



## Project Profile

BDP Industries, Inc. Greenwich, NY

### Village of Victor, NY Belt Filter Press Dewatering Project

#### *Facility Contacts*

Chief Operator: Jim Abraham (716)924-2004  
Engineer: Chatfield Engineers - Mr. John Schepp (716)227-6040

#### *Project Summary:*

The Village's existing drying beds, while functional, did not have enough capacity. As a result, solids inventory in the wastewater treatment process increased, which compromised effluent quality. The Village needed some way to remove and dewater sludge from their system more efficiently.

Chatfield Engineers, the Village Engineer, evaluated several alternatives: Expansion of the existing drying beds, centrifuge technology and belt filter presses. The belt filter press was determined to be the most economical option and provided the greatest operational flexibility. The evaluation demonstrated that the belt filter press had a lower capital cost, used less polymer, and required less operation and maintenance than the centrifuge option.

The Village desired state-of-the-art technology and selected the 3DP belt filter press, as manufactured by BDP Industries. The 3DP consists of an independent gravity dewatering section combined with a vertical pressure section. The horizontal gravity belt can operate up to five times faster than the pressure section - this greatly increases throughput. The vertical pressure section configuration maximizes cake dryness and minimizes polymer usage.

An air sparger system was installed on the gravity dewatering section. This utilizes multiple air lances located underneath the gravity belt. The air lances remove sludge and polymer from the belt fabric, further increasing dewatering and reducing polymer consumption.

#### *Basis of Design and Equipment Components*

- ⌘ One 0.75 meter 3-belt 3DP machine
- ⌘ Sludge Feed Rate 40 gpm @ 3% feed solids
- ⌘ Master control panel, polymer system, air sparger, sludge feed pump.
- ⌘ Discharge Solids: 25 percent
- ⌘ Sludge Characteristics: Primary Sludge and Trickling Filter Humus, both anaerobically-digested
- ⌘ Sludge is stored on existing drying beds.