



The design for the new Ultra-filtration Water Treatment Plant was completed in August, 1997, immediately followed by construction and an official opening on Dec. 4, 1998.



Raw water basins containing filtration cassettes.

Raymond A. Barker Ultrafiltration Water Treatment Plant - Town of Collingwood PUC

In March, 1996, a few isolated cases of Cryptosporidiosis were diagnosed in Collingwood. Suspecting the Town's water supply may be the source of the parasite, the Simcoe County Medical Officer of Health issued a 'Boil Water Advisory'. This was to remain in place until a water treatment system capable of reducing turbidity levels to < 0.1 mg/L was put into operation.

To enable the lifting of this Advisory, the Collingwood Public Utilities Commission (CPUC) approved the purchase and installation of interim ultrafiltration membranes, which were put into operation in August, 1996. The Ainley Group coordinated the design, purchase and installation process.

In 1996, the Ainley Group recommended that the CPUC provide a permanent plant utilizing membrane technology. A ZeeWeed™ membrane (combination micro and ultra-filtration) system and gas chlorination for disinfection were technologies considered during the design phase of the project.

In November, 1996, pre-selection of the membrane system was completed and a purchase order was issued to Zenon Environmental Inc. for the supply of micro/ultra-filtration membranes.

The design for the new plant was completed in August 1997, immediately followed by construction and an official opening on December 4, 1998.

The Ainley Group is currently managing the design and construction of an upgrade/expansion of the plant to a capacity of $48,355$ m³/d (MDD) at an estimated cost of \$28,000,000 (2008). The upgrade/expansion includes replacement of existing ZeeWeed™ 500 membranes with ZeeWeed™ 1000 membranes.

Project Facts

Client: Town of Collingwood PUC

Key Design Criteria:
New Ultra-filtration Water Treatment Plant.

Design Capacity: $27,355$ m³/d (MDD)

Design Population: 21,554

Treatment Criteria:

- turbidity reduction to < 0.1 mg/L
- Giardia, Cryptosporidium, bacteria, virus removal/inactivation

Upgraded Raw Water Pumping Facility for Industrial Use.

Design Capacity: $17,000$ m³/d

Project Cost: \$20,000,000 (1997)