

## Niagara River RAP Beneficial Use Impairment (BUI)

### Beach Closings

Impaired

#### Status of BUI assessment:

- On hold until all results are available from enhanced water quality monitoring and sewershed investigations.

#### Current Niagara River RAP Delisting Criteria:

- That public beaches meet the following conditions:
- Prominent sources of fecal pollution that could contaminate beach or recreational waters are known;
  - Less than 20% of the geometric means of water samples collected over the swimming season exceed the Provincial Water Quality Objectives (100 *E.coli*/100ml), or is similar to a suitable non-AOC reference site, when assessed over a period of at least three to five years;
  - Any severe exceedance of Provincial Water Quality Objectives is rare and predictably associated with local events such as significant rainfall events.

#### Canadian/American AOC Comparisons:

There are no beaches on the U.S. side of the Niagara River.

#### Lead agencies:

Niagara Region, Environment Canada and Town of Niagara-on-the-Lake.

#### What was the problem?

- The Stage 1 report (1993), Table A, stated that: "Beaches along the Niagara River are generally found in small quiescent areas away from the river's high velocities. Beach closings have occurred on a fairly routine basis over the past decade. In addition to the contributions from CSOs, the slow moving waters of swimming areas combined with high use and a plentiful waterfowl community are all believed to contribute to the problem."

#### What Do We Know?

- There is 1 public beach in the Niagara River AOC: Queen's Royal Beach (located on the Niagara River in Niagara-on-the-Lake). The Town of Niagara-on-the-Lake no longer considers Ball's Park a public beach (personal communication with Niagara Region's Health Dept., Feb/2012). Hence, Niagara Region no longer tests water quality at Ball's Park.
- Queen's Royal Beach is one of 26 beaches that are routinely tested for bacterial contamination by Niagara Region Public Health.
- Queen's Royal Beach has one of the highest levels of water quality impairment in the Niagara Region.
- There is a storm water overflow adjacent to Queen's Royal Beach that is a contributing *E. coli* source to the beach.
- Further investigations are underway at Queen's Royal Beach to determine the source of the problem and identify a solution.

#### What Has Been Done?

- A RAP technical evaluation of the impairment status of the Niagara River AOC beaches was carried out in 2007 and documented in the Stage 2 Update report (December 2009).
- A study of all beaches in the Niagara Region (most of them outside the AOC) was carried out through the Niagara Water Strategy, 2010/11.
- Environment Canada (EC) has conducted Microbial Source Tracking (MST) to determine if contamination is of human or wildlife origin.
- In collaboration, EC is continuing MST and Niagara Region its investigations in the sewershed through 2013 & 2014.
- Niagara Region compiled the results of its enhanced water quality monitoring in a report: *Queen's Royal Beach 2014 Study*.

#### What Still Needs To Happen?

- Need to complete MST and sewershed investigations.
- Need to determine the source of the problem and identify a solution.

#### Who will write BUI assessment?

- RAP Coordinator has prepared Part 1 (background) of the report. Anticipate complete report in 2017.

#### Who will conduct peer review?

- RAP Coordinating Committee and subject matter experts.

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