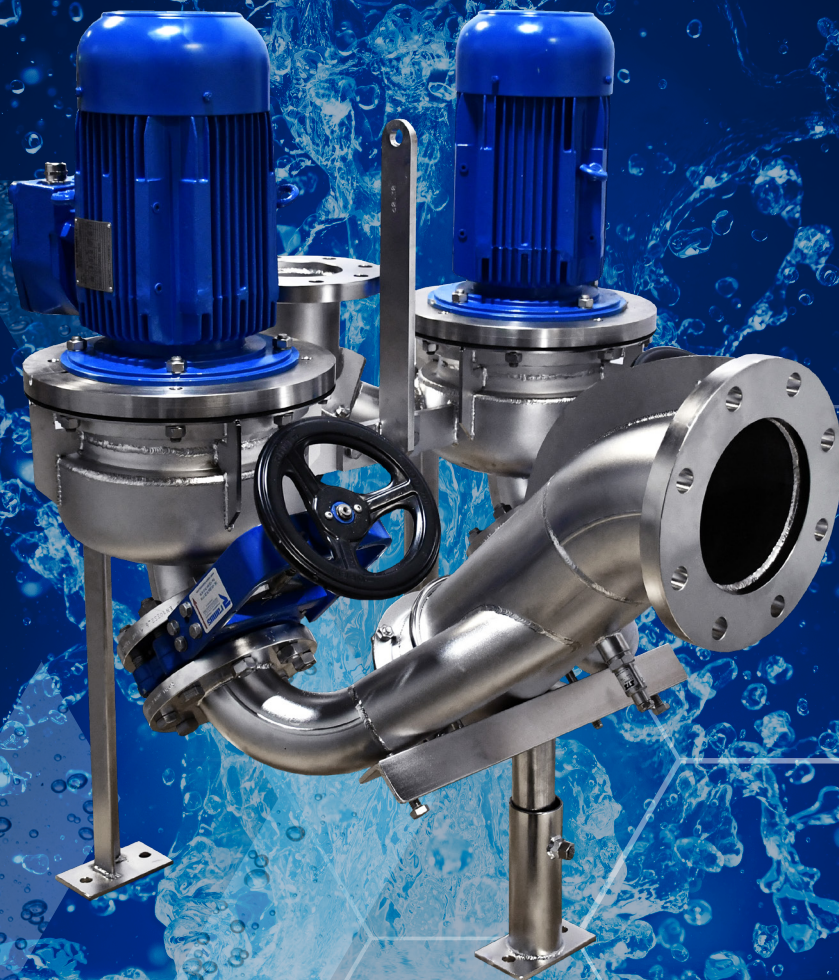




A revolutionary approach to eliminate the wet well.



**CHANGING THE WORLD
ONE WET WELL AT A TIME**



**INDUSTRIAL
FLOW
SOLUTIONS™**

**Imagine a future with
smart pumping stations
and no more wet wells.**

For nearly a century, wastewater systems have used the same technology to lift influent or storm water from the gravity network: fill a tank, signal the drive with a float, then pump at full speed until the tank's minimum-level float activates. It's archaic and inefficient, creating hazardous conditions that leave caustic, disgusting, odorous liquids standing in wet wells.

**Changing the world
one wet well at a time**

Maximize Safety & Minimize Risk

The **OverWatch®** Direct In-Line Pump System by Industrial Flow Solutions™ (IFS) delivers a completely autonomous lifting station solution using smart controls that react to environmental conditions in real-time, changing performance with the incoming flow and detecting potential clogs. Our patented impeller design and dual-pump system deliver **dynamic responsiveness** to conditions in real-time, shredding obstructions and removing clogs without operator intervention. By eliminating the hazardous wet well environment, maintenance becomes **radically safer**. Compared to conventional solutions, the system is also far more **efficient**, requiring a significantly shallower excavation footprint and delivering 65% cost savings over the life of the system. Our latest innovations are also bringing **remote monitoring and control** options to the table. With over 2,000 installations globally, **OverWatch®** Direct In-Line Pump System is maximizing safety and minimizing maintenance in new lift stations or retrofitting current systems all over the world.



**Dynamic
Responsiveness**



**Radically
Safer**



**Remote
Monitoring and
Control**

2000+
Installations
Worldwide

The Technology Is Simple

A traditional wet well collects wastewater and then pumps once the system's predetermined level is reached. A technology dating back to the early 1930s, this process allows materials to collect, solidify and clog the pump's impellers or remain in the well. Along with risking damage to pump equipment, the traditional approach exposes structures to built-up abrasives and acidic solutions, leading to infrastructure erosion and corrosion. The result is premature wear, pump failures, and high maintenance expense.



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Figure 1: The OverWatch™ system utilizes a duplex pumping system consisting of one 304L stainless steel hydraulic body, two IP67/IE3 immersible motors driven by variable speed drives. One pump is in service while the second pump is in standby.

A Design Like No Other

The **OverWatch®** Direct In-Line Pump system solves many problems associated with traditional wet wells by lifting influent directly from the inlet to the discharge while detecting and responding to solids, eliminating potential clogs. Operation is based on continuous pumping, decreasing backups by lifting influent directly at the entry point, without water loading. Because the system handles influent as it arrives,, rags, fats, oils and greases (FOG) have no chance to solidify and collect near the pump's suction.

- **304L stainless steel hydraulic body**
- **Two IP67 immersible motors. While one pump is in service, the other remains in standby**
- **Liquid level sensor allows the system to adjust to incoming flows in real time**
- **Variable frequency drives continuously monitor system status, allowing for a fully autonomous operation**
- **A patented variable-vane DIPCut® impeller design folds flat in reverse operation, exposing blades to shred obstructions**

Unparalleled responsiveness. When **OverWatch™** detects a clog, the system's pump will cycle itself to determine when the clog has been freed and then resume normal operation. If the system detects elevated flow levels, it will increase the speed of the pumping unit. Should flow exceed the capabilities of the single pump, the second pump will turn on for simultaneous pumping. This unique operating mode provides a long-term durable solution, with minimal need to replace, repair or maintain you water lifting system.

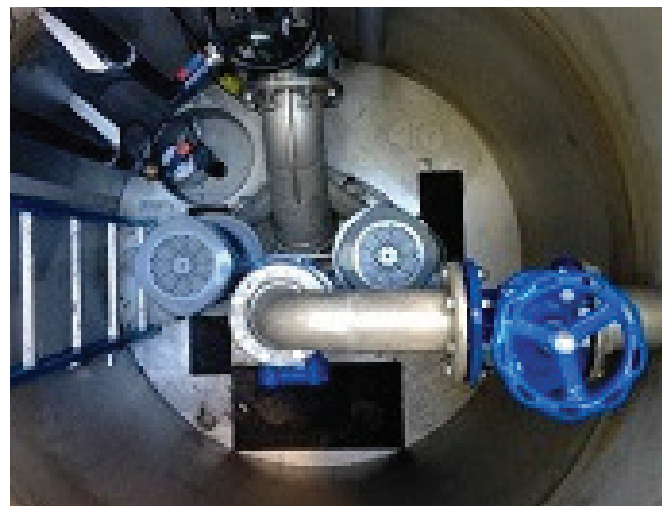


Figure 2: Influent is lifted directly from the end feed, eliminating the need to retain raw sewage, keeping a clean, dry environment.

Say Goodbye to Wet Wells

The **OverWatch®** Direct In-Line Pump System from Industrial Flow Solutions is a giant leap forward from traditional wet wells. Consider the advantages:

Direct In-Line Pumping Eliminates...

FOG, Rags and Wipe Issues

Environmental & Safety Risks

Exposure To Odors & Dangerous Gases

Wet Well Maintenance

The KEYS of Direct In-Line Pumping

- 1.** Eliminates the wet well, removing odors and dangerous gases.
- 2.** Reduces water loading through flow matching; eliminating scum layer, ragging, clogging. Utilizes vortex impellers; handles “solids” as they arrive.
- 3.** Reduction of planned and unplanned downtime; eliminate Vac Trucks.
- 4.** Lifts influent directly from the point of entry, reducing excavation depths.

Smart Solutions for Today's Wastewater Systems

Advanced simplicity.

The **OverWatch**® Direct In-Line Pump System's variable frequency drives depart from the traditional systems' "all or nothing" pumping. Instead, continuous pumping is achieved directly from the influent inlet while performing all the functionality of a traditional lifting station without the need for additional equipment. In addition, speed variation and simplified controls on the same panel allow regulation in any configuration, including the most complex combined sewage systems.

Keeping you informed.

If you desire remote monitoring and notifications, the system comes SCADA- and BACnet-ready. Complete cloud-based control can also be configured, allowing for performance trending and remote controls. This allows advanced functions such as resetting, remote unclogging, and fault notification.

Perfect for tight spaces.
The **OverWatch**® Direct In-Line Pump System is ideal for applications where environmental limitations, like high water tables and bedrock, impose strict limits on an installation's footprint.

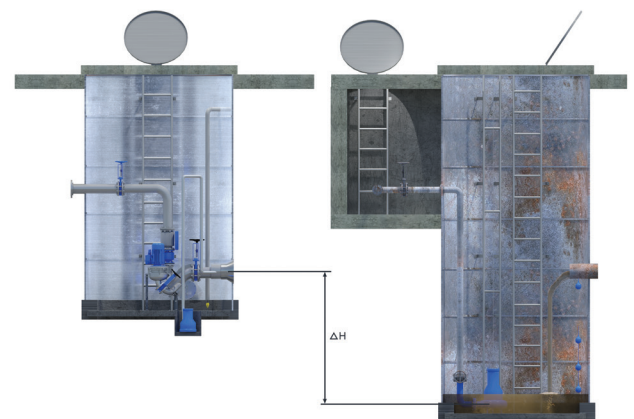


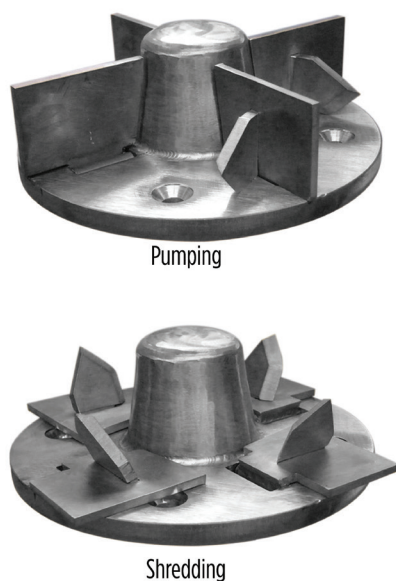
Figure 3: When compared to a traditional wet well system (right), a dry well system using OverWatch technology (left) utilizes less ground depth and requires less head.

Clogs Don't Stand a Chance

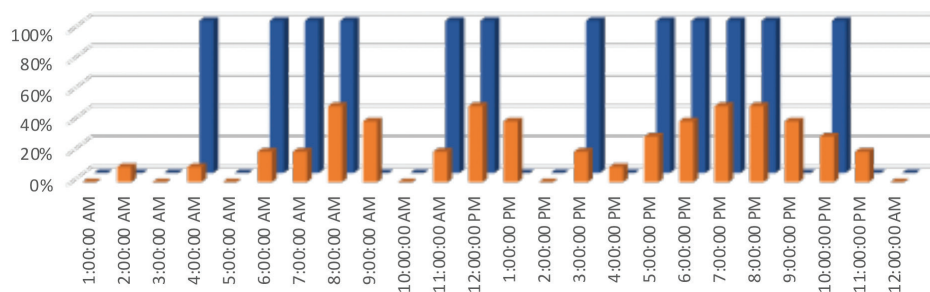
“Non-clog” or grinder pumps are the usual solution if rags, wipes, and other fibrous materials are causing your pumps to backup or clog. While these technologies work well independently, water supervisors are forced to choose between handling the potential clog at the lift station or the plant. Patented DIPCut® impeller technology from Industrial Flow Solutions makes it possible for a lift station to be both a non-clog and shredder in a single pump. This variable vane impeller design utilizes a vortex-style impeller. Its hinged vanes fold flat in reverse operation to expose blades that shred obstructions like long fibrous materials and rags. The system then removes them without human intervention or losing its high hydraulic pumping efficiency.

Efficiency for the long haul.

With the reduction of lift required and variable frequency drives, the **OverWatch®** Direct In-Line Pump System operates more frequently but with far less energy consumption, allowing for savings of up to 30% (figure 5). The frequent runtime helps eliminate FOG and fibrous materials that would traditionally cause unplanned downtime, requiring vacuum trucks, and



Pump Utilization Rate over 24 Hours



pump repairs. Construction and foundation support work is simplified. The large and heavy concrete basins requiring tremendous foundation support can be replaced with stainless steel or fiberglass basins. The flexibility and durability of these materials will allow for less maintenance and longer service life for years to come. Since the wet well has been eliminated, regular cleaning of the well is also a thing of the past.

A Proven Technology.

The Village of Sherman in upstate New York had a messy problem with serious safety concerns which were eliminated in just 12 hours of work. The town's lift station before the headworks would frequently clog. The pumps were aging, and the Village was experiencing significant downtime. Once a week, associates needed to pull the pumps to clear clogs. A septic vacuum truck was also required every two to three months to pull sediment and debris out of the tank. The village also wanted to improve upon the hazards to employee health posed by the system's confined space entry through a 36-inch silo access and a 20-foot descent to the submersible pumps. While looking for the best solution for their community, they determined that the **OverWatch®** Direct In-Line Pump System was the answer. The system was essentially plug-and-play when delivered. Chief Operator Jay Irwin said, "It's a very innovative technology. It got rid of our confined-space issues. I know it's going to save us a lot of man hours." The village saves approximately \$8,600 in maintenance every year thanks to **OverWatch®**.



OverWatch™ is a very innovative technology. It got rid of our confined-space issues. I know it's going to save us a lot of man hours."

Figure 4: The complete system installation shows a dry space with easily accessible equipment in place of a hazardous wet well environment. (Picture provided by the Village of Sherman, as published in Treatment Plant Operator, May 2018 issue)

¹Ted J. Rulseh, "Drying Out a Wet Well," Treatment Plant Operator (May 2018).

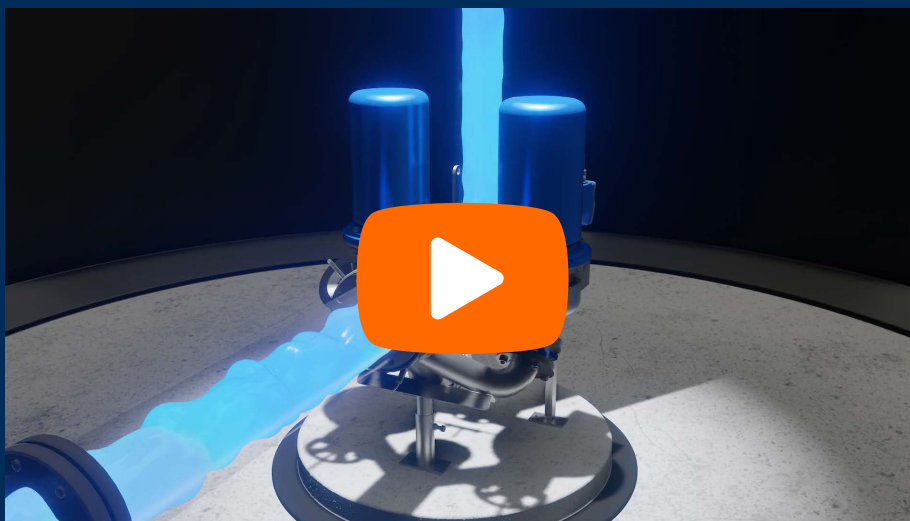


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To learn more about OverWatch Direct In-Line Pump System

Visit: www.flowsolutions.com

Take the 3D Tour: flowsolutions.eventstreamvm.com



Want to Learn More?



Visit www.flowsolutions.com



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