




Cost Savings Document:

Sherman, NY Wastewater Treatment

Application Overview

The Village of Sherman, a rural community of 730 people 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 was in need of replacing their aging lift station to reduce frequent pump clogging and bar cleaning concerns. The village's chief operator also took this opportunity to select a system that would improve safety issues surround the 20 foot descent through a 36-inch silo access that required complete confined space entry gear.

The station originally used a pair of submersible centrifugal pumps to lift the influent to the plant headworks. Mop rag would build up in the wet well and cause the pumps to clog, resulting in shutting the station down before entry. Bars screens were also cleaned once week, while a septic truck was called in every 2-3 months to clean the well.

Why they Selected OverWatch™ ...

- Constant monitoring prevents risks associated with clogged pumps and overflowing retention tanks
- VFD controlled drives sense the operating conditions and adapts performance real time to save energy
- Pumped liquid is completely contained in a stainless steel hydraulic body for an odorless environment
- Reduced size of unit allowed for additional storage in ejector pump rooms

Annual Total Cost Savings

\$8,480

PROBLEM

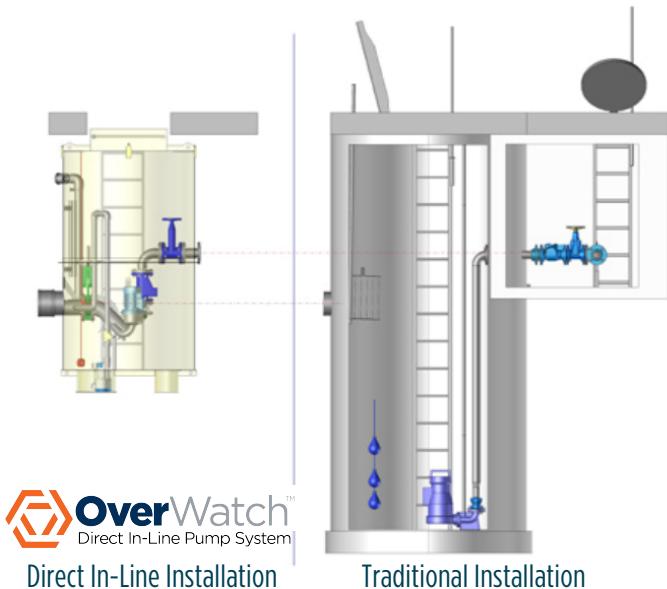
- Safety concerns and confined-space entry when climbing down 20 feet through a 36-inch silo access
- Frequent shut downs to repair clogged pumps
- Weekly cleaning of bar screens
- Septic tank cleaning truck on site every quarter



Features of OverWatch™

- No Wet Well required- Directly lifts influent from the inlet eliminating the effects of solidification and ragging caused by traditional systems
- Reduced Maintenance; no regular cleaning of screens, or vacuuming of Fats, Grease or Oils
- No Downtime from clogged pumps
- No build up of gases, Hydrogen Sulfide, and completely odorless
- Less detention time, no retained volumes
- Reduced excavation depth required for new installation
- Stainless Steel wetted parts to eliminate corrosion
- Optional Remote monitoring and warning notification; no more trips to the wet well to check operation

Revolutionizing Wet Wells....



COSTS ELIMINATED (per year)

• Vacuum Truck to clean the well	\$1,760
• Manually raking/cleaning of all screening	\$1,920
• Manually unclog wastewater pumps	\$2,880
• Preventative Maintenance	\$1,920

The OverWatch™ system delivered two 15 hp 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 Inflow & Infiltration (I&I) issues, with heavy rains and winter's thawing, the system's two pumps are able to operate in real time adjusting to maximum and minimum flows.

With the frequent clogging and cleaning issues, the village selected to go with the DIPCUT impeller, allowing for self-cleaning operation of the pumps. When solid objects impede the impeller, the system's Variable Frequency Drives 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 be installed and in just 11.5 hours of work, the village turned a wet well into a dry pit. The pumps now sit just 10 feet below the surface as the need to retain liquid volume has been removed. Also, eliminated were the troubling issues of cleaning and de-clogging the pit and bar screens, saving the village many maintenance hours and providing a much safer and cleaner environment for their employees to work.

"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

TOTAL ANNUAL SAVINGS

\$8,480



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