OAKVILLE

REPORT

COMMUNITY SERVICES COMMITTEE

MEETING DATE: DECEMBER 14, 2010

FROM: Environmental Policy Department

DATE: November 25, 2010

SUBJECT: **Oakville's State of the Environment Report (SOER) 2010**

LOCATION: Town Wide
WARD: Town wide

RECOMMENDATION:

1. That the report from the Environmental Policy Department, dated November 25, 2010, regarding the 2010 Oakville State of the Environment Report, be received;

2. That the 2010 Oakville State of the Environment Report be endorsed by Council and provided to the community; and

3. That prior to finalization the Director, Environmental Policy, be authorized to make minor edits to the Oakville State of the Environment Report, which do not substantially affect the substance of these reports.

KEY FACTS:

The following are key points for consideration with respect to this report:

- This is the third annual State of the Environment Report (SOER) presented to Council.
- Information and data SOER is gathered from a number of town departments and external agencies such as the provincial Ministry of the Environment, Ministry of Transportation, Conservation Halton and Halton Region.
- Short term trends show progress in a number of areas such as green space acquisition, water quality, air quality, resource use and trees planted.
- The town is actively working on a neighbourhood level ecological footprint program to further assist in monitoring and representing data.
- A communications program with a focus on enhancing school engagement is planned for 2011.
- A planned comprehensive update to the Environmental Strategic Plan (ESP) in 2011 will result in a revised and expanded set of indicators in 2012.

BACKGROUND:

On December 5, 2005, Council endorsed the town's Environmental Strategic Plan (ESP) and the implementation of recommendations within the plan 'to protect and enhance the Town's ecological environment, while maintaining a vibrant social and economic base' (from the ESP Vision Statement).

One recommended Essential Next Step was to develop indicators for monitoring and reporting on the condition of the environment in Oakville (ESP Action 6.1). Further, it recommended a State of the Environment Report (SOER) for Oakville be prepared in conjunction with the ESP Advisory Committee with community input to outline baseline conditions (ESP Target 6.1.1). An Environmental Indicators Program and the first State of the Environment Report were developed in 2008 to establish a framework and provide baseline conditions for future reporting. This initiative included a Technical Background Report (TBR) providing information on indicator models, the selection process for Oakville's indicators and a comprehensive data set. The first SOER incorporated selected indicators from the TBR and presented the information in a user friendly and graphic format.

This year, the third annual SOER provides the established set of indicators that were refined in 2009 and expands on the ongoing ecological footprint program. The SOER is geared toward the general public and provides numerous charts, graphics and identifies opportunities for readers to obtain further information.

COMMENT/OPTIONS:

2010 SOER Preparation

The first Technical Background Report (TBR) and SOER in 2008 were developed through extensive research and consultation with various agencies, technical experts and the input of the community including members of the Environmental Strategic Plan Advisory Committee.

The field of environmental indicators and environmental reporting is still relatively new. Keeping abreast of current models is done on a continuous basis through involvement with the Canadian Sustainability Indicators Network (CSIN) and maintaining an updated library of State of the Environment Reports from various municipal, provincial, federal and international indicators and reporting programs.

Key staff in other town departments, the Environmental Strategic Plan Advisory Committee, members of the public, Conservation Halton, Oakville Hydro, Halton Region, the Halton Public and Catholic District School Boards, provincial ministries

and volunteer agencies have all contributed data and provided draft review comments for incorporation into this year's SOER. It should be noted that as for previous editions, the information represents the last full year of data available. For this SOER, the data is primarily from 2009.

Highlights of the 2010 SOER

The SOER and indicators are organized according to the six ESP goals:

1. Natural Resources: green space and biodiversity; urban forest; air quality; water quality; climate change.
2. Resource Use: solid waste; energy conservation; water conservation.
3. Transportation: transportation choices; transit.
4. Healthy Neighbourhoods: landscape and aesthetics; access to parkland and recreation.
5. Community Engagement: outreach events; EcoSchools.
6. Best Practices: innovative environmental programs; sustainable building and development; Environmental Strategic Plan.

In addition, the latest results from the Ecological Footprint (EF) program are also highlighted. Oakville's EF tracking program was initiated at the end of 2009 and essentially provides an index of resource use and is complementary to the indicators in the SOER. Further details on the EF are provided later in this report.

Appendix A provides a draft of the 2010 State of the Environment Report. The findings of the 2010 SOER show that the town has improved results in a number of areas. Highlights of the report include:

Number of trees being planted by both volunteers and forestry staff: A total of 4,560 trees were planted between fall 2008 and fall 2009. This includes trees planted along streets, in parks, storm ponds, and natural regeneration areas. Of that total 1,430 have been planted by community groups in partnership with the town and 3,130 were planted through the town's operations. While community partnered plantings were down in 2009, staff took a more active role in tree planting ensuring that the overall number of plantings increased.

Abundance of green space and trails: A 2009 Community Attitudes Survey, conducted as part of the ESP update, asked residents to respond to questions on Oakville's environment. When asked to rate various environmental features on a scale of 1 to 5, both open space and the accessibility of trails topped the list with a rating of 4 out of 5. This is not surprising as Oakville has one of the highest per capita values of both green space and trails when compared to similar communities in Ontario. In 2009, although the overall amount of parks and trails increased, this

did not keep pace with population. Open space dropped slightly from 8.17 ha/1,000 people in 2008 to 8.02 ha/1,000 people in 2009 and trails went from 0.864 km/1,000 people in 2008 to 0.858 km/1,000 people in 2009. Oakville will need to ensure that green space acquisitions continue into the future to keep pace with population growth to maintain its enviable position.

Water quality: Water quality, as shown by phosphorus and chloride levels in Oakville's creeks, has generally been improving since 2007. As of 2009, phosphorus levels in all three major creeks are now only slightly above the Provincial Water Quality Objectives (PWQO) of 0.03mg/L. This may be due in part to various drivers such as a significant decline in development activity in 2009, increased consumer awareness of the impact of fertilizers and cleaning products on phosphorus levels and the concerted efforts of the town and region to address phosphorus levels entering local water bodies. Chloride levels are also showing a continued downward trend with levels remaining below the PWQO of 250 mg/L. Fourteen Mile Creek is the exception, however, showing an upward spike of chloride levels in 2009. A significant contributor to chloride levels is runoff from roadways and salt use during the winter. The town and region have been steadily decreasing their use of winter salt through a targeted Salt Management Program that includes pre-wetting salt to improve efficiency and the introduction of a pilot project involving Eco-salt that prevents the salt from bouncing off of roadways and into waterways. The high variability of chloride levels in Fourteen Mile Creek may be due in part to the fact that it is a much smaller creek that is more urban in nature which means it is more sensitive to the effects of runoff and less able to absorb the contaminants.

Water consumption and Waste diversion: Residential water consumption is showing a continued downward trend on a per capita basis. A number of factors may be contributing to this trend, not least of which is the continued water reduction strategies offered by the town and region. These include the Outdoor Water Use Program and the annual rain barrel sale held in the spring. In addition, we had a much wetter and cooler summer in 2009, which would have resulted in reductions in lawn and garden watering.

In another positive trend, the amount of waste diverted has also been increasing steadily, particularly since the introduction of the organics recycling by Halton Region. While these are encouraging trends, it should be kept in mind that the overall volume of water and amount of waste generated are still increasing due to population increases and Canada continues to have one of the highest water use rates and waste generation rates in the world.

Air quality: Indicators are useful in that they show trends over time and caution should be used in looking at the values over a single year. For example, despite the improvement shown in $PM_{2.5}$ values as a measure of air quality, this may be a short

lived gain. This trend has been seen across the province and elsewhere and has largely been attributed to the recession and drop in economic activity (decreased industrial output, fewer cars on the road with fewer workers, etc.). Additionally, the weather in 2009 was cooler and wetter which affects the ability of fine particles such as $PM_{2.5}$ to remain airborne.

Electricity and gas use: Since we started tracking residential energy data in 2006, this is the first year we've seen a downward trend in per capita gas consumption. Although this is only a 1% decrease, it is very encouraging to see a turnaround after several years of increases. A number of factors may have contributed to what we are seeing. There has been a focused campaign by all levels of government, hydro companies and environmental organizations to encourage residents to find ways to save energy. Energy saving home improvements and better construction methods are also becoming more widespread. As with many other indicators, the dip in the economy in 2009 also likely played a role. It will be interesting to see if the decreases continue in future years which will help reveal how much of a role (or not) the economy played in 2009.

Garden Plots: Community plots allow residents without access to outdoor space, the ability to rent land in order to plant their own gardens. A total of 189 lots are offered by both the town and Bronte Creek Provincial Park. An area of focus that is increasingly on the radar of many municipalities is the concept of food security and a desire to support a more local and/or organic base for food supplies. It is interesting to note that since we have been tracking this indicator (2004), those plots located in town have been rented 100% of the time. It may be worth looking at expanding this program to deal with the potential for pent up demand and to encourage local small scale food production.

Housing mix: Since 2007, the housing mix has been gradually improving to more closely reflect the targets set in the Region's Joint Municipal Housing Statement which calls for a mix of 50% low density, 30% medium density and 20% high density. Single home construction dropped by nearly 50% between 2008 and 2009, whereas apartment units decreased marginally. Total housing starts for apartment and townhouse construction outpaced single home construction for the first time since this indicator has been tracked (2001).

Ecological Footprint (EF)

New to the environmental indicators program as of last year is the addition of Oakville's ecological footprint. While each indicator can represent a particular aspect of the environment, the footprint combines a broad range of data to give an easy to understand snapshot of the impact of 'Oakville' on the environment.

The concept of the ecological footprint came to the forefront in the 1990's through the work of two Canadians, Mathis Wackernagel and William E. Rees. The EF measures how much land and water area a human population requires to produce the resources it consumes and to absorb its wastes. It is now in wide use by scientists, businesses, governments, agencies, individuals, and institutions working to monitor ecological resource use and advance sustainable development. The Livable Oakville Plan incorporates the EF as part of its policy framework and as a means of measuring progress towards sustainability.

Oakville's EF program has been developed in cooperation with the consulting firm that completed the Federation of Canadian Municipalities report on the footprints of representative municipalities across Canada. As a result of this report, it was found that Calgary and Edmonton had the highest footprints, followed closely behind by Halton Region at 8.91 ha. This protocol also helped further the concept of using the ecological footprint at the smaller scale of a local municipality. Oakville is now in the unique position of being a world leader in this field as the work here has progressed to allowing us to bring the footprint down to a "Dissemination Area" or neighbourhood level. This is possible, and largely due to the monitoring and data collection the town has carried out over the past few years.

Having an ecological footprint calculated at this level of detail allows the town to closely analyze our greatest environment impacts and ways to improve. It offers the opportunity to develop tools and consider data in a way that was previously unexplored. For example, we can pilot environmental outreach programs at a small scale to compare before and after results at a neighbourhood level before rolling them out to the larger community. A key indicator set out in Livable Oakville is to monitor and report on the EF of the town as a measure of the plan's success. Staff is now able to do this by planning area, given the level of detail now available.

A report on the town's ecological footprint was brought to Council on April 13, 2010. In September 2010, Jeff Wilson of ASM Consulting was brought in to review the results of Oakville's EF analysis with key staff members and discuss how this information could be further developed to assist with informing future policies and programs. The results of the neighbourhood level footprint are currently under development and staff review. Progress on the footprint program will be reported to Council in 2011.

Communications Plan

In 2010, the SOER was made available to the public through a number of avenues. Key target audiences included schools, the general public, agencies and government departments requiring detailed information on Oakville's environment.

Strategies that were incorporated included an SOER page on the town's environmental website, delivering SOER packages to all 66 of Oakville's public and private schools and highlighting the SOER in school newsletters and events, providing the reports at environmental policy outreach events and delivering copies to all of Oakville's libraries. The EF was also the focus of a workshop that was held as part of the town's 2010 Earth Day celebrations. Environmental Policy staff, in partnership with Earth Day Canada offered students from area high schools an interactive program that introduced them to the EF and how the EcoAction Teams calculator could help them make a difference in reducing their footprint.

After its first year of rollout, according to the results of the 2009 Community Attitudes Survey, a total of 11.5% of the population were aware of the SOER program. Staff is pleased with this number given that the program was only in its first year of distribution. Staff has been actively promoting the SOER through community outreach events and through the school boards and individual teachers.

Once again, Environmental Policy will work closely with the Strategy, Policy and Communications Department to ensure an effective outreach program is implemented in 2011. Staff will be continuing to dedicate resources into education and outreach, with a special section of the SOER directed towards teachers. A package, available on request, will feature curriculum links, project ideas and further information on the town's SOER and indicators to assist teachers in incorporating the SOER in the classroom.

Future Initiatives

The environmental indicators program and the SOER offer a number of opportunities for environmental outreach, education, evaluating and focusing programs and information sharing. Some of the SOER linked initiatives that are in development include:

EPIcenter – The business case and structure for a town-wide environmental database was developed in conjunction with the IS&S Department in 2010. With the move to PB2 budgeting and an increasing awareness and demand for monitoring and performance measures, the town has an even greater need to manage its environmental data. The recent deployment of the HARVEST tracking and monitoring system by the town offers a new opportunity to effectively integrate SOER data corporately. Staff will be working on this initiative in 2011.

ESP Update – The town's Environmental Strategic Plan (ESP) is being updated and improved in 2011. This will expand the ESP beyond an environmental focus to embrace the four pillars of sustainability: environment, social, cultural and economic as established within several of the town's master plans such as Livable Oakville.

The updated plan will integrate a Local Action Plan (LAP) as part of the town's obligations under Milestone 3 of the Partners for Climate Protection. This update will also involve a full review of the existing SOER to ensure the town has an appropriate monitoring program and inclusive set of indicators to cover these elements.

CONSIDERATIONS:

(A) PUBLIC

The SOER will provide the community with information to make lifestyle changes and decisions that will improve Oakville's environment.

(B) FINANCIAL

There are no financial implications associated with this report.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

Many departments, agencies, community groups and individuals have contributed to the environmental indicators program. Departments will have a continuing role to play to support reporting on these indicators. This program in turn supports departments across the corporation in managing their environmental data and the impacts of their programs and operations.

(D) CORPORATE AND/OR DEPARTMENT STRATEGIC GOALS

This report addresses the corporate strategic goal to:

- be accountable
- enhance our natural environment
- continuously improve our programs and services
- have environmentally sustainable programs/services

(E) COMMUNITY SUSTAINABILITY

The SOER promotes environmental stewardship and responsibility by raising awareness and providing concrete steps that can assist the town and its partners in achieving greater environmental sustainability. The ESP supports both environmental and social pillars of sustainability.

APPENDICES:

Appendix A: DRAFT 2010 State of the Environment Report (SOER)

Prepared by:
Donna Doyle,
Senior Environmental Policy Analyst,
Environmental Policy Department

Submitted by:
Cindy Toth,
Director,
Environmental Policy Department