



Brian Jobb, Manager, WCWC Training Institute: At the Centre, we offer classroom and hands-on training to operators, students, and senior municipal officials. Training is delivered here at the Centre and at over 150 locations throughout the province.

Souleymane Ndongue, Manager, WCWC Research & Technology Institute: We are pleased to invite you to our leading-edge technology demonstration facility. It features today's commonly used and also new equipment in drinking water treatment, analysis, monitoring, and distribution.

Bonnie McGinnis, Receptionist: We are proud to share our modern LEED Gold Certified facility with you.

Board Meetings at WCWC

The boardroom is used for WCWC meetings, a range of other meetings and opens up to the atrium.

Hands-on Training

Joel Corbeil, Trainer: We deliver high quality training province-wide with every course offered. Our courses are designed to train Ontario drinking water owners, operators, and students on relevant information and operating procedures. We deliver over 40 courses including the Ministry of the Environment's mandatory entry-level and certificate renewal courses. During peak weeks, we train up to 350 water operators across the province through both public and on-site deliveries. Maintenancefest is one of our most popular events, offering several hands-on training modules over one or two days. We host an annual Maintenancefest every summer at the Walkerton Clean Water Centre and offer regional Maintenancefests throughout Ontario as requested. Our courses and delivery methods are constantly assessed and refined in order to meet the needs of personnel working in the drinking water industry.

Technology Demonstration Facility

The technology demonstration facility here at the Centre is used for many purposes. It allows for hands-on training using fully operational drinking water treatment, distribution, and monitoring equipment. It is also used for practical drinking water research and assessment of technologies and services.

The Pilot Plant (Conventional Treatment Process)

The pilot plant is a gravity flow, dual-train, conventional treatment plant. The treatment process includes rapid mixing, flocculation, settling, rapid-rate filtration, and chlorination. The rapid filters are dual media, sand/antracite, and sand/granular activated carbon.

Slow Sand Filtration

Slow sand filtration is a process in which water flows through sand filter media by gravity. When the slow sand filter is established, biofilm is formed on the top layer of the sand. The majority of the particles are removed through adsorption by the established biofilm. The slow sand pilot plant can be operated with or without pre-ozonation.

Ultrafiltration Membranes

The ultrafiltration membranes at the Centre are vacuum-driven processes that remove particles by passing water through submerged membrane fibers.

Dissolved Air Flotation (DAF)

Dissolved Air Flotation (DAF) is a process that replaces settling tanks in a conventional treatment process. The dissolved air flotation plant includes rapid mixing, flocculation, flotation, and rapid rate filtration. The DAF process involves the release of bubbles from the bottom of the tank. The floc that is formed in the flocculation process attaches to the bubbles and floats to the top of the tank where it is skimmed off.

Ozonation

Ozone is a strong disinfectant that can be used for primary disinfection. It has also been shown to degrade personal care products, taste and odour compounds, and other contaminants. The ozone system can also be operated as advanced oxidation process otherwise known as AOP mode using an addition of hydrogen peroxide.

Ultraviolet (UV) Disinfection

Ultraviolet, or UV, disinfection is an effective non-chemical primary disinfection process. The UV rays can destroy bacteria and inactivate viruses and protozoa. Water flows through the chamber where it is exposed to UV light. The UV system can also be operated as Advanced Oxidation Process, or AOP, with addition of hydrogen peroxide.

Supervisory Control and Data Acquisition (SCADA) Process System

Just like many of Ontario's drinking water systems, the Walkerton Clean Water Centre has a sophisticated Supervisory Control and Data Acquisition system, SCADA. The system is a tool that monitors and controls the operation of drinking water process equipment, such as the pilot plant. The system collects data from online analyzers to plot historical and real-time trends. Data acquired, such as turbidity, pH, head loss, flow rates, temperature, free chlorine, and total chlorine can be collected and stored over time.

Distribution System

The Walkerton Clean Water Centre has fully-equipped distribution systems both indoors and outdoors. The purpose of the distribution system is to provide hands-on training experience, such as wet tapping, regarding the operation and maintenance of distribution systems.

Turbidity Meters

Turbidity meters measure the scattering of light from suspended particles in the water. Online turbidity meters measure turbidity continuously for processing equipment such as the pilot plant, ultrafiltration membranes, and slow sand filtration. Laboratory turbidity meters are used to measure turbidity from grab samples or laboratory samples.

pH Meters

pH meters measure whether water is acidic, basic, or neutral. Online pH meters are used to monitor the pH continuously for drinking water process equipment, such as the pilot plant or slow sand filtration. Laboratory pH meters are used to measure pH from grab or laboratory samples.

UV Meters

UV meters at the Walkerton Clean Water Centre measure the UV absorbance at 254 nanometers. UV light at 254 nanometer wavelength is absorbed by dissolved organic matter in the water, which indicates the level of dissolved organic matter. Online UV meters are used to monitor the UV absorbance continuously for the pilot plant. Laboratory UV meters measure UV absorbance from grab samples and laboratory samples.



Laboratory

The Centre's laboratory is fully-equipped with leading-edge technology and equipment. It provides a hands-on learning experience for owners, operators, and postsecondary students.

Thank You for Viewing

Training participants evaluate and rate the training experience. Almost 100 percent of our participants would recommend Walkerton's courses to others.

To find out more please contact us 866-515-0550 or inquiry@wcwc.ca