

Odour Management Project Charter



Prepared by the
Odour Management Working Group
for the
Clean Air Strategic Alliance
Board of Directors

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Project Charter

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Introduction

The issue of odour management came to the attention of CASA through its government, non-government, and industry stakeholders. The CASA Secretariat subsequently undertook a preliminary assessment of the issue to enable the Board of Directors to determine whether further action through a collaborative, multi-stakeholder process at CASA was advisable.

In September 2012, the Board agreed to establish a multi-stakeholder working group that would further screen and scope the issue and develop a project charter for the Board's consideration. In January 2013 the Odour Management Working Group was formed to undertake this task. The working group worked collaboratively to design a process that would assist a larger group of stakeholders to engage in a focused discussion directed at advancing odour management in Alberta. The members of the working group also obtained regular feedback from their membership which was incorporated in the project charter. The group considered the broad issue of odour management as well as what could realistically be accomplished by a CASA project team in approximately 18-22 months. This timeline is in keeping with Board direction that project teams should be more nimble and timely. Odour management is a complex issue and the working group discussed the need for a phased approach. As such, the working group developed a vision for odour management in Alberta to guide ongoing and future work as well as a goal for the work of this CASA project team. The group broke down the work of the project team into specific topics and objectives and provided additional process-related guidance. This project charter is meant to offer direction and advice to the convening CASA project team, subject to receiving approval from the Board.

Background

Air quality can be measured or assessed in many different ways, but sensory perception, e.g. smell, taste, visibility and eye, nose, or throat irritation, is the method most people use to judge air quality. Odours are one of the most common air pollution complaints and can have significant direct and indirect effects on health and quality of life.

There is a subjective element associated with the acceptability or degree of nuisance or offensiveness associated with a particular odour. This subjectivity is related to the circumstances or locations in which the impact is occurring. For example, some level of odour may be tolerated if an individual is travelling through an area of industrial development but that same level of odour may not be tolerated if it occurs in a residential area.

Responses to odour vary from individual to individual and can result in a variety of reportable effects, especially if the odour is noted as problematic and occurs on a frequent basis. Some individuals are able to detect an odour at much lower concentrations than others. In addition, one person may find an odour to be objectionable while another may not.

Odour management is complex. The compounds contributing to odour and sources of odour are diverse and the range of potential adverse effects is varied. Individual odour perception, preferences, and sensitivity, as well as the transient nature of odour, make it challenging to find reliable methods of assessing odour. It is also often difficult to establish a firm link between odour and health and quality of life impacts. Adding to this complexity is the cumulative impact

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of industrial activities and regional considerations, as well as the corresponding array of regulators, interested sectors, and government departments. Lastly, with more people living closer to industrial and agricultural development, the possibility for conflict between odour-producing activities and people is increasing.

Sources of odour in Alberta include development associated with industry, agriculture, and municipalities. Complaints about odour issues are generally most acute at the interface between new or existing development and residents in both urban and rural settings. A great deal of time and resources are expended by Alberta's regulatory agencies in addressing odour-related complaints, which in many cases are not effectively resolved. The satisfactory resolution of these complaints is problematic for a number of reasons: the subjectivity involved in odour complaints, the difficulty in identifying and measuring odourous compounds, the limitations of current legislation, the absence of clear odour management approaches and outcomes, and the lack of clearly defined roles and responsibilities with respect to who is accountable for addressing complaints.

It should be noted that although there are legislative limitations in addressing odour specifically, some air emissions are regulated for other reasons and this may have the co-benefit of reducing odour-causing emissions.

Project Scope

The work of the project team should focus on odours that are "adverse". Throughout this project charter, wherever the word 'odour' is used, it is referring to *adverse* odour. The term adverse is defined according to the Environmental Protection and Enhancement Act as: "*impairment of or damage to the environment, human health or safety or property*". This is in line with the definition of adverse used in CASA's vision for Alberta's air: "*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*".

Odour related compounds and mixtures can have perceived and direct health impacts, i.e. non-odour-related health impacts, and can also cause eye, nose and throat irritation. Depending on the substances involved these impacts can occur above or below odour thresholds. The working group considered these issues and agreed that the project team should only focus on detectable odours and direct/indirect and perceived odour-related health impacts. Health and well-being are drivers of odour management and should be embedded throughout the work of the project team.

The project team should be aware that existing regulatory processes, including facility approvals and associated emissions limits, frequently address odour-related emission sources and/or chemicals. These processes potentially represent an effective source control and preventative approach to odour management. However, this does not preclude evaluating the effectiveness of the regulations. The project team should focus on odourous compounds as a whole and stay at a high level.

The work of the project team should apply to all sectors, no individual sector is meant to be singled out. While some best practices could be sector specific, the project team should focus on

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creating processes (ex. for complaints, odour assessment, etc.) that provide a consistent approach to managing odour in Alberta. It should be recognized that in some instances, all reasonable efforts may have been made to manage a source of odour, but eliminating it may not be feasible.

The working group discussed the need for a phased approach to odour management in Alberta. Odour management is a large, complex issue that cannot be fully dealt with in 18-22 months by this project team. A phased approach would see this project team completing their work as well as identifying next steps. This could include next steps for a CASA project team as well as potential work for other groups. The project team should use the Project Goal to guide their work and the Vision for Odour Management in Alberta to guide next steps and to provide context for the work of this project team within the bigger picture.

Vision for Odour Management in Alberta

There is a comprehensive framework for odour management in Alberta.

Project Goal

To create a good practice guide for assessing and managing odour in Alberta.

Project Objectives

The work of the Project Team can be divided into seven cross-cutting topics. That is, the integrated nature of the work means that in developing the guide the same issue may need to be discussed and addressed under more than one topic. The ‘Potential Outcomes/Deliverables’ outlined in the shaded boxes under each objective are not meant to be prescriptive or limit the creativity of the project team, but rather to provide additional texture around the intent of the objectives.

1. **Complaints:** *Alberta regulatory agencies, facility operators and municipalities all may receive complaints related to odour concerns. A great deal of time and resources are expended by Alberta’s regulatory agencies in addressing odour-related concerns. When odour issues are not satisfactorily addressed, it may result in more protracted issues where complainants and proponents are more polarized and entrenched.*

Objective: To effectively manage odour complaints.

- Understand the current mechanism(s) in place to manage odour complaints (ex. where are complaints coming from, who received the complaint, what information was recorded, how the information was recorded, how the complaint was resolved, what mechanisms for feedback to complainant were used, etc.).
- Clarify roles and responsibilities for responding to odour complaints.
- Develop a predictable, consistent, timely, step-wise, comprehensive process to document, investigate and address odour complaints. The process will incorporate the interests of all parties, be applicable to any odour incidence and include a clear process flow and guidance for decision-making.
 - Develop a mechanism for the complainant and the complaint manager to communicate throughout the process including information exchange at first contact and communicating results at the end of the process.

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- Make information available about the response to odour complaints.
- Consider the role of odour assessment in responding to complaints.

Potential Outcomes/Deliverables:

- A process to document, investigate and address odour complaints that incorporates the interests of all parties and which incorporates measurement and assessment tools.
- A graphic representation(s) that clearly outlines the process (ex. decision tree, process map, flow chart, etc.)
- Guidance for phone operators/respondents responding to complaints.
- Guidance for regulators and complainants including roles and responsibilities and coordination of the various aspects of the complaints management system.

Objective: To monitor long-term trends in odour complaints.

Potential Outcomes/Deliverables:

- A documentation process (ex. database, odour report card, etc.) for tracking complaints as they move through the system to resolution.
- An understanding of the distribution and concentration of odour complaints as a means to develop proactive management mechanisms (e.g. identifying hotspots, cumulative effects).

2. **Odour Assessment:** *Effective response to odour complaints requires practical, credible and appropriate tools to assess odour. The results of an odour assessment can be used to determine the appropriate type and level of response to address an odour issue.*

Objective: To provide information on options, tools and recommended action for odour assessment.

Potential Outcomes/Deliverables:

- A review of protocols and criteria for investigating and characterizing odour and how they are applicable in Alberta (e.g. FIDOL - Frequency, Intensity, Duration, Offensiveness, Location).
- An assessment of available and practical options for assessing (measuring, monitoring, modeling, etc.) odour and how they might be applicable in Alberta.
- An understanding of when it is appropriate/not appropriate to use each option.
- Protocols and criteria for investigating and assessing odour and its impacts.
- An understanding of the role of odour assessment in odour management.

3. **Health:** *Health and well-being are drivers of odour management and are embedded throughout the work of this Project Team. Many odour issues are driven by health-related concerns (real or perceived). There is a large body of literature which examines the relationship between odour and health that could be used to inform the work of the team.*

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Objective: To improve the management of odour and odour complaints by identifying, understanding, and developing tools and strategies to address health concerns and issues.

Potential Outcomes/Deliverables:

- A review of best management practices for tracking health impacts of odour and how they are applicable in Alberta.
- A record keeping tool that allows individuals to track the health-related impacts of odour in a standardized, quantifiable way.
- A summary of the way in which the most recent odour and health literature informed the work of the team and influenced the development of recommendations.¹
- Options, gaps, and opportunities for management of health and odour complaints.

4. **Prevention/Mitigation:** *Exposure to odours can be assessed using the source-pathway-receptor model². By anticipating where odour issues may occur it is possible to prevent and/or minimize odour as well as odour-related conflicts/complaints.*

Objective: To provide a suite of tools to help prevent odour issues from arising that can be applied at the source, the pathway and the receptor.

- o Conduct a cross-jurisdictional review to identify best practices for preventing and minimizing odour and odour-related conflicts/complaints at the source, pathway and receptor.
- o Review best practices for managing odour at the interface between odour-causing activities and residents.
- o Analyze best practices to determine their applicability to Alberta.

Potential Outcomes/Deliverables:

- An inventory of best practices for preventing and minimizing odour and odour-related conflict/complaints at the source, through the pathway and at the receptor.
- Recommendations related to the implementation of best practices.

5. **Enforcement/Role of Regulation:** *Odour related regulation and associated enforcement of these regulations is one of many odour management tools. In order for enforcement to effectively resolve or prevent odour issues, it must be based on a set of comprehensive and appropriate regulations. For discussion purposes, regulation here refers to any law, bylaw, rule, code, standard, objective or other order prescribed by a government authority (federal, provincial or municipal) that regulates or guides conduct and provides oversight. The objective under this topic applies to all odour-producing sources and is not meant to single out any particular source.*

¹ Alberta Health has recently completed a literature review on odour and health.

² In the source-pathway-receptor model, the source is the location where an odour is produced, the receptor is the person experiencing an odour, and the pathway is the space between the source and receptor. For example, a person exiting their vehicle smells freshly-baked bread. The person is the receptor, the bakery across the street is the source and the physical environment and distance between the two is the pathway.

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Objective: To analyze the effectiveness and comprehensiveness of existing regulations, including the roles and responsibilities of federal, provincial, and municipal governments, which address odour in Alberta.

- Conduct a review of the effectiveness of existing regulations that address odour.
- Identify successes, challenges, and learnings of existing regulations that address odour.
- Consider ways to address existing gaps, including examples from other jurisdictions.

Potential Outcomes/Deliverables:

- A comprehensive understanding of the regulations that address odour in Alberta and where improvement could be made.
- Lessons learned that can be applied to the development and enforcement of future regulation.

6. **Education/Communication/Awareness:** *Communicating relevant information on odour and odour management will help to encourage more informed decision-making and help stakeholders engage more effectively in a credible and robust approach to the management of odours in Alberta.*

Objective: To increase awareness and clarify expectations about odour and odour management in Alberta and describe its importance in air quality management and protection.

Potential Outcomes/Deliverables:

- A communication and engagement strategy that increases public and stakeholder awareness about odour which considers:
 - Basic information about odour as well as the relationship between odour and health as well as odour and perceptions of general air quality.
 - Clarity regarding the nature and extent of what is possible for the management of odours in Alberta.
 - Increased understanding of jurisdictional responsibilities (ex. Municipalities don't have influence over facilities outside their boundaries).
 - Increased awareness of odour management strategies.
 - The most appropriate ways and means to communicate with target audiences are identified.
 - Increased awareness of on-going initiatives to assess and manage odour in Alberta.
- A strategy to communicate to stakeholders and the public the implementation work that will result from project team recommendations as well as the process that the team undertook and the Good Practice Guide.
- More informed decision-making.

Objective: To increase the capacity of relevant multi-stakeholder groups (Ex. industry associations, synergy groups, airshed zones, etc.) to engage in the management of odours in Alberta.

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Potential Outcomes/Deliverables:

- Improved relationships, coordination, divisions of responsibility and ways in which established, influential stakeholders can contribute to management of odour in Alberta.

7. **Continuous Improvement:** *CASA is a proponent of continuous improvement in the management of air quality in Alberta. This can be achieved through self evaluation and adaptive management as well as encouraging managers to stay abreast of new developments in emission reduction.*

Objective: To evaluate the implementation of a CASA best practices guide.

Potential Outcomes/Deliverables:

- A 5-year performance indicator for the work of the project team as described in the CASA Performance Measurement Strategy.

Objective: To foster the continuous improvement of a CASA best practices guide.

Potential Outcomes/Deliverables:

- A process for the regular review of the best practices guide.
- Recommendations for future odour-related research.
- New information and developments in the field of odour and odour and health as well as any other relevant studies are incorporated into the best practices guide.

Objective: To encourage continuous improvement at odour generating facilities.

- o Consider how continuous improvement would be implemented and evaluated.
- o Identify and consider continuous improvement options for odour management for odour-generating facilities.

Potential Outcomes/Deliverables:

- The guide encourages and provides options and recommendations to promote continuous improvement at odour generating facilities.

Project Deliverables

The Project Objectives outline an ambitious amount of work for the project team; the project team should ensure that at the end of the process work has been conducted under each of the seven topics, recognizing that the level of detail of the work may vary by topic. In the allotted timeframe, the project team may be able to delve more deeply into some topics, but may make recommendations for future work in others. This relates to the phased approach described in the Project Scope section. The ‘Potential Outcomes/Deliverables’ accompanying each objective provide an idea of the types of specific outcomes that could result from the work of the project team. As the project team undertakes their work, they should ensure that they remain focused on creating useable products for managing odour in Alberta that also contribute to the overall deliverables for the project team:

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- Final Report and Recommendations:
 - The project team should prepare a final report which includes a package of SMART (Specific, Measurable, Action-Oriented, Realistic, Time-bound) recommendations generated from the work under the seven categories of objectives.
 - The report should also identify and prioritize any further work.
- Good Practice Guide:
 - In conjunction with the final report and recommendations, the project team should prepare a Good Practice Guide which can be used to communicate the results of project team work as well as the ‘Toolkit’ resulting from their work. The ‘Toolkit’ should contain a variety of tools that support odour assessment and management in Alberta as well as an understanding of when it is appropriate to use each of the tools. The Guide should be clear and concise. The purpose of the Guide is that people involved in odour management or an odour issue can easily access the work of the project team and apply it.

Projected Resources

Potential Costs:

The working group foresees the following potential external costs over the life of the project team. The funds to complete this work would need to be raised. The accompanying figures are estimates ONLY and, as the work of the project team progresses, they would need to create a more detailed budget. It should be noted here that funding for the work of the project team is front-loaded (see Project Structure and Schedule section).

Studies and Contracts: ~\$150,000-\$200,000

- Possible studies/contracts are described under a number of objectives:
 - Complaints
 - Odour Assessment
 - Prevention/Mitigation
 - Enforcement/Role of Regulation
 - Health
- This work would likely be contracted to consultants, or the project team could determine other ways to gather the information (ex. Students or interns working for project team members).
- Work on the Good Practice Guide as described in the ‘Deliverables’ section would likely require the assistance of a consultant.

Consultation/Workshop: ~\$100,000

- Under the Education/Communication/Awareness objective, there are several Potential Outcomes/Deliverables that describe outreach activities. The project team would need to decide what this would look like but it could require funds. For example, at the end of the process could undertake communication with the public, hold a workshop on best practices, etc. to raise the profile of the work and the issue.
- The project team may undertake a consultation process to engage with certain groups (ex. impacted communities)

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- Necessary funds would depend on the activities the project team agrees to undertake.

Potential Sources of Funding:

The working group identified an initial list of possible sources of funding:

- Government, possibly:
 - Direct funding and grant funding
 - Alberta Environment and Sustainable Resource Development
 - Alberta Health
 - Alberta Agriculture and Rural Development
 - Alberta Energy
- Industry
- Federal Government (Health Canada, Environment Canada)
- Sewage treatment facilities

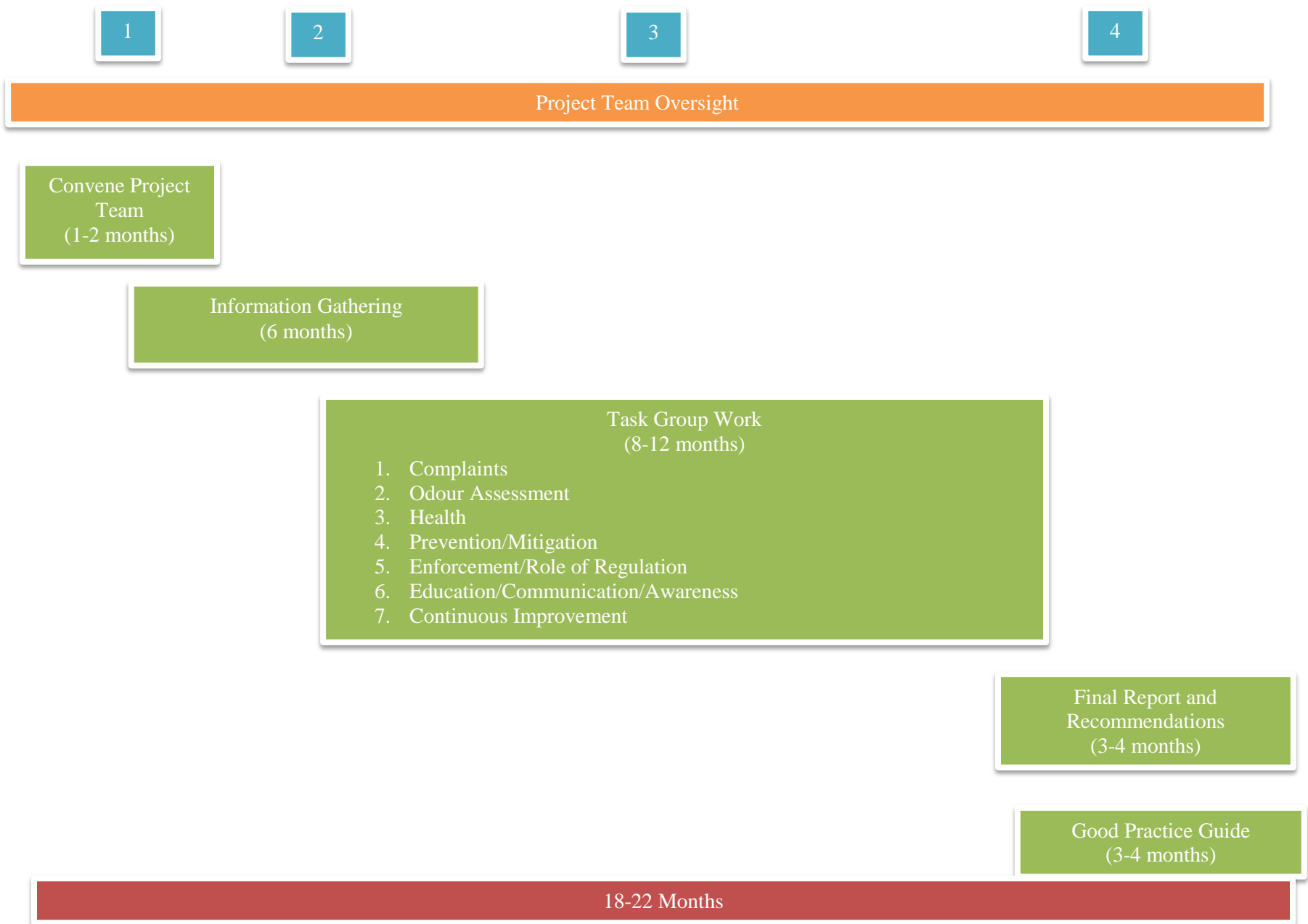
Project Structure and Schedule

The working group broke down the work of the project team into four phases and provided suggested timelines for each phase.

1. Convene the Project Team ~1-2 months
 - Review the project charter; complete work outlined under the Operational Terms of Reference section
 - Project Team training in collaborative processes and consensus decision-making
 - Identify all information gathering pieces of work from all objectives
 - Determine how these pieces of information should be gathered (ex. consultants)
 - Prepare any Requests for Proposals (RFPs)
 - Project Team designs, and makes available, task groups and task group workplans
 - As the project team designs the task group workplans, they should be mindful of timelines as well as the considerations outlined in the Deliverables section vis-à-vis the level of detail of the work.
2. Information Gathering ~6 months
 - Project Team oversees and coordinates all information gathering efforts
3. Task Group Work ~8-12 months
 - Task group formation may be staggered as information becomes available
 - Project Team oversees and coordinates task group work
 - Task groups prepare reports and consensus recommendations
4. Project Team Agreement on Final Report and Recommendations AND Creation of Good Practice Guide ~3-4 months
 - Project Team reviews task group report and recommendations
 - Project Team prepares and reaches agreement on final report and recommendations
 - The creation of the Good Practice Guide should run parallel to work on the final report and recommendations. This will most likely be done with the help of a consultant.

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It should be noted that funding for the work of the project team is front loaded (see Project Resources section). The timelines as outlined are dependent on this funding being made available. In developing this project charter the working group considered what the project team could realistically accomplish in an 18 month period. The timelines that accompany the four phases allocate the project team 18-22 months (beginning from the date of the first meeting) to complete their work. These phases are not discrete, but rather overlap. The project team should take a staggered approach to the four phases in order to meet the timeline of 18-22 months. The phases and timelines described above are summarized in the graphic below.



The working group also considered the time commitment that would be required from participants based on the outlined project structure and schedule. It is difficult to state how many meetings will be required until the project team is underway. To provide some context for participants, there will be an estimated 12 project team meetings and 50 task group meetings *over the life of the project*. The working group has provided the following information on meeting frequency for participants to consider:

Phase	Timeframe (months)	Meeting Frequency
1: Convene the Project Team	1-2	-The Project Team will need to meet several times over a short period to initiate the project
2: Information Gathering	6	-The Project Team will meet periodically (ex. every 2 months) to monitor information gathering
3: Task Group Work	8-12	-The Project Team will need to meet periodically to monitor and coordinate the work of the task groups -The frequency of the task group meetings will depend partly on the task group design and workplans from phase 1 -Task groups would likely meet once per month -Participants who sit on more than one task group should be prepared to meet more frequently
4: Final Report and Recommendations and Good Practice Guide	3-4	-The project team will need to meet several times over a shorter period of time to finalize the team's report and recommendations and to supervise and finalize the Good Practice Guide

Risk Analysis

The working group identified risks as well as possible mitigation strategies that the project team should consider as they undertake their work. The project team should be aware of the risks that could undermine the success of the project so that they can engage in proactive risk management.

Risk	Possible Mitigation Strategies
Timely funding is not available -funding for the work of the project team is front-loaded -a decision is required quickly with respect to funding	-be open and upfront about funding requirements and timelines -explore a variety of funding sources -understand how funding delays will impact timelines
Project team prioritizes work and subsequently work is not undertaken under all seven topics of objectives	-recognize and understand the interrelated nature of odour management and the seven topics

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Risk	Possible Mitigation Strategies
Unrealistic expectations of what can be accomplished by the project team in the proposed timeframe of 18-22 months	<ul style="list-style-type: none"> -use the project charter to help manage expectations -reference the Vision for Odour Management in Alberta -be open and upfront with participants
The timeline of 18-22 months is not met	<ul style="list-style-type: none"> -timelines could be impacted for a variety of reasons, some of which are outlined in this risk analysis table -participants should remain aware of how their actions will impact timelines -understand the amount of work detailed in the project charter -regularly track progress against project charter
Human resources -capacity to staff project team and task groups -identifying qualified people to participate -participants and CASA staff become overwhelmed	<ul style="list-style-type: none"> -be upfront with participants about the level of engagement/work required -Identify early participants with the right skill set to participate -keep work on topic, stay SMART -be supportive of other members, help other members to participate
Scope creep, remaining on track	<ul style="list-style-type: none"> -use SMART principles to keep participants and work focused -reference guidance from the project charter -remind participants that the Board must approve any changes to the project charter
Ignoring the cross-cutting nature of the seven topics	<ul style="list-style-type: none"> -recognize and understand the interrelated nature of odour management and the seven topics -be prepared for overlap in discussions
Unable to hire qualified consultants who can complete information gathering in timely manner	<ul style="list-style-type: none"> -build on work of previous consultant's -access participants networks of contacts to help speed the hiring process -start the hiring process in a timely manner
Poor communication between task groups, lack of coordination between task groups	<ul style="list-style-type: none"> -the project team is regularly updated on the work of the task groups, the project team provides oversight -cross participation between task groups -cross participation between task groups and the project team -regular coordination meetings between task group co-chairs
Lack of communication and coordination with	-ensure participants are aware of the

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Risk	Possible Mitigation Strategies
CASA caucuses during task group work affecting their ability to reach consensus	requirement to coordinate with CASA caucuses -regular communication between task groups and CASA caucuses -the secretariat can provide communication and coordination support -regular Board updates
Task groups do not complete their work on time	-good communication between task groups -communication and coordination with CASA caucuses -prepare clear workplans for the task groups -be open and upfront about timelines
Participants narrow their focus to the oil and gas sector (or any other specific odour producing source)	-refer participants to the Scope section of the project charter -participants should focus on approaches to odour management that apply to all sectors, not just oil and gas
Outputs of the project team are not useable and do not directly support odour assessment and management in Alberta	-the project team should consider how the products they produce will be used to ensure that the project team remains focused on creating useful and useable products -refer participants to the Deliverables section of the project charter
Implementers are not aware of their role in implementing the project team's recommendations	-Ensure that implementers fully understand their role in implementing the recommendations of the project team -Implementers should be members of the project team and involved in creating the consensus agreement - Ensure that recommendations are SMART (clearly outline responsibilities and expectations)

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Operating Terms of Reference

The project team should discuss and reach consensus on the following items that describe how they will work together:

- Requirements for quorum
- Frequency of project team meetings
- Frequency of updates and reports to the CASA Board
- Meeting protocols
- Ground Rules
- Protocols for handling media requests
- Protocols for providing updates to interested parties
- Any other considerations for working together

Stakeholder Analysis and Engagement Plan

The working group identified a draft list of stakeholders for involvement with this project team. As the project team proceeds with their work they will need to review this list and make any changes as required. The working group identified three categories of stakeholders:

- Project Team: Stakeholders who are required at the table to reach a consensus agreement
- Task groups: Stakeholders who have specific interests or expertise and can be engaged in a more focused way
- Engaged in Other Ways: Stakeholders who can be engaged as required in ways other than participation on the project team or task groups (ex. consultation, giving presentations, providing advice, etc.)

It should be noted that there has been a high level of interest in this subject from many stakeholders. The project team may wish to consider methods to help provide updates to interested parties.

Project Team: *Project team members should consist of those stakeholders who are required to reach a consensus agreement. The project team will oversee and direct the work of the task groups. The project team should promote coordination amongst stakeholders wherever possible to help keep the number of project team members at manageable levels.*

Government:

- Alberta Environment and Sustainable Resource Development
- Alberta Agriculture and Rural Development
- Alberta Energy
- Alberta Health
- Alberta Urban Municipalities Association
- Alberta Association of Municipal Districts & Counties
- First Nations

Industry:

- Chemical Industry
 - Chemistry Industry Association of Canada
- Oil and gas industry/Petroleum producers

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- Canadian Association of Petroleum Producers
- Canadian Fuels Association
- Small Explorers and Producers Association of Canada
- Agriculture (rendering and processing, CFOs)
- Food Manufacturers
 - Ex. Alberta Food Processors Association
- Forestry (Pulp and Paper)
- Waste management/composting
- Wastewater management entities/Municipal sewage treatment
 - Ex. Epcor

NGOs:

- ENGOs:
 - Alberta Environmental Network
 - Ex. Pembina Institute
- Health NGOs:
 - The Lung Association

Other:

- Alberta Airshed Council/Airshed Zones

Corresponding Members:

- Health Canada
- Environment Canada
- Alberta Health Services
- Energy Resources Conservation Board/Single Regulator
- Natural Resources Conservation Board
- Alberta Transportation
- Alberta Infrastructure

Task groups: *The working group identified some groups that may be able to provide specific expertise. It would be more effective to engage these groups in a more focused way on a task group to take advantage of their expertise. As described in the Project Structure and Schedule section, the project team will need to design the membership of the task groups based on the work that they have been assigned.*

- Health Canada
 - First Nation and Inuit Health – respond to complaints on reserve
 - Safe Environments – have technical/scientific expertise
- Alberta Health Services
 - Medical Officers of Health – respond to odour complaints in the community, would be interested in tools to track the health related impacts of odour (ex. Odour diary)
 - Environmental and Public Health
 - Health Inspectors

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- Science group and field staff – conduct risk assessment, support field staff, and conduct work in the field
- Alberta Conservation Association – may be able to provide technical expertise
- Environmental Law Centre – may be able to provide expertise on odour regulations
- Alberta Public Health Association – provide communications and health expertise
- Alberta Medical Association – provide health expertise
- City of Edmonton – variety of technical expertise ex. planning, municipal waste management, etc.
- Research Institutions/Academic Community – provide specific expertise (ex. odour assessment, health impacts, etc.)
- Communications experts – provide expertise while discussing Education/Communication/Awareness
- Energy Resources Conservation Board/Single Regulator – provide technical expertise
- Natural Resources Conversation Board – provide technical expertise

Engaged in Other Ways: *The working group identified some groups that could provide valuable input to the work of the project team but can be engaged in ways other than project team or task group participation.*

- Impacted communities/individuals – the experiences of those impacted by odour is an important piece of input, could be engaged through outreach and consultation work
- Association/Societies who are engaged in odour management (ex. Cumulative Environmental Management Association, Sunde Petroleum Operators Group) – the project team should liaise with these groups to coordinate and avoid duplicating efforts
- Research Institutions/Academic Community – could be engaged through contracts, conferences, workshops, guest speakers, etc.
- Professional associations – could be engaged with research or communication channels to workers/association members
- Smaller odour producing industries (ex. dry cleaners) as well as non-point sources of odour – could be asked to provide input or presentations on their experiences, or as specific issues arise

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Appendix A: Additional Working Group Discussions on Objectives

The Odour Management Working Group worked collaboratively to develop a project charter and design a process that would allow a larger group of stakeholders to engage in a discussion on odour management in Alberta. While completing this work, the working group members engaged in wide-ranging and forward-thinking discussions about objectives and work for a CASA project team as well as odour management in Alberta. The working group wanted these discussions to be made available to the convening project team to provide them with additional context and insight into the development of the project charter. These discussions are not part of the project charter, but all members of the working group viewed them as invaluable conversations starters and texture for the consideration of the convening project team. The working group understands that the discussions in Appendix A will be reviewed and considered by the convening project team, and acknowledges that many other factors will need to be contemplated as work progresses. The discussions in Appendix A are not meant to be part of the consensus agreement but represent the breadth of views and perspectives that were provided by working group members during the development of the Project Charter. Material for Appendix A has been drawn from meeting minutes.

1. Complaints:

- Need a standardized approach that can produce results and add credibility to the system. This system should be both reactive and proactive. A process map would be helpful to reinforce the desired approach.
- The current process needs to be clarified and better understood, including clarification of roles and responsibilities.
- There should be better communication with the community and the process should be iterative, but there needs to be an end-point.
- There needs to be communication between government departments.
- A triage system that determines what level of response may be required could be beneficial.
- Establishing levels of complaints, depending on the risks associated with the odour, would be a management tool, triggering what type of response may be necessary. Addressing complaints will require a variety of responses, whether that is prevention, education, enforcement etc. Complaints can also be used to focus and prioritize management efforts as well as identify hotspots.
- As a part of the complaints process, the person receiving the initial complaint should understand how to manage complaints and provide the complainant with all the information they need through the use of specific messaging. In turn, they should solicit all relevant information needed to follow up on the complaint.

2. Odour Assessment:

- The working group discussed updating an inventory of tools to assess odours.
 - Review the tools available in Alberta and other jurisdictions.
 - Tools should be practical in terms of human resources and financial cost.
 - Tools could be used for assessing complaints from receptors, managing the source (e.g facilities), monitoring, etc.

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- Need to provide information on when certain tools are appropriate or not appropriate.
 - The working group discussed the characterization of odours
 - There should be the ability to identify the source.
 - A means to quantify the odour.
 - Determine the impact of the odour on the individual.
 - Quantify the objective vs. subjective impacts of odour.
 - Thresholds and baselines could be used similar to the PM and Ozone Framework.
3. Health:
- Health is embedded in all of the objectives and should be taken into consideration when approaching each objective.
 - Work under this objective could include reviewing the work that has been done on odour in the broader context and the effects of odour on health.
 - How do we “action” existing literature reviews of odour?
 - What could be done with this information?
 - How will this information fit into the framework?
 - (There is work currently being done by Alberta Health.)
 - Could use health concerns to prioritize odour management efforts.
 - Currently there is no method for individuals to track health impacts from odour.
 - There are examples out there that we can apply to the Alberta situation. (E.g. odour diary). Health could turn into a lot of work for the project team, so the scope of this objective should try to be realistic.
4. Prevention/Mitigation:
- Review best practices in other jurisdictions, considering what worked and what did not work.
 - There needs to be better planning at the interface (where residential development meets potential odour sources) as well as personal responsibility for choosing where individuals decide to reside.
 - Cumulative effects of clustering odour intensive industry in certain areas will need to be addressed. Effective management will need to consider the region as a whole rather than each source individually.
 - Prevention and mitigation efforts could consider source, pathway and receptor organized according to:
 - The source (what actually emits the odour).
 - The pathway (what is between the source and the receptor).
 - The receptor (the person becoming aware of the odour).
5. Enforcement/Role Regulation:
- The group discussed that in some cases regulations are being enforced, but in other cases, the regulation is vague in specific reference to odour, making enforcement difficult. For example, AAQOs are not being exceeded, but people are still complaining about an odour being a nuisance.

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- Work under this objective could include doing a review and gap analysis of existing regulations, such as EPEA, Municipal Bylaws, The Public Health Act etc.
 - The team should consider that enforcement is only one possible outcome of a complaints process.
 - One suggestion was for the project team to develop criteria for enforcement.
 - There should be transparency around enforcement and the response should be timely.
6. Education/Communication/Awareness:
- Information to the public should be transparent, timely, responsive, and easy to understand.
 - Fundamental awareness material should be made available to help people make informed decisions and could include:
 - Basic factsheets on odours, as well as how odour might impact health.
 - Balanced information.
 - Potential management strategies.
 - Information about what can realistically be expected from odour management (i.e. that there will likely never be ‘zero’ odour)?
 - Public consultation could be used to inform the framework and make sure the public’s concerns are addressed, as well as promoting awareness of what the CASA odour management team is doing Cooperation with Industry associations, Synergy groups, and Airsheds should be encouraged.
7. Continuous Improvement:
- The team could develop a five year performance indicator for the overall work of the Project Team as described under the new CASA performance measurement strategy.
 - The performance indicator could act as a report card for the CASA odour framework.
 - Promote continuous improvement of the CASA odour framework for example through future audits or reviews.
 - Encourage continuous improvement of odour management best practices and approaches to stakeholders.

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Appendix B: Background Information – Reading Materials

The working group has compiled a brief list of reading materials which were found to be useful background information for understanding and framing odour. This list is by no means exhaustive, but rather is a starting for project team members who are looking for some initial reading on the topic. All material is available online (except the Frasnelli presentation) or can be requested in electronic format from the CASA Secretariat.

Axel, Richard. October 1995. The Molecular Logic of Smell. Scientific American: p.154-159.

Bokowa, Anna H. 2010. Review of Odour Legislation. Chemical Engineering Transactions (23): p.31-36.

Frasnelli, Johannes. November 2011. Presentation: Our Chemical Environment, Our Brain and Our Health. Odour Workshop, Calgary.

Ministry for the Environment, New Zealand. 2003. Good Practice Guide for Assessing and Managing Odour in New Zealand.

Nicell, Jim A. 2009. Assessment and Regulation of Odour Impacts. Atmospheric Environment (43): p.196-206.

Policy and Planning Department, Greater Vancouver Regional District. 2005. GWRD Odour Management Strategy.

RWDI AIR Inc. 2005. Final Report Odour Management in British Columbia: Review and Recommendations. BC Ministry of Water, Land and Air Protection.

Scottish Environment Protection Agency. 2010. Odour Guidance 2010.