



New headworks building housing the new aeration blowers and control room

The new headworks building combines a number of the preliminary process treatments in one stand-alone structure.

Collingwood Water Pollution Control Plant



Water Pollution Control Plant Headworks Upgrade Town of Collingwood

In 1997, the Town of Collingwood commissioned the Ainley Group to design an upgrade of the headworks at its water pollution control plant. The project, representing the first major upgrade of the plant since 1981, replaced equipment and processes provided in the original plant constructed in 1958. The upgrade was completed in the summer of 1999.

The new headworks' building combines a number of the preliminary process treatments in one stand-alone structure. The building provides an emergency plant bypass, a mechanically raked raw sewage screen, three new raw sewage pumps, two new grit removal units, a septage/leachate receiving facility and a bio-scrubber to remove odours from the entire headworks building. The new headworks is designed for a 2016 average daily flow of 25,876 m³/d and a theoretical peak flow of 68,000 m³/d to service an equivalent population (including future industry) of 21,554 persons.

In addition to the new pre-treatment headworks, the upgrade provides:

- standby power in the form of a diesel engine driven generator contained in its own building
- a new hydro sub-station
- replacement of the surface aerators used for the biological treatment of the wastewater with fine bubble diffused air
- the replacement of the gaseous chlorine disinfection system with an ultraviolet light process
- an automated instrumentation and control (SCADA) system.

Project Facts

Client: Town of Collingwood

Scope of Work:

- Detailed design
- Contract tendering
- Submissions and approvals
- Contract and construction administration.

Key Design Criteria:

- Flow rates:
 - average daily: 25,876 m³/d
 - theoretical peak: 68,000 m³/d
- Design population: 21,554 (2016)

Project Cost: \$5,500,000 (1999)