

# PUMP LIFT STATIONS



## **PumpTrooper®**

Essential Component to any Wastewater or Stormwater Conveyance System

The NWPX Park PumpTrooper® is a pre-engineered pump lift station system complete with all necessary components for fully automated operation. Pump Lift Stations move wastewater, stormwater, industrial water, or other process fluids from lower to higher elevations, or in some cases, long distances.

Our Pump Lift Stations are integrated systems that include the wet well structure, pumps, piping, valves, and automated controls. We manufacture each unit to project specifications and deliver it to the job site ready to install and plumb.

### **Applications**

Residential areas • Commercial properties • Sewage and treatment plants • Industrial facilities • Agricultural operations • Recreational areas

#### **Advantages**

- Automatic control system to ensure reliable operation without interruption
- Built-in components are factory- tested and ready to plumb
- Access hatchway with safety net for maintenance
- Prevents excessive odors, flooding, or overflow
- Designed for future scalability and expansion
- Control panel monitors pump system and is equipped with visual and audible alarms



Axial Flow Pump



Grinder Pump



Non-Clog Pump



Vertical Turbine Flow Pump









#### **How It Works**

Pump Lift Stations are a vital part of many wastewater and stormwater conveyance systems. Wastewater or stormwater enters the wet well of a lift station through gravity flow or by being pumped in from upstream collection lines. The water level in the wet well is monitored by float or non-contact sensors. When the level reaches a predetermined height, the sensors send a signal to start the pump(s) that will move the wastewater or stormwater to the next downstream point.

As the pump(s) start, the check valves on the discharge side of the pump(s) prevent fluid from flowing back into the wet well. Once the fluid level in the wet well drops to a predetermined level, the sensors send a signal to stop the pump(s). The process repeats as the flow continues into the lift station. Multiple pumps alternate to maintain even wear on the pumps. Additional components such as an alarm or backup power supply ensures safe and reliable operation of the system.



#### **System Components**

Wet Well: An underground chamber where wastewater or stormwater collects before being pumped out. The wet well is usually made of concrete and is designed to prevent fluids from escaping.

**Pumps:** Pumps move wastewater or stormwater from the wet well to a higher elevation. The type and size of the pump used will depend on the amount of fluids being pumped and the elevation to which it needs to be pumped.

**Control Panel:** Houses electrical components that control the operations. Includes an alarm system that will alert operators of high water levels in the wet well, pump failure, or other system malfunctions.

**Ventilation System:** Releases excess pressure or vacuum due to the filling or emptying of the wet well or piping. It removes odors and gases that may accumulate in the wet well.

**Hatchway:** Aluminum or HDG with integrated safety net.





