

**ACAP Saint John**  
**Lower St. John River / Kennebecasis River Environmental Forum**  
**Glenn Carpenter Centre - Saint John, NB**  
**February 12, 2003**

The purpose of this meeting was to share information among environmental stakeholders from this lower watershed and provide some understanding of the current situation on a variety of indicators in this region.

There was significant discussion on the time frame from which these evaluations should be considered. As a group, it was decided that only conditions and changes within the last 20 to 30 years would be considered.

**Regions Summary**

This is a summary of the eight regions identified by the stakeholders.

**1) Saint John Harbour** is considered overall a moderately impacted area although there are many localized “hotspots” of significant environmental degradation. Improvements have been made (improved, reduced or eliminated industrial outfalls, increased wastewater treatment, reduced pollution “incidents”), although there are still many areas that need attention. Considerable sources of information are available for this area and there are a number of active organizations actively working in this region. Resource harvesting has also significantly changed over the past 20 to 30 years with a variety of species no longer available or greatly reduced in numbers (salmon, sturgeon, shad).

**2) Kennebecasis River** (below Hampton Marshes) is considered one of the most heavily encroached riparian zones in the province. Beaches have been closed because of bacterial contamination, marshes are being filled in and algal blooms are increasingly prevalent. Very little research or monitoring has been done in this area since the mid-1980's. This area requires much more attention.

**3) Upper Kennebecasis River** (above Hampton Marshes) has three areas of particular activity: the Hampton Marshes; the Hammond River; and the upper tributaries around Sussex. One of the primary issue of concern for the Hampton Marshes is increased development, encroaching on the riparian zone. Overall water quality in this region is considered good.

The condition of the Hammond River is acceptable or improving upstream of the old highway, however, the area below the bridge is of greatest concern. There are fewer surprises in this area now. Most of the issues of concern have been identified and are being addressed.

In the upper most tributaries, land use is primarily agricultural (and forestry in the past). Issues here are mainly of non-point source issues. The new highway and the increasing number of gravel pits are seen as two of the biggest impacts on environmental conditions.

A number of studies exist for this area dating from as far back as the 1970's.

**4) St. John River** (main stem) has seen increases in non-point source pollution. The growth and development in this region is not as great as the lower Kennebecasis River but the demographics have changed from seasonal dwellings to year-round. As a result there have been increased sewage problems and algal blooms. Overall water quality is considered good. There have been changes in the fisheries (moving from salmon to bass and pickerel) and there are increasing recreation activities (e.g. fishing tournaments and power boat usage). Belleisle Bay is an area of particular concern in this region.

**5) Musquash Harbour and River** is considered a healthy area overall. Water quality is very good, and habitat conditions are relatively undisturbed (although this is a dynamic system and there are a number of naturally occurring changes). With the exception of lobster, which has become very successful in recent years, all other fisheries have declined. Considerable knowledge exists and is growing primarily because of the efforts to have this area designated as a Marine Protected Area. Other issues in this area include the conversion of NB Power's Coleson Cove to Orimulsion, acid deposition in Loch Alva and the modifications to the natural hydrology of the area because of dams and dykes.

**6) The Loch Lomond Watershed** is the largest, clean, potable freshwater supply in New Brunswick. This area has been used and partially managed by the City of Saint John since the early 1900's. The water is "soft" and poorly buffered and although there are growing controls on new developments in this area, there are run-off and septic tank issues. As a drinking water supply, there are some a number of historic and ongoing studies. Areas and issues of concern include siltation, fish passage, and introduced species. There are a number dams in this watershed but these are not control devices but area used to maintain water levels. Overall drainage is fairly natural.

**7) Nerepis River** has a number of significant environmental issues, primarily concerned with the heavy sedimentation from the upper tributaries (CFB Gagetown). There are also some septic tank issues along its length. This watershed is experiencing reduced water quality, bank erosion, flooding, and greatly reduced fishing. This area seems to be under considerable stress and requires attention.

**8) Coastal Bay of Fundy** (beyond the Saint John Harbour) has relatively little development but there are a variety of issues of concern. Fisheries have all declined except lobster, which has increased. Dogfish are more common and the commercial groundfish is gone. Spawning stocks seem to be missing. In this area is the dredgeate disposal site for the Saint John Port Authority dredging operations. This site has been well studied in recent years and seems to have some small impacts. There is a fair amount of shipping traffic, which is predominantly oil tankers and will soon include tankers carrying Orimulsion. Accidents between ships have been reported in recent years although a catastrophic spill has not occurred. This ecosystem seems stabilized or improving (because of efforts to eliminate or treat industrial or municipal discharges). A variety of interests are working and monitoring this area and there are recent changes to government management policies that will affect this region (e.g. NB Coastal Zone Policy, Federal Species At Risk Act).

## Indicators Matrix

Below is the result of the evaluation of environmental indicators recommended by GPAC. This process was conducted by assigning a “traffic light” colour to each indicator for each area. This colour coding has been converted to a numeric code for the purpose of this report. Following, is the legend for the GPAC Matrix.

<b>Numeric Code</b>	<b>Colour</b>
1	Red
2	Red- Yellow
3	Red - Yellow - Green
4	Yellow
5	Yellow - Green
6	Green

**Blue shaded squares** = indicates that the stakeholders present felt that the information concerning this indicator is not available at this meeting or that this information does not exist.

**Blank squares** = indicates that the stakeholders present felt that the indicator was redundant (and was already answered), not applicable or that the level of information required was not available.

### Matrix Summary

The results of the Matrix may be summarized as follows:

All regions have experienced significant changes in species and resource use.

The Kennebecasis and Nerepis Rivers have significant issues according to all indicators.

Saint John Harbour has concerns with water quality although riparian zone development and the presence of critical habitats require continued attention.

The Upper Kennebecasis River Tributaries have stabilized the integrity of the riparian zones but there remain considerable concerns with water quality and habitat issues.

Musquash, Loch Lomond and the Coastal Bay of Fundy showed strong indicators but are not without issues that require ongoing attention.

**GPAC Indicators Matrix - Lower St. John River Watershed Forum - February, 2003**

	Saint John Harbour	Kenn. River	Upper Kenn. River	St. John River	Musquash (Harbour & River)	Loch Lomond	Nerepis River	Coastal Bay of Fundy	AVG
<b>Water Quality</b>									
bacteria	1	2	3	4	5	5	2.5	3	3.2
nutrients	1	1	1	4	5	6	2.5	5	3.2
sediments	1	2	2	2	4	6	1	4	2.8
toxic chemicals	2	3	6	4	6	6		5	4.6
<b>AVG</b>	<b>1.3</b>	<b>2.0</b>	<b>3.0</b>	<b>3.5</b>	<b>5.0</b>	<b>5.8</b>	<b>2.0</b>	<b>4.3</b>	<b>3.3</b>
<b>Use and Integrity of Riparian Zones</b>									
clearing / development nat. areas	1.2	2	5	4.2	6	5	2	6	3.9
replacement of traditional uses	6	1	6	4	6	5.8	4	6	4.9
erosion and deposition	4	2	5	6	6	6	1	5	4.4
changes in water flow	5	5	6	5	2	1	4	6	4.3
<b>AVG</b>	<b>4.1</b>	<b>2.5</b>	<b>5.5</b>	<b>4.8</b>	<b>5.0</b>	<b>4.5</b>	<b>2.8</b>	<b>5.8</b>	<b>4.4</b>
<b>Changes in Species</b>									
populations	1	1	1	1	2	1	1	1	1.1
diversity									
dominance								1	1.0
invaders	5		5						5.0
<b>AVG</b>	<b>3.0</b>	<b>1.0</b>	<b>3.0</b>	<b>1.0</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.6</b>
<b>Changes in Resource Use</b>									
shift in targeted species	1	1	1	1	1	6	1	1	1.6
spp introductions									
shift from resource use to tourism									
<b>AVG</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>6.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.6</b>
<b>Presence of Critical Habitats / Natural Areas</b>									
benthic habitat	4	4	3	4	6	6	1	4	4.0
wetlands	4	2	5	3.8	6	6	5	-	4.0
aquatics vegetation	4	1	3	4	6	6	2	6	4.0
nesting foraging areas	4	1	2	4	6	6	2	5	3.8
spawning nursery areas	4	1	4	4	6	6	1	4	3.8
presence of protected areas	4.1	4.1	2	5.8	6	6	2	1	3.9
<b>AVG</b>	<b>4.0</b>	<b>1.8</b>	<b>2.8</b>	<b>4.5</b>	<b>6.0</b>	<b>6.0</b>	<b>1.8</b>	<b>4.0</b>	<b>3.8</b>

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