



Replacing a Clogged Pump Again?

Solutions to Improve Submersible Pump Performance



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



**INDUSTRIAL
FLOW
SOLUTIONS™**

The wet well has been used to manage commercial, industrial, and municipal wastewater since the 1950s. This tried-and-true method of using lift stations with submersible pumps to move wastewater from its point of origin to a treatment plant where it is sanitized and recirculated preserves our natural resources and promotes sustainability.

But what happens when the pumps you use consistently clog? The time and costs of continually repairing or replacing a clogged pump can quickly offset the wet well's inherent benefits—and be more than an occasional inconvenience.

Instead of accepting these issues as “par for the course,” it's important to know that using the right pump for the job can virtually eliminate your clogging issues along with the risk of flooding, contamination, and unplanned downtime.



The Perils of the Wet Well

If your operation calls for a wet well, you know that fats, oils, greases (FOG), solids, and fibrous debris are challenges for any submersible waste pump. It's common for these items to bind together, forming a solid layer atop the wastewater in your well or causing large chunks of solid material to get sucked into your submersible pump—the ideal recipe for an operation-halting clog.

In addition, the very operation of a wet well, i.e., reaching a prescribed fill level before pumping, can also create septic standing water. That water can contain dangerous gasses and viruses, releasing odors that put people and the environment at risk. Furthermore, aging wet well basins run the risk of cracking and leaking harmful contaminants into the surrounding soil.

Since the beginning, the wet well has presented perils and challenges that add to labor, cleaning, and maintenance overhead. For example, manually breaking up a solids layer, hiring vacuum trucks, and deploying cranes to lift the pump out of the well is messy, dangerous, and costly. In addition, worker shortages have made it increasingly challenging to respond to submersible pump “high-level” alarms that indicate a pump may be clogged and inoperable. Perhaps that's why so many businesses have developed an over-reliance on backup pumps or choose to repeatedly replace their clogged pumps with the least expensive models they can find.

To stop the clogging and replacing cycle, you need a pumping system engineered for your application. In return, you can rest assured that your pump will continue to operate efficiently and effectively for many years to come – reducing your total cost of ownership.

Case Study #1

Baltimore Inner Harbor Residence Building

Problem: Clogged pumps caused frequent sewage backup into the parking garage, creating tenants' hazardous conditions and unpleasant odors. Low ceilings in the garage made it impossible for vacuum pump trucks to enter the facility to clean up the mess. High insurance premiums for cleaning and reclamation added to already high restoration costs.

Solution: The **overWatch®** System installed in the parking garage eliminated all flooding and odors. In addition, the new systems saved the building management company and its insurance provider over \$47,000 in annual clean-up costs.



Solving the Clogged Pump Challenge

Solids handling pumps are designed to handle debris in the waste stream. Organic materials, such as animal fats, skins, pits, rinds, and human waste, have different properties than inorganic debris, such as wipes, feminine products, gloves, hairnets, and packaging material—to name a few.

Ensuring you get the best performance and extended life from your pump requires knowing the sizes and types of debris entering your waste stream, along with your desired flow rate. The wastewater pump best suited for your application will use different impellers to prevent clogging while still running efficiently. Traditional solids handling pumps are available with three different styles of impellers:

Open Vane Impellers:

The open design allows specified types and sizes of solids to flow freely through the pump into the discharge line

Vortex Impellers:

Create a whirlpool action that forcibly pulls and discharges solids from the wet well.

Shredding Impellers:

Cut solids into smaller pieces that are easily discharged.

If you are already using a solids handling waste pump and experiencing frequent clogging, chances are your pump is not designed for the solids you are sending to the wet well. Consulting with your pump supplier and getting the right pump for the job can put an end to your clogged pump troubles—for good.

Case Study #2

Rehabilitation and Senior Care Center, North Wales, PA

Problem: A high concentration of chlorine influent from laundry operations destroyed impellers and corroded pipework. In addition, disposable wipes and other ragging materials clogged the pump regularly. Lastly, a cracked cast iron basin was leaching fluid into the surrounding area.

Solution: The **overWatch**® System saved the property owner a total of \$76,000, including annual maintenance and repair expenses of \$17,000, the estimated cost of \$50,000 to replace the wet well, and \$9,000 in outsourced laundry costs due to downtime while replacing the basin.



Introducing the OverWatch® Direct In-Line Pump System

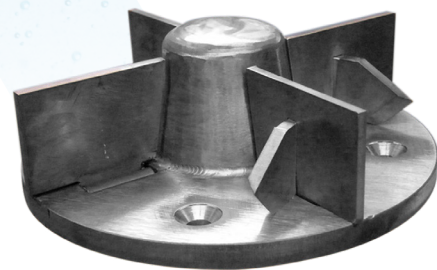
The **OverWatch®** Direct In-Line Pump System is a patented system that eliminates the wet well. The OverWatch lifts influent directly at the entry point, so there are no risk of FOG, wipes, or other debris binding solids to clog the pump.

Using a patented variable vane impeller design called the DIP CUT®, along with variable speed drives, the **OverWatch®** system senses when solids are present and only activates the cutting action when it's needed. This improves pump efficiency and saves energy.

Like existing submersible pumping systems, the **OverWatch®** Direct In-Line Pump System uses a lead pump and another on standby. **OverWatch®** technology senses when the primary pump is in shredding mode and will automatically start the secondary pump to maintain desired flow rates during shredding.

Install the **OverWatch®** system in a dry machine room or by converting an existing wet well. Because there is no wet well, odors and dangerous gasses are eliminated, corrosion and erosion are prevented, worker safety is optimized, and maintenance requirements are virtually non-existent.

See it for yourself! Contact IFS to request an invitation to an **OverWatch®** installation near you.



Pumping



Shredding

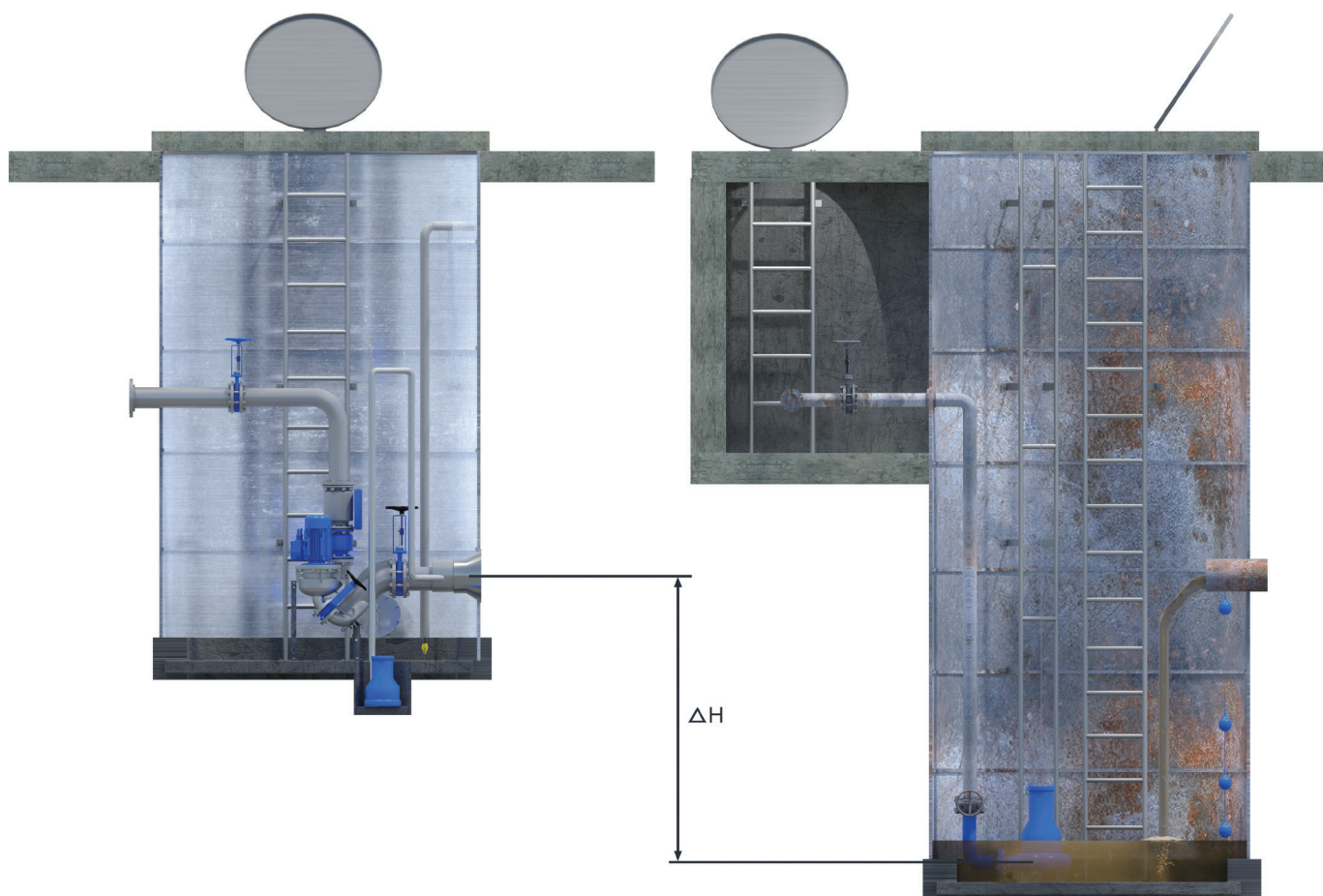


Case Study #3

Municipal Life Station, Wastewater Treatment, Sherman, NY

Problem: This rural community is home to 730 residents and a lift station that causes 26 hours of maintenance each year to remedy frequent pump clogging and weekly bar screen cleaning. Worse, the 36" silo access descending 20 feet into the ground compromised worker safety.

Solution: The single **OverWatch**® System replaced two submersible pumps previously used to lift influent to the plant headworks, converting the pit into a dry well. Total annual cost reduction is nearly \$8,500 in vacuum truck rental, removing clogs, manual bar screen cleaning/raking, and preventative maintenance, reducing total overall maintenance to 20 minutes over four years.





Talk to the Experts at Industrial Flow Solutions

If you're ready to put an end to your clogged pumps, get in touch with Industrial Flow Solutions (IFS). As a leading manufacturer of submersible pumps, controls, and direct in-line systems, IFS understands challenging applications and offers a comprehensive portfolio of pump solutions.

For nearly four decades and with over 200 years of combined technical experience, IFS has been serving companies worldwide. We've listened to our customers and engineered pumps with unique features and materials to resolve issues while maintaining uptime and maximizing profitability. From direct in-line systems to submersible pumps, we save our customers money and reduce environmental impact with pumps that operate more efficiently, safely, and reliably, last longer, and cost less to maintain, in ways that drive down the total cost of ownership by as much as 65%.

We're Here. We're Ready. With US-based customer service and manufacturing, IFS offers rapid-response access to distributor-based field support, technical expertise, and service. Our commitment to stocking inventory enables quick turnaround times on parts, pump replacement, and new unit availability to ensure that your operation continues without interruptions, delays, or surprises. Our customer service and technical experts are based in New Haven, CT, ready to turn your flow problems into flow solutions!

The toughest conditions deserve the toughest pumps capable of best-in-class performance every day, every shift, in every sump. That's your IFS Advantage.



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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



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sales@flowsolutions.com



860.631.3618



104 John W. Murphy Drive, New Haven, CT 06513

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