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## OPPI Policy Development Committee - Information About MOE Land Use Compatibility Guidelines

Author: [George McKibbin](#)

### The Ministry of the Environment Land Use Compatibility Guidelines (D1 through D6)

#### Introduction:

The Ministry of the Environment land use compatibility guidelines attempt to minimize adverse effects between incompatible land uses. Municipalities are encouraged to address land use compatibility early during planning approvals. The guidelines supplement the Environmental Protection Act to meet the requirements of Policy 1.7.1 e) of the Provincial Policy Statement. This policy states:

*"Long-term economic prosperity should be supported by:*

*e) planning so that major facilities (such as airports, transportation/transit/rail infrastructure and corridors, intermodal facilities, sewage treatment facilities, waste management systems, oil and gas pipelines, industries and resource extraction activities) and sensitive land uses are appropriately designed, buffered and/or separated from each other to prevent adverse effects from odour, noise and other contaminants, and minimize risk to public health and safety."*

The adverse effects are: noise and vibration; visual impact where waste management is concerned; odours and air emissions; litter, dust and other particulate; and other contaminants. Many facilities use processes and handle materials which result in fugitive emissions. Distance is the only effective buffer because environmental standards enforced by regulation may not eliminate potential adverse effects where these emissions occur.

#### Background:

The guidelines apply the following process:

- Industrial facilities are classified into one of three classes based upon analyses of the character of the industrial use/process, scale, probability for fugitive emissions; hours of operation, production volumes, movement of goods and employees and outdoor activity
- Depending upon the class, three potential influence areas are established based on past experience; Class 1 Industrial: 70 m potential influence area; Class 2 Industrial: 300 m potential influence area; and Class 3 Industrial: 1000 m potential influence area
- Unless and until detailed studies demonstrate these potential areas can be varied, sensitive uses are to be separated from industrial facilities by these distances depending upon classification
- With detailed analyses, this distances can be reduced but not to distances less than the following for each class based on past experience: Class 1 Industrial: 20 m; Class 2 Industrial: 70 m; and Class 3 Industrial: 300 m
- The separation distance can be provided on site or on adjoining lands. Lands within the separation distance can be used productively for compatible uses
- In general, there is a continuum of sensitivity between compatible and incompatible uses. The Ministry provides examples

of sensitive uses as: residential or facilities where people sleep (e.g., nursing homes, hospitals); institutions such as schools; certain outdoor recreational uses such as a camp ground; and certain agricultural operations (e.g., livestock operations, orchards); and wildlife sanctuaries. Additional analysis can be applied to define other uses of varying sensitivity.

- The result shouldn't freeze the use of land within this buffer. The onus is on the developer to provide information and analyses.

#### **Analytical Issues:**

The distances used in the guidelines are based upon Ministry of the Environment experience in the implementation of the Environmental Protection Act. Even when a facility is in compliance, adverse effects will be experienced around an industrial facility from time to time. The following analytical issues provide additional rationale for using distance to buffer potentially incompatible land uses.

A variety of different models may be employed to address potential adverse effects and these perform differently and may produce different results. The available models and standards applied to evaluate the results change as our science expands. The regulatory framework is based upon the selection a model to be applied and the standards to be met.

Once a regulation is in place, managers design their facilities. Today, a plant's economic life may outlast the regulatory standards to which it was constructed. But the Ministry and the facility manager cannot retroactively reconstruct the facility or re-issue its certificate of compliance each time a regulation changes. There will be slippage between the standards applied and a plant's ability to retrofit to meet new standards and that slippage may exist for many years which can be mitigated by placing distance between the facility and sensitive use.

Industrial processes and equipment change as do product lines during a plant's economic life. These changes may result in different and/or greater potential adverse effects from those experienced when the facility was commissioned. In a changing world, industries need to be flexible and if the public is to obtain greater public good from industrial designations and zoning, placing a reasonable distance between a facility and a sensitive use can maintain greater industrial flexibility.

Workplace safety regulations require measures such as back up beepers and warning signals. These are unregulated by the Environmental Protection Act and may be experienced as adverse effects by neighbours. Only distance can mitigate these measures.

Ministry of the Environment's land use compatibility guidelines have been in existence since the late 70's. The guidelines need to be updated to better address current situations.

- Emphasis on the re-use of former industrial lands and intensification will result in greater mixing of uses at higher population and employment densities, some potentially incompatible, in close proximity. We need better guidance as to how to plan re-use and intensification in these circumstances so as to enable urban uses to meet the requirements of the Provincial Policy and the Environmental Protection Act.

Public health science has changed. There is sufficient evidence to conclude for certain air quality contaminants, there are no levels at which the health of all members of the populace will be unaffected. Our environmental regulations are based on standards. If there are no completely safe standards, we need to re-examine the minimum distances and the methods by which we determine areas of potential adverse effects when separating Class 2 and 3 facilities from sensitive uses.

- Our public health challenges are changing. Asthma may become epidemic in character among some urban populations in part because of air quality resulting from urban land use and transportation patterns. Within an urban environment, air quality is the product of point source emissions, land use and transportation patterns and trans-boundary air shed contributions. There is scientific evidence that living in close proximity to heavily used urban automobile and truck transportation corridors results in poorer health. We need to expand the scope of the Guidelines to better address point and non-point sources within our urban environments.
- Re-use and intensification will result in larger facilities with greater reliance on larger scale mechanical systems (e.g., air

conditioning and cooling) and associated potential adverse effects. These systems should also be addressed as matters to be addressed in land use compatibility.

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