Beach Closing Beneficial Use Impairment Re-Designation



Beach Closings Beneficial Use Impairment (BUI)

WHAT WAS THE ISSUE?

In the 1991 Stage 1 Remedial Action Plan (RAP) Report, the Beach Closings BUI #10 was identified as impaired due to elevated levels of bacteria in some of the Canadian locations along the Detroit River. In particular, sites downstream of Little River, Windsor sewer overflow sites, Turkey Creek and the Amherstburg Waste Water Treatment Plant exceeded acceptable levels outlined by the Provincial Water Quality Guidelines. Beach closing was one of the BUIs identified as an environmental issue for the Detroit River Area of Concern.

In 2010, the DRCC established that Beach Closings will no longer be considered impaired when the frequency of beach closures due to elevated counts of E.coli in the Detroit River at White Sands and McKee Park do not exceed the frequency at upstream (Sandpoint Beach) and downstream Holiday Beach references.

ONTARIO GUIDELINES FOR SAFE SWIMMING

In Ontario, the guidelines for safe swimming are based on maximum counts of E.coli, measured in colony forming units or cfu. An advisory or warning is posted if samples exceed 100 cfu/100mL of water, which means the public swims at their own risk. A beach is closed if samples exceed 1,000cfu/1,000mL of water.

Ontario Guidelines for Safe Swimming

Advisory or **Warning** if samples are equal to or greater than 100 cfu/100mL of water

Beach Closure if samples are equal to or are above 1,000cfu /1,000mLof water



White Sands Conservation Area

WHAT WAS DONE?

The Windsor Essex County Health Unit (WECHU) is responsible for monitoring beach quality at 9 swimming beaches throughout Essex County. Their sampling is conducted weekly between June and September, but only 1 of 9 beaches falls within the Detroit River AOC. To address AOC locations, Essex Region Conservation Authority (ERCA) sampled two additional locations from 2009 to 2011 which include McKee Park and Sandpoint Beach, on behalf of the DRCC. These two sites were selected because they are part of the Detroit River AOC, and are used for recreation such as fishing and boating.

The DRCC then reviewed and compared E.coli bacteria data from McKee Park and White Sands Conservation Area to reference beaches (Sandpoint and Holiday Beach) monitored by WECHU. The monitoring reflects, in part, the results of DRCC partner investment of \$212 million to local infrastructure to improve water quality since the































1991 Stage 1 RAP Report. This includes an upgrade to the Lou Romano Water Reclamation Plant in 2008, ongoing separation of combined sewers, the construction of a combined sewer overflow retention treatment basin in 2011 and an upgrade to the Amherstburg Wastewater Treatment Plant in 2012.

As well, the underground Combined Sewer Overflow (CSO) Retention Basin (RTB) on Riverside Drive installed in Windsor in 2014, captured 476 million litres (ML or megalitres) of combined stormwater and sewer overflows that would have previously discharged directly into the Detroit River without any treatment. This project has significant benefits to reducing pollution into the water system.

RESULTS

The results of this assessment show that the Detroit River sites rarely exceeded the closing benchmark and were not different than the upstream and downstream locations (Sandpoint and Holiday). This means the BUI is now **Not** Impaired, and is considered to be the same water quality of the rest of the Great Lakes. It is important to note that these beaches are still subject to E.coli being present, but due to many projects addressing local water quality, the results demonstrate the Detroit River has improved.

WHAT CAN YOU DO?

It is important to note that swimming in undesignated areas of the Detroit River is highly discouraged due to dangers related to water current and shipping traffic. The public is encouraged to contact the WECHU to obtain information regarding the condition of a designated swimming beach in the Windsor-Essex Region: http://www.wechealthunit.org/inspect/beaches or call: 519-258-2146 x.426.

REFERENCES

Detroit River Canadian Cleanup (DRCC). 2013. Redesignation Report: An Assessment of 'Beach Closings' (BUI #10) in the Detroit River Canadian Area of Concern. Windsor, Ontario, Canada.

For more Information, Contact: Detroit River Canadian Cleanup 311-360 Fairview Avenue West Essex, Ontario N8M 1Y6 postmaster@detroitriver.ca

Tel: 519-982-3722 Fax: 519-776-8688

Report also available at www.detroitriver.ca

Who is the Detroit River Canadian Cleanup?

The Detroit River Canadian Cleanup implements the Remedial Action Plan on behalf of a community-based partnership working together to protect, restore and enhance the Detroit River ecosystem. The federal, provincial and municipal government, local industries, scientific researchers, local environmental organizations and many dedicated citizens are key partners and play an important role in the cleanup process. The DRCC's member organizations provide leadership in identifying partnerships and funding opportunities to support and implement clean up goals.

Restoring our River Together!

When the Windsor-Detroit area underwent rapid industrialization at the turn of the 20th century, the Detroit River became notoriously polluted. Issues facing the Detroit River are combined sewer overflows, urbanization and land use or degradation of habitat and toxic contaminants such as mercury, polychlorinated biphenyl (PCB), polycyclic aromatic hydrocarbons (PAHs) and metals in the water and sediment. These environmental issues have been identified as being related to, or the cause of, the impairment of several beneficial uses.

A beneficial use is defined as the ability of living organisms (including humans) to use the Great Lakes without adverse consequences. A Beneficial Use Impairment (BUI) is a condition that interferes with the enjoyment of a water use. The Canada-United States Great Lakes Water Quality Agreement (GLWQA) identifies 14 Beneficial Use Impairments (BUIs) that must be restored in order to remove the water body as an Area of Concern (AOC). An AOC is a location where environmental quality is degraded compared to other areas in the Great Lakes Basin.