

# New Headworks – Archbald Wastewater Treatment Facility

Lackawanna River Basin Sewer Authority, Lackawanna County, PA

Client: Bassett Engineering, Montoursville, PA

Cost: \$3,500,000



As a consultant to Bassett Engineering, Gwin, Dobson & Foreman provided geotechnical, structural, mechanical and electrical engineering services for a new \$4 million headworks structure at the Archbald Wastewater Treatment Facility.

Designed for an average daily flow of 6.0 MGD and maximum hydraulic flow of 36 MGD, the project included a gated influent chamber, Parshall flume, self-cleaning bar screens, vortex grit separation system, headworks building and utility water system.



## New Headworks – Archbald Wastewater Treatment Facility

Lackawanna River Basin Sewer Authority, Lackawanna County, PA

Client: Bassett Engineering, Montoursville, PA

Cost: \$3,500,000

---

The project included the following:

- Design of influent chamber and gated CSO flow diversion system. Influent headworks flume includes a 3-foot wide Parshall flume.
- New vortex grit separation system including 16-foot diameter Hydro International Grit King™ units (two (2) 18 MGD capacity units) with 30-inch diameter inlet and 60-inch overflow. The system included a 250 GPM self-priming grit lift pump, grit compactor/washer and screenings conveyor.
- New self-cleaning fine screen system including Parkson Aqua Guard UltraClean™ system installed in a 3-foot wide by 6-foot deep channel.
- Structural and foundation design elements included all substructure and superstructure, pavilion roof system and electrical control room.
- Electrical work including all primary power, distribution, lighting and equipment power wiring along with instrumentation and integration with the Archbald plant control system.
- Utility water system with 1,050 gallon hydropneumatic tank and three (3) 200 GPM submersible pumps mounted in the chlorine contact chamber.

GD&F performed shop drawing reviews and participated in equipment startup during the construction phase. A partial boundary survey, detailed quantity takeoff and engineering cost estimate were also performed by GD&F. The headworks system exceeded the expectations of the Lackawanna River Basin Sewer Authority.