INDUSTRIAL FLOW SOLUTIONS™

OverWatch™ Direct In-Line Pump System

Changing the world one wet well at a time.

Case Study

Confined space entry concerns and frequent maintenance caused a village in New York to find a better way - OverWatch™ Direct In-Line Pumping System

Overview

The Village of Sherman, a rural community of about 730 on the far west end of New York, has a 40-year-old 140,000 gpd (design) package treatment plant that achieves more than 99 percent BOD and TSS removal. The clean water plant's chief operator needed to replace an aging lift station to reduce frequent pump clogging and bar cleaning concerns and improve safety issues related to the 20ft deep x 36in diameter silo that requires confined space entry gear to access.

The station originally used a pair of centrifugal pumps to lift the effluent to the plant head works where mop rag builds up in the wet well and causes the pumps to clog, resulting in shutting the station down before entry. Bar screens required weekly cleaning and a septic truck was called in every 2-3 months to clean the well. Disruptions were costly. OverWatch™ Direct In-Line system was the solution to their problems.

PROBLEM

- Safety concerns and confined space entry when climbing 20ft down through a 36in silo access
- Frequent pump clogs
- Disruptive shutdowns to repair
- Weekly cleaning of bar screens
- Quarterly septic tank cleaning
- Costly maintenance repairs

"The system has been trouble-free and has saved significantly on labor." - Ted Rulseh, Treatment Plant Operator Magazine, May 2018

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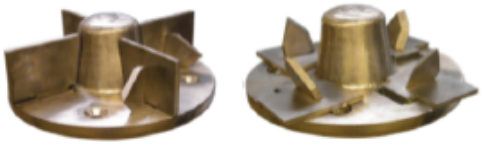
Solution

An OverWatch™ system delivers two 15hp pumps, each having the ability to handle 100% of the normal flow while in a safe and clean dry pit environment. This station is notorious for I&I issues, with heavy rains and winter's thawing, the systems two pumps are able to operate in real time, adjusting to minimum and maximum flows.

With the frequent clogging and cleaning issues, the town selected to go with the DIPCut® impeller, allowing for self-cleaning operation of the pumps. When solid objects imped the impeller, the system's Variable Frequency Drives (VFD) senses a higher torque and reverses the pump's direction. The hinged vanes fold flat, exposing cutting knives which allows mop rags and other fibrous material to be shredded and removed.



The OverWatch™ system was delivered ready to install. In just 11.5 hours, the wet well was transformed into a dry pit where the pumps sit just 10ft below the surface without the need to retain liquid volume.
Clogs in the pit and bar screens are eliminated, saving the town costly labor & cleaning hours while providing a much safer and cleaner environment for their employees.

RESULTS

- Eliminate confined space entry issues are eliminated
- Reduce maintenance costs by eliminating clogs
- Increase operational efficiency with fewer or no downtime disruptions
- Improve access to pump system equipment

Features

- Improves pumping & shredding, energy efficiency, and operational overhead
- Reduces lift station maintenance, downtime & excavations costs
- Eliminates wet wells, hazardous gases & odors, FOGS, clogs & debris

Benefits

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

"One pump can handle 100 percent of our normal flow. It's nice to know we have plenty of pump power, especially since we have an I&I issue. When we get heavy rains or thaws, we have enough capacity without any problem," - Jay Irwin, Chief Operator

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