

STEWARDSHIP INDICATORS FOR LAKE ONTARIO MUNICIPALITIES

Introduction

In drafting indicators of municipal stewardship for Lake Ontario, we have attempted to find measures of activities which:

- * minimize local pollution to Lake Ontario
- * restore and enhance natural habitat
- * promote water conservation
- * demonstrate co-operation with other jurisdictions who share responsibility for the Lake
- * encourage public enjoyment of the Lake and access to decisions influencing the Lake.

We have categorized our recommendations as follows:

- * municipal corporate behaviour
- * municipal operations
- * municipal parks, open space, and habitat
- * municipal communication, education, and public empowerment.

In our work we had the Royal Commission on the Future of the Toronto Waterfront's guiding principles in mind. These principles are that the waterfront be clean, green, usable, diverse, open, accessible, connected, affordable, and attractive.

John Maher

Sarah Miller

MUNICIPAL CORPORATE STEWARDSHIP INDICATORS
RE: POLICY AND PROGRAMS

Does the municipality have a special environmental department and staff? How many person-hours per year? If so, does their work include a mandate to conserve and protect Lake Ontario?

Does the municipality have a process to link the environmental work of all municipal departments in a way that promotes an ecosystem approach?

Is there a corporate understanding of the linkages between environmental and public health?

Water Conservation

Are all municipal water supplies metered?

Do they utilize water efficient devices?

Are there local restrictions on the sale of inefficient water use devices?

Is there a standard for per capita water conservation and a plan to reduce water use per capita?

Are funds raised from water and sewage charges dedicated to improvements in treatment, clean-up and source control rather than shifted to other budget expenditures?

Are there municipal codes that require water efficiency standards to be met in new development?

Municipal Planning

Is there a water and sewage master planning process in place? For how many years into the future are these plans made?

How many rivers and streams (in kilometres) with flows to Lake Ontario, have been "containerized", buried, or turned into sewers?

Are there plans to naturalize these waterbodies? Have any been restored?

Are there by-laws which exclude development in river valleys, wetlands, groundwater recharge areas and headwaters, and along the near shore and shoreline of the Lake?

Are there local erosion and sediment controls in place?

Do official plans have an environmental protection component? Do they protect historically significant waterfront heritage?

Are there planning provisions for non-structural storm-water management techniques (semi-permeable surfaces, rooftop storage, landscaping, and storm water detention)?

Are there local wetland protection initiatives? Are environmentally sensitive areas mapped?

Is there an official waterfront plan?

STEWARDSHIP INDICATORS
RE: MUNICIPAL OPERATIONS

In Ontario, have municipalities adopted the province's model sewer use by-law (which is voluntary)?

What is the level of enforcement of sewer by-laws: the number of prosecutions and enforcement staff on a discharge basis?

The number of persistent toxic chemicals that are controlled in sewer-use by-laws?

The number of "special arrangements" to exceed sewer use by-laws?

The level and frequency of monitoring combined and storm-sewer discharges in wet and dry weather conditions.

The percentage of combined sewers that have been separated within the local Lake Ontario watershed. Timetables for completing sewer separation.

Concerning the need for infrastructure repair: what percentage of flows in sewers is from inflow and infiltration?

How much of the infrastructure has been replaced since ??? (we need to ascertain a date, life expectancy for infrastructure here).

Re: Municipal Water and Sewage Treatment Plants (STPs)

The number, character, and frequency of audits of inflow and discharge of sewage in STPs?

Does the municipality have programs to prevent STP overflows and bypasses? Is there a target date to eliminate all such occurrences?

The number of STPs operating at or close to treatment capacity.

Are there programs to maximize removal of persistent toxics from sludge before discharge to the lake, incineration or sludge application to land?

Are there enforceable safe drinking water standards for local drinking water sources?

Are trihalomethanes and other persistent toxic chemicals controlled in drinking water standards?

Do measures to control zebra mussels minimize impacts on water quality?

Are there programs to prevent the introduction of invasive species?

**STEWARDSHIP INDICATORS FOR MUNICIPAL PUBLIC PARKS,
OPEN SPACE, NATURAL AREAS, AND HABITAT**

Re: Beaches

The number and percentage of days that public beaches have been closed because of bacterial contamination.

The frequency of testing and public notification of beach contamination?

The number of complaints of medical waste found on beaches?

Is the goal of swimmable beaches integrated in municipal clean-up plans? Is there a timetable to achieve this goal?

Re: Parks and green spaces

Do parks and planning policies encourage corridors, pathways and linkages along waterways and the lakeshore?

What is the ratio of green space to developed areas in the municipality?

What is the level of public use of parks? (Is use being measured?)

What active and passive recreational uses of the waterfront and watershed are available?

What is the measure of public versus private recreational facilities on the Lake and waterways? Are public facilities

affordable?

What percentage of the total shoreline is accessible to the public?

Are there physical and legal barriers to public access?

A measure of the use of pesticides and herbicides per hectare in parks and open spaces?

Are there programs reducing the use of herbicides and pesticides in parks?

Re: Natural Areas and Habitat

Are there municipal programs that encourage ecological diversity in the region and is it recognized in municipal goals?

Is shoreline and lake filling controlled and monitored? Is there an assessment and approval process for lake filling?

Do shoreline alterations encourage habitat creation? Is there an active wetland creation program?

Are the benefits of wetlands - in storm water management and in water quality and as educational resources - reflected in municipal initiatives?

**STEWARDSHIP INDICATORS OF MUNICIPAL OUTREACH,
EDUCATION AND COMMUNICATIONS**

Re: Outreach and Empowerment

Does the public have access to municipal decision making affecting the ecosystem?

Is there a "Citizens' Advisory Committee" to the municipality on environmental concerns?

Are there local citizens' groups who advocate for the improvement of the Lake Ontario ecosystem as their stated mandate?

Is the public involved in the municipal planning process?

Does the municipality fund citizen stewardship activities?

Does the public have access to information about municipal programs and activities impacting Lake Ontario? (I.e. beach bacterial monitoring results, sewer and STP discharges, monitoring results of

local polluting industries.)

Re: Educational

Do school boards have environmental mandates?

What is the local level of public understanding about the source of their drinking water? Is hydrology taught in the schools?

What percentage of schools have environmental improvement projects along waterways?

What educational materials are produced by the municipality to promote stewardship of Lake Ontario?

Is there a local municipal environmental library or resource centre?

What is the level of public awareness of local fish advisories? Are these advisories provided in the language of those fishing in the area?

Re: Networking

What formal networks are in place to confer with other municipalities who border Lake Ontario? How often do meetings happen?

Is there local watershed co-ordination between all agencies with jurisdiction over the Lake Ontario watersheds?

How often do these organizations meet?

Do they have common goals? Do they have formal agreements?

Are municipal activities evaluated on their impacts on adjacent municipalities and on Lake Ontario?

In conclusion, John has suggested that we might consider a rating system similar to this one he found in the Canadian Urban Institute's Special Report on Cities and Global Warming.

TABLE 1:
Styles of response by local
government to the environment

Styles (8 is strong)	Examples
1. Flout the law	Discharge raw sewage; use illegally polluting vehicles.
2. Merely obey the law	Do no more, or less, than is required.
3. Set a good example within administration	Intra-office recycling; use natural gas vehicles.
4. Advocate within jurisdiction	Encourage reduction, reuse, and recycling; promote transit and district heating.
5. Legislate within jurisdiction	Ban certain materials at landfill sites; local restrictions on automobile use.
6. Advocate outside jurisdiction	Push for tighter automobile pollution standards; promote inter-city rail.
7. Seek new legislative authority	To tax automobile ownership; to ban sale of items made with CFCs.
8. Legislate outside jurisdiction	Ban sale of items made with CFCs; ban use of many kinds of packaging.