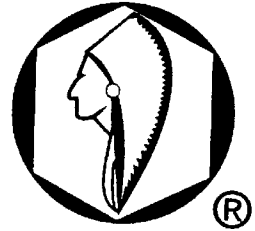


Piston Pumping Solutions - Landfill Vault

*Difficult Pumping Applications from
Blackhawk Environmental Company*



Stormwater Creates Challenge at Recreational Preserve

The Forest Preserve District of DuPage County, Ill., (FPDDC) has solved a stormwater runoff problem that plagued the Blackwell Forest Preserve last year. The overflow was the result of a problem with the closure techniques used on the Mount Hoy landfill, which ceased operations in 1973 and later was designated a Superfund site.

The Mount Hoy landfill is located in the preserve, which is a 1,312-acre area that includes several lakes, fishing and boating facilities, hiking trails and shelters. Because the landfill was named a Superfund site, FPDDC had to construct a leachate and gas management system. In addition, the district had to recontour the top of the landfill to minimize water infiltration by creating a barrier using clay and topsoil. As a result of the revised landscape, Mount Hoy became a recreational area during the winter as locals and visitors used it as a tubing hill.



Blackhawk's Pneumatic Trident Pump, housed in a 4-foot vault to conceal it from view, continually pumps the accumulated stormwater runoff into a 10,000-gallon collection tank.

Nine pumps were installed to move leachate from the landfill to a centrally located 10,000-gallon capacity tank. The contents of the tank are then trucked to a water treatment facility for processing.

Jerry Hartwig, project manager for the Forest Preserve, and Site Engineer Ray Babowice manage the groundwater monitoring wells around the site to ensure there is no contamination in the area. Last year they discovered that stormwater — which could not permeate the clay barrier — was working into the dirt surface at the bottom of the hill. The water eventually traveled to a parking lot adjacent to Mount Hoy, which forced visitors to trudge through a muddy and wet area.

To solve the problem, the district built a stormwater collection system consisting of a 30-foot-long trench lined with PVC piping and filled with gravel. After the stormwater is collected, it is pumped into the leachate collection system. Because the water was being pumped only five feet below the bottom of the well that collected it, the district decided that a discrete vault would provide the best type of pump installation and would blend in with the surrounding recreational environment.

“There is no electricity out on the hill and we don't want any electric wires there, which would destroy the beauty and functionality of the hill,” Hartwig says. “Instead, we use a compressor with a dryer to supply air to the pumps, which prevents the lines from fouling up and from freezing over the winter.”

Hartwig used a pneumatic Trident pump designed for vault applications from Glen Ellyn, Ill.-based Blackhawk Environmental to continually pump the stormwater into the collection tank. “We installed a single cover over the entire 4-foot vault so that the pump does not show,” Hartwig says.

Today, the landfill remains environmentally secure and its conversion into a recreational area has been completed. “The combination of the trenching system, discrete vault and short pneumatic pump have solved our stormwater problems on our landfill-turned-winter-tubing-hill,” Hartwig adds.



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