

Introduction to the New IAIA Air Quality Assessment Guide

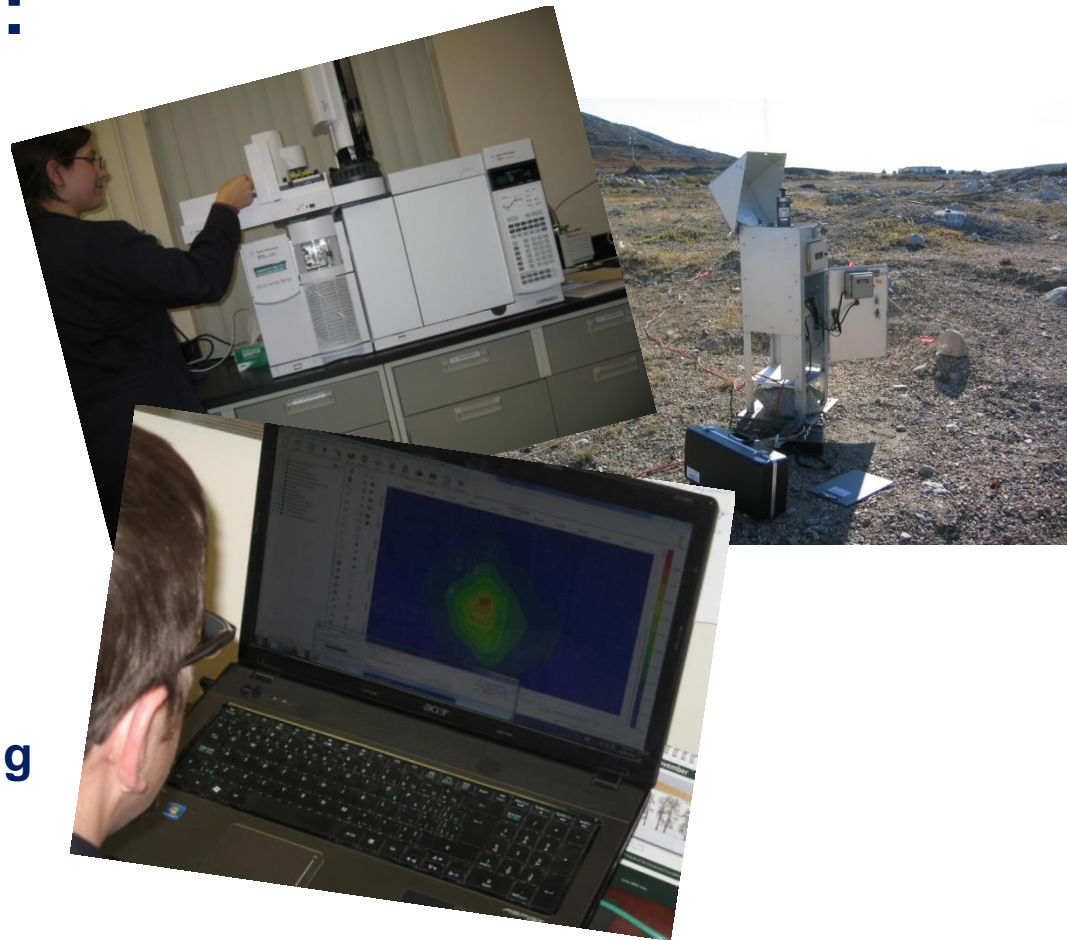
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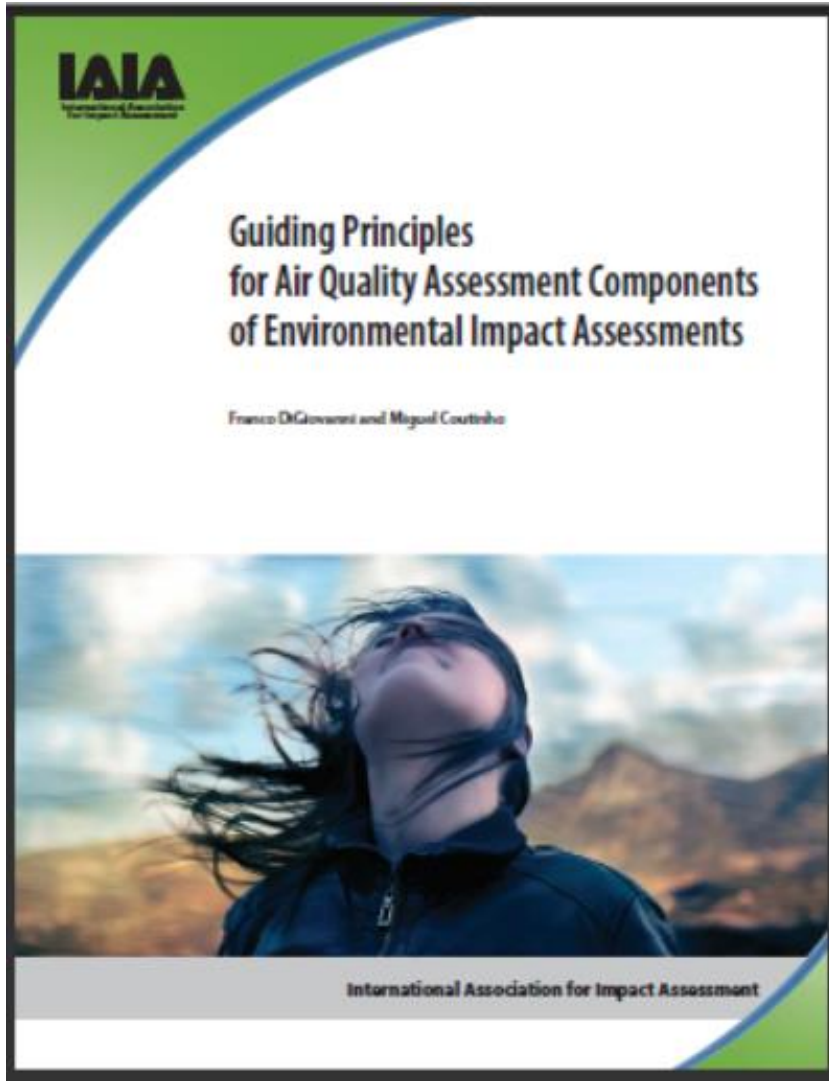
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- EA Assessments
- LUC Assessments
- Permitting and Emissions Reporting
- Indoor Air Quality
- Occupational Hygiene & Safety
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- > \$2,000,000 in air monitoring & lab instruments



Presentation



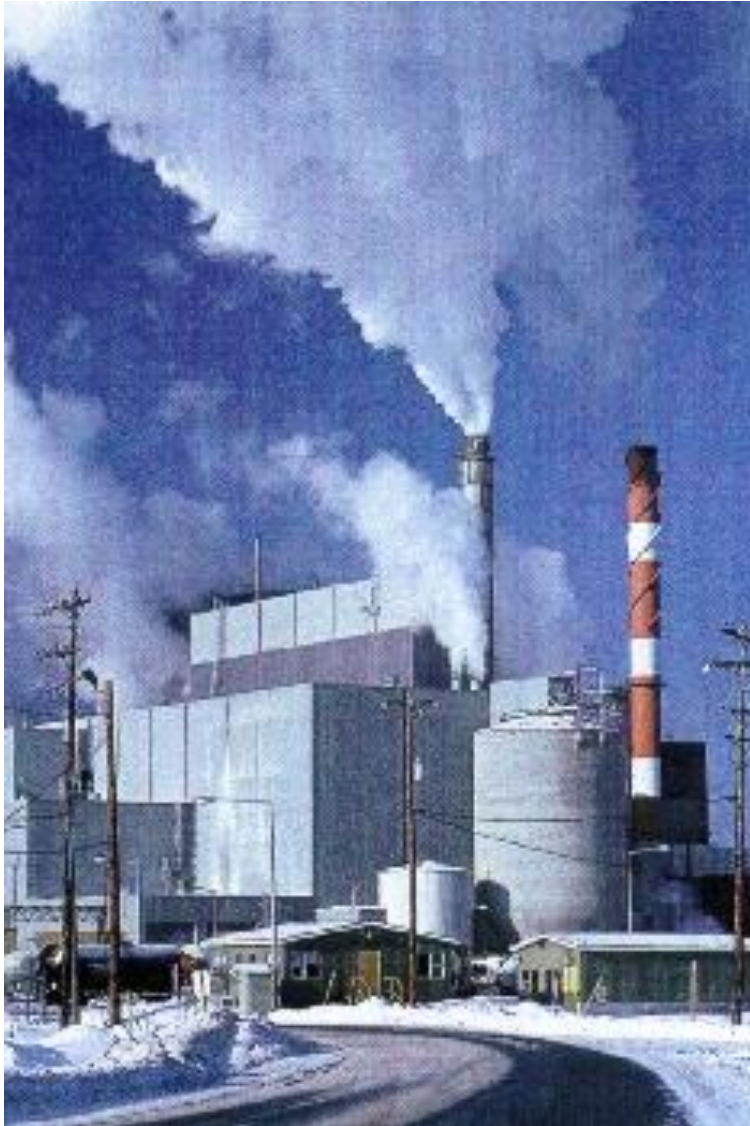
- * Introduction
- * Sections of Guide
- * Living Document – expansion/modifications to current guide
- * An international standard
- * Further Applications

Introduction

- * Air quality (AQ) is a central focus of many EAs
- * To clarify areas of uncertainty and inappropriate air impact assessment methods
- * For experienced air quality practitioners representing proponents + reviewers of such documents (regulatory or third-party peer reviewers)



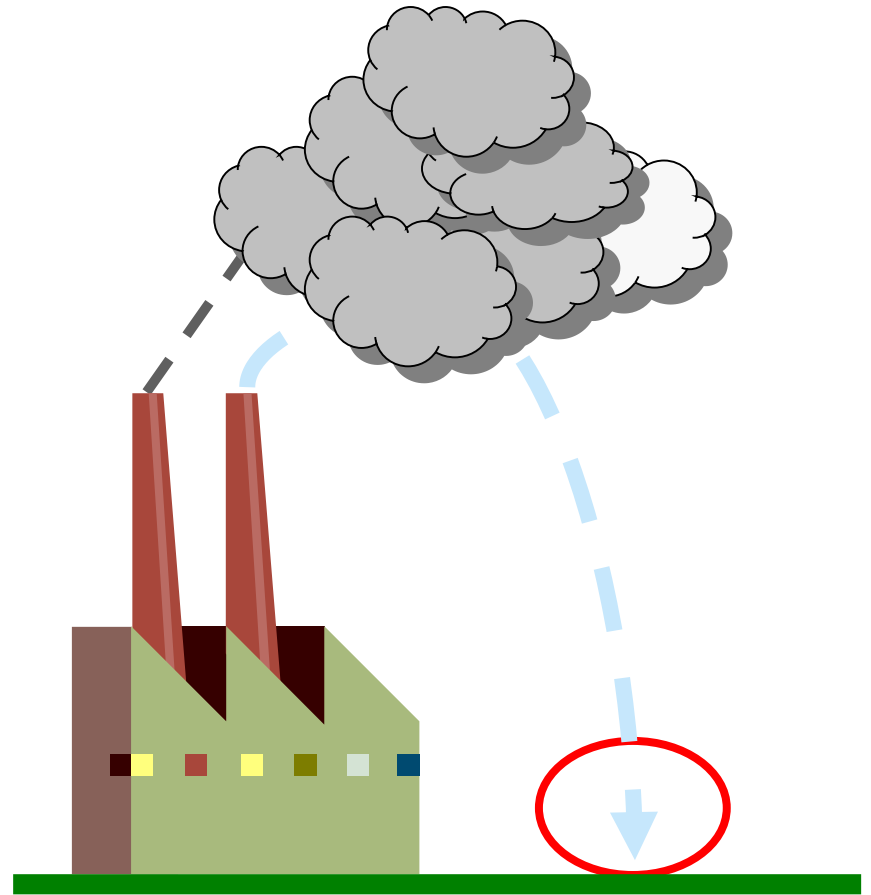
Sections of the Guide



- * Scoping of Project: identifying all sources (“subject” sources)
- * Identifying all contaminants -> Contaminants of Potential Concern (CoPC); fugitive dust (speciation)
- * Worst-case impacts: identifying the appropriate operating scenario; “maximal” emissions + worst-case meteorology

Sections of the Guide

- * Spatial/temporal variability of the subject sources
- * Quantifying emission rates
- * Modelling dispersion
- * Appropriate meteorological data
- * Baseline AQ levels: spatial/temporal variations, methods of assessing baseline (e.g., local vs regional)



Sections of the Guide



- * Unavailable input data and conservative estimates
- * Refinements, probabilistic approaches, and uncertainty assessments

IAIA Living Document – future expansions to the current guide

- * Parts of the guide provide only a very brief introduction to expansive topics, e.g., emissions estimation
- * Suggested expansions and modifications are welcome as part of the “Living Document” philosophy
- * Franco and Miguel will edit submissions



IAIA Living Document – future expansions to the current guide: IAIA Session Summary



- * Guest speakers:
 - * very supportive
 - * stacked conservative assumptions
 - * Appendix: list recommended qualifications for AQ practitioners
- * Audience:
 - * support for general adoption
 - * Do not update too frequently

An international standard

- * Various jurisdictions (countries) can be encouraged to adopt these guidelines to assist in standardizing AQ assessment methods
- * This will increase the profile of OAIA/IAIA
- * *What can you do to encourage adoption of these guidelines by EA regulatory agencies?*



Application to Land Use Compatibility Assessments in Ontario

public. Smaller changes included use of the WordPress blogging platform as a hybrid publishing medium and data base for planning files because it offers flexibility, data management and an exceptionally low cost of less than \$400 per year and streamlining of the file digitization and web upload process, by providing each planning staff with a scanner at his or her desk.

The third example relates to the creation of a GIS database/ map that was developed with a survey interface designed for computer tablets to complete a community-wide tree inventory. The information was gathered and input in the field by staff and volunteers. While this may not seem like such a leap forward in technology, the unfortunate reality is that there are still far too many municipalities where these kinds of tools are not an option.

What makes this project even more special is that it is now being adapted for another unique study. This time the same tools that allowed for geo-location, photographic documentation, and note taking throughout the community, are being adapted for a heritage cemetery study.

The planning policies and projects currently underway in Clearview are in many respects as contemporary and advanced as any community within the province, regardless of size and urbanization. Efforts focused on healthy community design, innovative mixed-use and infill developments, place-based design, active transportation, and creating an all-ages friendly community are all actively being pursued. How technology can facilitate or advance these work programs is continually explored.

What's next for Clearview? The planning department is considering the development of a digital 3D model to examine the urban design characteristics of new developments in a more sophisticated and effective way than is now possible. This is a similar model to that used in [Portland, New Hampshire](#) to assess context sensitive designs in the community's heritage district as part of its development review process and as a community information tool.

The Clearview planning department is always seeking to enhance its work through consistent exploration of technological tools. I believe that any community can have similar success if it can foster the necessary curiosity, courage and creativity to integrate technology into their planning programs.



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ENVIRONMENT

Air Emissions Assessments

D-series guidelines

By Nicole Shantz and Franco DiGiovanni

Air quality impacts caused by certain land uses on adjacent sensitive receptors have been at the root of many land use incompatibilities for centuries. In the mid-1960s, the Ontario Ministry of the Environment developed the D-series guidelines for land use planning and proposed changes to land uses that may involve environmental impact considerations. Since 1994, Provincial Policy Statements under the Planning Act have provided direction on land use compatibility issues relating to sensitive uses, facilities (or industrial, commercial and institutional development) and adverse effects. Most municipal official plans reflect the PPS compatibility policies and refer to MOE guidelines including the D-series guidelines. In April 2014 a new PPS was enacted.

This D-series guidelines is meant to prevent or minimize adverse effects (as defined in the *Environmental Protection Act, R.S.O. 1990, c.E.19*) on sensitive land uses due to incompatibilities between, for example, new industrial or residential developments and currently existing developments. They are applicable to environmental discharges such as noise, vibration, odours and air emissions, such as dust.

As originally developed, the D-series were meant to guide assessments that were to be submitted to the MOE for review. However, starting in 1995, the responsibility for administering land use compatibility assessments was given to municipalities.

The purpose of this article is to highlight the difficulties that have often been observed with air quality assessments conducted for land use compatibility studies in Ontario. Some of the difficulties are a result of the downloading of responsibility without appropriate modification in the land use compatibility assessment procedures. This may lead to potentially incomplete air assessments. The acceptance of incomplete air quality assessments (e.g., for industrial land uses) risks the health and well-being of the surrounding community. A better approach



Nicole Shantz



Franco DiGiovanni

- * Ontario PPS requires avoidance of “adverse effects”
- * Supporting D-series guides offer out-dated and vague advice re AQ
- * Many LUCA for AQ do not meet the PPS requirements to test for adverse effects

Application to Land Use Compatibility Assessments in Ontario

- * EA AQ assessments do provide complete information to test for “adverse effects”
- * *The IAIA AQ guide could be used to support such assessments for LUC*



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Thank you!

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