
Industrial Wastewater Pre-Treatment Design, Construction, & Operation

Customer: Coastal Sunbelt Produce
Location: Howard County, MD



Description:

The Coastal Companies expanded its capabilities with a new produce processing facility in Laurel MD. With Hydro-Terra Group's assistance, they included in their facility plan a wastewater pre-treatment plant for reducing the strength of their processing wastewater to sanitary sewer levels. A 100,000 gpd system receives flow from the 300,000 ft² plant and passes it through headworks, primary settling, extended aeration, secondary settling and effluent pumping stages. Solids removal, biological treatment and chemical pH adjustment is critical to the success of this plant.

Hydro-Terra Group (HTG) provided engineering, design, construction, startup and operation services of this pretreatment facility. Included in the design is a remote monitoring system which can alert off-site operators of issues early, avoiding potential problems. Water flows to the plant by gravity and is moved within the plant by a combination of airlift and electric pumping systems. Regenerative blowers and fine bubble aerators provide oxygen for the biological treatment process, which is intended to reduce suspended solids, biochemical oxygen demand and phosphorous. Final effluent is dosed with liquid caustic to maintain a neutral pH. Sanitary domestic wastewater also flows the pre-treatment plant, and two pumping chambers move both the treated process wastewater and the untreated sanitary wastewater through two 1300' long force mains to the county sanitary sewer.

Project Highlights:

- ✓ Site and process treatment design
- ✓ Coordination with local government agencies and development of discharge permit
- ✓ Assessment of potential water quantity and quality impacts
- ✓ Design, contracting, construction oversight, and mechanical /controls installation
- ✓ Preparation of Operations & Maintenance Manual and as-built plans
- ✓ System startup with process monitoring and equipment modifications
- ✓ Client assistance for permit conformance



Controls & Remote Monitoring System



Pre-Treatment Plant