

## IN BRIEF:

### SITE/LOCATION:

Danville, KY  
City of Danville, KY's East Main Street and Phylben Village Lift station, both equipped with two Barnes 4XSHV non-clog 30 HP pumps with vortex impellers.

### PROBLEM:

The East Main Street lift station was experiencing overflows with a Barnes competitor's pump. The lift station's frequent overflows were a result of mechanical seal failures.

### SOLUTION:

Crane Pumps & Systems and distributor, C.I.Thornburg introduced Todd Conger, from the city of Danville, KY to the Crane Pumps & Systems' Barnes Solids Handling non-clog pumps. After seeing the performance of the Barnes line, the City of Danville installed Barnes SH pumps in its East Main Street lift station and its Phylben Village lift station. The pumps at both locations have been operating well since being installed.

## Applications & Systems

# Mechanical Seal and Plug-n-Play Cord Saves Time and Money for City of Danville, KY

## Barnes® Solids Handling Success

The East Main Street lift station in the city of Danville, KY was experiencing overflows with its submersible non-clog pumps. Mechanical seal failures was the number one problem. When one of the pumps failed, they installed a Crane Pumps & Systems Barnes 4XSE non-clog as a temporary fix. Even though the pump was atypically installed for the application, it performed so well, that they left it installed and when the lift station was selected for a rebuild they opted to install the Crane Pumps & Systems Barnes 4XSH pump.

Two Barnes 30 HP 4XSH non-clog pumps with vortex impellers were initially installed at the East Main lift station, and two more were later installed at the Phylben village lift station. Crane Pumps & Systems' Barnes Solids Handling pumps were designed and tested with less clogging in mind while extending the service life of the seal. The pump was designed with a robust bearing design and larger shaft cross sectional area that reduces shaft deflection and seal misalignment. In addition, the tandem hard faced mechanical seals reduce wear. The impeller is cast with pump-out vanes to the mechanical seal that provide protection from large solids. The slotted flange allows the pump to be installed onto a competitor's discharge piping with no modifications.

The city is very happy with the installed SH pumps. In addition to the improved mechanical seal life, the pump is also a better fit than their previous brand because of the removable cord. The Barnes SH Plug-n-Play cord reduces maintenance costs and makes pulling the pump easy. The city no longer needs to send electricians or other specialist to remove the pump. Keeping the cord in place limits the potential of pinching and damaging the cord while the pump is outside of the lift station.



4XSH PUMP AT PHYL BEN VILLAGE LIFT STATION



PUMPS & SYSTEMS



BARNES  
PLUG-N-PLAY CORD  
FOR SH PUMPS

***"The plug will save you three to four hours pulling the pump!"***  
***Carl Harmon, City of Danville Senior Mechanic***