

Overview of Land Use Compatibility between Sensitive Land Uses and Nuisance Sources

Peter Piersol
ppiersol@ortech.ca



- The Proximity Issue
- The Pressure Points
- Available Guidance
- D-6 Report & Study Examples



The Proximity Issue



- The air Ontario Regulatory system, including noise, is primarily based on **off-property** impacts.
- Concept of ‘Points of Impingement (POI)’, or points of potential adverse effect



The Proximity Issue

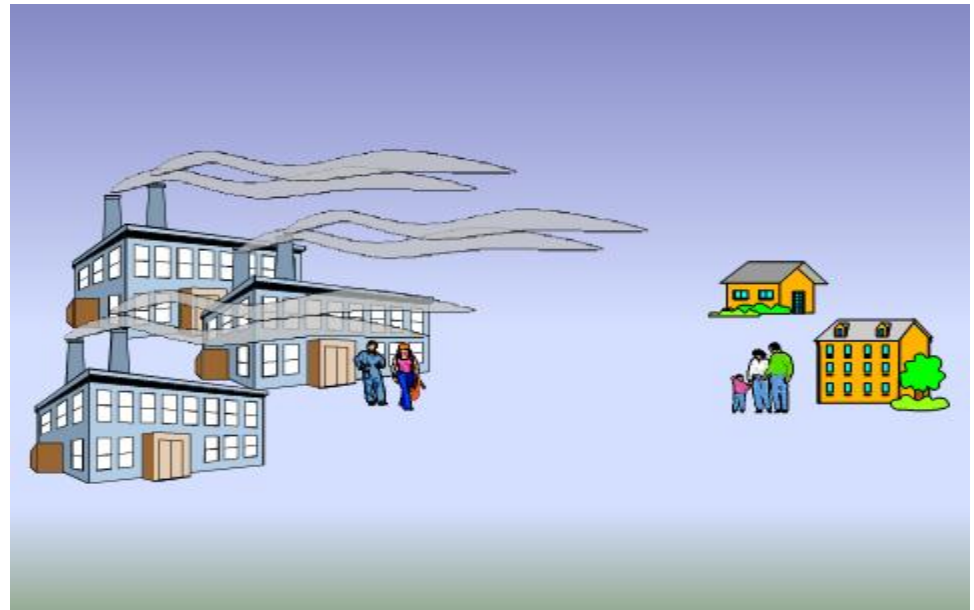
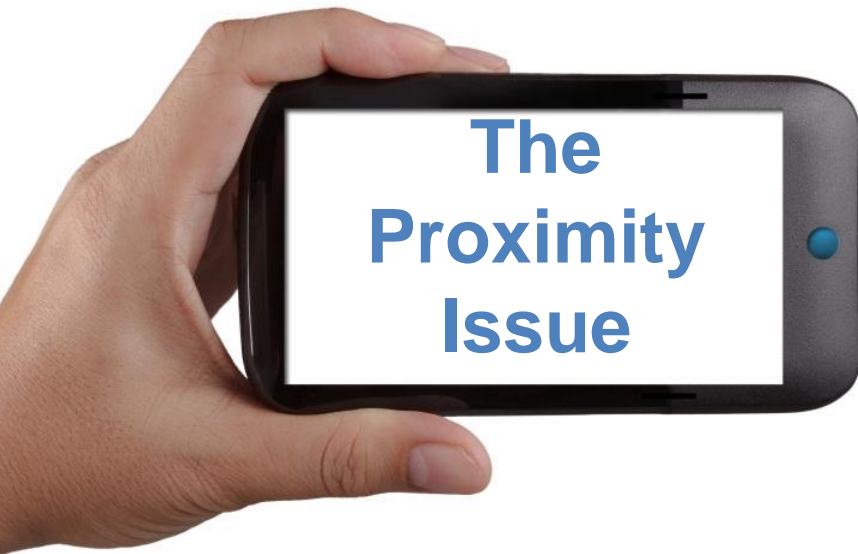
Points of impingement



2. (1) A reference in this Regulation to a point of impingement with respect to the discharge of a contaminant does not include any point that is located on the same property as the source of contaminant. O. Reg. 419/05, s. 2 (1).

(2) Despite subsection (1), a reference in this Regulation to a point of impingement with respect to the discharge of a contaminant includes a point that is located on the same property as the source of contaminant, if that point is located on,

- (a) a child care facility; or
- (b) a structure, if the primary purpose of the property on which the structure is located, and of the structure, is to serve as,
 - (i) a health care facility,
 - (ii) a senior citizens' residence or long-term care facility, or
 - (iii) an educational facility.



Air Points of Impingement:

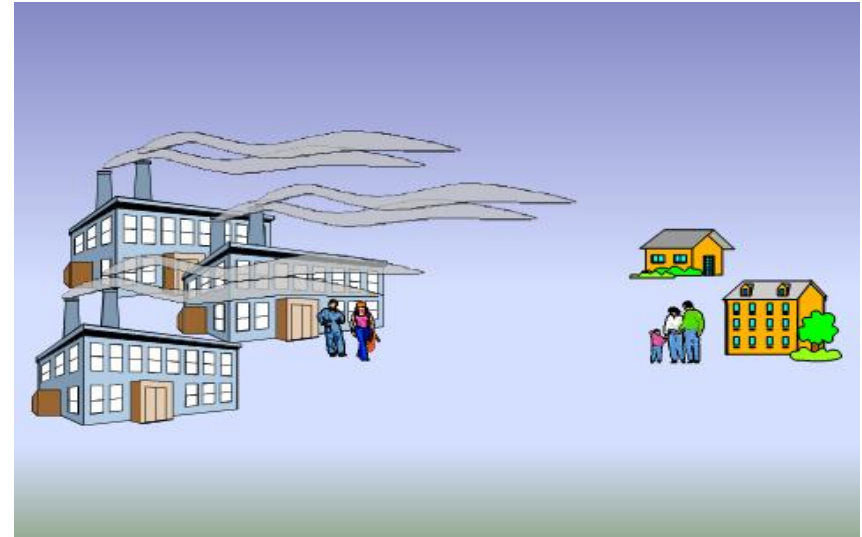
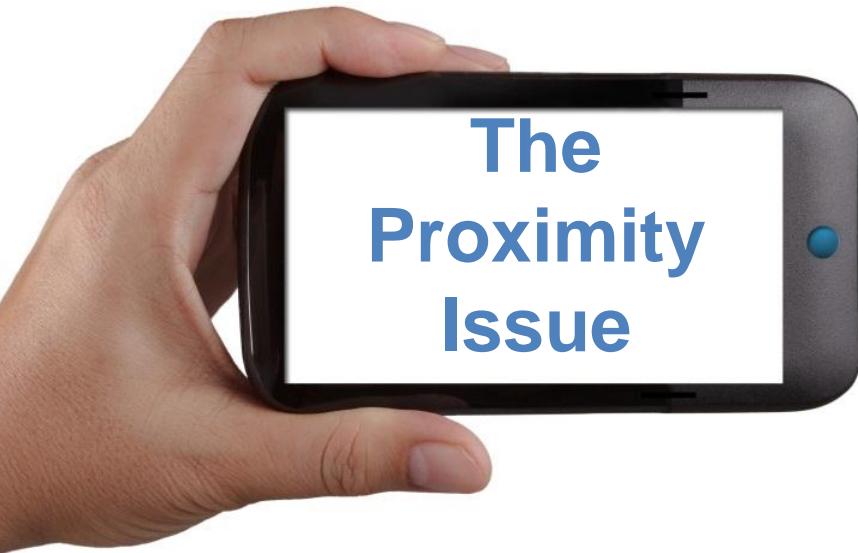
All off-property 'receptors', including

All ground level locations including low rise structures:

Elevated structures (e.g. medium and high rise buildings);

And certain on-property locations (e.g. child care).

c.f. Noise Point of Reception; later presentation



The Pressure Points

- High demand for residential development
- Low demand for industrial land or industrial land development
- Redevelopment, Infilling and Mixed Use
- Functional 'grandfathering' of existing industries
 - Tolerance of some fugitive dust, noise and odour leaving the property
- Community perceptions of adverse impacts and nuisance



2014 Provincial Policy Statement (s1.2.6 Land Use Compatibility)
The Environmental Protection Act

The 1999 Land Use Compatibility Guidelines (the so called 'D'
Guidelines); on the MOECC website:

<http://www.ontario.ca/document/d-1-land-use-and-compatibility>

<http://www.ontario.ca/document/d-6-compatibility-between-industrial-facilities>



- D-1 Land Use And Compatibility
- D-2 Compatibility between Sewage Treatment and Sensitive Land Uses
- D-3 Environmental considerations for Gas or Oil Pipelines and Facilities
- D-4 Land Use on or Near Landfills and Dumps
- D-5 Planning for Sewage and Water Facilities
- D-6 Compatibility between Industrial Facilities and Sensitive Land Uses



Details and Clarifications:

- D-1-1; D-1-2; D-1-3
- D-4-1; D-4-2; D-4-3
- D-5-1; D-5-2; D-5-3; D-5-4; D-5-5
- D-6-1; D-6-2; D-6-3; D-6-4



D-6-2 Clarification

The Ministry of the Environment & Energy requires that the industrial facility, for which the Air C of A application is being made, must comply with area zoning by-law(s). If the proposal conflicts with area zoning by-laws, the application will be returned.



**NPC-300 Environmental Noise Guideline,
Noise Assessment criteria for Stationary Sources and for Land Use
Planning**

**Ontario Regulation 419/05 Air Pollution — Local Air
Quality**



Guideline A-10 Procedure For Preparing an Emission Summary and Dispersion Modelling Report

Guideline A-11 Air Dispersion Modelling Guideline for Ontario

Technical Bulletin Methodology for Modelling Assessments of Contaminants with 10-minute Average Standards and Guidelines under O.Reg. 419/05

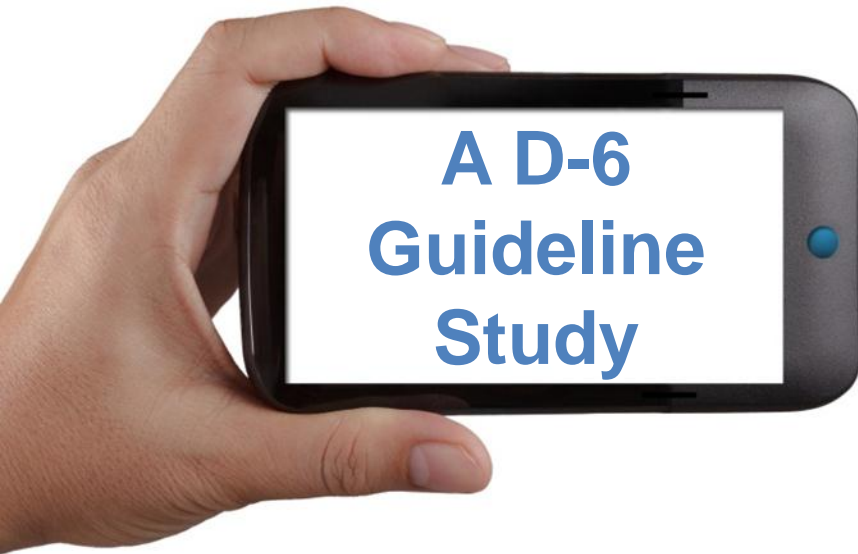


Halton 2014 Guidelines (Part of Halton ROPA 38;

Report No. IMLC01-14):

- Land Use Compatibility Guidelines Regional Official Plan Guidelines
- Air Quality Guidelines Regional Official Plan Guidelines

Includes Transportation Corridors and Airports



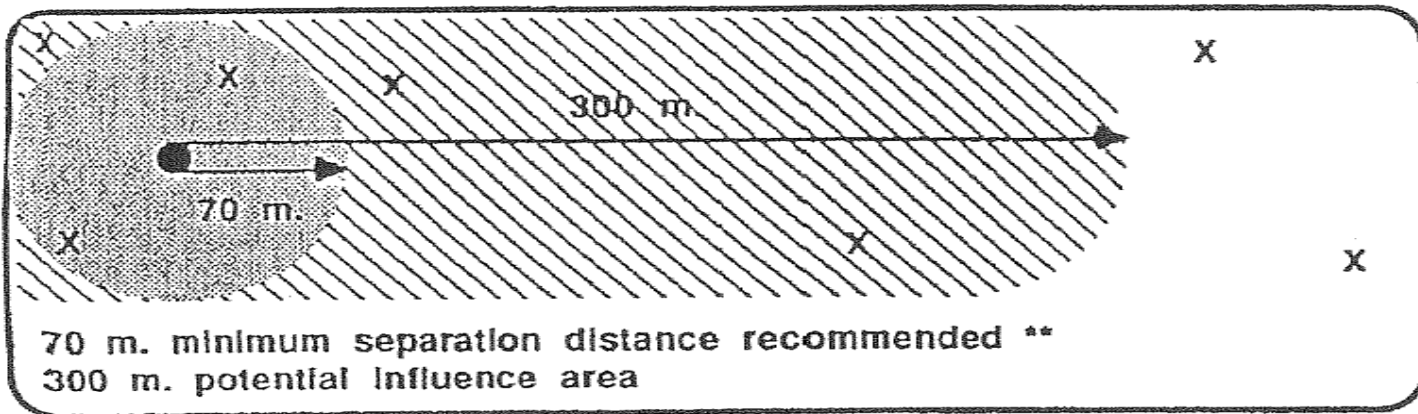
- 1000 Metre Study Area to search for Industrial Uses
- Definitions and examples of three Classes, based on noise, dust and odour:

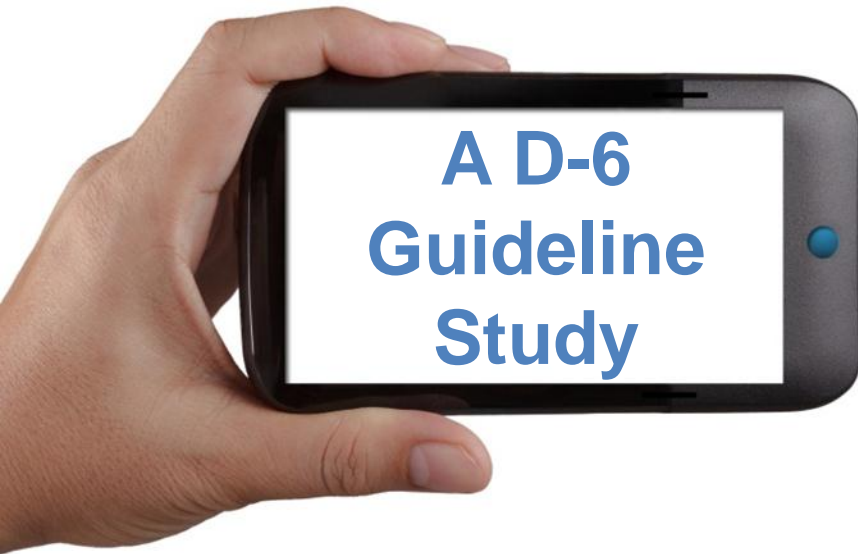
Class	Recommended Minimum Separation Distance (m)	Potential Influence Area (m)
I	20	70
II	70	300
III	300	1000

- **But** the ‘actual influence area is site specific’

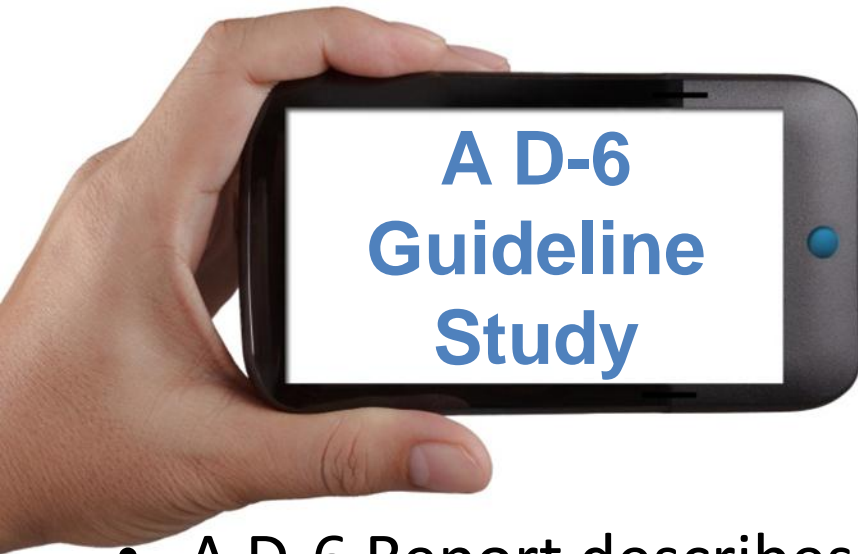
D-6 Guideline Graphic

CLASS II INDUSTRIAL:

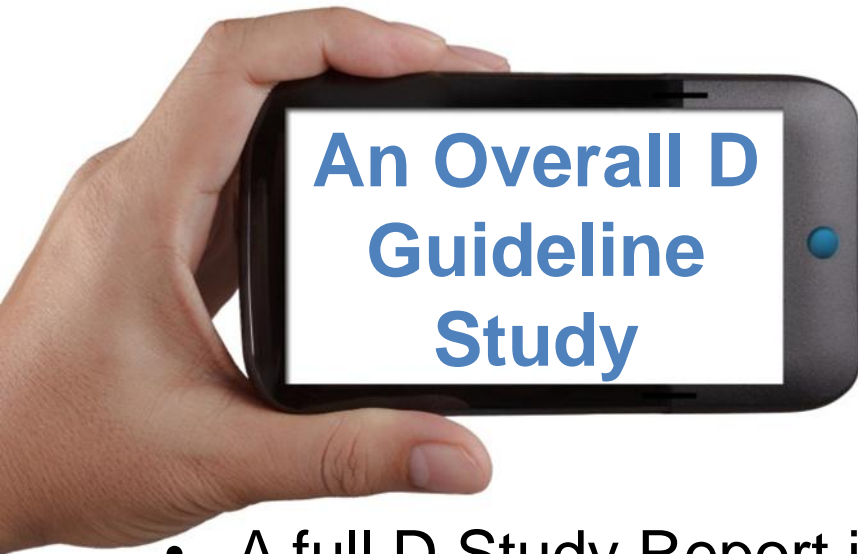




- Sensitive land uses (where humans or the natural environment may be adversely affected by emissions):
 - Designated recreational uses, public spaces
 - Buildings and Amenity Areas; examples include residences, senior homes, schools, day care, hospitals, churches, campgrounds

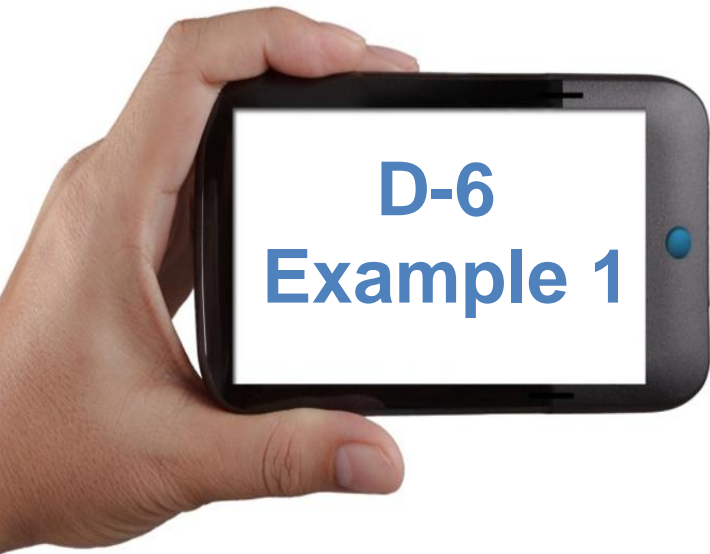


- A D-6 Report describes
 - the relevant existing and proposed **industries** and separation distances to
 - existing and proposed **sensitive uses** based on the potential for noise, dust and odour.
- Typically the report is commissioned to address encroachment of new residential on existing industry
- Report may also include mitigation as appropriate

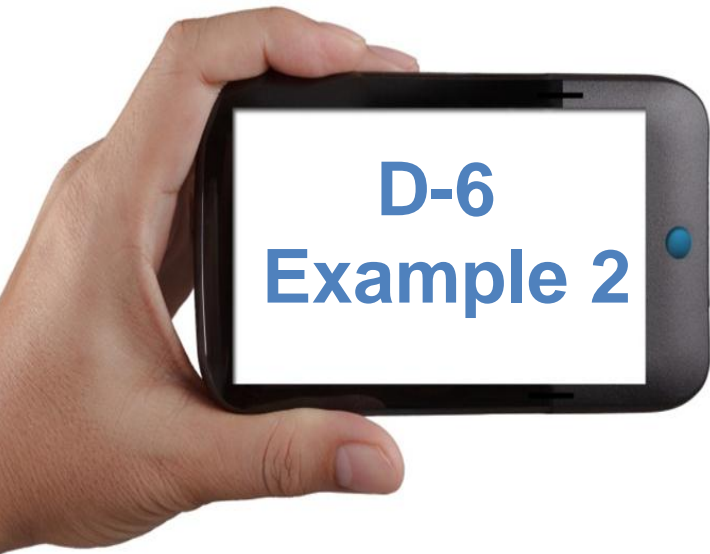


- A full D Study Report includes:
 - Sewage Treatment Facilities;
 - Pipelines;
 - Landfills and Dumps;
 - Water Supply and Services; and
 - Industrial Facilities.

- A full sensitivity study might also include transportation corridors, airports and the like.



- Proposed Townhouses Adjacent to Small Sewage Treatment Plant:
 - Odour Issues
 - Complaint History
 - Community Odour Observations
 - Consultations with Regional Government
 - Peer Reviews



- Proposed Housing Near Industrial Park:
 - Survey of industrial & commercial facilities
 - Categorize facilities & identify separation distances
 - Site Visit Observations
 - Discussions with Municipal, Regional Government & MOECC

Thank you

