



BURNSIDE

Land Use Compatibility

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Presented to: The Aggregate Resources Community Working Group
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Agenda

- Presenter Background
- Guidance documents
 - D-1
 - D-6
 - O.Reg. 419/05
 - NPC-300

Harvey Watson

- B.A.Sc. from University of Waterloo, 1991
- Received P.Eng. in 1995
- Consulting in environmental Air Quality and Noise since 2003
- Completed over 200 Assessments
- Peer reviewed over 300 Assessments by others on behalf of Government agencies (Municipalities, Regions, Metrolinx, Conservation Authorities, etc)



D-1 – Land Use Compatibility

- Supposed to be 1st level screening tool to decide whether land uses are compatible
 - First written in 1995
 - Last Updated in 2018
 - Explains who should use these guidelines and when
 - Provides definitions
 - Recommends detailed studies if buffers are insufficient
 - Refers to other D-series documents for more detail

Other Land Use Compatibility Documents

- Details provided on/for
 - D-2 – Sensitive land and Sewage Treatment Facilities
 - D-3 – Sensitive land and Gas or Oil Pipeline
 - D-4 – Sensitive land and Landfill
 - D-5 – Calculating and Reporting Uncommitted Reserve Capacity at Sewage and Water Treatment Plants
 - D-6 – Sensitive land and Industrial Facilities

Steps

- Facility Categorization (next slide)
- Identification of sensitive receptors (anywhere someone sleeps + schools and libraries)
- Distance Measurement (property line to property line)

Categorization

- For each item, decide the most appropriate Class based on the description in each column.
- Count # in each class
- Decide class to assign.

Ministry of Environment: D Series' Industrial Categorization Criteria			
Item	Class 1	Class 2	Class 3
Noise	Sound not audible off property	Sound occasionally audible off property	Sound frequently audible off property
Dust and/or Odour	Infrequent and not intense	Frequent and occasionally intense	Persistent and/or intense
Vibration	No ground-borne vibration on plant property	Possible ground-borne vibration, but cannot be perceived off property	Ground-borne vibration can frequently be perceived off property
Air Quality	Low probability of fugitive emissions	Occasional outputs of either point source or fugitive emissions	High probability of fugitive emissions
Scale of Production	Small scale plant or scale is irrelevant in relation to all other criteria for this Class	Medium level of production allowed	Large production levels

Categorization

Ministry of Environment: D Series' Industrial Categorization Criteria			
Item	Class 1	Class 2	Class 3
Outside Storage	Minimal storage	Outdoor storage permitted	Outside storage of raw and finished products
Process	Self-contained plant or building	Open process - outdoor storage of wastes or materials	Open process - outdoor storage of wastes or materials
Process Outputs	Produces/stores a packaged product	Periodic outputs of minor annoyance	Frequent outputs of major annoyances
Possibility of Fugitive Emissions	Low probability of fugitive emissions	Low probability of fugitive emissions	High probability of fugitive emissions
Hours of Operation	Daytime operations only	Shift operations permitted	Daily shift operations permitted
On-site Movement	Infrequent movement of products and/or heavy trucks	Frequent movement of products and/or heavy trucks with the majority of movements during daytime hours	Continuous movement of products and employees
Examples (not comprehensive)	Electronics manufacturing and repair Furniture repair and refinishing Beverages bottling Auto parts supply Packaging and crafting services Distribution of dairy products Laundry and linen supply	Magazine printing Paint spray booths Metal command Electrical production manufacturing Manufacturing of dairy products Dry cleaning services Feed packing plant	Manufacturing of paint and varnish Organic chemicals manufacturing Breweries Solvent recovery plants Soaps and detergent manufacturing Manufacturing of resins and costing Metal manufacturing

Buffers

Class	Minimum (m)	Influence (m)
1	20	70
2	70	300
3	300	1,000

- Aggregate Pit usually Class 2 or 3
- If sensitive receptors found within Minimum buffer, a study must be prepared if the facility emits the contaminant (Aggregate Operation would be required to prepare Dust and Noise studies. May need vibration study if they do blasting.)

Buffers (cont)

Class	Minimum (m)	Influence (m)
1	20	70
2	70	300
3	300	1,000

- If sensitive receptors found within Influence buffer, a study may be prepared if the facility emits the contaminant at a significant level.
- If no sensitive receptors found within Influence buffer, then nothing further required (normally).
- Same studies would be expected for an aggregate pit.

Noise Assessment – NPC-300

- Guideline NPC-300 is Provincial guidance on how to assess noise in the province.
- Every industry must meet these guidelines regardless of whether D-6 was done and or shows need for noise study.
- Assessment looks at worst-case 1-hour impact for Daytime, Evening, and Nighttime, if appropriate.

Air Quality Assessment – O.Reg. 419/05

- O.Reg. 419/05 is Provincial regulation on how to assess air quality in the province.
- Every industry must meet these guidelines regardless of whether D-6 was done and or shows need for noise study.
- Assessment must meet criteria at property line for everything except dust and odour.
- Odour not normally an issue for aggregate pits.

Questions