



MUNICIPAL WASTEWATER

IFM Aids a Local Village in WWTP Upgrades

A village in Northwest Ohio contacted IFM to aid in upgrades to a clarifier in their existing wastewater treatment plant. The village administrator requested installation of RAS (return activated sludge) and WAS (waste activated sludge) lines from their west clarifier.

The RAS line returns settled material in the clarifier to the head of the aeration system. This process re-seeds the new wastewater flow that is entering the aeration tank. The WAS line removes sludge from the treatment process and sends it to the sludge holding tank. This process keeps the ratio of biomass in the plant to the incoming food supplied in balance. If both of these lines are not working properly, then the plant will not run efficiently and proper water treatment will not occur. This needed completed to stay in compliance with OEPA regulations.

To complete this work, IFM installed 3 geyser pumps, new piping, and hardware to the plant. Geyser pumps were chosen since they are the most economical pumping system for RAS/WAS. Geyser pumps have the ability to pump heavy concentrations of RAS consistently, they are less likely to clog due to the heavy concentration of solids. They also have a wider range of flowrates that can be controlled by adjusting the frequency of "strokes". These pumps consume less air, they have less sludge cavitation, and lead to improved clarifier performance.

When on site, IFM installed three new air return lines on the west clarifier. Upper supports were installed on each return line and supports were installed below the return cavity and anchored to the base. The village supplied the air lines for each return and IFM completed the connections and installed dedicated valves for RAS and WAS.

Once full installation was completed and all pumps and lines were tested, IFM explained full operation to the village operators and troubleshooting of any issues that may arise.

