



*Del Trend Pump House*

## Del Trend Reservoir and Pump Station Upgrades Township of Springwater

In 2006 The Township of Springwater retained Ainley Group for the design and construction administration/site observation services for upgrades to the existing Del Trend reservoir and high-lift pump station. Upgrades were required to service planned residential and commercial growth in the south end of Midhurst.

A design brief for the proposed works was completed in July 2006. Based on design criteria, it was determined that an additional 375m<sup>3</sup> of storage volume was required. The additional storage was designed as a below grade reservoir, connected to the existing storage reservoir. It was also determined that the four existing high-lift pumps needed to be replaced with four larger pumps and a larger D.G. set was required. The new pumps are:

- two to provide average day demand and maximum day demand at 6.4L/s each
- one max duty at 37.6L/s
- one standby max duty at 37.6L/s.

The three duty pumps are equipped with variable frequency drives (VFDs). The VFD for the max duty pump can also control the standby pump. Del Trend is a closed loop system, the high-lift pumps are controlled by discharge pressure from the pumphouse. The design included replacing the MCC and PLC, upgrading the controls, replacing the D.G. set, HVAC upgrades, as well as landscaping and grading around the new reservoir.

*The water storage capacity expansion and increased high-lift pumping capacity was needed to service planned residential and commercial growth in the south end of Midhurst.*

### Project Facts

**Client:** Township of Springwater

**Scope of Work:**

- Design Brief
- Submission to Ministry of the Environment for revised CofA
- Submission to Ministry of the Environment for revised Permit to Take Water
- Detailed design:
  - In-ground reservoir
  - Grading and Landscaping
  - Mechanical upgrades
  - Electrical Upgrades
  - New MCC
  - Instrumentation and Control
  - New Hydro Service
  - New D.G. set
- Preparation of Tender Documents
- Construction Administration
- Site Observation

**Key Design Criteria:**

- Design Equivalent Population of 682 persons
- Additional Storage Volume: 375m<sup>3</sup>
- 2 pumps @ 6.4L/s
- 2 pumps @ 37.6L/s

**Project Cost:**

Construction \$960,000  
Engineering: \$200,000