New Jersey’s Lower Township Municipal Utilities Authority had a problem. The utilities authority operates a 5 MGD plant, with wastewater inflow arriving through a 48-in pipe routed 23 feet below grade level. Their manual inflow pump screening setup was difficult and hazardous to clean, and its 2.5” screen spacing let entirely too much non-dispersible waste through. Their 3,000 GPM non-clog pumps were constantly clogging, and workers were repeatedly exposed to a hazardous situation.

Each day, a crew of two to three workers had to descend a 26’ stairwell into a dark, hazardous environment to manually remove accumulated debris from the screen. Scooping the refuse with gloved hands caused additional non-dispersible trash to fall through the large openings between screen bars, and workers had to haul heavy buckets full of debris up the steep, damp steps to a nearby dumpster. Hefting the heavy buckets overhead caused a number of strain injuries over the years, and hazardous hydrogen sulfide levels often necessitated expensive overtime work to clear the screens very early in the morning.

“Our old system cost $26,000 in annual labor.”

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Screentec Saves LTMUA $72 Every Day

Craig Loper, LTMUA’s superintendent, calculated the manual pump screen’s labor costs alone at over $26,000 every year. Worker’s compensation and pump replacement costs sent the total expense of the antiquated system through the roof, but there weren’t any satisfactory solutions available on the market. Until Screentec, that is. “We studied numerous solutions from major vendors in the industry, but they were all twice as expensive as Screentec. On top of that, they all required extensive modifications to our existing inflow system” Craig says. With its low price, easy installation, and low-maintenance design, Screentec was the natural choice for LTMUA. Screentec’s design excludes moving parts, removing the requirement for unsafe manual operations at the bottom of the lift station.

Aqualitec designed and built a simple solution to meet Lower Township’s needs. In order to allow for easy removal, if it ever became necessary, Screentec was installed without any attachments at the bottom of the lift station structure. Aqualitec fabricated Screentec’s bar screen on a customized bracket, secured to the wall by guide rails and attached at its upper base by a single pair of brackets. “We installed the Screentec unit with our own forces in two days with a four man crew and an electrician. We used a pickup truck crane and hand tools,” Loper recalls. Other than removing a small handrail section, installation required no modifications to LTMUA’s existing inflow structure.

"Screentec is better, cheaper, and safer.
-Craig Loper, LTMUA"

The design has exceeded all of LTMUA’s expectations. “Our new vertically installed screen with a ¾” bar spacing does the job much better, cheaper and most importantly, much more safely than our old system,” Loper says.

Aqualitec has been building state-of-the-art pump protection equipment for over 15 years, and has performed over 1,000 installations worldwide. The Screentec design was a fantastic investment for LTMUA, meeting the utility authority’s needs for reduced manual labor, decreased risk to personnel, greater reliability, and increased protection of expensive pumping equipment. Screentec saves LTMUA more than $72 every day!