

# **Whites Pond Preserve -Lewes Delaware.**

## **Sewer System Narrative.**

### **Introduction**

Whites Pond Preserve is a small subdivision consisting of 14 lots in Lewes, Delaware. The property is identified as Parcel # 335-8.12-79.00 totaling 7.05 acres. The site is bordered by wetlands abutting Whites Pond on 3 sides and Theodore Freeman Highway in the North. The property is mostly undeveloped except for a single residence that will be retained and included with the subdivision sewer collection and conveyance system.

### **Sewer collection system**

The sewer collection and conveyance system will be managed, maintained and operated by the City of Lewes. Wastewater will be discharged to the Howard H Seymour Water Reclamation Plant for treatment. The sewer pipe materials will be C900 PVC SDR 35 with minimum diameter of 8 inches. Manholes will be precast concrete with cast iron covers.

### **Sewer Conveyance and Disposal.**

Average daily flow is computed at 3500 gallons per day. Using an equivalent EDU of 250 gallons per single family home per day. Design peak 1 hour flow is assumed at a conservative factor of 4. Using these numbers the average daily inflow is computed at 2.43 gallons per minute and the pump station design flow is computed at 9.72 gallons per minute. In the event of an emergency the collection system has the capability of storing in excess of 48-hours of average flow without any overflows or spills. Due to the low flows dual E-One grinder pumps are to be installed to facilitate the use of a small diameter force main to maintain cleansing velocities that are in excess of 2 feet per second.

The small station will include dual pumps operating in a lead- lag pattern to obtain even use and wear on the pumps and motors. Included in the station will be a valve vault with bypass connection, air release valve and flow meter. Site water supply is fitted with a backflow prevention system. City compliant SCADA system for effective monitoring and maintenance will be installed and integrated by the City of Lewes. Electrical cabinet houses pump controller, and panel boards for lights, heaters and ancillary items requiring power, and back-up generator ATS, panels and disconnects.

The site is protected by a 6 ft high vinyl fence and locking gates. Landscaping will be provided to improve community aesthetics.