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Patchogue WWTP Membrane Thickener Process Case Study

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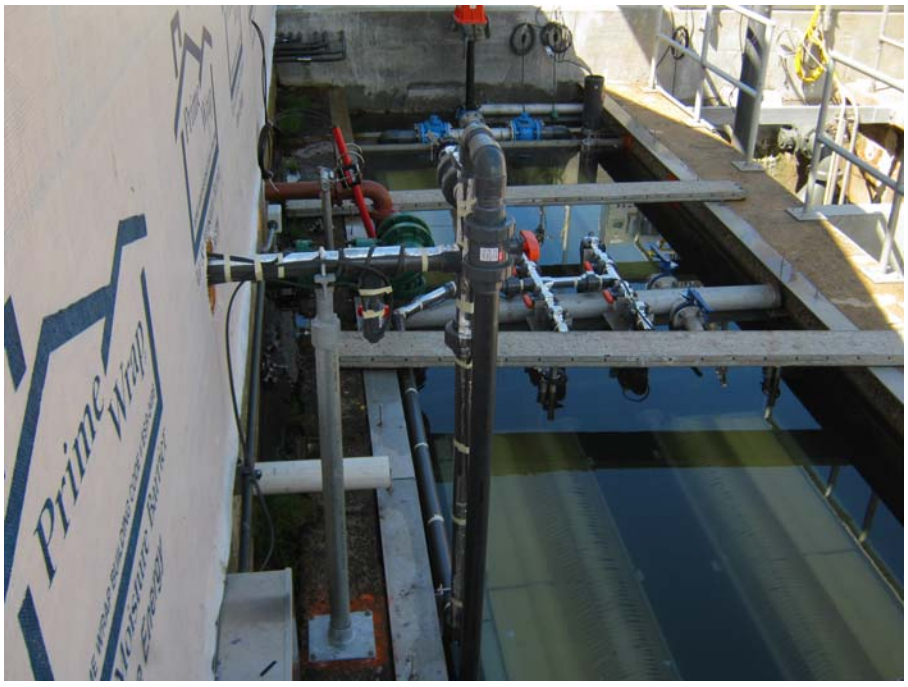
Problem

The Village of Patchogue Wastewater Treatment Plant (WWTP) in Long Island, New York upgraded their biological process to an Integrated Fixed Film Aeration System (IFAS). In addition to rising fuel costs this upgrade resulted in substantial increases in sludge production at this facility, escalating sludge hauling costs.

Solution

An OVIVO Membrane Thickening (MBT) process was installed at the Patchogue WWTP to minimize sludge hauling costs. The Membrane Thickening (MBT) process was retrofitted into two existing tanks minimizing capital costs by preventing construction of new tanks. The MBT process pre-thickens waste activated sludge from the IFAS process up to 3% solids by utilizing a Kubota flat plate membrane and operating it in conjunction with one sludge holding tank. By providing reliable thickening with an MBT process, sludge hauling cost savings were over $27,000 a month for an annual savings of over $327,000. The total installed cost of the MBT equipment was $1.5 million and based on hauling cost savings alone, the Village of Patchogue will get a payback on the MBT process in 4.5 years.



Membrane Thickening Tank at Patchogue WWTP