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*This report is published for public and agency comment
as part of Durham Region's review of its Official Plan.*

*The proposed directions for refinement of the Official Plan Policy
do not necessarily represent the position of Regional Council
on changes that may be considered to the ROP.*

Please provide your comments by November 28, 2003.

4.3 What is Being Done

Air quality is affected by local, regional and global factors. MOE has estimated that almost half of the smog found in Ontario originates from the America Midwest. Nevertheless there are local actions that can be taken to help improve air quality.⁷

From a national perspective, a number of initiatives have been launched to address climate change. The most significant is the Kyoto Protocol, an international initiative aimed at reducing emissions and air pollution. As a supporter of the Protocol, Canada is proposing to reduce greenhouse gases by six percent below 1990 levels during the period 2008-2012.

In 2001, the federal government announced significant new funding (\$250 million) for municipal actions to reduce green house gas emissions. Municipal responses include the City of Calgary purchasing wind-generated electricity to power their light rail transit system. In addition, many municipalities are installing lighting systems that require less energy and maintenance and are taking measures to reduce excessive lighting. Other municipalities are investigating the feasibility of converting to “green” fleets for municipal vehicles and implementing energy conservation measures with municipal buildings.

At the Provincial level, a \$10 million Climate Change fund has been established to support projects that reduce greenhouse gas emissions and improve air quality.

The Region of Durham has also recently taken action to respond to air quality concerns by participating on the GTA Clean Air Council, this will lead to the development of Regional air quality action plans.

Regional Council also established a Regional Air Quality Working Group to:

- follow-up on key issues during the annual GTA Smog Summits;
- help establish a series of ongoing Summits; and
- explore opportunities and coordinate and implement Corporate clean air initiatives between annual Summits.

It is generally recognized that road traffic is the primary source of air pollution with fossil fuel power stations a secondary source. The draft Durham Region Transportation Master Plan (TMP), which identifies the policies, programs and infrastructure improvements required to address Durham transportation needs for the next 20 years and beyond, also addressed air quality as it

⁷ *Smog Alert, A Municipal Response Guide*, MOE, 1999

- to implement an integrated residential waste management system for the collection, processing and disposal of: 1) blue box recyclables; 2) food and yard waste compostables; 3) residual garbage waste; and 4) special wastes; and
- to consider an “Energy from Waste” type facility for the disposal of residual garbage wastes.

These strategies are consistent with the intent of the ROP which states that Regional Council will pursue measures related to the reduction, re-use and recycling of waste. The Long Term Waste Management Strategy, approved by Regional Council, effectively promotes waste reduction and as a result, no changes to the ROP are proposed.

6.3 Pesticide Use

Submissions were received regarding protecting the environment from the potential impacts of pesticide use.

Pesticide is a chemical substance designed to kill, control or repel living organisms such as weeds, insects and rodents. Fertilizers containing herbicides (weed killers) are considered pesticides.

In an effort to reduce the use of pesticides within the Region, the Regional Health Department has produced a pamphlet that describes alternatives to pesticide application on lawns and gardens.

Pesticides are regulated by the Federal and Provincial governments to keep risk to human health and the environment low. Local Municipalities also have the ability under the new Municipal Act to pass by-laws to control pesticide application within their boundaries. Many local municipalities within Durham Region are currently considering the use of by-laws to regulate pesticides. As a result, no changes to the ROP are recommended.

6.4 Light Pollution

Submissions were received regarding protecting the environment from light pollution. Light Pollution is the excessive illumination of the night sky. The adverse effects of excessive light include:

- urban sky glow that impacts surrounding rural characteristics;
- direct glare affecting sight;
- light trespass of someone else’s light adversely affecting others;
- environmental impact on birds and wildlife; and
- wasted energy.

The ROP views the environment as natural resources, their processes, the built environment, and the direct or indirect impact of human activities. Lighting pollution can be an impact on human activities and the Region's natural resources.

ROP policy promotes the enhancement of the visual amenities of the (urban) environment and encourages area municipalities to enact by-laws establishing environmental, aesthetic, and urban design controls. Further, in the preparation of official plans, the Region requires area municipalities to include policies to address environmental, aesthetic, and urban design controls. Within this context, local municipal by-laws to regulate outdoor lighting and control light pollution are encouraged and supported. The City of Pickering Official Plan, for example, explicitly requires that outdoor lighting should be of "appropriate quality, intensity, and design . . . to reduce the effects of light pollution on the night-time sky and on adjacent uses".

The ROP also promotes the reduction of energy consumption. Ineffective and inefficient lighting is simply a waste of energy. Since we largely depend on fossil fuels to produce energy, the use of more effective and efficient lighting would also contribute to an overall reduction of air pollution.

The ROP currently does not reference light pollution. Given the potential impacts on the environment, the ROP should include directions to encourage local municipalities to incorporate policies into their official plans and/or pass by-laws to minimize light pollution.

Proposed Directions

It is proposed that the ROP be amended to encourage local municipalities to incorporate policies in their official plans and/or pass site plan control by-laws to minimize light pollution.

Based on an 8.4% woodland coverage in the Urban Areas, the following ranking is proposed:

Urban Areas:

<u>Size</u>	<u>Rank</u>
0.5 – 1ha=.....	1
1.5 – 2ha=.....	2
2.5 – 3ha=.....	3
1.5 – 4ha=.....	4
4.5 – 5ha=.....	5

Shape

Shape is used as a means for identifying woodlands with characteristics favorable to interior forest habitat. Forest interior habitat refers to the area of the woodland considered free from external influences (also known as edge effects). Researchers have found changes in light levels, air temperature, soil moisture, plant richness and canopy density from the forest edge to the interior. Many types of wildlife require the protection of an interior forest habitat to survive.

Woodland shape was measured using the area/perimeter ratio. The application of an area/perimeter ratio ranks woodlands that are more compact and round higher than those woodlands which are linear or have greater edge and do not possess characteristics for interior habitat. The following ranking system was used.

<u>Area/Perimeter Ratio</u>	<u>Rank</u>
35-59 =.....	1
60-102 =.....	2
103-140 =.....	3
141+ =.....	4

Proximity to Other Natural Heritage Features

Similar to the proposed provincial criteria for the identification of significant woodlands on the ORM, it is also recommended that woodlands 4 ha or larger which connect to, contain or overlap any other natural heritage feature are also considered regionally significant. Woodlands that are in the presence of other natural features often supportive by providing linkages and enhanced ecological functions. For example, woodland coverage in a significant valley land can be beneficial in slope stability and woodland coverage that connects to significant fish habitat can aid in controlling water temperatures.