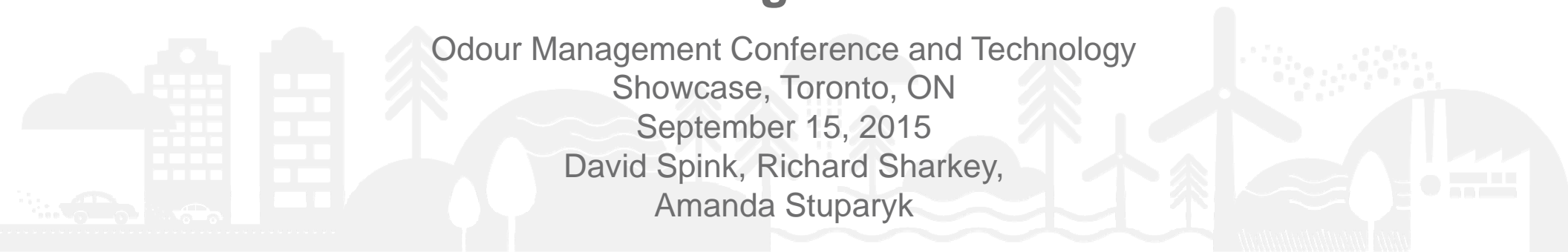




Alberta Clean Air Strategic Alliance
**Good Practices Guide for Odour
Management**

Odour Management Conference and Technology
Showcase, Toronto, ON
September 15, 2015

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About the Clean Air Strategic Alliance (CASA)

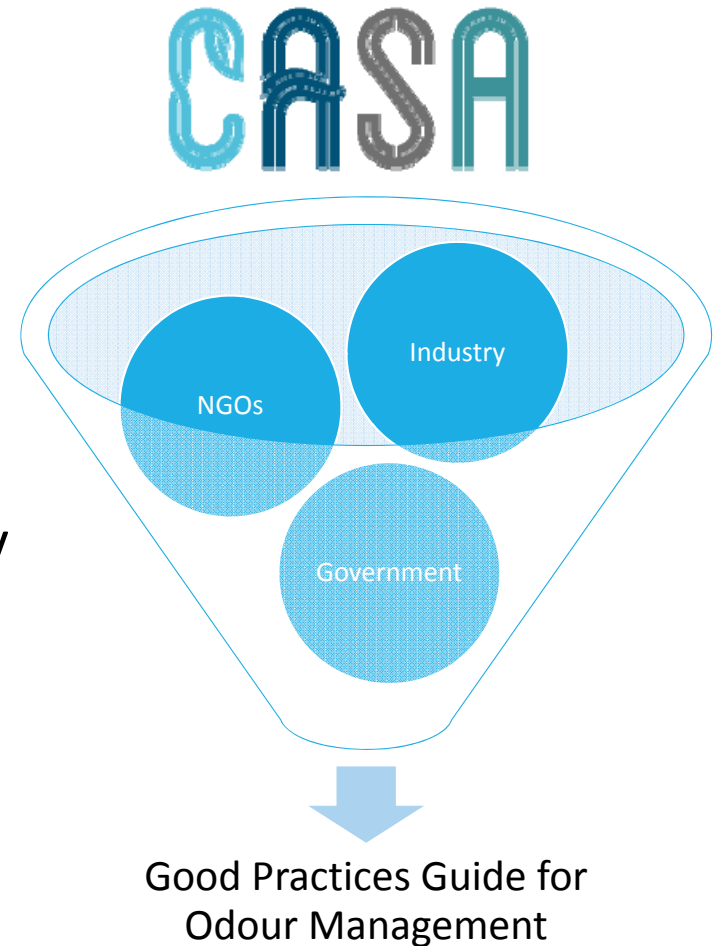
- **Non-profit** organization
- Brings together diverse stakeholders from **government, industry and non-government** organizations
- Provides **strategies to assess and improve air quality** for Albertans
- Policy decisions are developed using a **collaborative consensus** process



What is Consensus?

Participants work together as equals to realize acceptable actions or outcomes without imposing the views or authority of one group over another.

Building Consensus for A Sustainable Future National Round Table on Environment & Economy, 1996



CASA and Odour Management Project

Areas of Focus

The air will have no adverse odour, taste or visual impact and have no measurable short- or long-term adverse effects on people, animals or the environment.

1. Health
2. Assessment
3. Prevention & Mitigation
4. Complaints
5. Enforcement & Regulation
6. Education, Communication & Awareness
7. Continuous Improvement



Task Groups and Reports

Five groups reporting to Odour Management Team

- Report to the Clean Air Strategic Alliance Odour Management Team Enforcement/Role of Regulation Task Group – RWDI Consulting Engineers and Scientists
- Review of Odour Assessment Tools and Practices for Alberta – Millennium EMS Solutions Ltd., and Environmental Odour Consulting
- Review of Odour Prevention and Mitigation Tools for Alberta – Pinchin Ltd.
- Odour Complaints in Your Area: A Guide for Developing an Odour Complaint Process – Developed by the Task Group
- Odour and Health Backgrounder (with Symptom Tracking Tool) – Developed by the Task Group
 - Available online at www.casahome.org

Principles for the guide

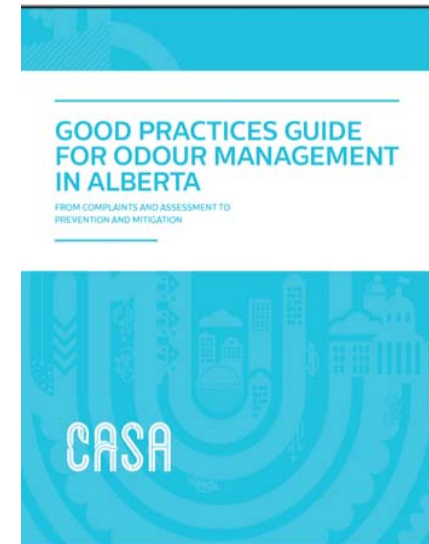
Although focused on Alberta, the guide is considered applicable to anyone involved in odour management

- Assess and recommend national and international best practices applicable in the Alberta context
- Capture the products and recommendations of the individual task groups
- Offer practical tools and approaches
- Be clear, concise and user friendly
- Provide keys/roadmaps to guide tool selection and use

Structure of the guide

Key sections

- Understanding Odour
- Odour and Health
- Odour Prevention & Mitigation
- Odour Assessment
- Odour Management (Regulation)
- Odour Complaints



UNDERSTANDING ODOUR

Summary of elements that are essential to the understanding and characterization of odours and odour events



Odour and Health

The link is not well understood

- Health concerns and/or actual health effects and the effects of odour are challenging to understand
- Odour-related health issues vary
- Until the impact of odour on health is better understood, it is recommended that traditional chemical exposure – health effects assessments be used when responding to odour complaints

Symptom and Odour Tracking Tool

SYMPTOM DETAILS

Date

Time

Location (e.g., home, work)

Intensity (0-5)

Did the symptoms come and go during the day?

SYMPTOM DESCRIPTION AND OTHER RELEVANT INFORMATION

(e.g., I smelled manure and rotten eggs in the same day, had a headache followed by trouble sleeping)

ODOUR DETAILS

Date

Time

Location (e.g., home, work)

Intensity (0-5)

Did the odour come and go during the day?

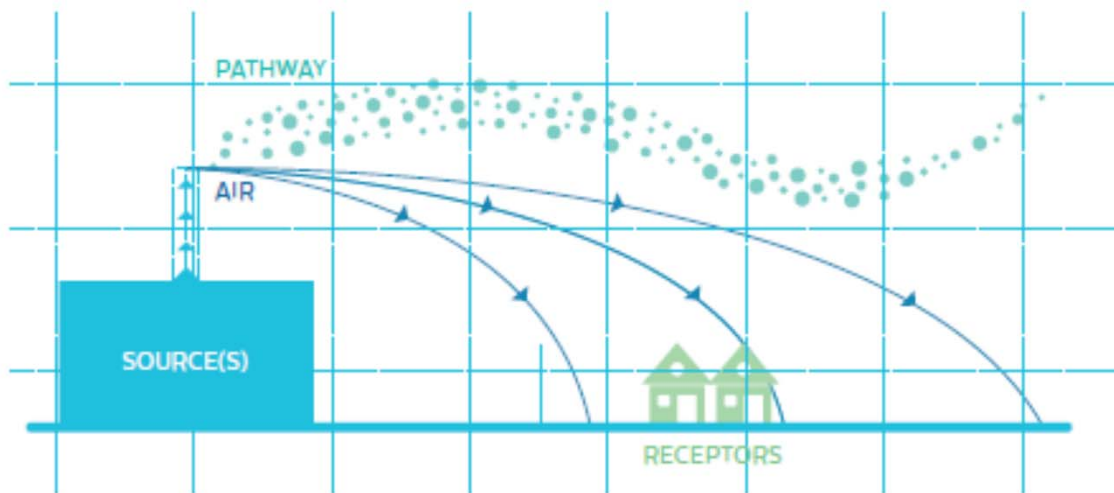
ODOUR DESCRIPTION AND OTHER RELEVANT INFORMATION

ODOUR PREVENTION

Outlines actions and tools to prevent or mitigate odorant releases and/or nuisance odour events



Source-Pathway-Receptor Model and Tools



BENEFITS

Prevention techniques can drastically reduce or eliminate the potential for odour

Operational/maintenance modifications can be simple and easy to implement

CONSIDERATIONS

Material substitutions can require expensive and time consuming trials

Process changes may affect the quality of products

ODOUR ASSESSMENT

Outline of the different odour assessment tools and approaches that can be used and when and how to use them



Tool Use Guide

PURPOSE OF ODOUR ASSESSMENT	SUGGESTED STEPS
To verify and investigate odour complaints	<ol style="list-style-type: none"> 1. Non-analytical assessment 2. Ambient sampling and measurement 3. Source sampling and measurement
To comply with conditions outlined in operating/industrial permits	<ol style="list-style-type: none"> 1. Source sampling and measurement 2. Ambient sampling and measurement
To determine compliance with odour legislation	<ol style="list-style-type: none"> 1. Source sampling and measurement 2. Ambient sampling and measurement
To assess long-term odour exposure levels in an area	<ol style="list-style-type: none"> 1. Non-analytical assessment 2. Ambient sampling and measurement
To rank potential odour sources for mitigation purposes	<ol style="list-style-type: none"> 1. Source sampling and measurement (OU or individual compounds)
To determine background odour concentrations before building a new facility	<ol style="list-style-type: none"> 1. Ambient sampling and measurement
To determine the off-site odour impact from existing operations	<ol style="list-style-type: none"> 1. Non-analytical assessment 2. Ambient sampling and measurement
To determine the expected changes in off-site odours resulting from new facilities, expansions of existing facilities or other operational changes	<ol style="list-style-type: none"> 1. Source sampling and measurement 2. Ambient sampling and measurement 3. Dispersion modelling

ODOUR MANAGEMENT

**Regulatory options identified
as potential approaches for
managing odours**



Regulatory Approaches

General considerations

- Guide provides general considerations for any potential regulatory-based odour management framework
- Identifies strengths, weaknesses and considerations
 - 8 ambient-based
 - 2 emission-based regulatory systems

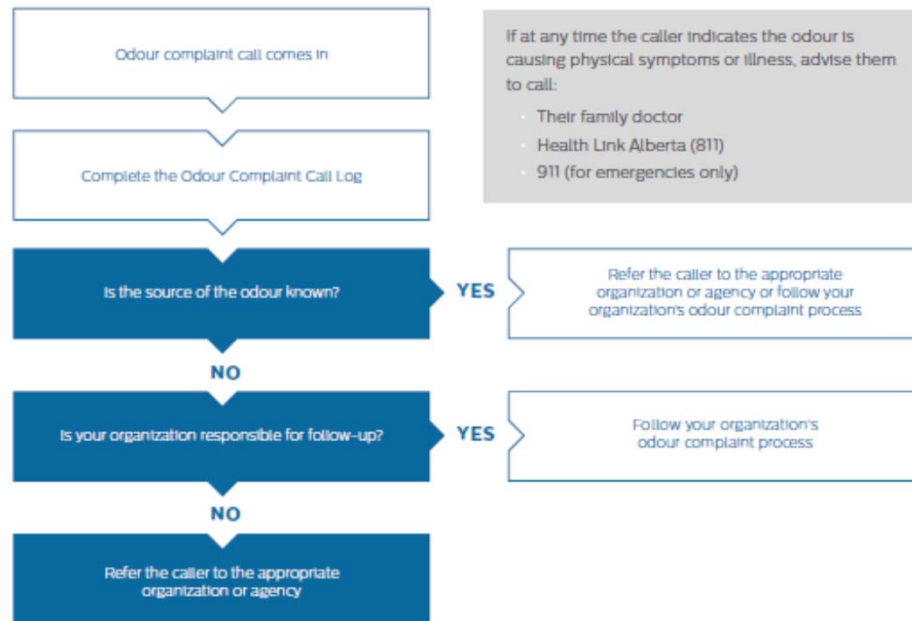
ODOUR COMPLAINTS

Guidance and advice about odour complaint management, from taking the complaint to preparing for an investigation



Odour Complaint Referral Process

Odour Complaint Decision Tree



CHEMICAL/ PETROLEUM ODOURS	MANURE/SEWER ODOURS	ROTTEN ODOURS	ODOUR
Possible sources: <ul style="list-style-type: none"> - Manufacturing - Refineries - Oil & gas operations 	Possible sources: <ul style="list-style-type: none"> - Agriculture 	Possible sources: <ul style="list-style-type: none"> - Sour oil and gas operations - Pulp mill 	Possible sources:
Contact: Local Organization AER/AEP	Contact: Local Organization Municipality NRCB	Contact: Local Organization AER/AEP	Contact:

Customize the boxes as appropriate for your local industries and activities.

- Alberta Energy Regulator (AER)
1-800-222-6514
- Alberta Environment and Parks (AEP)
1-800-222-6514
- Natural Resources Conservation Board (NRCB)
1-866-383-6722
- 311 Calgary or 311 Edmonton

FUTURE PLANS

Continuous improvement and education, awareness and communication strategies



Questions?

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