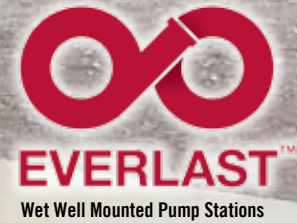




Smith & Loveless Inc.



Pump Stations for
School Districts



Above Ground Pumping Revolutionizes Texas School District's Operations

Location: Klein Independent School District (I.S.D.), Houston, TX

Products: Wet Well Mounted Pump Stations

For most small to medium-sized operations groups like Klein Independent School District in the suburbs of Houston, the conventional choice of submersible wastewater pumps holds little wisdom. Above-ground pump stations reduce exposure to designated confined spaces, and associated safety requirements, allowing these groups to operate in a more convenient and cost-effective manner.

“With the S&L [above-ground] stations, we can do just about everything no problem with just one guy,” said Steve Cox, the Maintenance Supervisor for Mechanical, Electrical and Plumbing at Klein I.S.D. for more than 11 years. “When a submersible goes out, it’s contractor time.”

Servicing 30 elementary, 9 intermediary and 4 high schools, with a combined population of more than 50,000 students, the District employs one full-time Lift Station Technician to operate nearly 20

pump stations. Klein I.S.D. is recognized as one of Texas’ fast-growth Districts and projects to grow by up to 50 percent in the next decade, with plans to add a handful of elementary, three intermediary and two high schools.

Nearly all Texas school districts are independent organizations managed by locally-elected school boards. These districts can encompass partial or entire metropolitan areas, as in the case of Klein, so they can become quite large. Yet because of their independent nature, these districts take on nearly all central functions critical to the operation of their school system, including construction and infrastructure management.

With vast responsibilities and continued growth, Klein I.S.D. places a priority on equipment that not only minimizes cost but also operation and maintenance requirements. This is a focus shared by small to

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medium-sized wastewater systems operations groups all across the world. Therefore, a majority of the pump stations owned and operated by the Klein I.S.D. are above-ground Wet Well Mounted Pump Stations (WWMPS) manufactured by Smith & Loveless.

Klein’s single Lift Station Technician easily and safely inspects each of the District’s 12 S&L Wet Well Mounted Pump Stations on a regular basis by simply walking up and opening the lightweight enclosure. The technician immediately has total access to all mechanical and electrical equipment—including the pump internals after removal of just four bolts.

Wearable seals are periodically replaced as recommended by the manufacturer, Cox said, but the pump stations require little regular maintenance or repair. Occasionally a pump must be manually unclogged, but this is a quick process with the District’s use of S&L’s premium **X-PELLER®** Impeller at locations experiencing a high volume of stringy materials. No individual S&L pumps have been replaced or repaired by an outside contractor over the last decade. “Problems are not a very common occurrence,” Cox said. “The S&L stations run very well.”

In sharp contrast, Klein is ill-equipped to deal with the maintenance and associated safety requirements of its submersible pumping systems and is forced to outsource 100 percent of repairs to outside contractors. They do not possess the specialized equipment or training necessary to safely and effectively pull and repair these systems (which requires accessing designated confined spaces like the wet well and below-grade valve vault). These items can include: permitting, hoists, harnesses, gas monitoring equipment, vac truck, multiple personnel, and other OSHA and Class 1 Div 1 requirements. “My technician lets them in the gate, that’s about it,” Cox said. “We don’t even have the equipment to pull the pump [one of the first steps].”

In almost every instance that Cox can recall, this service contract has included totally draining and cleaning the wet well with a vac truck, renting of a temporary pump, and a significant cost related to the repair or total replacement of the pump. It’s an ugly, time-consuming, and costly process that Cox witnessed firsthand for more than six years at his previous job operating primarily submersibles as a Lift Station Technician.

“It’s a nasty job... pulling that thing out, cleaning it, handling it,” Cox said. “We attempted to work on them, but it just got so complicated.”

Yet circumstances dictate that submersibles must be utilized at some of Klein’s installations, usually due to an unusually deep existing wet well, lack of space, or personal engineer preference, according to Cox. The District currently operates five submersible pump stations but Cox would welcome the opportunity to replace some of them in the future.

“If S&L fits the application, that is going to be our recommendation,” Cox said. “The operation costs are much higher with submersibles.” Besides providing a more convenient and cost-effective manner of operating pump stations, Smith & Loveless delivers a level of total project support that is of noticeable value to Klein and similar operations groups. S&L has assisted Klein with design services from licensed engineers, installation and field services, detailed operation and maintenance instructions and on-stock part availability.

The O&M cost savings provided by S&L’s above-ground WWMPS, combined with value-added S&L project support services, are then topped off with industry-leading S&L Non-Clog Pump efficiencies. The result is the lowest total cost of ownership in pumping. It just so happens that the most cost-effective pumping system is also the most operator friendly one, sealing the deal for operations groups the Klein Independent School District.

“It’s so much easier to just let them turnkey the whole thing,” Cox said. “Installation is easier, operation is easier, pretty much everything.”



S&L Above Ground Pump Station on Wet Well (3-D)