

# NEXT-GEN SUBMERSIBLE SOLIDS HANDLING PUMP

## HELPS PROTECT DANVILLE, INDIANA

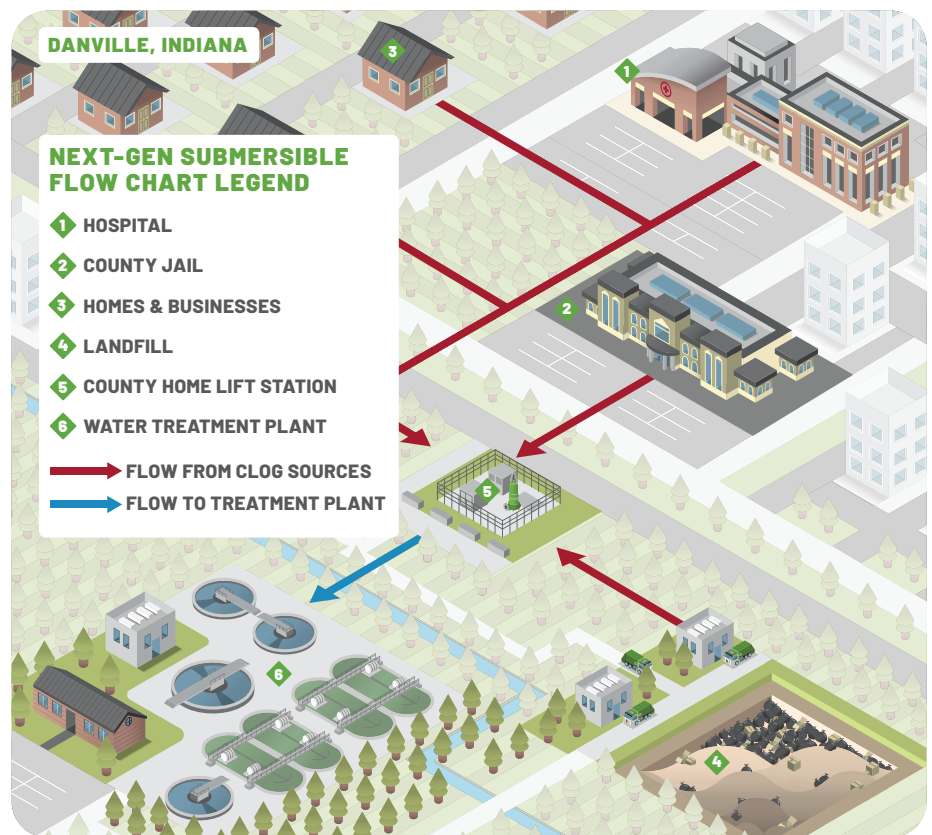
The County Home Lift Station is the largest lift station operated by the Town of Danville Wastewater Department. In addition to large businesses and several thousand residents, the station's service area includes a regional hospital, county jail, and a landfill.

A large array of objects from the hospital and jail such as medical supplies, clothing, needles, toothbrushes and more are introduced in the sewer line and end up at the lift station. The deluge of items in the wastewater stream culminate in one of the biggest challenges faced by municipal wastewater operators: **CLOGGING**.

### THE PROBLEM: FREQUENT CLOGGING

The assortment of challenging objects coming downstream meant that the three pumps at the lift station were repeatedly getting clogged. The Wastewater Department's small crew received frequent emergency service calls, forcing staff to come in after hours to pull the pumps and clear the clogs using a vacuum truck. This was occurring every three to four weeks, resulting in mounting labor and service costs.

Even when the pumps weren't clogged, the amount of trash passing through the system was so great that staff needed to manually clear debris three times a day. In addition to the extra costs incurred, these issues



The County Home Lift Station faces major clogging challenges from a hospital, jail, landfill, several large businesses, and almost one-third of the town's population.

also presented significant biohazards for the wastewater personnel clearing debris and entering wet wells. Clogged pumps also resulted in widespread blockages, accentuated by large rain events, putting the jail, hospital, and town residents at risk.

### 90-DAY TRIAL FIGURES

#### NEXT-GEN PUMP: POSITION 1 OF 3

Runtime (daily): 3 hrs, 38 min  
 Runtime (total): 381 hrs, 58 min  
 Flow rate (avg): 754 GPM  
 Effluent (total): 17,346,381 gal  
 Clogging failures: 0

Participants were not compensated for their testimonials regarding Pentair products. Statements and values are based on a 90-day trial period. Individual experiences with Pentair products may vary depending on use case and application.



The Pentair Hydromatic Next-Gen Submersible pump is lowered into the wet well at County Home Lift Station.

### THE SOLUTION: HYDRAMATIC NEXT-GEN SUBMERSIBLE PUMPS

Dave Dunnuck, Vice President of BBC Pump and Equipment Company, Inc., recommended a Hydromatic Next-Gen Submersible pump to help alleviate the issues at Danville's largest lift station. The Next-Gen Submersibles use an innovative combination of a semi-open stainless steel impeller and self-cleaning cutter plate to eliminate tough clogs. The premium efficient motor is oil-cooled for lower running temperatures and features Class H insulation, increasing the life of the pump and reducing energy use. Combatting grease layer buildup and solids settling, the volute is mix-flush ready, keeping the pit clean. Recognizing these features, Dunnuck thought the Next-Gen pump could be the perfect response to the challenges posed at the lift station by waste from the jail, hospital, and landfill. BBC worked with the Danville Wastewater Department to initiate a 90-day trial period, replacing one of the three pumps at the station with a Hydromatic Next-Gen Submersible.



The Town of Danville Wastewater Treatment Plant receives water pumped from the lift station.

### RESULTS: "BEYOND OUR EXPECTATIONS"

Dunnuck and BBC worked with Danville Wastewater to inspect the Next-Gen pump every 30 days. Immediately at the first inspection personnel noticed the wet well was significantly cleaner and had considerably less trash and debris present. Prior to installing the Next-Gen, the pumps were being pulled every three weeks for cleaning and unclogging. Since installing the Next-Gen pump, staff have had no need to pull the pumps. "It does so much work for the other two pumps," says wastewater operator Wayne Herring. "There's less trash at our facility. We're not clogging up."

Chris Tidd, a water treatment laborer for the department, touted the cost savings and improved quality of life presented by the Hydromatic Next-Gen pump. "We have 17 of these stations. If we have one of these in each station, the time freed up is drastic." Instead of dreading a service call at 2 a.m. on a Saturday, Chris says he "would feel very secure and safe, knowing that with [the Next-Gen] in our wells, I'm never getting a call."

At the conclusion of the 90-day trial, the Danville team was so impressed with the Next-Gen pump's performance and reliability, they opted not only to purchase the trial pump, but also to replace the other two pumps at the station with Next-Gen models. "We were all anticipating good results and it ended up being beyond our expectations," said Dunnuck.



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