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Utilities - Reduce OPEX
Rice University in Houston, TX - Case Study

Rice University saves $20K every 6 months

With Xylem's Flygt Concertor solution, the university now avoids clogs and callouts caused by grease and debris, as well as costly recurring equipment replacement.

Within the booming metropolis that is Houston, Texas, you will find a heavily wooded 300-acre campus that is home to Rice University. The university was established in 1912, and on any given school day, you will find approximately 15,000 students, faculty, and staff roaming its grounds.

David Mosquinski, Leal Gonzales, and John Ramirez are key members of the university's Mechanical, Electrical, & Plumbing (MEP) staff, taking care of the five wastewater lift stations and two plants on campus. Having over 60 years of experience working at the university between them, they were well-aware of which station on campus was the biggest daily challenge to their group. In fact, when Jason Van Alstine from Hahn Equipment, the exclusive Flygt distributor in the Houston area, stopped in to speak with their team, they agreed, "It was almost fate."

Challenge

When Jason asked the university staff what their biggest challenge was, they immediately took him to the Baker Institute Lift Station to have a look for himself. This is one of the university's larger lift stations, having 6 dormitories and a cafeteria discharge into its wet well. The 20-foot-deep station struggled with debris and chronic grease build-up from the cafeteria. At times, the grease was 3-4 feet thick, and gave off a strong and unpleasant hydrogen sulfide odor that you could smell "up and down the street," according to Ramirez. The hydrogen sulfide also ate away at the impellers in their wastewater pumps, causing poor performance.

The team had to constantly monitor the Baker Institute Lift Station, checking it one to two times per week. Even still, they couldn't avoid frequent call-outs to the station, often overnight or on weekends. They were growing weary of the time and expense of fighting the clogging and incessant need for pump repair or replacement, spending upwards of $20K every 6 months. The day that Jason viewed the station, the grease was so thick that it had dislodged one of the competitor's pump's guiderails. Even the competitor's temporary pump that had recently been installed while another pump was out for repair, had failed and left the station out-of-service once again. After over 5 years of dealing with this "headache", the staff was eager to make a change.

Lovett Hall on the Rice University campus in Houston, TX.

Customer:	Rice University, Baker Institute Pump Station
Challenge:	Clogging & failures, caused by grease and debris. Nonstop repair and replacement expenses.
Solution:	Two new Flygt Concertor wastewater pumps for their duplex station, with N-style Hard-Iron ™ impellers. One new NEMA 4X stainless steel control panel.
Results:	Clogs and callouts have been eliminated. The university is saving $20K every six months on repair and replacement expense.

CLOG FREE
GUARANTEED
SMART CONTROLS

Solution

The MEP staff reviewed Hahn Equipment's solution carefully, comparing it to the typical replacement quotes they had become so familiar with. Jason proposed two new Flygt Concertor wastewater pumps for their duplex station, with N-style impellers. He was confident that the pumps' self-cleaning feature would eliminate the chronic clogging, while the pre-programmed wet well cleanout functionality would address the grease build-up. Jason also chose Flygt Hard-Iron ™ for the impeller material to solve the premature failure caused by the hydrogen sulfide at the station. The university staff noted that while the Flygt solution was more expensive up-front, it was time to see if they could truly solve their issues.

Ultimately, the university chose to partner with Hahn Equipment to provide them with the two new Flygt Concertor N-Pumps and a NEMA 4X stainless steel control panel. Hahn Equipment not only provided the equipment, but also performed the installation and start-up. The new Flygt equipment has now been up and running at the Baker Institute Lift Station since January 2020 without a single call-out. After the first ten months of operation, the staff was happy to report that the station was still running just as well "as the day they put it in".

"When it comes down to it, we're going to go with another Hahn system, because we just don't have to worry about it. It did cost us more initially, but we're saving more money in the long run. We haven't had to spend that $20K every 6 months! All in all, it's saving us money."

Results

"The pit has completely changed from what we were used to seeing. It's nice and clean. The pumps are not over-amping, and the smell is gone too," said Gonzales. Where clogs, odors, and callouts were once common-place, the university is now confident that they have a solution that better serves their campus. They even commented that they were saving energy with the new Flygt Concertor pumps; the university is environmentally aware and strives to reduce their power consumption with energy-efficient products. The university has been so pleased the Flygt solution provided by Hahn Equipment that they have recently called Jason back to campus to review a pump rehab project in the basement of one of their buildings and intend to expand their partnership with Hahn and Flygt into the future.

Baker Institute lift station.

New Flygt Concertor wastewater pumps.

NEMA 4X control panel being installed on Rice University campus.

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