



Lake Erie Water Quality – Seasonal Water Quality Advisory

September 14, 2023

With changing water temperatures and weather conditions, Lake Erie may experience a considerable thermocline inversion causing the lake water to “turn over”. This typically occurs in fall, and can result in colour, taste and odour issues in drinking water.

Seasonal lake turnover events may bring up water with very low oxygen levels from the deeper part of the lake to the surface. Coupled with wind and storm events, this can cause a number of issues including sizable fish-kills, algal die-off, increased amounts of manganese in the raw water, strong odor, and high turbidity (cloudiness) in the raw lake water. This water can be very difficult to treat depending on the severity of the event.

When lake turnover events occur, the treated water supplied to the area municipalities from the Elgin Area Primary Water Supply System (EAPWSS) continues to meet the stringent water quality standards established by Ontario Regulation. The water system’s contracted operating authority, the Ontario Clean Water Agency, works diligently to ensure the treated water quality continues meet the drinking water standards; however, some consumers may notice a change in the appearance (colour), taste or odour of the water as a result.

When incoming raw water into the plant changes, such as low oxygen levels and higher manganese content, the Elgin Area Water Treatment Plant makes operational changes to address the current circumstances. Changes may include an increase in chlorine levels to compensate for the higher-than-normal chlorine demand and ensure adequate disinfection prior to the supply of water to area municipalities, as well as increased the use of powder activated carbon to combat the strong taste/odors associated with an event.

Operations staff keep in close contact with other drinking water systems along the north shore of Lake Erie to share information about changing lake conditions. Member municipalities that receive water from the EAPWSS will be advised of events that may impact their local municipal water distribution systems.

Consumers with questions or concerns about the supply of drinking water from their municipal water distribution system should contact their local municipality.

Background

The Elgin Area Water Treatment Plant (WTP) utilizes a conventional chemically-assisted sedimentation and filtration water treatment process to supply treated drinking water approximately 138,000 people in the municipalities of Bayham, Central Elgin, Dutton Dunwich, Malahide and Southwold, as well as the Town of Aylmer and the cities of St. Thomas and London.

On average, the Elgin Area WTP supplies about 44 million litres of water per day to area municipalities, with a maximum summer peak in the order of 60 million litres.

Raw water from Lake Erie, treatment processes, and treated drinking water supplied to area municipalities are continuously monitored using computerized analyzers. Onsite operational laboratory testing is conducted at the WTP every four hours to monitor and confirm treatment processes and water quality. Additional samples are sent to an accredited laboratory daily, weekly, monthly and quarterly to verify treatment quality and to further ensure the treated drinking water meets the Ontario Drinking Water Quality Standards.

The taste and odour of the water from Lake Erie is treated at this facility using powder-activated carbon added to the raw water as it enters the water treatment facility, which is subsequently removed through the sedimentation and filtration processes.

The drinking water supplied to area municipalities is disinfected using both chlorine and ultraviolet light (UV), and chlorine residuals are monitored and maintained in the transmission system which supplies the area municipalities.

Additional information about the Elgin Area Primary Water Supply System is available at: <https://huronelginwater.ca/>

For further information please contact: general@huronelginwater.ca