

Approaches and Solutions for CAAQS Achievement in Alberta
Project Charter

Approved by the CASA Board

September 2021

CAAQS Achievement Project Charter

Contents

Introduction	2
Background	2
Scope.....	3
Project Goal.....	4
Project Objectives and Strategies.....	4
Objective 1: Prepare a written background document providing an overview of NO ₂ CAAQS, as well as O ₃ and PM _{2.5} CAAQS implementation in Alberta.	4
Objective 2: Create a base of informed stakeholders who can contribute meaningful solutions to CAAQS implementation in Alberta.	5
Objective 3: A list of collaborative approaches and solutions for NO _x CAAQS achievement in Alberta.....	6
Objective 4: Write final report and recommendations.	7
Objective 5: Execute effective communication of the project work and deliverables.	7
Project Deliverables	8
Project Structure and Schedule	8
Projected Resources and Costs.....	10
Risk Analysis	10
Operating Terms of Reference.....	13
Stakeholder Analysis and Engagement Plan.....	13
Appendix A: Working Group Membership	15
Appendix B: Reference Materials	16

Introduction

To protect human health and the environment, the Canadian Ministers of the Environment, including the Government of Alberta (GoA), committed to implement an Air Quality Management System (AQMS) in 2012 to manage air emissions across Canada.

Canadian Ambient Air Quality Standards (CAAQS) are the component of the AQMS used to drive air quality improvement. CAAQS were developed through a collaborative process led by the Canadian Council of Ministers of the Environment and currently cover four air quality parameters: sulphur dioxide (SO₂), fine particulate matter (PM_{2.5}), and ozone (O₃), and more recently nitrogen dioxide (NO₂). The Standards are reviewed and updated on a 5-year cycle to ensure they align with the latest scientific information.

For each parameter, an air quality standard and three threshold levels are established that results in four colour-coded management levels (green, yellow, orange, and red). Each management level outlines the air management actions that should be taken in air zones falling within that management action level. For air zones falling in the “red” or “orange” management levels, air zone management plans must be developed to improve air quality through active air management. Current forecasts indicate that most Alberta air zones will likely reach the orange CAAQS level for annual NO₂ in 2021¹, and for this reason, managing this pollutant is of interest for Alberta.

NO₂ is primarily formed through burning of fossil fuels. Conventional oil & gas represents almost half of all NO₂ emissions in Alberta; other major sources include transportation, oil sands, and electric power². It is important to begin addressing the elevated NO₂ levels in Alberta in a timely manner as high concentrations of NO₂ lead to adverse environmental impacts (e.g. smog, acidification, eutrophication and phytotoxicity) and health issues (e.g. respiratory problems).

Background

The GoA, led by Alberta Environment and Parks (AEP) and the Alberta Energy Regulator (AER), have identified an urgent need to create innovative solutions to reduce NO₂ emissions in Alberta. These approaches and/ or solutions to NO₂ emissions reductions, would have implications for, and serve the interests of, several organizations and sectors across the province.

¹ <https://www.casahome.org/attachments/CAAQS%20and%20NO2%202018-08-09.pdf>

² CASA Non-Point Source Project Team Final Report, p. 126, found at: <https://www.casahome.org/past-projects/non-point-source-project-team-37/#:~:text=The%20CASA%20Non%2DPoint%20Source,or%20not%20achieving%20the%20CAAQS.>

In addressing this need, AEP and other GoA Integrated Resource Management System Partners see an opportunity to collaborate within the Clean Air Strategic Alliance (CASA) for information sharing and engagement with stakeholders by organizing and facilitating a project to:

- Bring together a diverse set of stakeholders and share awareness on the urgency to address this issue and the implications of Alberta failing to achieve CAAQS and associated regional Air Quality Management Framework (AQMF) limits,
- Garner diverse perspectives in a transparent setting on solutions for NO_x emissions reductions from a range of regulated and non-regulated NO_x emitting sectors,
- Identify considerations for socioeconomic and environmental concerns, any potential advantages or disadvantages to affected stakeholders, and alignment of provincial initiatives with federal legislation with the intent of reducing NO_x emissions,
- Engage in respectful dialogue with stakeholders to find common ground/interests on taking action to improve Alberta's air quality and meet CAAQS and AQMF limits while considering the economic implications of different possible emission management options, and
- Inform current policies and identify opportunities to improve, or expand, those policies while recognizing and considering the associated administrative and regulatory implications of each policy change option.

Scope

The work of the project team will focus on engaging CASA members to:

- compile and summarize existing knowledge related to CAAQS emissions and exceedances at the orange and red levels,
- fill knowledge gaps around air emissions where CAAQS exceedances are expected,
- share the information gathered and confirm understanding with a broader audience, and
- develop recommendations, approaches, and/or solutions to reduce NO_x emissions and minimize CAAQS exceedances.

Approaches and solutions will be generated and vetted through a three-step process:

1. Develop a background information document on the state of air quality and NO_x emissions in Alberta, the national CAAQS framework, and the NO₂ CAAQS implementation challenge in Alberta,
2. Host webinar(s) based on the background report to share the information with a broader audience and confirm understanding, and
3. Execute one or more workshops with relevant experts to develop appropriate recommendations, potential approaches, and/ or solutions to reduce NO_x emissions to achieve CAAQS.

Each step in the process will have a distinct target audience due to differences in the delivery format, content presented, and feedback/input required.

Project Goal

The goal of the project is to promote stakeholder awareness of, and gather cross-sector perspectives on, NO₂ CAAQS air quality issues and to identify and collaboratively develop potential approaches and solutions that have the support of implementers to manage NO_x emissions to prevent CAAQS exceedances.

Project Objectives and Strategies

Below is a list of project objectives, strategies, and potential outcomes/deliverables. The project team members will create and execute more detailed work plans following project kick-off, which will outline how each strategy is to be executed. As they do so, the project deliverables may be revised to what is most appropriate and useful for achieving each objective. As such, the *'Potential Outcomes/Deliverables'* under each objective are not meant to be prescriptive or limit the creativity of the project team, rather to provide additional context around the intent of the objectives.

Generally, the objectives are ordered such that the outputs of one objective will be used as inputs to the work on the subsequent objective. For example, the information in the background document produced under Objective 1 will be presented in the Objective 2 webinar(s).

All large meetings (i.e. webinars, workshops) are proposed to be virtual due to current and expected social distancing requirements resulting from the COVID-19 pandemic, and budget limitations. If more than one workshop takes place, sector feedback and input could take place between events. The project team may wish to consider shorter, more frequent virtual meetings to minimize participant fatigue typical of long-duration virtual events.

Objective 1: Prepare a written background document providing an overview of NO₂ CAAQS, as well as O₃ and PM_{2.5} CAAQS implementation in Alberta.

Summarize the Province's experience and approaches related to O₃ and PM_{2.5} CAAQS (and former Canada-wide Standards (CWS)) implementation at the orange and red levels, including possible applicability to the NO₂ CAAQS. This information will be presented in one or more webinars under Objective 2.

Strategies

- 1.1. Prepare a written background document on the NO₂ CAAQS, as well as O₃ and PM_{2.5} CAAQS/CWS implementation in Alberta. Document drafting will be led by the GoA with project team support and input to ensure stakeholder implementation experience, information needs, and concerns are included. The report is expected to be 20-30 pages in length and may include information on:
 - The AQMS and CAAQS, how they are applied in Alberta, and a jurisdictional review of CAAQS exceedances
 - O₃ and PM_{2.5} management plans, including who was involved, how they were developed, the elements of the plan, and implementation

- SO₂ CAAQS management planning and implementation
- Experiences and outcomes from previous CAAQS/CWS orange and red management levels exceedances in Alberta
- A provincial and regional inventory of NO_x emission sources, which may include:
 - 2018 Draft Annual Emissions Inventory Report (AEIR)³
 - Draft 2018 National Pollutant Release Inventory⁴
 - Provincial Acid Deposition Management Framework assessments
 - Environment and Climate Change Canada
 - 2018 Provincial Air Quality Photochemical Modeling report⁵
 - CASA's ongoing project, '*Impacts of Reduced Consumer Transportation and Industrial Activity on Air Quality in Alberta due to COVID-19*'
- Next steps for the project and expectations for participants in the project moving forward

1.2. Review and finalize background document with the project team

Potential Outcomes/Deliverables

- Background document summarizing the province's NO_x status and data, experience with implementation of O₃ and PM_{2.5} management plans in response to orange and red CAAQS/CWS levels in Alberta, and how other jurisdictions are approaching effective CAAQS implementation and management.

Objective 2: Create a base of informed stakeholders who can contribute meaningful solutions to CAAQS implementation in Alberta.

The project team will host one or more webinars to present the information from the background document to a broader audience. The target audience is expected to include:

- CASA Membership
- Airsheds
- Universities/researchers
- Industry (i.e., transportation, agriculture, oil & gas, mining, etc.)
- Indigenous communities
- Environmental groups and other Non-government organizations
- Government (federal, provincial, and municipal)

The target audience will be determined by the project team. The webinar(s) is an information session, and there may be benefits to extending the invitation to other interested parties,

³ <https://www.canada.ca/en/services/environment/pollution-waste-management/national-pollutant-release-inventory.html>

⁴ <https://open.alberta.ca/dataset/7f234172-a595-47b0-b8f9-4b3739bbcfda/resource/6c1cc270-ba68-4fff-8b12-f2b8eb6dfe73/download/aeir-standard-aug2018.pdf>

⁵ <https://open.alberta.ca/publications/9781460142387>

including the public. However, the intention is not to undertake full public engagement in relation to CAAQS.

The number of webinars required will be dependent on the amount of content in the background document, the availability of speakers, and other factors and will be determined following Objective 1.

Strategies

- 2.1. Develop key messages for webinar(s) and the associated feedback being requested
- 2.2. Prepare and deliver the webinar(s) either with in-house resources or via a consultant
 - Choose presenters based on the content of the background document
 - Develop cost estimates and plans for effective webinar delivery based on the experience of other organizations
- 2.3. Send out post-meeting emails or surveys to collect feedback on the material
 - Feedback from participants during the webinar is expected to be limited to a question and answer session
 - A brief follow-up survey to participants can include requests for feedback on the presented material and its effectiveness, options for improvement, level of interest from participants, etc.
- 2.4. Compile and summarize feedback to inform subsequent workshop(s)

Potential Outcomes/Deliverables

- One or more webinars presenting information from the background report to a broader audience.
- Organized feedback from participants to inform subsequent workshop(s).
- Report summarizing webinar proceedings.

Objective 3: A list of collaborative approaches and solutions for NO_x CAAQS achievement in Alberta.

Following the webinar(s), one or more workshops will be held to identify recommendations, potential approaches, and solutions on how to reduce NO_x emissions in Alberta.

The number of workshops and their format will be determined by the project team following the webinar based on the content required.

Strategies

- 3.1. Prepare and deliver one or more workshops including relevant experts
 - The target audience for the workshops is proposed to be the CASA membership and other relevant stakeholders
 - Speakers, if required, will be chosen by the project team based on the nature of the content to be covered, and will be determined following the webinar
- 3.2. During the workshop(s), participants will:
 - Confirm and update information from background report (e.g. jurisdictional review)

- Develop a set of recommendations, potential approaches, and solutions for managing NO_x emissions in Alberta

Potential Outcomes/Deliverables

- Confirmed and updated information from the background report developed in Objective 1.
- Recommendations, potential approaches, and solutions that could be used in Alberta to address the expected NO₂ CAAQS exceedances, with rationale and including recommendations on when, which, and how stakeholders should be involved.
- A report on the proceedings of the workshop(s).

Objective 4: Write final report and recommendations.

Evaluate and recommend management actions and/or next steps to reduce NO_x emissions in Alberta based on the outcomes of Objectives 1 to 3.

Strategies

4.1. Develop a final report including the outcomes of Objectives 1 to 3. Additional inputs or considerations should include:

- Input from key stakeholders
- Evaluation of potential approaches, management actions, and/or next steps for emitters, leveraging existing available information wherever possible.

Some considerations may include:

- degree to which management actions reduce NO_x emissions in Alberta
- cost/benefit analysis
- ease of implementation
- relevance to Albertan context

Potential Outcomes/Deliverables

- Recommendations for management actions and/or next steps to help manage NO₂ emissions in Alberta to meet the NO₂ CAAQS.

Objective 5: Execute effective communication of the project work and deliverables.

Develop and implement a strategy and action plan for communicating the work of the project team.

Strategies

- 5.1. Form a communications subgroup for development of communications materials and key messages
- 5.2. Identify existing communication channels that could be leveraged
- 5.3. Determine the appropriate audience, key messages, and how they will be communicated
- 5.4. Engage stakeholders as required throughout the project
- 5.5. Provide advice on stakeholder and public engagement to the implementers of management actions, where applicable

Potential Outcomes/Deliverables

- Communications strategy detailing what, how, when, and to whom project information will be communicated.
- 1-2-page communications documents including key messages and webinar/workshop outcomes for colleagues, project participants, and the public.

Project Deliverables

The project team will provide the following deliverables:

1. A background report on CAAQS/CWS implementation in Alberta and the projected NO₂ CAAQS issues
2. A webinar (or webinars) to share the information from the background report including input from all sectors/ stakeholders along with a report summarizing webinar proceedings
3. One or more workshops along with a workshop report to arrive at approaches and solutions to achieve NO₂ CAAQS in the province
4. Final report, including:
 - Lessons learned
 - Evaluation of recommendations received
 - Any project team recommendations
 - Webinar and workshop proceedings
5. A 1-2-page communications document including key messages and webinar/workshop outcomes for colleagues, project participants, and the public

It should be noted that *CASA's Performance Measures Strategy: A "how-to" guide to performance measurement at CASA* indicates that each project team is required to generate one specific metric that will allow the success of the team to be evaluated five (5) years in the future. More guidance on how this can be achieved can be found in the strategy.

Project Structure and Schedule

Project work should begin in November 2020. The working group anticipates that the entire project will take approximately two years, with an estimated completion date of September 2022.

Refer to Table 1 for a high-level illustration of the process.

Table 1: CAAQS Achievement Project Timeline

Task Description	Objective #	2020				2021												2022								
		Sept*	Oct	Nov	Dec*	Jan	Feb	Mar	Apr*	May	Jun	Jul	Aug	Sept*	Oct	Nov	Dec*	Jan	Feb	Mar	Apr*	May	Jun	Jul	Aug	Sept*
Formation of Project Team		█	█	█																						
Background document	1				█	█	█	█	█	█	█	█	█	█												
Webinar(s)	2						█	█	█	█	█	█	█	█	█	█										
Workshop(s)	3													█	█	█	█	█	█							
Write final report	4																			█	█	█				
Communications & Engagement	5	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Broad sector review (6 weeks)																							█	█		
Board decision																									█	

*Denotes CASA Board meeting

Projected Resources and Costs

Table 2 outlines the potential external costs over the life of the project, as anticipated by the working group. As the work of the project team progresses, detailed work plans and associated budgets will be developed.

The cost for hosting virtual events is expected to be low, but the budget considers speaker costs, facilitators, or other meeting support, should they be necessary.

Table 2: Estimated CAAQS Achievement Project Budget

Item	Estimated Cost
Background document compilation (Objective 1)	\$3,000
Hosting the webinar(s) (Objective 2)	\$5,000
Hosting the workshop(s) (Objective 3)	\$7,000
Final report writing (Objective 4)	\$5,000
Development and implementation of communications strategy (Objective 5), to potentially include: Communications materials (e.g., message map, backgrounder, etc.)	\$5,000
Total Estimated External Costs	\$25,000

Risk Analysis

Identifying, analyzing, and mitigating project risks is a key component of executing a successful project. The project team will incorporate proactive risk management into the project to mitigate risks that could undermine its success.

Table 3 lists the risks as well as possible mitigation strategies identified by the working group that the project team should consider as they undertake their work.

Table 3: CAAQS Achievement Risk Analysis including Possible Mitigation Strategies

Risks	Possible Mitigation Strategies
Process	
COVID-19 Delays and Limitations	<ul style="list-style-type: none"> Explore opportunities for the workshop and events to be held online instead of in-person as appropriate. Develop the workplan with additional time to accommodate potential project delays. Clear communication among project team members related to capacity and availability.
Timely funding not available	<ul style="list-style-type: none"> Identify who the clients of this work are. Pursue funding from clients if appropriate.

Risks	Possible Mitigation Strategies
Process	
	<ul style="list-style-type: none"> • Develop a strong value-proposition that includes examples of sectors that may be involved or affected • Project Team members discuss the work and associated need for funding with their constituents early in the process • Project Team members discuss additional mitigation measures as required
Recommended processes and learnings are too broad or not specific to the project goal	<ul style="list-style-type: none"> • Seek a balance between regional needs and provincial applicability in management actions chosen • Consider prioritizing cross-cutting actions that provide regional benefit and have the potential to be broadly applicable • Consider ways to align this work with existing or developing provincial policy, management frameworks and plans
Can't reach agreement, e.g., on content, potential processes/ management actions, or communications	<ul style="list-style-type: none"> • Determine in advance which pieces of work do and do not require consensus • Outline a clear decision-making process that includes what happens if the team can't agree – who will make the decision? • Have an explicit discussion around Interest-Based Negotiation, and get all the interests of the team members on the table
Project Team does not understand or follow the Project Charter	<ul style="list-style-type: none"> • The Project Manager reviews the Project Charter with the Project Team and together highlight areas that may require further clarification. If the Project Team is still unclear, the Project Team brings concerns to the Board for approval/direction • Board receives regular updates to ensure progress is monitored
CASA Board disagrees with management actions identified in Objective 3	<ul style="list-style-type: none"> • Project Team members liaise with their constituents and Board members on an ongoing basis • Project Team provides regular status reports for Board meetings • Project Team determines if additional workshops/engagements are required to create Board consensus
Recommendations of the Project Team are not implemented. Specifically, advice given on implementing approaches	<ul style="list-style-type: none"> • This risk is outside the scope of the project team to mitigate; however, this risk will be reduced if i) the parties potentially involved in implementation are engaged, and ii) reference to implementation (who and how) is included in the report's recommendations

Risks	Possible Mitigation Strategies
Process	
and/ or solutions in Objective 3.	
Information Collection	
Few participants in online webinar(s), and/or workshop(s)	<ul style="list-style-type: none"> • Ensure that CASA network and membership fans out information on the webinar(s) and workshop(s) through various means, including social media networks • Targeted emails to CASA membership • Increase the frequency of communications and reminders and explore alternative channels to reach the public
Lack of / limited information (accessibility)	<ul style="list-style-type: none"> • Ensure Project Team membership enables the team access to information • Use judgement where information is unavailable • Any gaps in information will be noted during the process to promote transparency
Privacy concerns potentially impacting the ability to collect robust suggestions from internet engagement	<ul style="list-style-type: none"> • Remove key identifying information from responses • Follow FOIP and PIPA processes
Stakeholder Engagement	
During stakeholder engagement, “interested parties” don’t agree with the list of management processes provided in Objective 3	<ul style="list-style-type: none"> • Try to develop the potential management actions collaboratively, and determine if additional engagement sessions are required • If stakeholders disagree, seek to understand stakeholder reasons for disagreement • Identify non-consensus recommendations where appropriate
Lack of engagement/ownership on Project Team	<ul style="list-style-type: none"> • Identify and communicate with potential stakeholders early in the process • Create a clear value proposition • Be clear about what is being asked of Project Team members
Obtaining stakeholder feedback and refining potential solutions with interested parties (Objective 3) takes longer than expected or causes scope creep	<ul style="list-style-type: none"> • Set specific parameters for this piece of work: <ul style="list-style-type: none"> ○ Purpose of soliciting feedback ○ Scope of influence outcomes will have on overall process • Confirm timelines and availability

Operating Terms of Reference

An Operating Terms of Reference describes how the project team agrees to work together. The project team should discuss and reach consensus on the following items:

- Requirements for quorum
- Governance
- Meeting protocols
- COVID-19 social distancing procedures
- Roles and expectations of project team members
- How decisions will be made
- Ground Rules
- Frequency of project team meetings
- Frequency of updates and reports to the CASA Board
- Protocols for handling media requests
- Protocols for providing updates to interested parties
- Any other considerations for working together

Stakeholder Analysis and Engagement Plan

In general, stakeholders will be engaged in different capacities and at different times as necessary to meet the project outcomes.

The working group identified the following categories of stakeholders whose involvement would benefit the project:

- Project Team: Stakeholders who are required at the table to reach consensus agreement.
- Corresponding members: Stakeholders who receive all correspondence but are not required at the table to reach consensus agreement.
- Task Groups or Technical Experts: Stakeholders who have a specific interest or expertise and can be engaged as required.
- Other:
 - Stakeholders from whom feedback on management actions is sought, which may include potential implementers or those potentially impacted (Objectives 2, 3).
 - Members of the public who may be engaged and/or informed (Objective 2).

Table 4 includes a list of potential stakeholders for consideration. Additional stakeholders may become apparent as the work progresses; the project team will regularly evaluate whether the appropriate stakeholders are engaged.

Table 4: Potential Stakeholders to Consider for Involvement in the CAAQS Achievement Project

Individual or Organization	Possible Interests, Concerns, or Involvement
Provincial Regulators (e.g., Environment and Parks, Transportation, Rail, Agriculture and Forestry, Alberta Energy Regulator, Service Alberta, Alberta Justice, Alberta Health)	<ul style="list-style-type: none"> • Responsible for ensuring achievement of the CAAQS as well as provincial policy • Will likely be responsible for implementing many management actions • Interested in environmental protection and health of Albertans as well as ensuring sustainable economic prosperity • Involved in education/awareness initiatives • May be involved in implementing management actions or have interest in certain sectors, e.g., forestry trucks, shuttle buses to mine sites
Federal government (e.g., Environment and Climate Change Canada, Transport Canada)	<ul style="list-style-type: none"> • Interested in ensuring achievement of the CAAQS across Canada, effectiveness of and alignment with federal policies, as well as meeting transboundary commitments
Municipalities	<ul style="list-style-type: none"> • Involved in education/awareness initiatives • May be involved in implementing management actions • Interested in ensuring the health of communities • Interested in protecting the environment
First Nations and Métis	<ul style="list-style-type: none"> • Interested in ensuring the health of communities • Interested in protecting the environment
Trucking companies/associations (e.g., CTA/AMTA, Independent Trucking Association)	<ul style="list-style-type: none"> • Interested in fairness across the sector • Concerns regarding possible costs or inconvenience of potential management actions
Rail (e.g. CN, CP)	<ul style="list-style-type: none"> • Interested in fairness across the sector • Concerns regarding possible costs or inconvenience of potential management actions
Industry	<ul style="list-style-type: none"> • Interested in management actions to reduce NOx emissions that include both industrial and non-industrial emission sources
Pacific NorthWest Economic Region (PNWER) Foundation	<ul style="list-style-type: none"> • Interested in awareness of requirements in each jurisdiction, for cross-border activities
Health and Environmental Non-Government Organizations	<ul style="list-style-type: none"> • Interested in ensuring the health of Albertans • Interested in protecting the environment
Airshed Organizations	<ul style="list-style-type: none"> • Involved in outreach/education/awareness initiatives • Involved in data collection to inform CAAQS management actions • May be involved in implementing management actions
Agriculture Associations (e.g., Alberta Canola Producers, Alberta Beef Producers, etc.)	<ul style="list-style-type: none"> • Interested in fairness across the sector • Concerns regarding possible costs or inconvenience of potential management actions
Academia/Research Councils (e.g., U of A Centre of Smart Transportation, and others)	<ul style="list-style-type: none"> • Interested in feedback received potential research implications of study results, or in possible concurrent studies
The Public	<ul style="list-style-type: none"> • General interest • Educational opportunity

Appendix A: Working Group Membership

Name	Role	Organization
Members		
Dan Moore	Member	Alberta Newsprint Company
Rob Beleutz	Member	Graymont
Sean Mercer	Member	Imperial Oil/Canadian Fuels Association
David Spink	Member	Prairie Acid Rain Coalition
Kristi Anderson	Member	Mewassin Community Council
Julie Carter	Chair	Wood Buffalo Environmental Organization
Sanjay Prasad	Member	Wood Buffalo Environmental Organization
Sheila Lucas	Member	Alberta Environment and Parks
Carolyn Tralnberg	Member	Alberta Environment and Parks
Crissy Handziuk	Member	NOVA Chemicals
Brittney Morgan	Chair	Capital Power
Ahmed Idriss	Member	Capital Power
Andria Panidisz	Member	Canadian Association of Petroleum Producers
CASA Secretariat		
Lauren Hall	Project Manager	Clean Air Strategic Alliance
Katie Duffett	Project Manager	Clean Air Strategic Alliance
Alec Carrigy	Project Manager	Clean Air Strategic Alliance

Appendix B: Reference Materials

The project team should review the following materials in preparation for project initiation:

- ROVER III documents⁶
- The current Alberta Air Quality Modelling Guideline 2013⁷ and the updated draft Alberta Air Quality Modelling Guideline 2020⁸
- Ambient Air Quality Objectives / AAQGs^{9,10}
- Canadian Ambient Air Quality Standards¹¹
- Provincial O₃ and PM_{2.5} Air Zone Management Plans¹²
- The CCME CAAQS Guidance Document on Air Zone Management¹³
- 2018 Provincial Air Quality Photochemical Modeling report¹⁴
- Alberta Regional Planning documents¹⁵

⁶ <https://www.casahome.org/current-initiatives/rover-iii-53/>

⁷ <https://open.alberta.ca/publications/9781460105993>

⁸ <https://www.alberta.ca/assets/documents/aep-air-quality-model-guideline-2020-draft.pdf>

⁹ <https://www.alberta.ca/ambient-air-quality-objectives.aspx>

¹⁰ <https://open.alberta.ca/dataset/0d2ad470-117e-410f-ba4f-aa352cb02d4d/resource/97d1afdf-b66b-4805-be41-a5a3f589c988/download/aaqo-summary-jun29-2017.pdf>

¹¹ https://www.ccme.ca/en/current_priorities/air/caaqs.html

¹² <https://open.alberta.ca/dataset/2baa091e-2b5e-4d12-9da7-4c5e89bef71d/resource/5f87b061-e049-4549-8fde-b077cf0207fd/download/implementationframework-pm-ozone-sep2015.pdf>

¹³ https://www.ccme.ca/files/Resources/air/aqms/pn_1483_gdad_eng.pdf

¹⁴ <https://open.alberta.ca/publications/9781460142387>

¹⁵ <https://www.alberta.ca/land-use-regional-planning.aspx>