Assessment of Impaired Beneficial Uses of the Bay of Quinte

IBU #10: Beach Closings

FINAL REPORT
EXECUTIVE SUMMARY

This report was prepared to help the Bay of Quinte Remedial Action Plan Restoration Council assess the current status of the impairment to the beneficial uses of the Bay of Quinte for recreational use, namely Beach Closings. Restoration targets from the Bay of Quinte Remedial Action Plan, Five Year Work Plan, 2001-2005 were used in the analysis of area beach postings data to determine the success of restoration efforts by local stakeholders.

Beach closings data was evaluated from 1988 to 2002 to look for trends in the water quality. While there were some beaches that showed improvement, notably West Zwick’s Island (on the Bay of Quinte) and Kingsford (Salmon River) Beaches, the rest did not improve.

Failing an improvement on the Riverside Park (Moira River in Belleville) and Zwick’s beaches, closure and relocation plans were a possible recommendation. Since no improvement was noted at the Riverside beach, and since the City of Belleville has discontinued use of the beach, closure and relocation is recommended.

The outcome of the investigation does not point to a clear direction to delist the impaired beneficial use number 10, Beach Closings. However, recommendations are included for further study including the establishment of an intensive sampling program that would better represent water quality within the bay.
# Table of Contents

**EXECUTIVE SUMMARY** ......................................................................................................................... 1

**TABLE OF CONTENTS** .............................................................................................................................. II

**INTRODUCTION** ...................................................................................................................................... 1

**BACKGROUND** ...................................................................................................................................... 1

**IMPAIRED BENEFICIAL USE NO. 10: BEACH CLOSINGS** ................................................................. 2

- Why Beaches are Closed .......................................................................................................................... 2

**DEVELOPMENT OF RESTORATION TARGETS** .................................................................................. 4

- DeListing Targets ...................................................................................................................................... 4

**HOW THE TARGETS ARE MEASURED** .............................................................................................. 5

**ANALYSIS** ........................................................................................................................................... 5

- Forest Mills and Newburg Beaches .......................................................................................................... 6
- Frankford and Kingsford Beaches ............................................................................................................. 7
- Zwick's Island and Riverside Beaches ...................................................................................................... 8
- Other Bay of Quinte Beaches .................................................................................................................... 10

**HAVE THE TARGETS BEEN MET?** ....................................................................................................... 11

**RELOCATION OF RIVERSIDE BEACH** ................................................................................................ 12

**CONCLUSION** ...................................................................................................................................... 13

**DISCUSSION** ....................................................................................................................................... 13

**RECOMMENDATIONS** ............................................................................................................................ 14
Table of Figures

FIGURE 1: LOCATION OF BAY OF QUINTE BEACHES .......................................................... 3
FIGURE 2: UPPER BEACHES ......................................................................................... 7
FIGURE 3: ZWICK'S BEACH POSTINGS ....................................................................... 8
FIGURE 4: RIVERSIDE BEACH POSTINGS ................................................................... 9
FIGURE 5: NORTHPORT, DESERONTO AND TRENTON BEACH POSTINGS ............. 11

Table of Tables

TABLE 1: BAY OF QUINTE BEACH POSTINGS .................................................................. 6
TABLE 2: BACTERIAL COUNTS AT RIVERSIDE BEACHES .......................................... 10
INTRODUCTION

The Five Year Work Plan, produced by the Restoration Council of the Bay of Quinte Remedial Action Plan (RAP), outlines the actions to be followed in the restoration effort by stakeholders as well as targets and objectives to be used to assess the state of the impairments of the beneficial uses of the bay. This report has been prepared to investigate the measure of the success of actions taken to restore the recreational use of Bay of Quinte beaches for area swimmers.

The report compares recent data on area beach closings to historical closings (1989 to 1994) to identify trends in bacteriological contamination within the bay and its tributaries. Restoration targets and how they are to be measured (work plan objectives) have been taken directly from the Five Year Work Plan.

BACKGROUND

The International Joint Commission identified the Bay of Quinte as an Area of Concern in 1985 for high levels of pollution. The pollutants ranged from nutrients (most notably phosphorus) to bacterial contaminants and various toxins.

Since then, the Bay of Quinte Remedial Action Coordinating Committee (now known as the Bay of Quinte Restoration Council) was formed to identify the problems and work towards restoring the impaired beneficial uses of the bay.

Ten of 14 beneficial uses have been identified in the Bay of Quinte\(^1\) as impaired. These are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Impaired Beneficial Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Restrictions on fish and wildlife consumption</td>
</tr>
<tr>
<td>3</td>
<td>Degradation of fish and wildlife populations</td>
</tr>
<tr>
<td>6</td>
<td>Degradation of benthos</td>
</tr>
<tr>
<td>7</td>
<td>Restrictions on dredging activities</td>
</tr>
<tr>
<td>8</td>
<td>Eutrophication or undesirable algae</td>
</tr>
<tr>
<td>9</td>
<td>Restrictions on drinking water consumption, or taste and odour problems</td>
</tr>
<tr>
<td>10</td>
<td>Beach closings</td>
</tr>
<tr>
<td>11</td>
<td>Degradation of aesthetics</td>
</tr>
<tr>
<td>13</td>
<td>Degradation of phytoplankton and zooplankton populations</td>
</tr>
<tr>
<td>14</td>
<td>Loss of fish and wildlife habitat</td>
</tr>
</tbody>
</table>

\(^1\) Stage 2 Report, Bay of Quinte RAP Coordinating Committee, 1993, p 13
As part of the Five Year Work Plan to move toward delisting the Bay of Quinte as an Area of Concern the Restoration Council has put forward targets to be achieved over the next five years that, if met, would indicate an improvement in the condition of the bay or signal an elimination of the impairments to the bay's beneficial uses. The targets have measurable objectives, which can be indicators that the delisting targets have been met, or the objectives may help to identify trends in the improvement of the quality of the water and sediment in the bay.

**IMPAIRED BENEFICIAL USE NO. 10: BEACH CLOSINGS**

Bay of Quinte area residents wishing to go for a swim or do some sunbathing at the beach periodically find themselves driving by their local beach making a longer trip to more distant beaches that are still open to swimmers. The nearby beaches are often closed. The closure of beaches is a very plain indicator to the public of poor water quality and a significant reduction in beach postings would send a strong signal to Bay of Quinte residents that the water quality has improved. See Figure 1 (following) for a map of the Bay of Quinte Beaches.

**Why Beaches are Closed**

Health officials have determined that counts of *fecal coliform* bacteria greater than 100 per 100 ml, or more recently, counts of *e-coli* greater than 100 per 100 ml of water at beaches represents a health concern. During the swimming season (June 1 to September 15) area beaches are tested regularly for the concentration of *e-coli* that can indicate the presence of pathogens in the water. When a test result indicates a concentration of *e-coli* in the water that exceeds this amount, local health officials close the beach until two successive test samples yield results below 100 counts per 100 ml. High bacterial counts and related health risks have impaired the recreational use of the Bay of Quinte.

It has been observed that particularly high bacterial counts are recorded following significant rainfall events. Highest concentrations in the bay, recorded during research in 1987 (reported in Bay of Quinte RAP Technical Report No. 5), were found at the mouths of some of the bay's major tributaries. The main sources of bacterial contamination in rural regions are faulty septic systems and poor agricultural practices related to manure handling and livestock access to watercourses. Whereas in urban centres, sewage bypasses, unmanaged stormwater runoff, wildlife, and to some degree, combined sewer overflows contribute to bacterial contamination of Quinte beaches.

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2 Provincial Water Quality Objectives of the Ministry of the Environment and Energy, *E.Coli* used since May 1, 1994 as the most suitable bacteria of the coliform group as an indicator of fecal contamination.

3 Ibid, p 77

4 Ibid, p 78

**Bay of Quinte Remedial Action Plan**

Update on Impaired Beneficial Use #10: Beach Closures
Figure 1. Bay of Quinte Beaches
DEVELOPMENT OF RESTORATION TARGETS

In the Stage 2 report, 1993, 19 recommendations (numbers 21-39) were put forward containing steps of action that would curtail the sources of contamination and restore this recreational use of the bay. These centre on various bacterial contamination reduction strategies including sewage treatment plant upgrades, water conservation measures, restricting livestock access to rivers and streams, and managing urban stormwater runoff.

The goal of the Bay of Quinte RAP for impaired beneficial use number 10 as expressed in the Stage 2 report has been that zero beach closures could be achieved by taking action on the 19 recommendations. Some of the recommended actions have been completed whereas others requiring diligent management of human activity must continue on into the foreseeable future. Still other actions presuppose the capacity to successfully manage non-human activity.

An example of this would be contamination due to gull droppings. Gulls are attracted to beach areas where sources of food are plentiful. Consequently, water surrounding the beaches receives the fecal bacteria from the gull droppings and the beaches may be closed. Going further, a beach, having been closed for long periods of time and having little human activity, may become satisfactory habitat for Canada geese which are a prolific source of fecal matter. The beaches continue to test high for bacterial contamination. Such is the case at the Riverside beaches in Belleville further compounded by contamination from pigeons roosting under the Highway 401 overpass upstream.

Other actions remain to be taken on some recommendations including those with proposed by-laws and recommendations with large groups of proposed implementors.

Delisting Targets

Since not all the 19 recommendations have been carried out to completion or imply a completion is possible the zero beach closure goal seems more of an ideal. Quite realistically, for the reasons discussed above, zero beach closings is not achievable in the short term. And since bacterial counts vary, sometimes by orders of magnitude, depending on the proximity of the sampling period to a prior rainfall event, a target having a particular bacterial count limit would not be meaningful.

Therefore, trends toward improvement in the water quality (i.e. lower bacterial counts)

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5 Ibid, p 121
have been more recently set as achievable restoration targets. The Five-Year Work Plan contains two restoration targets for recreational body contact usage of the bay:

1) Using 1989 - 1994 as the base year period, demonstrate improved bacteriological water quality conditions for the beaches at Forest Mills, Frankford, Kingsford and Newburgh.

2) Using 1989 - 1994 as the base year period, demonstrate progress toward improving bacteriological water quality conditions for the beaches at Riverside Park and Zwick’s Island (Belleville).

**HOW THE TARGETS ARE MEASURED**

Individual test results may vary greatly depending on the location of the sample taken and the hydrologic conditions during and leading up to the sampling time. For this reason, a measure of the improvement of water quality that is less sensitive to the extreme variation in bacterial counts has been put forward by the Restoration Council. Instead of looking at bacterial concentration, the strategy for measuring the status of the impairment of this recreational use is to look at the number of days posted for each beach. The Five-Year Work Plan has formalized this in the two objectives given below. These objectives form the framework for the assessment of the status of IBU #10.

**Objective #1**  Significant reduction in beach postings with a trend toward zero beach postings at Forest Mills, Frankford, Kingsford and Newburgh beaches.

**Objective #2**  Significant reduction in beach postings at Riverside Park and Zwick’s Island or closure and relocation plans to place the beaches in an urban area suitable for human access and recreational purposes are developed and endorsed by the community for the Riverside Park and Zwick’s Island beaches.

**ANALYSIS**

The health units for Hastings and Prince Edward and Kingston, Frontenac, Lennox and Addington carry out regular sampling of the public beaches in their jurisdiction and have recorded results of their sampling efforts since the late 1980s. This data has been made available by the health units to the author for this report.

The sampling results have been presented in Table 1 (below) as number of days each beach was posted in the years between 1988 and 2002. In some cases the data is missing and in the case of Kingsford beach testing ceased in 1999. Charts have been prepared

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7 Ibid, p 27  

**Bay of Quinte Remedial Action Plan**  
Update on Impaired Beneficial Use #10: Beach Closures
showing the number of days posted at each beach. The years where no data is available will be conspicuous in the charts as having no colouration on the ‘floor’ of the chart. An example of this is seen on Figure 2: Upper Beaches where the chart has no colour when no data was recorded for Kingsford and Frankford beaches in 1988.

Table 1: Bay of Quinte Beach Postings

<table>
<thead>
<tr>
<th>Bay of Quinte Beaches</th>
<th># of Days Posted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long Point B of Q</td>
</tr>
<tr>
<td>1988</td>
<td>20</td>
</tr>
<tr>
<td>1989</td>
<td>0</td>
</tr>
<tr>
<td>1990</td>
<td>14</td>
</tr>
<tr>
<td>1991</td>
<td>0</td>
</tr>
<tr>
<td>1992</td>
<td>7</td>
</tr>
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<td>1993</td>
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<tr>
<td>1994</td>
<td>35</td>
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<td>1995</td>
<td>8</td>
</tr>
<tr>
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<td>0</td>
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<td>1997</td>
<td>9</td>
</tr>
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<td>1998</td>
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<tr>
<td>1999</td>
<td>35</td>
</tr>
<tr>
<td>2000</td>
<td>25</td>
</tr>
<tr>
<td>2001</td>
<td>10</td>
</tr>
<tr>
<td>2002</td>
<td>7</td>
</tr>
</tbody>
</table>

(Blank Cell) Information Unavailable

Forest Mills and Newburg Beaches

Information for the Forest Mills and Newburgh beaches was not available. However, both beaches (which are under the control of Quinte Conservation) are no longer being maintained as beaches. The Kingston, Frontenac, Lennox and Addington Health Unit indicated verbally that the Forest Mills beach has not been posted in recent years and only for a very short period during the mid 1990’s. However, records were not kept of these postings.

In the case of the Newburg beach, a seasonal weir creates the beach. Quinte Conservation stopped installing the weir in 2000. The water condition behind the weir deteriorated rapidly after installation and was consistently unfit for recreational use. Quinte Conservation was also concerned for the safety of the staff, who were required to remove the weir in the fall, describing the condition of the water as a ‘sewer’. This beach has since been discontinued.

Similarly, the Forest Mills beach is no longer being maintained as a beach by Quinte Conservation. The beach is created by the Breeze Dam, which is a permanent structure on the Salmon River. Quinte Conservation ceased installing the swimming buoys in the late 1990’s and have had little reaction from the public. Water quality was not a concern.
at this beach that was discontinued due to the low usage. Nevertheless, people have been observed still using the beach.

The analysis of the status of IBU #10 has focused on the remaining beaches for which good data is available including: Frankford, Kingsford, Riverside, and Zwick’s. Although not specifically required to be investigated, data for the beaches in Northport and Deseronto, and Bain Park beach in Trenton has been included to add further observations to Bay of Quinte water quality.

**Frankford and Kingsford Beaches**

A chart has been prepared, using Table 1, that shows the number of days each beach was posted for the period from 1988 to 2002 (see Figure 2: Upper Beaches).

**Figure 2: Upper Beaches**

The Frankford beach is located in the village of Frankford, now part of the City of Quinte West, situated on the east side of the Trent River, just south of the downtown bridge. The Frankford beach annual postings range from 0 to 63 days posted. There is no obvious trend towards zero beach postings at this beach. In fact, some of the longer periods of beach postings have occurred in 1997 and 2001. For the years 1988, 1989 and 1993 no information was available.

The Kingsford beach, created by a seasonal weir installed by Quinte Conservation, is located near the village of Lonsdale. There have been no reported postings in recent years.
(verbal communication with the KFLA Health Unit) and this beach continues to be
operated by Quinte Conservation. The Kingsford beach is reported to have regular use by
the public.

Zwick’s Island and Riverside Beaches
Figures 3 and 4 have also been prepared using the data in Table 1 that shows the annual
posting summary in chart format for both the Zwick’s Island and Riverside beaches.

Zwick’s
The Zwick’s Island beach is located in Belleville, just west of the Hwy #62 bridge over
the Bay of Quinte. Zwick’s Island park is a closed landfill site for which remediation
plans are presently in the pilot testing phase. The City of Belleville no longer operates
the Zwick’s beach and ceased providing life guards in 1994. Meanwhile, the Health Unit
has continued testing of this beach and has reported no closures since 1996.

Figure 3: Zwick’s Beach Postings

While the data for the other Bay of Quinte beaches demonstrates that the water quality of
the bay can vary depending on location, the Zwick’s data does indicate that bacterial
contamination does not appear to be a persistent problem at the Belleville beach. The
data would support continuance of the beach as the objective of ‘significant reduction of
beach postings’ appears to be satisfied.

Bay of Quinte Remedial Action Plan
Update on Impaired Beneficial Use #10: Beach Closures
In a conversation with Mr. Doug Moses, Director of Parks and Recreation of the City of Belleville, we discussed this beach. It is the City's desire to move towards a reduced reliance on local water quality for recreational use such as swimming and to provide a more controlled environment. This would be in the form of a water park possibly located at Zwick's Island or at Riverside Park.

Riverside

The Riverside beaches are located within the City of Belleville along the Moira River upstream of the present Yardman's Dam. In years past, a seasonal weir was installed by the Moira River Conservation Authority which created a headpond in which swimming at either the east or west beaches was made possible. These likewise have been discontinued by the City when life guards were removed in the late 1980's.

The MRCA, now Quinte Conservation ceased installing the weir in the late 1980's and eventually constructed the present permanent weir for ice control. The City has since removed the life guard chairs and posted no swimming signs in 2002. Tests of the Riverside beaches consistently showed elevated concentrations of bacteriological contamination (see Table 2) and do not indicate a trend toward reduced closures. Figure 4 below indicates the number of days posted each year.

Figure 4: Riverside Beach Postings

![Figure 4: Riverside Beach Postings](image)

The average bacterial concentration from 1991 to 1999 is shown on Table 2. Average concentrations are commonly several times the safe limit. The averages are affected by

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Bay of Quinte Remedial Action Plan
Update on Impaired Beneficial Use #10: Beach Closures
extremely large infrequent counts and therefore the median concentration was also
determined. The median concentration, albeit lower that the average, is always above
safe levels, with the exception of the 1996 and 1997 years. Testing was discontinued in
2002 after the beach was formally closed by the City.

Table 2: Bacterial Counts at Riverside Beaches

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>West</td>
<td>East</td>
<td>West</td>
<td>East</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>142</td>
<td>53</td>
<td>85</td>
<td>45</td>
<td>52</td>
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<tr>
<td>386</td>
<td>176</td>
<td>323</td>
<td>162</td>
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<td>401</td>
<td>100</td>
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<td>426</td>
<td>100</td>
<td>272</td>
<td>340</td>
<td>123</td>
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<td>1458</td>
<td>398</td>
<td>321</td>
<td>233</td>
<td>77</td>
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<td>434</td>
<td>431</td>
<td>210</td>
<td>296</td>
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<td>1260</td>
<td>1172</td>
<td>431</td>
<td>253</td>
<td>119</td>
</tr>
<tr>
<td>403</td>
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<td>397</td>
<td>289</td>
<td>241</td>
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<td>748</td>
<td>607</td>
<td>170</td>
<td>440</td>
<td>167</td>
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<td>739</td>
<td>738</td>
<td>276</td>
<td>190</td>
<td>780</td>
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<tr>
<td>987</td>
<td>325</td>
<td>600</td>
<td>600</td>
<td>289</td>
</tr>
<tr>
<td>283</td>
<td>155</td>
<td>350</td>
<td>721</td>
<td>2496</td>
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<td>222</td>
<td>147</td>
<td>408</td>
<td>515</td>
<td>1172</td>
</tr>
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<td>274</td>
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<tr>
<td>49</td>
<td>216</td>
<td>35</td>
<td>24</td>
<td>180</td>
</tr>
</tbody>
</table>

Other Bay of Quinte Beaches

Other beaches on the Bay of Quinte, specifically the Centennial beach in Northport, the
Centennial beach in Deseronto and Bain Park in Trenton have all reported closures.
Figure 5 has been prepared to demonstrate graphically the beach closures at these
beaches.

Bay of Quinte Remedial Action Plan
Update on Impaired Beneficial Use #10: Beach Closures
Deseronto and Bain Park beaches continue to have annual postings of between two to three weeks with some longer periods at Bain Park. The Northport beach was posted for about one week each in 1998 and 2001. No other postings were reported.

HAVE THE TARGETS BEEN MET?

Refering back to the two objectives on page 5 of this report, a trend toward zero postings for the Forest Mills, Frankford, Kingsford, and Newburg beaches is sought. Of these, the Newburg beach has been abandoned and the beach at Forest Mills is no longer operated. Of the two remaining beaches only the Kingsford beach (albeit lacking hard data) appears to have achieved zero closure. The Frankford beach does not show a trend toward zero closure. The following table (Table 3) summarizes the findings for Objective #1:

<table>
<thead>
<tr>
<th>Beach</th>
<th>Target Achieved?</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Mills</td>
<td>N/A</td>
<td>No longer operated</td>
</tr>
<tr>
<td>Frankford</td>
<td>No</td>
<td>Closings still persistently high</td>
</tr>
<tr>
<td><strong>Kingsford</strong></td>
<td><strong>Yes</strong></td>
<td>Zero closings achieved</td>
</tr>
<tr>
<td>Newburg</td>
<td>No</td>
<td>Abandoned</td>
</tr>
</tbody>
</table>

Bay of Quinte Remedial Action Plan
Update on Impaired Beneficial Use #10: Beach Closures
It cannot be concluded at this time that a trend toward zero closure has been achieved in the upper beaches.

The second objective, focusing on Riverside and Zwick’s beaches, is for significant reduction in postings. Here the Riverside beaches do not demonstrate any reduction in the number of days posted. However, the beach at Zwick’s Island has achieved zero postings far surpassing the ‘significant reduction’ objective. Ironically, the use of both beaches has been discontinued by the City of Belleville.

Failing achievement of significant reduction on the Riverside beaches, the author is directed to recommend closure of the beach (which has already taken place). Secondly, a relocation plan is to be developed. This is discussed in the next section.

Although not in use by the City of Belleville, the Zwick’s beach has met the objective and no recommendation for closure or relocation can be based on the findings of this study. However, there appears to be no desire by the City to reopen the beach. Thus, a needs analysis should be considered by the City to investigate public demand for urban swimming and water recreational use. The following table (Table 4) summarizes the foregoing discussion.

Table 4: Riverside and Zwick’s Beaches

<table>
<thead>
<tr>
<th>Beach</th>
<th>Target Achieved?</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverside</td>
<td>No</td>
<td>Beach closed – relocation recommended</td>
</tr>
<tr>
<td>Zwick’s</td>
<td>Yes</td>
<td>Abandoned – needs analysis recommended</td>
</tr>
</tbody>
</table>

Relocation of Riverside Beach

Within the urban Moira River reach there exists no extensive publicly owned frontage to create a new beach area. In addition, water quality in the river is not so variable that one would expect to find improved conditions over those at Riverside Park. Thus, in-river relocation of Riverside beach would not be feasible.

While bacteriological conditions appear to have improved on the Bay of Quinte, relocation to the bay area is also not recommended at this time. This is due in part to the lack of interest by the City to use a beach area at Zwick’s that presently tests safe for swimming. In part also, other water quality factors make swimming in the bay less desirable. Periodic algal blooms and corresponding odour reduce the aesthetic quality of...
the bay. Moreover, the current public perception of the Zwick's area is tarnished due to current attention to leachate from the closed landfill.

There is little public land available to the west of Zwick's for possible relocation of Riverside beach. It would also not be recommended to relocate east of Zwick's due to the proximity of the Sewage Treatment Plant.

Consequently, an alternative to a formal beach, as suggested by the Parks and Recreation department, could be considered. A feasibility study is recommended to look at this option.

**CONCLUSION**

In both cases, the objectives have not been shown to be satisfied by results from bacteriological testing. Only at Kingsford and Zwick's beaches were the objectives met. All other beaches investigated do not show improvement of the water quality.

It cannot be concluded that this impairment to the beneficial use of the Bay of Quinte has been remediated at this time. However, looking specifically at the terms of reference upon which this conclusion is made, the Frankford beach alone continues this impairment. Further investigation of the Frankford site, possibly including a pollution prevention and control plan, would identify the cause of the high bacterial levels. Barring a quick solution to the contaminant problem, would one beach be significant enough to continue this impairment? The Restoration Council would need to give further direction on the minimum requirement to declare a removal of the impairment.

Closure and relocation of Riverside beach is recommended and a feasibility study should be undertaken to determine the location and type of recreational facility to replace the beach.

**DISCUSSION**

The impairment to the beneficial use of the Bay of Quinte for swimming has, in the opinion of the author, not been well evaluated by the methodology required by the Five Year Work Plan applied in this report. The bacterial contamination in the Bay of Quinte and its tributaries should not be represented by grab samples at various beaches. While these beaches may be areas of increased likelihood of body contact with the bay water, the samples taken there do not make good surrogates for inferring the water quality throughout the bay.

Increasingly, with the advancing popularity of personal pleasure craft, body contact with water in the bay occurs in a more diffuse manner. The water quality throughout the bay should be safe for use by the public. This water quality information is not captured by

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Bay of Quinte Remedial Action Plan
Update on Impaired Beneficial Use #10: Beach Closures
routine sampling at merely several beaches.

Moreover, it has not been demonstrated that all the 19 actions in recommendations 21 to 39 of the Stage 2 document have been taken or are being continued. These recommendations are far reaching and may not have been advanced to a point or vigilantly maintained such that noticeable bacterial reductions would be measured. It may simply be too early to score the success or failure of reaching the objective of safe body contact.

A more thorough evaluation of the implementation of the 19 recommendations would be in order before the definitive conclusion of water quality either way should be proclaimed. This may also necessitate a purposeful sampling program be considered that would investigate the water quality in the bay in a more representative fashion similar in scope to that undertaken in 1987. The sampling program should cover a span of two to three years in an attempt to both capture a trend and avoid basing conclusions on a ‘good’ year.

At the end of this period of sampling and after determining that all reasonable progress has been achieved on the 19 recommendations a more informed conclusion can be made on the state of the impairment to swimming in the bay.

RECOMMENDATIONS

Recommendation #1:
Formal acknowledgement by City of Belleville of the closure of the Riverside beaches is recommended at this time. Pending the outcome of the proposed sampling program (see recommendation 5 below), a relocation plan should be considered that would include a feasibility analysis for an alternative type of facility.

Recommendation #2:
A needs analysis should be prepared by the City to determine the future of the Zwick’s Island beach.

Recommendation #3:
Monitoring of the Frankford and Kingsford beaches should be continued and records kept up to date.

Recommendation #4:
It is recommended the Restoration Council investigate further the conditions at the
Frankford beach and consider if this beach prevents the impairment from being restored.

**Recommendation #5:**
It is recommended the Restoration Council initiate a bay wide monitoring program to determine the quality of the water.

**Recommendation #6:**
The state of implementation of recommendations 21 through 39 should be investigated to determine if all actions have been completed or are continuing to be acted upon.