



OverWatch™

Direct In-Line Pump System

Case Study

A New Jersey town struggles to keep their pneumatic ejector running as replacement parts become hard to find. Industrial Flow Solutions' Direct In-Line pumping system, OverWatch™, is a direct replacement; keeping the dry well.

Overview

In this small lift station, lies a monster sized problem for one small town in New Jersey. Their Clow/Yeomans pneumatic ejector pump, capable of 50 gallons per 30 seconds against 30' TDH, continued to fail compressors and other components that have become increasingly hard to find. The system was designed and installed in the late 1980's and was in need of replacing.

The town engineer was looking for a new solution that would fit into the existing two level well, but not require a large expense of converting to a wet well. This lift station also sits in the middle of a quiet neighborhood, so noise was a concern. In the redesign, they needed to ensure that there was no additional brick and mortar established above grade. The pump, valve, meters, and controls needed to fit in the existing room. There was also the concern of with the potential odor issues. The OverWatch™ Direct In-Line Pumping system solved all of their potential concerns.



BEFORE



AFTER

PROBLEM

- 30+ year old pump technology exposes issues with finding replacement parts
- Limited space with current well size
- Constant compressor failures
- No tolerance for odors or noises
- Limited budget for reconstruction

Solution

The OverWatch™ Direct In-Line Pumping System was a direct replacement for the pneumatic ejectors, while giving the operators all of the benefits of VFD controlled pumps. The system maintains a dry machine room and requires a smaller footprint than the previous pumping technology used. The current invert and discharge could be used as is, and no additional changes were needed to the machine room. The system comes complete with the control panel and pump; arriving on site ready to install. The roadside access hatch was only 30", which would require all components to be designed to fit through the hatch without removing the well lid. By not needing to remove the lid, the contractor was able to save on crane rental costs and the danger of the concrete lid crumbling from being moved after 30 years in place. The control panel fit on the wall in the location of the existing panel.

The town selected OverWatch™ as no major construction would be needed to install the system. The installation took place over the course of three days, with one and a half days devoted completely to demolition and repairing a leaking invert pipe. The town engineer was able to set the operating parameters to maximize scouring velocities with each start up keeping the invert clean, while eliminating future discharge build up.

The town opted for the wireless communication package, which provides them in-real-time notifications and performance of the system. The town pays for daily inspections of the lift station and a premium for emergency service calls. By utilizing the OverWatch™ communication platform, they hope to remove the daily inspection expenses, saving them thousands each year.

"The OverWatch™ Direct In-line Pumping System is way less intimidating than our previous system" - Town Engineer



Features

- Eliminates the wet well on hazards associated with it
- Adjusts pumps performance in real time based on environment
- Stainless Steel wetted components to eliminate corrosion
- Reduced maintenance, no cleaning, no pump downtime

Applications

- Retrofitting of current wet wells
- New Pumping stations where excavation depths required is difficult or expensive to achieve
- Pumps prone to ragging/clogging
- Areas where sewage odors are unpleasant to its environment
- Ejector pumps with high concentration of Fats, Oils, Greases

RESULTS

- Entire package is a direct interchange to the pneumatic ejector
- Maintains safe and dry machine room
- No modifications to current well
- Eliminated need for above grade structures