

Woodside WWTP Membrane Thickener Process Case Study

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Woodside Membrane Thickening and Sludge Holding Tank

Problem

From January 2006 to February 2008 Woodside Wastewater Treatment Plant (WWTP) in Suffolk County, New York was hauling an annual average of 1,110,00 gallons of liquid sludge to be processed at Bergen Point a centralized wastewater treatment facility. Suffolk County paid more than \$100,000 annually to haul this sludge from Woodside WWTP to the Bergen Point facility. This was a substantial cost to Suffolk County and were looking for a solids handling process to minimize liquid hauling costs from Woodside WWTP.

Solution

Woodside WWTP installed a Membrane Thickening (MBT) process in order reduce hauling costs at this facility. The Membrane Thickening (MBT) process was retrofit into two existing sludge holding tanks minimizing capital costs by preventing construction of new tanks. Commissioned since March 2008, the MBT process at Woodside WWTP pre-thickens liquid sludge produced at this facility up to 3.5% solids by utilizing a Kubota flat plate membrane and operating it in conjunction with two sludge holding tanks. By pre-thickening the sludge up to 3.5% solids with an MBT process, sludge hauling at Woodside WWTP was a reduced by more than 57% which resulted in an annual savings of \$60,000 on hauling costs. Based on hauling costs alone, Suffolk County was able to get a return of investment on the MBT process in only 2.5 years.