

BARNES®

SALEM LAKES, WI

Application Overview

The Village of Salem Lakes, located in southeast Wisconsin, is a small rural community with a population of about 12,000 people. Its municipality manages 25 pump stations. Of these 25, pump station 18 is the second largest station and is a triplex station with 30HP submersible non clog pumps.

The ductile iron vortex impellers of the pumps in station 18 were wearing out frequently due to abrasive particles in sewage. The worn-out impellers were catching rags and stringy solids in the sewage, which increased costs of deragging and pump cleaning. Due to the station's inherent design, pump cleaning required confined space entry into the station rather than removal of the pump. Since the ductile iron impellers were lasting only a few months, they had to be replaced often requiring frequent confined space entries. Repeated impeller replacements cost servicing time and necessitated the municipality to keep inventory of spare impellers. In addition to replacement and servicing costs, worn-out impellers were also negatively impacting flow rate and pump efficiency.

Installation

Crane Pumps & Systems and Energenecs Inc., a municipal distributor of Crane Pumps & Systems, recommended the Village of Salem Lakes to replace the existing ductile iron vortex impellers with the Barnes White Iron (25% High Chrome) impellers. Salem Lakes installed a Barnes White Iron impeller in one of the pumps in the station. After 6 months of continuous operation in the abrasive environment, the Barnes White Iron impeller has experienced no wear and continues to provide superior non-clogging and efficient performance. The pump does not require cleaning which eliminated the need for confined space entries. The Village of Salem Lakes is highly impressed with Barnes White Iron impeller solution and is planning to replace ductile iron impellers with Barnes White Iron impellers in the other two pumps in the station and in other stations handling abrasive solids.

Key Takeaways

Pain Points

- Existing impellers were wearing out frequently due to abrasive particles
- Impellers were catching rags & stringy solids, which led to excessive deragging and pump cleaning costs
- Cleaning the pumps required confined space entry into the station
- Worn-out impellers were negatively impacting flowrate and pump efficiency

Solution

- Barnes White Iron impeller installed to replace the existing ductile iron vortex impeller
- Pump has experienced no wear and continues to provide superior non-clogging and efficient performance
- Pump no longer requires cleaning or confined space entries
- Salem Lakes plans to replace other impellers in the station with White Iron Impellers



PUMP

Barnes White Iron Impeller



OPERATIONAL IMPROVEMENT

Reduced abrasion and wearing



INSTALL DATE

July 2018



MUNICIPALITY POPULATION

12,000

