

REGION OF OTTAWA-CARLETON

MEMORANDUM

RÉGION D'OTTAWA-CARLETON

NOTE DE SERVICE

Our File/N/Réf.  
Your File/V/Réf.

RC

DATE

29 March 2000

TO/DEST.

Co-ordinator  
Community Services Committee

FROM/EXP.

Associate Medical Officer of Health

SUBJECT/OBJET

**2000 BEACH RECOMMENDATIONS**

Information Previously Distributed

To be listed on the Community Services  
Agenda, 20 April 2000

BACKGROUND

It is the responsibility of the Medical Officer of Health to make recommendations from a health perspective regarding the use of recreational waters for bathing purposes. The decision to permit bathing at any particular beach is made by the municipal Department of Recreation and Parks.

In Ottawa-Carleton, the most relevant factor in determining the beach water quality is the knowledge of the sanitary conditions at the site, supplemented by the bacteriological analysis of the water. Historical sampling results permit an analysis of past trends of bacterial influences at a site, while ongoing daily sampling permits analysis of current factors influencing the bacterial load at any given time.

The Environmental Health Branch monitors the water quality at all beaches within the Region. A total of 25 sites on the Ottawa and Rideau Rivers are sampled. The three in-town beaches (Mooneys Bay, Westboro Beach and Britannia Beach) are sampled five days a week, while the out-of-town beaches are sampled once every two weeks. Samples were taken between May 19 and August 31, 1999. The City of Ottawa opened the in-town beaches to the public in 1999 on the following dates: June 12-13, June 19-20, and June 25 to August 18. This was similar to the schedule in 1998.

Mooney's Bay Beach has a pump system which brings water from the centre of the Rideau River into the beach area to improve water circulation. This beach is also equipped with gull netting over the swimming area to deter seagulls from frequenting the beach. Both of these measures have made a positive impact on the water quality at Mooney's Bay. Gull netting was erected over part of the swimming area at Britannia Beach in 1999 to see if similar positive outcomes in beach water quality would result.

Currently, the main indicator for assessing human health risks stemming from the use of recreational water is the level of *E. coli* bacteria. *E. coli* usually do not pose health risks, but this organism is considered the best single indicator of the presence of pathogenic micro-organisms from faecal contamination by warm-blooded animals, including humans. The Ontario standard is currently 100 *E. coli*/100ml of recreational water, calculated as a geometric mean. The United States Environmental Protection Agency estimates an illness rate of 8 individuals per 1,000 swimmers in waters containing a geometric mean of 126 *E. coli*/100 ml of water. Recreational exposures to waterborne pathogenic micro-organisms increase the risk of adverse health effects such as gastroenteritis, ear, eye and skin infections, and acute respiratory illness. Persons with existing health conditions or weakened immune systems may be at higher risk. Health risks are higher with total immersion (compared with wading), and if water is swallowed. It takes a minimum of 24 hours for bacteriological results from the samples to be processed due to the nature of the culturing of the *E. coli* organisms measured. For this reason, bacteriological results are not available until the day after the sample was taken.

In preparing departmental recommendations, previous information including knowledge of various discharges into the rivers and their effects as measured by thousands of bacteriological samples taken over the past several years was reviewed. Rainfall is another factor which affects stormwater contribution to the rivers. In 1999, as well as in past years, there was a correlation between rainfall events of 5 millimetres (mm.) or more on recreational water quality at both Britannia and Westboro Beaches.

#### WATER QUALITY AT BEACHES IN 1999

Annex A\* shows the 1999 bacteriological results for the three in-town beaches: Mooneys Bay, Westboro Beach and Britannia Beach.

##### Mooneys Bay

Water quality at Mooneys Bay continued to be excellent in 1999, exceeding the Provincial standard on only one sampling occasion.

##### Westboro Beach

In 1999, the Health Department recommended that Westboro Beach be closed for 24 hours following a rainfall of 5 mm. or more and when a bacterial test results indicated a trend of poor water quality. Sample results exceeded the provincial standard 10 times during the open bathing season, down from 20 times in 1998. Rainfall events and trends of poor water quality resulted in the beach being posted for a total of 13 days in the bathing season.

### Britannia Beach

In 1999, the Health Department recommended that Britannia Beach be closed for 24 hours following a rainfall of 5 mm. or more and when a bacterial test results indicated a trend of poor water quality. 1999 saw an improvement in the quality of water at Britannia Beach. Sample results exceeded the provincial standard 21 times during the open bathing season, down from 32 times in 1998. Rainfall events and trends of poor water quality resulted in the beach being posted for a total of 13 days in the bathing season. Gull netting was erected over an area adjacent to the swimming area over the course of the 1999 bathing season. Because the netting was not in place until the end of July, it is difficult to determine if the netting was responsible for improved water quality. No marked improvement was noted after the erection of the netting, and there was some thought that the netting may have redirected gulls into the bathing area where there was no netting.

### Out-of-Town Beaches

The water quality at out-of-town beaches along the Rideau and Ottawa Rivers remained good in 1999.

### RECOMMENDATIONS FOR 2000

The Health Department will continue to monitor all beaches in the Region on the same schedule as in 1999, with increases as necessary.

### In-Town Beaches

- Mooneys Bay Beach be open for swimming;
- Westboro Beach be open for swimming but closed for 24 hours following a rainfall of 5 mm. or more;
- Britannia Beach be open for swimming but closed for 24 hours following a rainfall of 5 mm. or more;
- If bacteriological trends indicate a problem at any of these beaches, I will recommend the beach in question be closed until such time as sample results indicate it is safe for bathing.

Out-of-Town Beaches

Ottawa River:

Fitzroy Provincial Park (2)  
Camp Woolsey  
Constance Bay  
Camp “Y”  
Shirley’s Bay  
Auger Beach  
Baskins Beach  
Buckham’s Bay

Rideau River:

Rideau Provincial Park (4)  
Baxter Conservation Centre  
Long Island (RCMP Camp)  
Taylor Conservation Area  
Kars Dock  
Echolands

The following out-of-town monitoring points should continue to be sampled:

Ottawa River:

Piney Point  
Ottawa Beach

Rideau River:

Manotick East  
Black Rapids

FINANCIAL IMPLICATIONS

There are no financial implications resulting from this report.

PUBLIC CONSULTATION

No public consultation was required for this report. Under the Health Protection and Promotion Act, 1983 and the Mandatory Programs and Services Guidelines, 1997, the Medical Officer of Health has a legislated responsibility to ensure that recreational waters are suitable for bathing purposes.

*Approved by  
Edward Ellis, MD, MPH, FRCPC*

\*Available upon request from the Committee Co-ordinator