Memorandum

Clean Air Strategic Alliance

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Date: **August 12, 2011**

From: **Norman MacLeod, Executive Director**

To: **CASA Directors & Alternates**

Subject: **CASA Board Meeting – September 8, 2011**

Attached are the draft agenda and briefing materials for the next meeting of the CASA Board of Directors, which is scheduled from **9:00 am to 2:15 pm** on Thursday, September 8, 2011. Many thanks to all of you who attended our retreat in Canmore. Our upcoming session in Calgary will provide you with the chance to discuss the roll-out of your ideas, and prepare the groundwork for new and existing Project Teams reconvening this Fall. The meeting will be held at:

McDougall Centre – Rosebud Room
455 – 6th Street S.W.
Calgary, Alberta

We look forward to seeing you in Calgary.

Norm MacLeod
780-427-9793

September 8, 2011

Board of Directors Meeting

ABOUT CASA

Vision:

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.

Mission:

To recommend strategies to assess and improve air quality in Alberta, using a consensus process.

Identity:

The Clean Air Strategic Alliance is a multi-stakeholder partnership composed of representatives from industry, government, and non-government organizations.

Goals:

1. ***Protect the environment by preventing short- and long-term adverse effects on people, animals and the ecosystem.***

2. ***Optimize economic efficiency.***

3. ***Promote pollution prevention and continuous improvement.***

Administration

Strategic Planning

Project Management

New/Other Business

Clean Air Strategic Alliance
Clean Air Strategic Alliance – Board Meeting
McDougall Centre – Rosebud Room
455 – 6th Street S.W.
Calgary, Alberta
September 8, 2011

Draft Agenda

	1.0	**ADMINISTRATION**	**1**
9:00 – 9:30 (30 min)	**1.1**	**Convene Business Meeting and Approve Agenda** *Objective: Convene business meeting and approve agenda.*	
	1.2	**New Representatives** *Objective: Introduce and welcome new CASA board representatives.*	
	1.3	**Executive Director's Report/Financial Statements** *Objective: Receive a report on secretariat activities and income and expense statements, and a mid-year budget update for 2011.*	
	2.0	**STRATEGIC PLANNING**	**2**
9:30 – 10:00 (30 min)	**2.1**	**Draft Proceedings Document** *Objective: Receive for information, the draft proceedings document from the June 2011 Strategic Planning Retreat.*	
10:00 – 10:30 (30 min)	**2.2**	**CASA's New Strategic Plan** *Objective: Receive for information, and discuss content and approach to completion of the CASA 2012 – 2016 Strategic Plan.*	
10:30 – 10:45		**BREAK**	
	3.0	**PROJECT MANAGEMENT**	**3**
10:45 – 11:30 (45 min)	**3.1**	**Managing Collaborative Processes Guidebook** *Objective: Receive information and provide feedback on the development of the Managing Collaborative Processes Guidebook.*	
11:30 – 12:00 (30 min)	**3.2**	**Status Reports** *Objective: To receive information on project activity and application of new approaches.* • CASA and AAC Joint Standing Committee • Confined Feeding Operations • Electricity Framework Review Project Team • Human and Animal Health Team • Operations Steering Committee • Particulate Matter and Ozone Implementation Team • Performance Measures • Vehicle Emissions Project Team	
12:00 – 1:00 (60 min)		**LUNCH**	
	3.0	**PROJECT MANAGEMENT CONTINUED**	**3**
1:00 – 1:30 (30 min)	**3.3**	**Update on the 2009 Ambient Monitoring Strategy** *Objective: To receive information on long-term funding options from Alberta Environment.*	
1:30 – 2:00 (30 min)	**3.4**	**GHG Offsets Protocol** *Objective: To receive an update on implementation from Alberta Environment.*	

	4.0	**NEW/OTHER BUSINESS**	**4**
2:00 – 2:15 (15 min)	**4.1**	**New/Other Business** *Objective: Introduce new business and/or complete any unfinished business of the day.*	
	4.2	**Updated Mailing and Membership Lists** *Objective: Provide up-to-date information on CASA board members.*	
	4.3	**Evaluation Forms** *Objective: Provide time for board members to fill out their evaluation forms.*	

INFORMATION SHEET

ITEM: **1.2 New Representatives**

ISSUE: Two new directors and one new alternate director have been chosen by their respective member organizations as representatives on the CASA board.

STATUS: **Mike Norton** of Environment Canada has been appointed to replace Randal Cripps as the director representing Federal Government.

Leigh Allard of The Lung Association – Alberta & NWT has been appointed to replace Tony Hudson as the director representing NGO Health.

Dawn Friesen of Alberta Health and Wellness has been appointed to replace Alex MacKenzie as the alternate director representing Provincial Government – Health.

ATTACHMENTS: A. Biographies of New Members

Biography **Director**

Mike Norton
Acting Regional Director General
Environment Canada

Mike Norton has assumed the responsibilities of Regional Director General – Prairie and Northern on an acting basis. His substantive position is Regional Director of Strategic Integration and Partnerships, Prairie and Northern. He is based in Environment Canada's regional headquarters in Edmonton. Key among his responsibilities is serving as chair of the Prairie Provinces Water Board and the Mackenzie River Basin Board. The RDG is also the departmental lead on the *Canada-Manitoba Memorandum of Understanding Respecting Lake Winnipeg and the Lake Winnipeg Basin.* He also provides senior leadership for horizontal and corporate issues across the region's five jurisdictions, 800+ staff, and 20+ facilities. Previously, Mike has worked in both the environmental assessment and wildlife programs of Environment Canada's Environmental Stewardship Branch.

Biography **Director**

Leigh Allard
President & CEO
The Lung Association – Alberta & NWT

Leigh Allard is the new President/CEO of The Lung Association, AB & NWT. The organization focuses on its vision of "Healthy Lungs and Clean Air so we can all Breathe Easier". She has been with The Lung Association since 2000 and has served in various capacities including her last role as Vice President, Development. Prior to her joining The Lung Association she spent 10 years working with the Ontario and Alberta government within the Attorney and Solicitor General's department.

Biography **Alternate**

Dawn Friesen
Acting Executive Director
Alberta Health and Wellness

Dawn is the Acting Executive Director, Health Protection Branch, Community and Population Health Division, Alberta Health and Wellness. She has a strong interest in public health and twelve years experience working in government. Throughout her time with government, her work has been focused on health promotion, cancer screening, infection prevention and control and a variety of public health issues and policy development.

Prior to this most recent appointment (June 27, 2011), she was the Senior Manager for the Infection Prevention and Control team in Health Protection Branch.

Dawn has a graduate degree from the University of Alberta. In addition to her public sector experience she has worked as a nurse in the health system and as a nursing educator.

INFORMATION SHEET

ITEM: **1.3 Executive Director's Reports and Financial Statements**

BACKGROUND: The Board is provided with regular reports from the Executive Director at each Board meeting. At the September board meeting, the Board usually receives a mid-year budget update.

ISSUE: **1. Executive Director's Reports**

ATTACHMENTS:
A. Board Action Items
B. Executive Directors Report
C. CASA Projects & Initiatives
D. Status of CASA Operational Plan
E. Legal Requirements - June 30, 2011
F. Stakeholder Support – June 30, 2011

ISSUE: **2. Financial Reports**

ATTACHMENTS:
G1. Status of Revenue and Grants – June 30, 2011
G2. Excerpt from Executive Committee Minutes – May 5, 2011
H. Consolidated Core Expenses – June 30, 2011
I. Mid Year Update of 2011 Core Budget – June 2011

Board Action Items
For Discussion – September 8, 2011

Action items	Meeting	Status
Strategic Planning Retreat Proceedings The following deliverables will be provided to the Board for discussion and decision: • A proceedings document from the retreat • A first draft of a new Strategic Plan • A process and procedures document that describes options for improving efficiency and effectiveness.	June 8 & 9, 2011	Will be discussed under agenda items 2.1 and 2.2.
Item 2.1 - Flaring and Venting Project Team AENV to provide an update of the Climate Change policy work at the fall meeting.	March 10, 2011	Will be discussed under agenda item 3.4.

Completed Action Items

Action items	Meeting	Status
Item 1.5 – Indoor Air Quality The secretariat will work with the executive to determine which departments, in addition to the three to which CASA reports, are most appropriate to send the indoor air quality report to, and will prepare a letter of transmittal.	March 24, 2010	Done.
Item 1.5 - Strategic Planning Update/Business Plan The Secretariat will do an e-scan before the June strategic retreat, and will begin by canvassing Board members.	December 2, 2010	Done.
Item 1.5 - Strategic Planning Update/Business Plan The Secretariat will provide further information regarding business plan implementation in March and may suggest some short term candidates for action, pending a more comprehensive revision of the plan.	December 2, 2010	Done.
Item 1.6 (Core Budget for 2010) The Secretariat will request a letter from the Department of Energy documenting their commitment to 2011 CASA core operational funding.	December 2, 2010	Done.
Item 2.1 (Guidance Document for Project Teams) Robyn will circulate a copy of the wall chart to the board and will provide updates as the project evolves.	December 2, 2010	Done.

Executive Director's Report

Part I - Overview of Key Initiatives

Strategic Planning

Strategic Planning Retreat

The 2011 strategic planning retreat resulted in outcomes and suggested actions that, if fully implemented, would significantly change the substance of, and approach to, air quality discussions among CASA stakeholders. In attaching a priority to Goals 1 and 2 in the Mission Review document, CASA Board members clearly committed to an agenda for discussion that focuses on: 1) the development of proactive and reactive advice on major policy initiatives and 2) strategic interventions that would model the CASA approach on more specific and/or regional air quality management discussions.

The Board also confirmed that CASA must reconsider the way it does business in order to respond to our client groups and a changing mosaic of issues (e.g. issues are being addressed in a more integrated manner, across different media). This re-engineering of CASA business processes will require all of our stakeholders to be receptive to new approaches and to work within an environment of adaptive management. We must find our way as we go and learn by doing. The Board, Executive, Secretariat and project teams must all ask the question, "how could we work more effectively and efficiently?" There will likely be changes to the way in which CAMS is applied (e.g. screening and scoping).

Following the retreat, the Executive and the Secretariat will have to move quickly to cement tentative agreements with respect to CASA direction and process, so that the alliance is well-positioned to tackle new tasks in late 2011 and early 2012. This will require Board agreement on a new strategic plan, changes to process and procedures and an expanded collaborative toolkit that can respond to a broader range of stakeholder engagement requirements.

This is not, of course, an alternative to consensus-building. We will continue to seek consensus whenever possible, and in doing so, the Board wants us to bring more discipline and rigor to table discussions. Project Managers will take a more directed approach and all participants will be expected to understand and practice interest-based negotiation. Better and more focused training will be made available to project teams and Board members.

There is much work to do and the fall will see the roll-out of several important documents that describe a new agenda and approach. Meanwhile, CASA stakeholders must begin the work of identifying those issues and opportunities they see as being consistent with Goals 1 and 2, and must bring them forward as new SOOs.

Related Deliverables

2011 Board Retreat Proceedings – July 25
2011 to 2016 CASA Strategic Plan (1st draft) – July 29
2011 CASA Process and Procedures / Options for Discussion – August 30

Reconvening Project Teams

This Fall, a number of project teams will reconvene, either to continue under an existing Terms of Reference, or to build a new Statement of Opportunity for presentation to the Board. This will present some near-term opportunities to: a) provide training in interest-based negotiation for participants, b) develop a more rigorous screen and scope process, c) test drive a more directed style of project management, and d) refine new roles and responsibilities of the Board, project teams, etc.

The Secretariat

Staffing / Recruitment

The Secretariat has recruited two new staff members, one permanent hire and one term employee, to meet existing and new work commitments. These new staff will bring skills and capabilities to CASA that will allow the Secretariat to respond to new challenges. These include, reconvening existing project teams, convening new teams, program development under the new strategic plan, training for project managers, training for CASA stakeholders, workshop design for 2 workshops in 2012, website improvements and communications support. Coupled with the secondment of Sandra Klashinsky, Executive Director from the Oil Sands Secretariat, and the availability of seasoned contract help, the CASA Secretariat is very well positioned to undertake new work and to meet stakeholder expectations.

Sandra will be acting as team lead in the development of a new guide for CASA Project Managers (a CASA Guide to the Management of Collaborative Processes). The guide will marry the CAMS process with the most current thinking on Strategic Decision Making and the application of a broader collaborative toolkit. We expect that it will create a new high water mark for effective stakeholder engagement in Alberta. The guide will be developed in consultation with a small group of interested CASA Board members.

Linda Jabs will begin her new assignment with CASA under contract at the end of Sept. While complete contract deliverables are yet to be determined it will include providing ongoing support to the PM and Ozone Team, facilitation support to the CDW data quality group, effecting a transition to the new Project Manager for the CASA / AAC Joint Standing Committee and the Performance Measures Committee and, perhaps most importantly, exploring opportunities for more effective aboriginal involvement in air quality discussions.

HR Systems

The revised Employee Handbook will be finalized in August, completing the overhaul of CASA HR systems. Together with staffing adjustments, new employee support provisions and a reconfigured office, the staff complement at the CASA Secretariat should be entering a new window of stability, subject to regular and ongoing small adjustments.

Part II - Detailed Board/Committee/Project Work

Board and Standing Committees:

Board

- The next Board meeting is September 8 in Calgary.

CASA and AAC Joint Standing Committee

- The committee agreed on gathering information from airsheds about their current work, relationships, etc. However, when compared to the questions AENV posed to airsheds and WPAC's as part of their 'Value-Added' survey, it became cleat that there was considerable overlap, to the extent that further polling of airsheds would not add value. The "Review of Value and Funding Options for Airshed Zones and Watershed Planning and Advisory Councils to Support Cumulative Effects Management" has been released by Alberta Environment. This report and the results of discussions with individual airsheds will be provided to Committee members, who will discuss a path forward at their next meeting.

Communications Committee

- The next meeting will be in September, after the Board has approved the new strategic direction. A key agenda item is revision of the Strategic Communications Plan to reflect new direction. As there was no quorum at the June meeting, the new chair(s) will be appointed in September.

Executive Committee

- The Executive Committee will meet on August 5, before the next board meeting

Operations Steering Committee

- The dotnetnuke system is being incorporated into the CASA Data Warehouse and is expected to be operational in late July or early August. This will be a more user friendly and efficient means for retrieving information from the CDW.
- Committee members agreed that they will wait for the results of the Integrated Monitoring, Evaluation and Reporting Framework (IMERF) and the Cumulative Effects Management System (CEMS) before transitioning into the Multi-Stakeholder Implementation Committee (MIC), as envisioned by the AMSP. In the interim, AENV has brought together a group of data providers to establish guidelines to ensure consistency of the ambient data that is

collected under the Air Monitoring Directive. CASA is providing assistance with facilitation and some project management.

Project Teams:

Confined Feeding Operation Implementation Review Team

- The Implementation Review Team is satisfied with progress on all the recommendations except for one. On this outstanding recommendation, the team has provided some advice on implementation to Alberta Environment. The CFO team will reconvene in November 2011.

Electricity Framework Review

- In anticipation of the Federal Minister of Environment's announcement to regulate CO2 emissions from coal-fired power plants, the PM Management Task group will go into abeyance for a few months.
- The EFR team suggested that the Board strike a task group to review the federal and provincial systems and propose opportunities for alignment between the two regulatory requirements.

Human & Animal Health Implementation Team

- The team is in currently in abeyance; every six months (April and October), the co-chairs consider whether the team should reconvene. The decision is based on:
  - The Syndromic Surveillance Network (SSN) pilot project information update by Alberta Health and Wellness (AHW).
  - Any other issue that it merits to be discussed by the team.
- Alberta Health and Wellness will be providing an update on the Syndromic Surveillance Network (SSN) pilot project at the September Board meeting.
- The team expects to provide a status update at the December 2011 CASA Board meeting, based on information provided by Alberta Health and Wellness in September.

Particulate Matter & Ozone

- The team met on July 14 and heard key developments in the national Air Quality Management System from Bill Calder (AENV) and Marc Deslauriers (Environment Canada).
- The Lessons Learned document and transmittal letter that were submitted to the Air Management Committee will be taken into consideration as the AQMS process moves forward, particularly in the guidance document for air zone delineation, developing the CAAQS and the trigger system.
- As the AQMS framework unfolds, the team will work together to answer the technical questions that were posed in the Lessons Learned document. The issue of funding the federal process will be flagged as there has to be sufficient monies in place to allow for the work to be completed.
- The team will next meet in early September 2011 to discuss the technical information that will be going forward to the AMC.

Performance Measures

- As per the discussion at the June 2010 Board meeting, the committee will be considering the relevance of CASA's performance measures and their capacity to effectively evaluate organizational performance.

Vehicle Emissions

- The team was disbanded at the September CASA Board meeting.
- One of the key messages from the team and approved by the Board is that the team recognizes that the work, as per its terms of reference, is done, but there is still more to be done on vehicle emissions.
- In fall 2011, the secretariat will convene key stakeholders to consider submitting a Statement of Opportunity to the CASA Board. There is an existing statement of opportunity, detailing future work that CASA could initiate to reduce vehicle emissions. However, this document is still in the initial phases of development and could be revised to provide a fresh perspective on CASA's previous work on vehicle emissions.

CASA Projects & Initiatives

Updated August 2011

Projects	*Status*			
(EXEC) Executive Committee	Active	Peter Watson	Myles Kitagawa	Cindy Christopher
(JSC) CASA & AAC Joint Standing Committee	Active	Bev Yee	Bob Scotten	
(OSC) Operations Steering Committee	Active	Tom Dickson		
(PMO) Particulate Matter & Ozone Implementation Team	Active	Bob Myrick	Myles Kitagawa	Claude Chamberland
(PMC) Performance Measures Committee	Active	Bob Myrick	Ruth Yanor	Ted Stoner
(CFO) Confined Feeding Operations Team	Reconvene Nov. 2011			
(EFR) Electricity Framework Review Team	Active	Randy Dobko	Tom Marr-Laing	Jim Hackett
(HAHT) Human and Animal Health Implementation Team	Update expected April 2011		Ruth Yanor	
(VET) Vehicle Emissions Team	Statement of Opportunity pending			
(CC) Communications Committee	Active			

Initiatives	*Completion*
(SP) Strategic Plan 2012 - 2017	December 2011
Managing Collaborative Processes (Guidebook)	March 2012
Training for Practitioners	December 2011
CASA Associates Network	December 2011
First Nations Engagement	TBD

Legend

Co-chairs:

Gov't | NGO | Industry | AAC & Airsheds

Project Manager:

Norm MacLeod | Linda Jabs | Robyn-Leigh Jacobsen | Jean Moses

CASA Operational Plan 2011

Sept, 2011 Update

Initiative	Milestone	Link to Business Plan	Responsibility	Status
Board of Directors	Preparation and follow-up for four board meetings **March** – Approve Financial Statements **June** – AGM and Strategic Planning Retreat **September** – Receive budget update **December** – Approve 2012 Operational Plan and budget	Strategy 2.2 Strategy 1.1	The board alone is responsible for Strategy 2.2 Norm / Alison	CASA's role in regional planning will be determined through the identification of targeted "strategic interventions" as described under Goal 2 in the Mission Review doc. Financial Statements approved. AGM and Strategic Planning Retreat complete Mid-stream budget update provided at Sept. Board mtg.
Executive Committee	**Ongoing -** Meetings prior to each board meeting. Q3 - Review and provide guidance to Ex. Dir. with respect to proposed Business Plan amendments and review of Secretariat systems and functions **October** – Approve 2012 budget and review Operational Plan		Norm / Alison	New strategic plan to be approved at Dec. 2011 Board meeting. Secretariat systems and functions under review in Q3 and Q4

Initiative	Milestone	Link to Business Plan	Responsibility	Status
Performance Evaluation	**Q1** – Sectors caucus to evaluate CASA utility/relevance, responding to a common question template. **March** – Sectors report evaluation results to Board for decision.		Board members	Performance Evaluation complete and included in Mission Review doc.
Business Plan	**Q3** - Revise the 2010 – 2012 Business Plan in response to outcomes from the Performance Evaluation, the board Strategic Planning retreat, internal planning systems review and any further guidance and/or decisions taken by the GoA.	All strategies	Robyn / Norm	New strategic plan to be approved at Dec. 2011 Board meeting.
Secretariat	**Q3** – Completion of a comprehensive review of all Secretariat systems, functions and staffing, directed at improving efficiency and alignment with Board direction and the revised Business Plan	All strategies	Norm	Continue review of Secretariat systems and functions in Q3 and Q4, to reflect new Strategic Plan. Recruitment/staffing complete. HR systems revised and updated.
Communications	**March –** Annual report text provided to board; printed copies distributed in July	Strategy 4.1	Jean / Jillian	Completed

Initiative	Milestone	Link to Business Plan	Responsibility	Status
	June – Plan developed around best practices repository	Strategy 4.2	Jean	Initial brainstorming completed but plan delayed until March so it reflects 2012-17 strategic plan
	June – Outreach/recruitment plan to board	Strategy 4.1	Jean	Delayed until December so it aligns with 2012-2017 strategic plan
	June – Clean Air Day event	Strategies 4.1, 4.2	Jean	Successful multi-partner Environment Week kick-off event completed Clean Air Day event completed successfully
	September – CASA Communications plan review	Strategy 4.1	Jean	On agenda for committee meeting in late September
	Clean Air Bulletins every two months	Strategy 4.1	Jean	Completed
Coordination Workshop	**March** – Report and recommendations to CASA Board	Strategies 2.2, 2.4	Jean	Completed
	December – Recommendation for 2012 Coordination Workshop to CASA Board	Strategies 2.2, 2.4	Jean	On agenda for committee meeting in late September
CASA and AAC Joint Standing Committee	The committee to be convened late 2010 and will begin work **Q1** 2011	Strategies 1.2, 2.1	Linda	Committee met for the first time in February 2011. Additional factors and information have since come to bear which will require the committee to develop a revised path forward.

Initiative	Milestone	Link to Business Plan	Responsibility	Status
Operations Steering Committee	**Feb 2011 –** Visioning workshop re: future of database **Ongoing –** Oversee implementation of the CASA Data Warehouse	Aligned with Goal #4	Linda	The direction for the OSC is on hold pending the release of the Cumulative Effects Management System and the Integrated Monitoring, Evaluation and Reporting Framework. AENV is presently working on a data provision piece for the Air Monitoring Directive, which has support from OSC team members and is consistent with the proposed direction given at the June retreat.
"Managing Collaborative Processes" Guide	**Dec 2011** – Preparation of rolling draft for review by ad hoc group, Executive and Board in Oct thru Dec 2011. Publication in March 2012.	Strategy 3.1	Sandra	Sandra K secondment focused on the preparation and completion of this document. Project scoping and charter nearing completion
Performance Measures Committee	**March –** Report to board on all listed Performance Measures. Results to be included in the 2010 Annual Report, distributed in July **Ongoing** – Prepare measures #3 and #5 through 2013	Strategies 1.2, 2.2	Linda	Performance Measures are to be reviewed with respect to what is reported on behalf of CASA and to the public. Based on the new strategic direction, measures will have to be revised and/or developed.

Initiative	Milestone	Link to Business Plan	Responsibility	Status
Particulate Matter and Ozone	Full review of the framework to begin in 2011, including an analysis of major policies such as CAMS, CEMS, and CAS	Strategies 1.2, 2.2	Linda	Framework review is delayed pending the release of the national Air Quality Management System. The team is providing input to the national process in the form of Lessons Learned on the existing Framework and the Canada Wide Standards.
Airshed Support	Q2 – Completion of meetings between CASA ED, Project Mgr and all airshed boards to identify ways in which CASA can add value, provide guidance and support.	Aligned with Goal #2	Linda	All airshed meetings completed as of June 2011, with results to be provided to the CASA and AAC Joint Standing Committee.
CFO-IRT	**June –** Final report to the CASA Board.	Strategy 3.1, 3.2, 4.2, 4.3	Robyn	Done
CFO	**Fall** – Team reconvenes	Strategy 2.2, 3.1, 3.2, 4.2, 4.3	Robyn	A group will be convened to develop a Terms of Reference in November 2011.
Electricity Framework Review Committee	**March –** Final report of the PM Task Group to Board. Project team is disbanded.	Strategy 3.1, 3.2	Robyn	The PM Task Group is in abeyance pending the announcement of the Federal GHG regulation.
Strategic Foresight	**March –** Final report of consultant's work to Board	Strategy 1.1, 3.2	Robyn	Done
Human and Animal Health	**April –** meeting for hearing the update on SSN. **June –** the team presents at the CASA Board meeting the ongoing developed works.	Strategies 1.2, 4.1	Robyn	AHW is providing a status report for the September Board meeting and will be doing a presentation at the December Board meeting.

Initiative	Milestone	Link to Business Plan	Responsibility	Status
Vehicle Emissions	Group activities linked to Clean Air Strategy release by the GoA. **Q3/Q4 –** the group meets after reviewing the draft of the Clean Air Strategy to analyze the alignment of the current SoO draft with the strategy. **December –** the group presents the SoO to the CASA Board.	Strategies 1.2, 3.1, 3.2, 4.1, 4.3	Robyn	The secretariat has met with some interested stakeholders to discuss the nature and focus of a SoO and will continue to pursue a more in-depth screening and scoping process.

Clean Air Strategic Alliance
Legal Requirements Completed
January to June 2011

Description	**Requirements**	**Completion Date**
Canada Revenue Agency Corporation Income Tax Return T2 and Non Profit Organization Information Return	Annual Filing of Return & Audited Financial Statements	February 3, 2011 (for 2010)
Annual General Meeting	Annual Meeting of Members of the Alliance Presentation of CASA's Audited Financial Statements	June 8, 2011 June 8, 2011
Canada Revenue Agency – GST Return	Return Filed Quarterly	April 27, 2011 July , 2011
Canada Revenue Agency – Payroll Deductions	Payment is made on about the 15th of the following month by a third party payroll provider, Ceridian	Feb 15/11 - for Jan Mar 15/11 - for Feb Apr 15/11- for Mar May 16/11 - for Apr June 15/11 - for May July 15/11–for June
Board of Directors Liability Insurance	Annual Payment for Liability Insurance	January 1/11 (for 2011)
Alberta Corporate Income Tax Return AT1	Annual Filing	February 3, 2011 (for 2010)
Alberta Registries	Annual Return, in accordance with *Societies Act*, including financial statements and list of Directors	March 28 , 2011

Stakeholder Support
January 1 to June 2011

Name	Organization
Ann Baran	Southern Alberta Group for the Environment
Myles Kitagawa	Toxics Watch Society of Alberta
Chris Severson-Baker	Pembina Institute
David Spink	Prairie Acid Rain Coalition
Denis Sauvageau	Friends of an Unpolluted Lifestyle
Ruth Yanor	Mewassin Community Action Council

Note: The above stakeholders received stakeholder support from CASA during 2011.

CASA Core Revenue Forecast
31-Jul-11

Revenue	**Amount**	**Note**
Grants Carried Forward from 2008	**$547,730**	Includes Pre-payment for 2009 Operations from Alberta Environment
Grants Received in 2009		
Alberta Energy - 2nd Quarter Pre-Payment	$250,000	Intended to be carried forward to future years
Alberta Energy - Annual Contribution	$1,000,000	Intended for operations to March 31, 2010
Total Grants Received in 2009	**$1,250,000**	
Total Expenses in 2009		
Transfers to Projects	-$55,000	To Martha Workshop and Priority Setting Workshop, as agreed by Alberta Environment
Total 2009 Expenses	-$836,590	Year-end actual
Balance End of 2009	**$906,140**	
2010 Revenue		
Alberta Energy - Annual Contribution	$850,000	Intended for operations to March 31, 2011
Transfer to external projects	-$800	
Total Expenses 2010	$923,410	Year end actual
Balance End of 2010	**$833,995**	Intended for operations to June 30, 2011
Anticipated Revenue 2011-Alberta Energy	$850,000	
Anticipated Expenses 2011	-$1,025,090	
Anticipated Balance End of 2011	**$658,905**	Intended for operations to March 31, 2012
Anticipated Revenue 2012-as per P. Watson	**$850,000**	see Attachment G2 - Excerpt from Executive Committee Minutes from May 5, 2011

Excerpt from the May 5, 2011 CASA Executive Committee Meeting #59

4.b. Review Draft Retreat Agenda

Norm related the proposed retreat agenda to the sections of the completed Discussion Document, noting that the workshop would track the major strategic questions posed in that document. As per Cindy's desire to move expeditiously through the "Strategic Foundations" piece and to focus Board discussions on more substantive work, much of the agenda will focus on what CASA does and how it does it.

The Committee stressed the need for those attending the retreat to come with an open mind, while at the same time, being able to make tentative commitments with respect to proposed objectives for the Alliance. Of course all parties will want to check with their constituencies before signing off on a strategic plan in the Fall.

Action 59.4 Norm to contact Bev Yee regarding AENV's ability to make tentative commitments at the retreat to proposed business lines for CASA.

The AGM portion of the agenda must provide for the election of CASA's President. At the Committee's request, Peter agreed to stand for another term. He further indicated that constrained budgets in government would preclude Alberta Energy returning to a 1,000K grant level for CASA in 2012-2013, but the Secretariat can proceed with planning for an $850K grant.

Action 59.5 The Secretariat will prepare the AGM agenda, providing a decision sheet that proposes Peter's re-election.

Action 59.6 The Secretariat will base its financial planning for 2012-2013 on a grant of $850K from Alberta Energy.

Clean Air Strategic Alliance

Consolidated Core Expenses

June 30, 2011

Expense Account	Administration	Board	Communications	Statement of Opportunity	Projects	Total Actual	Total Budget July 2011	Variance
Supplies & Services								
Advertising		344	2,558			2,902	11,160	11,254
Finance Charges	837					837	2,000	1,163
Computers & Links	15,515					15,515	38,890	23,375
Courier	174	1,146	56			1,376	2,050	674
Depreciation							5,196	5,196
Development- Stakeholders							5,125	5,125
Furniture & Equipment	3,186					3,186	7,000	3,814
Office Reconfiguration	742					742	4,000	4,000
Honoraria - Stakeholders		4,010	285		6,155	10,450	37,089	26,639
Insurance	531	1,425				1,956	3,777	1,821
Meeting Expenses		9,778	236		1,251	11,265	26,597	15,332
Office Supplies	2,391	251				2,642	6,020	3,378
Print & Reproduction Services								
Annual Report			8,452			8,452	8,452	0
General	596	2,204	420		20	3,240	8,940	5,700
Repairs & Maintenance								
Records Storage	753					753	2,700	1,947
Subscriptions			4,076			4,076	7,000	2,924
Telecommunications	2,752				522	3,274	13,059	9,785
Travel								
Consultants		1,617			8,612	10,229	15,812	5,583
Stakeholders		5,431	99		2,916	8,446	34,573	26,127
Staff	2,221	5,655	3,130		6,202	17,208	26,133	8,925
Total Supplies & Services	**29,698**	**31,861**	**19,312**	**0**	**25,678**	**106,549**	**265,573**	**162,762**
Professional Fees								
Accounting Fees								
Audit	8,731					8,731	8,800	69
Consulting Expense								
Alberta Environmental Network					3,090	3,090	7,085	3,995
Consulting Expense - Other	341	18,325			46,899	65,565	100,500	34,935
Total Professional Fees	**9,072**	**18,325**	**0**	**0**	**49,989**	**77,386**	**116,385**	**38,999**
Human Resources								
Salaries & Wages	98,831	38,757	44,049		81,345	262,982	552,160	289,178
Employer Contributions	18,148					18,148	23,695	5,547
Group Benefits	9,775					9,775	18,265	8,490
Group Retirement Savings Plan	19,105					19,105	38,754	19,649
Performance Pay								
Employee Recognition	511					511	2,500	1,989
Staff Development								
Membership Fees					157	157	1,005	848
Training	6,484					6,484	15,000	8,516
Temporary Staff & Contract Labour							2,500	2,500
Recruitment	921					921	6,000	5,079
Total Human Resources	**153,775**	**38,757**	**44,049**	**0**	**81,502**	**318,083**	**659,879**	**341,796**
Total Expenses	**192,545**	**88,943**	**63,361**	**0**	**157,169**	**502,018**	**1,041,837**	**539,819**

July 2011 Revision

	TOTAL INTERNAL	ADMINISTRATION	COMMUNICATIONS	BOARD	PROJECTS	STATEME OPP
Supplies & Services						
Advertising	**11,160**		11,060	100		
Finance Charges	**2,000**	2,000				
Information Technology	**38,890**	38,890				
Courier	**2,050**	250	100	1,700		
Depreciation	**5,196**	5,196				
Development/Training	**-**					
Stakeholder	**5,125**				5,125	
Furniture & Display	**7,000**	7,000				
Office Reconfiguration	**4,000**	4,000				
Insurance	**3,777**	892		2,885		
Meeting - Meals	**26,597**		1,665	14,000	10,932	
Office supplies	**6,020**	5,000		1,000	20	
Honoraria - Stakeholder	**37,089**		8,774	8,000	20,315	
Telecommunications	**13,059**	6,000			7,059	
Photocopying/Printing	**-**					
Annual Report	**8,452**		8,452			
General	**8,940**	2,640	2,300	3,000	1,000	
Records Storage	**2,700**	2,700				
Repairs & Maintenance	**-**	-				
Subscriptions	**7,000**		7,000			
Travel	**-**					
Consultants	**15,812**			2,200	13,612	
Stakeholder	**34,573**		8,896	10,300	15,377	
Staff	**26,133**	8,250	1,052	7,875	8,456	500
Total Supplies & Services	**265,573**	82,818	49,299	51,060	81,896	500
Professional Fees						
Accounting	**-**					
Audit	**8,800**	8,800				
Legal	**3,000**	3,000				
other	**97,500**		5,500	22,000	70,000	
NGO sector	**7,085**				7,085	
Total Professional Fees	**116,385**	11,800	5,500	22,000	77,085	-
Human Resources						
Salaries & Wages	**552,160**	259,515	71,780	60,737	160,128	-
Employer Contributions	**23,695**	23,695				
Group Benefit Plan	**18,265**	18,265				
Group RSP	**38,754**	38,754				
Temporary Staff	**2,500**	2,500				
Performance Pay	**-**					
Employee Recognition	**2,500**	2,500				
Recruitment	**6,000**	6,000				
Staff Development						
Membership Fees	**1,005**	200	280		525	
Training	**15,000**	15,000	-			
Total Human Resources	**659,879**	366,429	72,060	60,737	160,653	-
TOTAL EXPENSES	**1,041,837**	**461,047**	**126,859**	**133,797**	**319,634**	**500**

INFORMATION SHEET

ITEM: **2.1 & 2.2 Strategic Planning Retreat - Proceedings Summary and the Draft Strategic Plan**

ISSUE: The CASA alliance is nearing completion of a strategic planning cycle that began over a year ago. Its successful conclusion will require that the Board and the Secretariat finalize explicit and suggested agreements/direction through a final push to write and sign-off CASA's strategic plan. A rolling "single text" approach is proposed.

BACKGROUND: Output from the retreat, as captured in the proceedings document, provided the direction required by the Secretariat to prepare a 1st draft of the strategic plan. That is, Board members reached agreement on the strategic foundation for the plan (framework, principles, vision and mission) and provided a strong sense of direction and priority with respect to CASA goals and objectives. Members also provided some advice regarding CASA's business processes and the way in which CASA is organized. While not all of this direction was agreed to by consensus (that will occur once the strategic plan is ready), there was considerable convergence in the work done by the working groups, reflected in the retreat summaries. All of this provided a good base for plan development.

The strategic plan itself will be a synthesis of materials drawn from several sources, including: background information from CASA's files; performance evaluation information; information developed by CASA teams and external providers; new material from the Mission Review document; and of course, retreat outcomes. Together these will allow a small working group and the Secretariat to develop a plan that describes where CASA has been, our current operating environment and our shared description of CASA's job for the next five years.

Plan development will require ongoing Board member contributions to a rolling draft (a small working group was established at the retreat). Much of this work will focus on overall plan content, clarification/refinement of objectives and the development of strategies and measures of success. Discussion drafts of the plan will be prepared by the Secretariat to expedite and focus discussions.

One year after the process began, a December agreement on the plan will position CASA to begin 2012 with new strategic direction, a new guide for project managers and a willingness to improve the architecture and mechanisms CASA uses to do its work.

STATUS: The Proceedings Summary has been finalized and distributed to Board members and other parties with an interest in CASA. The proceedings were then subsequently used to prepare an early draft of CASA's new strategic plan. A final draft will be developed, together with an ad hoc committee of the Board, and will be ready for decision at the December Board meeting.

ATTACHMENTS: A. Proceedings Summary
B. Rolling draft of the CASA Strategic Plan 2012-2016 (for discussion only)

For discussion purposes. Unless otherwise noted, this report is a summary of individual Board member observations.

CASA Strategic Planning Retreat Proceedings

Prepared by the
CASA Secretariat
for the
Clean Air Strategic Alliance
Board of Directors

June 2011

For discussion purposes. Unless otherwise noted, this report is a summary of individual Board member observations.

ACKNOWLEDGEMENTS

The preparation and successful roll-out of CASA's 2011 strategic planning retreat required the considerable work and help of several individuals and organizations.

Randy Angle and Gordon Erlandson developed CASA's Mission Review document and provided the basis for well-informed Board discussions.

Stephanie Clarke and Sharon Willianen, of Alberta Environment, helped to guide workshop participants through the agenda, facilitating working group discussions and summarizing results.

Alex Grzybowski assisted in workshop design and facilitated workshop plenary sessions.

Secretariat staff spent many hours, arranging retreat logistics, providing stakeholder support and providing coordination and oversight so that the workshop resulted in specific deliverables.

And finally, Board members attended for two full days of strategic discussions, setting aside their other responsibilities to develop a shared blueprint for action.

Their contributions are very much appreciated.

Norman MacLeod

Executive Director

The Clean Air Strategic Alliance

For discussion purposes. Unless otherwise noted, this report is a summary of individual Board member observations.

WORKSHOP DESCRIPTION

The workshop was divided into two parts. Day 1 focused on affirming a strategic foundation, the clarification and prioritization of goals and objectives and the review of a Mission Statement, all of which would serve as a basis for developing a new CASA strategic plan. Having described "CASA's job", Day 2 was directed at considering the implications for CASA's Board, Executive, Secretariat and project teams, as the alliance moves to implement the new plan; in effect, describing how CASA would achieve its objectives.

AFFIRMINING STRATEGIC BUILDING BLOCKS

Review of Assumptions

The following observations were offered regarding the Assumptions that support Strategic Planning:

- There is an assumption that CASA activities lead to better air quality and that better "outcomes", referenced in assumption #2, actually means better air quality and lower emissions.
- There should be a reference to health in assumption #2
- The term "air quality management" in assumption #4 refers to AQMS (existing and revised), the Cumulative Effects Management System (CEMS) and the Land Use Framework (LUF). It suggests that CASA has a role to play in these.
- Assumption #6 is understood to include the idea that achieving better air quality outcomes will require CASA and others to build better institutional capacity.

Review of Operating Principles

The following observations were offered regarding CASA's Operating Principles:

- Under the principle of Fairness, CASA doesn't really seek to treat all stakeholders equally. A revision was suggested: "CASA supports equality amongst stakeholders, without bias toward any individual, organization, business or government.
- With respect to the principle of Integration, it is assumed that proposed solutions/recommendations generally try to maximize or optimize the three listed elements. Instead, this principle should be revised to read, "CASA supports integrated air quality decision-making that achieves an acceptable balance between a) environmental

protection, b) economic performance and efficiency, and c) continuous improvement and pollution prevention.

- The principle of Integration should include a reference to health.
- The intent of the Integration principle is that stakeholders should remain open to seeking integrated solutions through collaboration. We shouldn't presume that these listed outcomes represent competing interests that require trade-offs.

Strategic Planning Framework

Workshop participants affirmed the Strategic Planning Framework as shown on page 35-36 of the Mission Review document. In response to a question regarding the extent to which CASA develops strategies, it was agreed that the definition of strategies on page 6 of the Mission Review provides the correct interpretation of a strategy and is sufficiently broad.

Review of Recommended Goals

The recommended goals, shown on Page 39 of the Mission Review were introduced and discussed. It was noted that these goals were very similar to those contained in previous business plans with the exception that pollution prevention has been included under principles rather than goals.

The following observations were offered for inclusion in a revised Strategic Plan:

Goal 1: To provide strategic advice on emerging air quality issues and the impacts of major policy initiatives on air quality

- Goal 1 as written implies that CASA is reactive in providing strategic advice, rather than proactive. This goal should be written to include this change in orientation and to confirm that this is a desirable, on-going role for CASA.
- There is a concern that the use of the term "advice" detracts from CASA's focus on developing consensus recommendations, though working by consensus may apply more broadly than to this goal alone.
- Providing proactive policy advice may suggest that CASA's reach should be extended beyond current practice. If this is intended or desirable does CASA have the capability to deliver?
- There is a need for further wordsmithing to capture CASA's role in developing strategic solutions with respect to both existing and emerging air quality issues and the impacts of major policy initiatives on air quality.

Goal 2: To support the continued development and implementation of effective and efficient air quality management in Alberta

- CASA's work is directed at making a contribution to the continued development and implementation of effective air quality management in Alberta, rather than simply providing support. This should be reflected in the goal.
- CASA has much to offer with respect to the process used to develop effective air quality management in Alberta (i.e. enhanced engagement). This may be apparent in the objectives, but it's not clear in the goal.

Goal 3: To contribute to the development of a reliable, comprehensive, objective base of knowledge and information on emissions, ambient air quality, health and environmental impacts, and potential management and mitigation mechanisms.

- It should be determined whether CASA's resources would be better applied to providing oversight or strategic advice with respect to databases, such as the CASA Data Warehouse, rather than providing a continued management function.

Goal 4: To communicate information that builds awareness, understanding and commitment to air quality management in Alberta.

- CASA needs to bring the same strategic approach to communications that is suggested under Goal 1 for the development of advice.
- With respect to outreach, it should be determined if there is a need to change the makeup of the board so that other parties are included. CASA also needs to consider, for those not on the board, the extent to which these parties need to be engaged and how to do that most effectively.

CLARIFYING AND PRIORITIZING GOALS AND OBJECTIVES (Working Groups)

Goal 1

Working Group participants felt that the following objectives were linked, in that they were all steps in the same process:

Objective 1a - Emerging Air Issues: To determine and prioritize emerging air quality issues on a minimum three-year cycle.

Objective 1d - Problem Analysis: To conduct comprehensive problem analysis that informs Board decision-making with respect to the nature and extent of identified issues, and provides advice with respect to appropriate actions by CASA or other organizations.

Objective 1e – Proactive Assessment: To provide multidisciplinary assessments of broad air-related issues needing greater understanding for the improvement of public policy.

Summarized Group Discussion

- This grouping should include a reference to existing air issues, rather than just emerging air issues.
- This cluster is truly about the need for CASA stakeholders to improve their ability to prioritize issues on an on-going basis.
- This process of issue identification and prioritization should include a mechanism to receive feedback from government and other stakeholders.
- E-scans, while useful, need to be supplemented by proactive assessment (1e above) to assist in prioritization.
- In order to provide the Board with actionable advice there is a need to:
    - Assess the immediacy of the issue
    - Identify if the issue is a good candidate for a consensus process
    - Determine if CASA can address all aspects of the issue, or only certain elements
- Stakeholders need to be involved in issue identification from the outset if we wish to have them fully engaged later.
- With respect to Proactive Assessments (1e):
    - Undertake as warranted on a particular issue, rather than on all identified issues
    - Review at a predetermined date in the future and assess whether this is occurring and if this is an appropriate role for CASA
    - It's not clear how this would be done and by who (e.g. the Secretariat, Project Teams?)
    - This objective was generally considered to be a low priority that would only be done in pursuit of broader objectives

The remaining objectives under Goal 1 were also considered to be related and were discussed together.

Objective 1b – Policy Analysis: To establish a process to evaluate impacts of major policy initiatives on air quality and the determinants of air quality.

Objective 1c – Consistency Analysis: To identify potential inconsistencies among various policies and frameworks (national, provincial and regional) as these relate to air quality management in Alberta.

Summarized Group Discussion

- CASA has not done this in the past and it is unclear if this was because it wasn't warranted, wasn't desired, or for some other reason. Given the lack of action on this element in CASA's previous business plan we would need to determine how best to move this forward (e.g. a team/committee with a clear process and dedicated resources)
- The reason for undertaking this work would have to be clear and it would be problematic if CASA were then seen as advocating for a particular policy agenda.
- It would have to be clear who was to receive this policy advice and they would have to be receptive.
- This work would have to be seen to add value and the recommendations would have to be offered while the policy was under development, rather than after the fact. Policy recommendations would have to reflect the interests of CASA stakeholders, rather than simply offering general advice.
- Federal initiatives should also be considered under this objective.
- It would be imperative for governments to participate in these discussions to ensure that the advice and analyses were well received. CASA could provide a "safe venue" for the GoA to discuss policy issues and to receive advice that represents common ground.
- There was some question whether it is CASA's role to evaluate the effectiveness of existing policies, though perhaps this could happen in the context of a "lessons learned" document.
- It's clear that effective policy analysis (1b) is very closely linked, if not dependent on, there being proactive assessment (1e).
- With respect to (1c) it was suggested that:
    - Airsheds should be established across the province
    - Federal representatives need to be committed to participating in CASA processes
    - This objective is a subset of (1b)

Finally, participants noted that the existing Goal 1 objectives are missing the following ideas/initiatives:

- There is no mention of CASA providing strategic advice on multi-stakeholder processes. CASA could act as a centre for excellence, assuming a mentorship role and sharing the "CASA Advantage".

- There is no reference to the need for innovation as part of our analyses, nor is there any mention of continuous improvement.

In closing, the groups noted that effective action under Goal 1 is the most important thing that CASA stakeholders could do to advocate for improved air quality in Alberta.

Goal 2

Working Group participants noted that objectives 2a, 2b, 2c and 2f were linked and a high priority for CASA.

Objective 2a – Airshed Support: To work with the Alberta Airsheds Council and Airshed Zones to determine the best form of support that CASA can provide.

Objective 2b – Place-based Planning: To support place-based planning and cumulative effects management.

Objective 2c – Air Management Planning Framework: To develop a framework to guide air quality management planning (similar to the PM and Ozone Management Framework).

Objective 2f – Municipal Support: To assist municipalities in air quality planning.

Summarized Group Discussion

- CASA should identify and pursue opportunities to provide "strategic interventions" – timely opportunities where CASA stakeholders could model effective engagement and set the stage for further work and implementation under these objectives.
- To the extent that CASA is able to develop air quality management frameworks, such as the PM and Ozone Management Framework, it will benefit many of the regional discussions referenced in objectives (2a), (2b) and (2f).
- Federal completion and roll-out of the AQMS will have a major influence on the nature and content of air quality management in Alberta, but it is not yet clear when this work will be completed, and how implementation of the AQMS will proceed. In the interim, CASA's experience in developing and implementing frameworks has the potential to significantly shape the design and implementation of the AQMS. CASA could also contribute to the rationalization of the three air quality management levels (i.e. federal, provincial, regional).

- In general, CASA should provide assistance at the regional level where it is likely that the lessons learned could be applied provincially, consistent with the scope of CASA's work. Working Groups were emphatic that CASA should exercise caution in selecting

  candidates for assistance, so that CASA resources are wisely used at an appropriate level of detail.
- The best opportunities for strategic intervention would be those that allow CASA to meet several of its goals and objectives while working on the same project (i.e. cross-cutting opportunities).
- There was considerable discussion about the best ways/means to foster more effective engagement of aboriginal communities in discussions about air quality. Working Groups did not suggest specific measures that would improve the level and quality of engagement, but did feel that the Secretariat should explore how this might be achieved.

Objective 2e was also considered to be a high priority for CASA.

Objective 2e – Facilitating Dialogue: To provide a forum for the discussion of air quality issues among various stakeholder groups.

Summarized Group Discussion

- It was noted that stakeholder engagement at the regional level may not currently provide for the kind of collaborative dialogue that builds agreement and cross-sector relationships. It was felt that CASA could make a valuable contribution to the facilitation of regional discussions, but again, only where and when there is the potential to have a lasting impact and to model effective collaborative dialogue. As discussed under the preceding cluster, the intention is to provide strategic interventions, rather than program delivery.
- The provision of facilitation services in regional discussions, or in other instances, should only occur where there is a clear intention to engage in effective multi-stakeholder dialogue.
- It was observed that this objective is linked to several communications objectives under Goals 3 and 4 and specifically objective (4e) under which CASA would serve as a "collaboration hub".

In plenary discussion, participants asked how the "strategic interventions" noted under Goal 2 would be identified and brought forward for action under the CASA process. This was not addressed in the workshop.

Objective 2d – CAMS: To operate an efficient and effective Comprehensive Air Management System.

Summarized Group Discussion

- This objective was considered to be a given within CASA and, subject to a number of refinements that were discussed on Day 2, would continue to serve as CASA's overarching decision-making process.

Objective 2g – Program Delivery: To assist the GoA by assuming responsibility for assigned components of the air quality management system.

Summarized Group Discussion

- Workshop participants were clear that CASA should not be involved in program delivery, except in those instances where government has an interest in receiving multi-stakeholder feedback on the attributes, scope and direction of a particular program.

Objective 2h – Clean Air Strategy: To assist the GoA in delivering aspects of the new Clean Air Strategy.

Summarized Group Discussion

- Participants felt that the Clean Air Strategy (CAS) may be the enabling mechanism for many of the objectives described in the Mission Review, and that CASA may subsequently assist in delivering aspects of the CAS, but questioned whether this should be a separate objective in CASA's strategic plan.
- The CAS also serves as a means to integrate a range of air quality initiatives.

Goal 3

Participants noted that the sum total of the actions suggested under Goal 3 exceed CASA's capacity and resources, and that CASA subsequently needs to be strategic in identifying its most appropriate and relevant function. Group discussions under Goal 3 focused on objectives (3a) and (3f).

Objective 3a – Air Management Information: To provide knowledge and information required for air management.

Summarized Group Discussion

- The CASA Data Warehouse has real value, but there are significant questions with respect to whether CASA should act as a manager or provider of program support to the CDW. This function could more appropriately be done by government, provided that CASA retained the ability to provide strategic advice regarding the attributes of the CDW.
- The nature of that strategic advice would focus on the CDW's functionality, quality, accessibility, transparency, knowledge gaps and relevance to the management of air quality, as well as the CDW's capacity to inform the resolution of air quality issues.
- CASA may also provide advice with respect to the kind of data that is collected and the way in which data is used to address air quality issues.
- There is an ongoing need for the CDW or its successor to be viewed as a credible source of information that continues to have the confidence of a broad range of stakeholders.
- CASA will continue to seek data and air quality information, but that information will be specific to CASA's work and the issues it seeks to resolve, and perhaps at different scales. CASA's role under this goal should focus on (3f), the Knowledge System.
- There are other functions/services that CASA might provide that would enhance the value of collected data, such as trend analysis and footprint analysis and/or the conveying of interpreted air quality information to other parties with an interest, such as municipalities.

Objective 3f – Knowledge Systems: To operate a systematic process by which knowledge needed for successful air quality management is created, captured, shared and leveraged.

Summarized Group Discussion

- Providing oversight of the air quality knowledge system should be one of CASA's highest priorities. Understanding what information is available and what information is needed is a very different function from the collection and management of databases.
- If CASA is to continue providing useful and relevant policy advice about air quality it needs to be able to draw on high quality information that is a product of a comprehensive knowledge management system.
- There is a need to inventory the considerable information that has been developed by CASA over the past 16 years and to conduct timely and ongoing gap analyses that enable CASA stakeholders and others to address emerging air quality challenges. To date, the knowledge system has been problem-driven. The end state should be that CASA stakeholders would be aware of the information that is "in the system", aware of the gaps, and able to take steps to fill the gaps.

- As part of the knowledge system, there is a need to improve air-related modeling that could be used to inform important policy choices.

Objective 3b – Jurisdictional Information: To assemble and share cross-jurisdictional information on air monitoring, mitigation measures and best management practices that could be effective in Alberta.

Summarized Group Discussion

- While perhaps not of the same order as (3a) and (3f), CASA should recognize the importance of this objective.

Goal 4

Working Group discussions focused on Objectives (4a), (4c), (4e) and (4f).

Objective 4a – Awareness: To increase awareness of CASA's mandate and activities through targeted outreach to all sectors.

Objective 4e – Collaboration Hub: To establish CASA as a centre of knowledge for the application of collaborative processes in multi-party situations.

Objective 4f – Extension of the CASA Model: To make the CASA problem solving model available to non-air situations.

Summarized Group Discussion

- CASA's familiarity with collaborative processes (4e) and consensus-based dialogue specifically, is its greatest strength and CASA should place a high priority on transferring that knowledge and expertise to other interested parties.
- The transfer of this expertise to non-air related discussions (4f) is considered to be a lower priority, but was recognized as an important instrument to build partnerships and to engage in outreach, improving awareness of CASA activities (4a).
- It was suggested that activities under (4a) be subject to timely direction from the Board so that resources and capacity are considered.
- As has been indicated under other goals, there is a need to be strategic in pursuing all of the activities under Goal 4, focusing on partnering and the leveraging of resources.

Objective 4c – Public Education: To facilitate the transmission of air quality information to the general public.

Summarized Group Discussion

- There was limited agreement on the extent to which CASA should be involved in public education. Some participants suggested that CASA could become more visible in public air quality discussions, becoming the media resource for air-related information. CASA could also provide information and resources to the public education system and/or assume some of the communication functions identified in the new Clean Air Strategy. Other participants felt that this objective has the potential to draw heavily on CASA's limited resources and that CASA should leave these functions to other parties that are better equipped.
- Finally, it was noted that CASA will continue to educate and provide information when warranted by specific Project Team discussions and under the direction of the Board.

REVIEW OF MISSION STATEMENT

Myles Kitagawa presented the work of a small group that was convened to redraft CASA's Mission Statement. Myles invited retreat participants "to boldly go where no one has gone before". The redrafted statement read as follows.

> "The Clean Air Strategic Alliance is a multi-stakeholder alliance composed of representatives selected by industry, government and non-government organizations to provide strategies to assess and improve air quality for Albertans, using a collaborative consensus process."

Workshop participants agreed by consensus to the redrafted Mission Statement. It was subsequently noted that the revised Mission Statement is consistent with both Goals 1 and 2, which have been identified by the Board as priorities. In response to a question from the floor it was also confirmed that the use of the word "strategies" is intended to include the suite of possible actions listed under the definition shown on page 6 of the Mission Review document.

IMPLICATIONS FOR CASA - FUNCTION

Having focused on the realignment of CASA's job during Day 1, workshop participants were then asked to provide advice with respect to: 1) the breadth of CASA's collaborative toolkit, 2) the potential to improve CASA's approach to reach consensus, and; 3) the ways in which CAMS could be changed to be more effective and efficient. The following is a summary of those group discussions.

For discussion purposes. Unless otherwise noted, this report is a summary of individual Board member observations.

1. How should CASA employ a broader collaborative toolkit to address air quality issues?

Summarized Group Discussion

- In general, CASA could add value to air quality discussions in Alberta if it employed a broader toolkit of collaborative approaches and techniques.
- CASA could be making a more significant contribution to government and to the formulation of policy in Alberta than is happening now, provided that any new undertakings remain consistent with CASA vision/mission and CASA's limited resources and capacity. If CASA is to apply a broader toolkit, then the board should be vetting all new significant proposals to determine the appropriateness and extent of CASA involvement.
- It should be acknowledged that the identification and documenting of non-consensus items should not be viewed as failure. The process of gathering and describing the interests of CASA stakeholders, and specific points of departure on important issues, is valuable to government and to all stakeholders.
- CASA should be dealing with the "big issues" that sometimes take time to resolve, but it is time well spent. Generating quick answers may not be the best approach if durable solutions are required.
- At the same time, it's important to remember that CASA's Mission is to develop recommendations by consensus and CASA would lose its most important attribute if stakeholders were to lose that focus. It would be counterproductive to remove the expectations and pressure that can motivate stakeholders to reach consensus.
- While confirming the value of consensus, there are other models of consensus that have been shown to work and we should be receptive to continuous improvement of our approach.
- An early assessment of issues would allow stakeholders to determine the nature of an issue, the "parts" of an issue and, which of those parts might be good candidates for a consensus-based dialogue.
- If we continued to focus our discussions on consensus vs. non-consensus we may miss the fact that it is our broader collaborative approach that allows us to:
    - Develop a better understanding of the issues;
    - Understand where we share common ground and where we disagree; and
    - Agree to disagree on some points.
- In practice, the application of a broader interest-based approach would see CASA:
    - Holding workshops;
    - Fostering a better understanding of issues;
    - Gathering early perspectives and input on issues; and/or
    - Engaging in fact finding, which in turn could inform next steps and/or a Statement of Opportunity.

- Were CASA to undertake a process at a different scale (e.g. regional); the experience gained may benefit other regional processes in addition to CASA stakeholders that have an interest in provincial-scale policy advice.

2. How should CASA improve upon its current approach to reaching consensus?

Summarized Group Discussion

- Government is reluctant to draw on CASA for issues that are time-sensitive. Still, government and other stakeholders are committed to consensus-based dialogue. CASA's focus should be on how our approach can be streamlined to produce outcomes more quickly, without losing the highly valued buy-in.
- There may be a need to clarify our understanding of government's commitment to implement CASA agreements. While it may sometimes seem that government is hesitant to implement some CASA recommendations, stakeholders should acknowledge that GoA ministers need to be briefed and that other GoA agencies and players, some of whom may not be familiar with CASA or the history of an issue, need to be consulted. Government must also continually assess the alignment of CASA discussions with government policy priorities.
- CASA has historically provided "front end" recommendations and should perhaps be less concerned with the fine tuning government must do during implementation. Still, CASA stakeholders will continue to be very interested in the results that flow from their recommendations and government should feel comfortable coming back to CASA stakeholders to discuss implementation challenges. It is a shared responsibility.
- The Secretariat could play a larger role in supporting the work of project teams, acting as process marshals and brokers, building relationships, encouraging team members to identify and focus on their interests, keeping discussions on track to produce outcomes, and fostering productive stakeholder discussions between meetings to "move the ball forward".
- The Secretariat could also be providing more support at the caucus level, ensuring that communications within caucuses are timely and that all stakeholders are well-briefed.

- When contentious issues arise, all stakeholders should press harder to get a breakthrough and there should be more accountability, transparency and clear procedures that apply when stakeholders elect to "block" an emerging agreement.
- New players and CASA teams should be trained and reminded of the general principles of consensus and the way in which consensus-building has been practiced at CASA. Establish a mentorship program.

- The AAMS courses should incorporate more role-playing exercises and a condensed version of the current curriculum should be offered to those who can't commit to attending for 5 days.
- The process for providing information to the board needs to be improved so that board members are informed about emerging Project Team issues before they become entrenched – this would enable board members to engage with their team representatives and provide guidance. In some instances, the assignment of more senior and experienced team representatives, with the authority to make decisions, would be helpful.
- The selection of sector representatives should consider the type of people who are likely to bring a positive orientation to a consensus-based environment and who have the requisite skills. In turn, their experience with CASA project teams should provide their own organizations with added value.
- Building consensus agreements requires momentum, consistency, commitment, timely outcomes and relevance. Stakeholders need to take responsibility for their own level of engagement and participation. If they miss successive meetings, they should be seeking a replacement.
- Project team representatives need to continually check back with their constituencies to ensure team discussions remain on track and to ensure that representatives maintain their authority to negotiate. Consider developing a template that reps could use to report back to their organizations after each meeting.
- CASA's multi-stakeholder approach and track record is a significant accomplishment and should be communicated to others outside the province. If CASA has an advocacy role, it is as an advocate for the 'CASA approach' to dealing with issues.

3. How should CAMS be changed to be more effective and efficient?

Summarized Group Discussion

- While the intent and logic of CAMS overall is still valid, there is a need to review our procedures for each step of the process.

- A review of the CAMS procedures should happen concurrently with a review of roles for the board, co-chairs, project teams and the secretariat. For example, the board may wish to spend more of its time having strategic policy discussions vs. more operational discussions. The frequency of board meetings may also need to be reconsidered.
- CAMS seems to work best as a guide to address specific air quality issues, rather than as a vehicle to tackle major, cross-cutting air policy issues at a strategic level.

It may need to be revisited to reflect the changing nature of air-quality issues confronting Albertans.

- Expand the screen and scope process. It should support working groups of CASA stakeholders, in consultation with the Executive, to assess emerging issues, do the necessary detailed homework, and bring a thoughtful document to the board. This process could be used to generate new Statements of Opportunity. This would lead to more tightly focused team discussions on the right issues, with greater clarity of purpose.
- Project teams could employ a staged approach when near-term recommendations are required.
- The screen and scope step should include advice on which issues should be handled in a consensus-based manner and those that should not. There should be process advice offered for both of these categories. A screen and scope document should also address the pace/timelines required by client groups so that the discussion process can be tailored accordingly, without sacrificing CASA values.
- Early information gathering could also foster agreement on the accuracy of information and the identification of gaps, and allow Project Teams to move more quickly once convened.
- There is a need for improved project management at the team level that would bring more rigor to the process, and more attention to timelines, deliverables, and process strategy.
- Consider the assignment of specific board members for each project team to act as champions and to build accountability between project teams and the board.
- The trend toward more integration of media at the regional level will almost certainly require a similar integrated approach at broader policy levels. Similar integration challenges exist even within air quality discussions. Companies find themselves having to manage and provide input to GHG and AQMS discussions as though they were not related. In an era of limited available sweat equity, stakeholders will demand more integrated approaches.

- The fact that there are fewer Statement of Opportunities coming forward may have much to do with stakeholders being too focused on the existing CASA family. Consider the possibility of convening teams to 1) develop an Odour Management Framework and 2) address climate change strategies.
- There is a long-standing interest in finding a more effective way to engage aboriginal communities in air quality discussions. In pursuing this, it should be

emphasized that a range of approaches may be necessary, given the diversity of communities and varying capacities.

IMPLICATIONS FOR CASA - STRUCTURE

In plenary, workshop participants offered the following observations regarding the way in which CASA "does business" and how it might reorganize CASA roles and responsibilities to provide more effective delivery:

1. The Role of Members and CASA Board of Directors
    - The Board should be used to provide strategic direction and to expedite the process.
    - Operations should be changed to improve the linkages between the Board and project teams
    - Enhance the role and function of the Executive Committee. More frequent liaising between the Executive, the Secretariat and project teams and more flexibility in the approach used to address issues would lead to more efficiency.
    - A Board sub-committee could be used to oversee project team work and/or scope emerging issues.
    - The Secretariat has a significant role to play in improving efficiency through coordination and liaison with the Executive Committee.
    - Board membership should be revisited at a later date, once there is more clarity on the content and scope of issues to be addressed by CASA.
    - Board membership could be tiered, based on the extent of engagement required based on sectors' interests.
    - The representation of government agencies on the Board doesn't necessarily need to change (e.g. addition of SRD), provided that there are periodic briefings to all departments with a potential interest.
    - More thought should be given to the *range* of ways that various parties can engage with CASA, rather than just focusing on Board membership.

2. The Role of the Executive Committee
    - Consider the above recommendations regarding the Executive's role in building links between the Board and project teams.
    - Increase the size of the Executive Committee or add alternates so that the group can meet as required.

3. The Role of the Secretariat

- The role of the Secretariat should shift from just Project Manager to neutral process facilitator, relationship broker and coach.
- There will be staff implications, requiring skill development (e.g. facilitation, negotiation, discussion document/report preparation, project management)

4. Resourcing
    - Financial contributions may vary from year to year, based on need.
    - Consider expanding CASA's funding base through contract work that aligns with CASA objectives and principles.

Action: Incorporating the above observations, the Secretariat and the Executive will provide a draft process and procedures document for discussion by the Board.

Facilitators Summary

The facilitator described a few key outcomes from the two-day retreat

1. CASA should focus on being a platform for consensus in Alberta, but should also articulate a broader collaborative toolkit that would improve stakeholders' ability to understand and contribute to air quality issues.
2. Joint information gathering and more energy invested in the front end of CAMS could lead to more effective project teams.
3. CASA's ability to improve performance will require that roles and the capacity of the Board, the Executive Committee, and the Secretariat and project teams be reviewed.
4. The emphasis that the Board placed on goals 1 and 2 clarifies CASA's job and confirms the requirement to be strategic.
5. Through "strategic intervention" CASA can model sound multi-stakeholder engagement in other processes. It is more effective to *demonstrate* how CASA does business, rather than to simply tell others.

Action: The following deliverables will be provided to the Board for discussion and decision:

- A proceedings document for the retreat
- A first draft of a new Strategic Plan
- A process and procedures document that describes options for improving efficiency and effectiveness.

CLOSING OBSERVATIONS

Based on workshop outcomes, participants were asked to consider if there is still value in CASA and its approach. Participants were also asked to reaffirm their organization's commitment to CASA. There was general agreement to make that commitment, with the following observations and caveats being offered by individuals:

- CASA is an important place to get things done, but continued success will require some real changes, not minor "tweaks". There was some excitement around the emphasis placed on Goal 1, as this is consistent with a bigger shift in focus.
- CASA remains the best opportunity for dialogue with government in Alberta, but close attention will be paid to how new work unfolds.
- It is very important that outcomes be delivered in a timely way and that training be provided to participants.
- There is a need to develop a better understanding of air quality related health impacts.
- CASA's real value is in projects that continue to deal with air quality issues and that provide air quality facts vs. a CASA that acts as a Centre of Excellence on consensus.
- There is a real opportunity to contribute to air quality management plans in Alberta which will in turn demonstrate CASA's renewed relevance.
- There was some eagerness to see an expanded role for CASA that extends beyond Calgary and Edmonton.
- A more rigorous scoping of issues will have real value.
- CASA continues to offer an opportunity to develop solutions that incorporate everyone's interests, rather than focusing on government.
- Given the renewed interest in air quality, there was a desire to see airsheds that cover the whole province.
- There was an affirmation of commitment to responsible care and the continued opportunity for constructive dialogue and continuous improvement.
- CASA's way of doing business should be applied in other forums that our sector participates in.

- There was a focus on improving efficiency and effectiveness. Our sector also expects CASA to have real involvement in the roll-out of CEMS and the LUF.
- There is obviously work to be done that is relevant and focused. But it would be wise to undertake a limited agenda and demonstrate short-term success.

- *Workshop Adjourned* -

For discussion purposes. Unless otherwise noted, this report is a summary of individual Board member observations.

APPENDIX

Appendix A – Workshop Agenda

Appendix B – Workshop Participants

~ Rolling Draft ~

2011 Strategic Plan

Please note: This is a preliminary draft of the strategic plan, prepared by the CASA Secretariat as a starting point for discussion only.

August 12, 2011

2011 DRAFT CASA Strategic Plan

August 12, 2011

1. Executive Summary

1.1. What is the fundamental problem(s) that this plan addresses?

1.2. What are the primary benefits in terms of support for the bigger picture?

1.3. What are the key elements of the plan in summary form?

1.4. What actions are needed to implement?

1.5. What are the anticipated milestone achievements during the life of the plan?

1.6. What are the costs and benefits of implementing the plan?

2011 DRAFT CASA Strategic Plan

2. CASA's Planning Approach

2.1. Value of Strategic Planning

Strategic planning is the means by which the members of CASA envision the future of the organization, and develop the procedures and operations necessary to achieve that future. It provides the strategic direction that is the foundation for managing all aspects of the organization, and is both a management process and the generator of a product in the form of a strategic plan.

The value of a strategic plan is to assist the organization to:

- Take advantage of organizational strengths and reduce the impact of weaknesses
- Capitalize on opportunities and emerging trends and take steps to reduce or overcome challenges the organization and its members may be facing.
- Prioritize and document the goals the organization wants to accomplish over the next 3 years to ensure the goals are well understood and achieved by the Board, Project Teams, and stakeholders.
- Bring together the organization's resources and direct them towards specific goals.
- Allocate resources and assign responsibilities.

The CASA Strategic Plan sets out the vision and principles for the organization. It describes the purpose the organization will fulfill within its operating environment, and provides a blueprint for getting there. The plan provides a structure that the Board can use to amend operating policy and make day-to-day decisions, consistent with CASA's purpose and culture. The strategic plan also outlines the organization's four goals and provides a means of tracking consequences of decisions over time and, as experience or circumstances change, the foundation for changing course.

The Board has adopted a strategic planning framework that can be carried forward from one planning cycle to the next. The following figure shows the strategic planning hierarchy in relation to CASA's overall planning and performance management framework.

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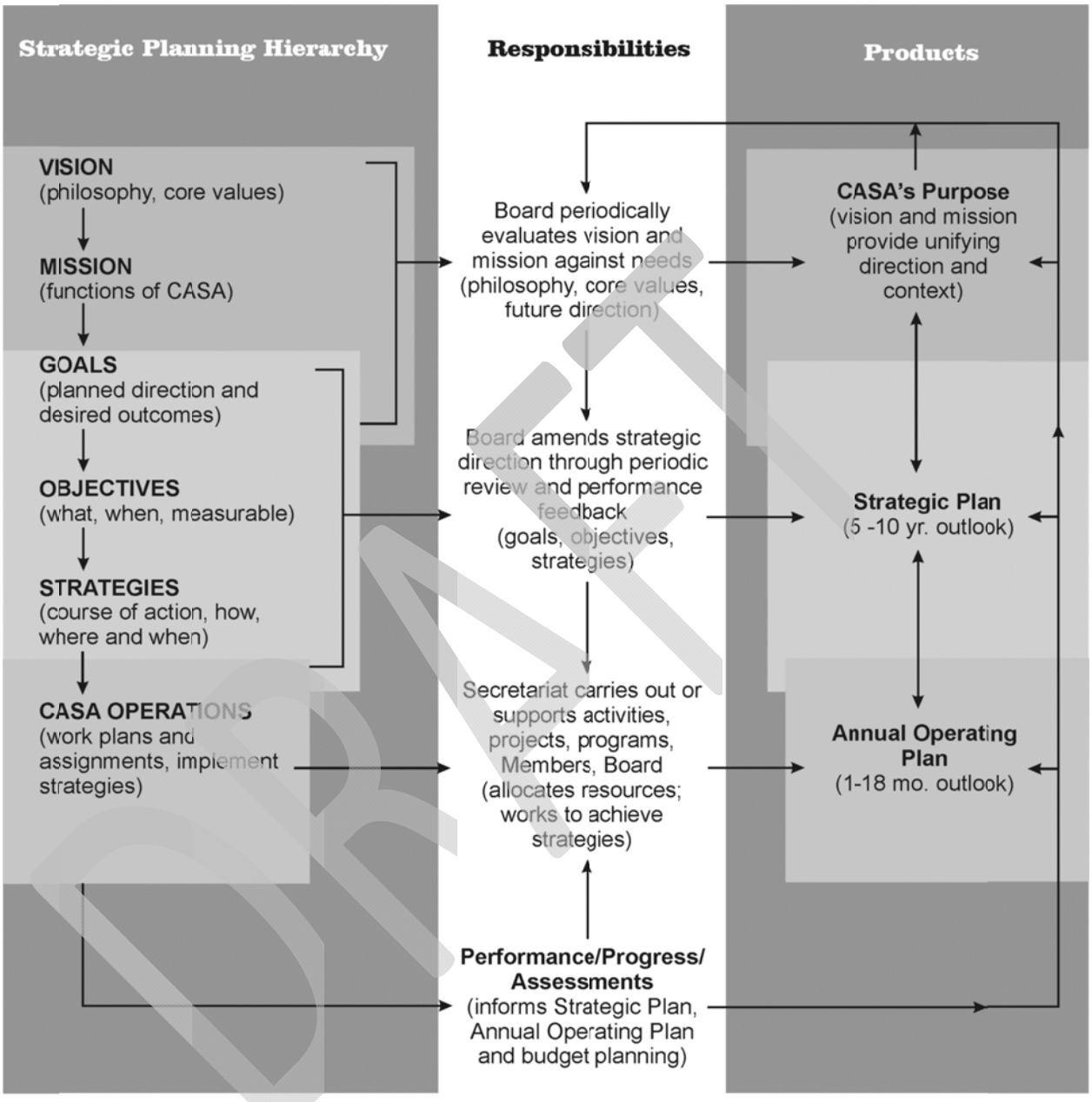
Figure 1: Strategic Planning Framework and Performance Management for CASA



CASA - August 10, 2011

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2.2. Strategic Planning Methodology

The approach to strategic planning was a comprehensive one that allowed for:

- Scanning CASA's operating environment and the wide array of processes and factors affecting CASA;
- Assessing potential future trends and conditions;
- Canvassing observations and ideas from stakeholders and staff;
- Collating and evaluating issues and opportunities; and
- Developing a package of strategic alternatives for consideration by the Board.

The following figure provides a summary of the planning work undertaken by the secretariat and the sequence of the steps involved.

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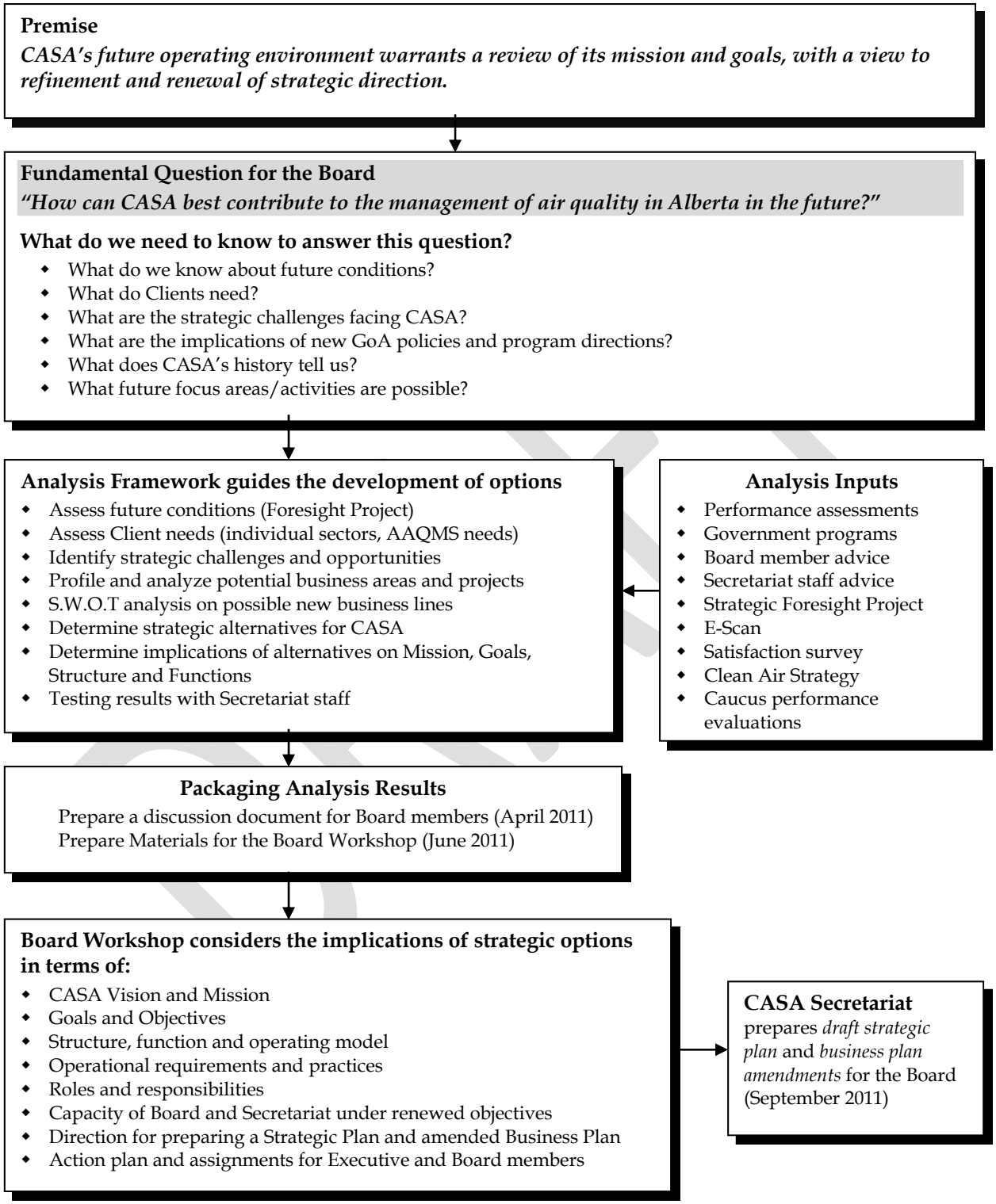
Figure 2: Description of CASA's 2010-2011 Strategic Planning Approach



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2.3. Unique aspect of CASA's planning process.

CASA is a multi-stakeholder partnership composed of representatives selected by industry, government and non-government stakeholders. All members have a vested interest in air quality. CASA's main task is to conduct strategic air quality planning for Alberta by identifying priority issues and developing action plans that include economic and environmental consequences and expected outcomes.

Following from this unique function and purpose, CASA's strategic planning process is also unique. CASA's strategic direction must reflect the range of interests amongst industry, government and non-government stakeholders – it must be a synthesis of the overlapping stakeholder perspectives on air quality management in Alberta.

2.4. Target audiences

- The *Board* will use the Strategic Plan to amend strategic direction, operating policy and make day-to-day decisions
- CASA *Stakeholders* will use the Strategic Plan to ensure that CASA follows the direction laid out in the Strategic Plan; to ensure that project team recommendations and activities are consistent with CASA's strategic direction, purpose, and culture.
- The *Secretariat* will use the Strategic Plan to develop the operational plan, which describes how the strategies will be implemented, including work plans, activities and assignments.

2.5. Constraints or limitations that impacted the process or the results.

2.6. Approval provisions.

The annotated draft of the strategic plan will be presented to the board at their September 2011 board meeting. This initial draft of the strategic plan will be used to promote discussion and receive advice from an ad hoc working group of Board members. The plan will be presented for final approval in December 2011.

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2.7. Timelines for Review

Tool	2010	2011	2012	2013	2014
Performance Measure Committee					
Performance Evaluation Committee					
Strategic planning workshop					
E-scan					
Strategic Plan					
Operational Plan					
Risk Management Framework					

- The Performance Measures Committee calculates all performance measures every 3 years. Performance measure 3 (degree of implementation) and 5 (degree of recognition) are calculated every year.
- An e-scan can be updated on a regular basis, as required.
- The Strategic Plan will have a 5 – 10 year horizon, but be updated every three years.
- The Operational Plan and Risk Management Framework will be updated annually.

3. Background

3.1. CASA's Past and Present

In a 1994 Ministerial Order, the Minister of Environment under the *Environmental Protection and Enhancement Act* together with the Minister of Energy under the *Department of Energy Act* named the 'Clean Air Strategic Alliance Association' as an advisory committee to undertake and report to them on:

1. *The operation of the Comprehensive Air Quality Management System as described in the Clean Air Strategy for Alberta Report dated November 1991.*
2. *The conduct of strategic air quality planning for Alberta through the utilization of a consensus building collaborative approach. Planning shall include, but is not limited to:*
   i. Clear identification of issues,
   ii. Prioritization of current and emerging issues, and
   iii. Allocation and coordination of resources.
3. *Recommendations as to the priority of problems with respect to strategic air quality in Alberta and to specify action plans and activities to resolve such problems. The action plans will prescribe guidelines for the initiatives to be undertaken and what outcomes are expected from each initiative.*
   In all reports submitted, there shall be a recommendation as to which organization or agency should take the lead for action. The recommendation shall include the economic, and air quality implications of the proposed courses of action. Reports shall include the progress and compare the actual benefits and results to projected outcomes, responsibility, accountability and performance of the initiatives. Reports will be submitted jointly to the Ministers of Environment and Energy.

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Today, the ***Clean Air Strategic Alliance*** (CASA or the Alliance) is a multi-stakeholder partnership composed of representatives selected by industry, government and non-government stakeholders. All members have a vested interest in air quality. CASA's main task is to conduct strategic air quality planning for Alberta by identifying priority issues and developing action plans that include economic and environmental consequences and expected outcomes.

3.2. CASA's Future Outlook

At the June 2011 Strategic Planning Retreat, CASA Board members had the opportunity to not only affirm CASA's strategic foundation, but also to clarify and prioritize goals and objectives. In the second half of the retreat, Board members considered the implications of CASA's 'new job' for the Board, Executive Committee, Secretariat, and project teams. Some highlights of the discussion included:

- CASA should focus on being a platform for consensus in Alberta, but should also articulate a broader collaborative toolkit that would improve stakeholders' ability to understand and contribute to air quality issues.
- Joint information gathering and more energy invested in the front end of Comprehensive Air Quality Management System (CAMS) could lead to more effective project teams.
- CASA's ability to improve performance will require that roles and the capacity of the Board, the Executive Committee, the Secretariat, and project teams be reviewed.
- The emphasis that the Board placed on goals 1 and 2 clarifies CASA's job and emphasizes a requirement that CASA be strategic in selecting candidates for projects.
- Through "strategic intervention" CASA can model sound multi-stakeholder engagement in other processes. It is more effective to demonstrate how CASA does business than to simply tell others.

3.3. Operating Principles

CASA's operating principles guide how the Board, Secretariat and participants will conduct the work of administration, projects, programs and activities of the Alliance.

Collaboration: CASA works with individuals, organizations, businesses, and government in a comprehensive and integrated manner to build consensus and encourage shared responsibility.

Integrity: CASA is recognized as an independent and influential advisory body to government, stakeholders, and the public, supported by sound scientific and economic knowledge.

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Transparency: CASA is an open and accessible organization, with established processes to bring issues forward and communicate activities.

Fairness: CASA supports equality amongst stakeholders, without bias toward any individual, organization, business, or government.

Innovation: CASA brings together diverse and unique stakeholders and seeks to develop the best recommendations for improving air quality in Alberta.

Timeliness: CASA's projects are prioritized and coordinated to enable effective and efficient responses to air quality management issues.

Integration: CASA supports integrated air quality decision-making that seeks a synergy between:
(a) environmental protection to prevent short- and long-term adverse health effects, (b) economic performance and efficiency, and (c) continuous improvement and pollution prevention.

4. CASA's Vision and Mission

4.1. Reaffirmation of the vision and mission statements.

Vision
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.

Mission
The Clean Air Strategic Alliance is a multi-stakeholder alliance composed of representatives selected by industry, government and non-government organizations to provide strategies to assess and improve air quality for Albertans, using a collaborative consensus process.

4.2. Narrative definition of the mission; Board and staff responsibility to the mission.

4.3. Explanation of any adjustments.

The redrafted Mission Statement was agreed to by consensus at CASA's June 2011 Strategic Planning Workshop. It was subsequently noted that the revised Mission Statement is consistent with both Goals 1 and 2, which have been identified as board priorities.

It was also affirmed that a 'strategy' is a course of action selected from among alternatives as a means of achieving a goal or objective (or interest). The definition of a strategy is broad. A strategy may be general or specific in nature, and may describe a pattern, management standard, guideline, action, procedure or policy. Strategies express how, where and when to commit resources to achieve objectives.

5. CASA's Operating Environment

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5.1. Strategic challenges and assessment of risk.

Section 5 of mission review (p. 25)

- Mature organization
- Complexity of air quality related issues
- Commitment to the CASA model
- Clarity for CASA's future role
- Responsiveness of Operating procedures

5.2. Direction from the Strategic Foresight Committee

The Strategic Foresight Committee examined the range of potential changes that would most significantly affect a CASA-like organization in the decades through to 2040. While no foresight exercise can predict the future, an exploration of the range of possible futures can help position an organization to more confidently and effectively adapt to changing conditions as the future unfolds.

The Strategic Foresight Committee identified nine *trends and drivers* with a spectrum of conditions that would define the future world in which CASA operates. The Committee also developed four major *insights* about CASA's future:

1. **Building upon Success:** Air quality management in Alberta has advanced over the past 15 years, in large part attributable to the ongoing dialogue and collaboration through CASA. The high level of engagement and synergy has led to sound and durable solutions to air quality issues.
2. **Defining the 'S' in CASA:** CASA has focused primarily on generating solutions to air quality challenges, but the opportunity exists for CASA to demonstrate strategic leadership and to play a more proactive role in addressing emerging issues and shaping our collective path forward.
3. **Expanding CASA's Reach and Broadening its Focus:** Opportunity exists to think more holistically about air quality management, to consider integrated approaches across environmental media, to consider tackling issues beyond its current scope, to expand to national, inter-provincial, regional and sub-regional scales, and to engage a broader range of stakeholders.
4. **Building Capacity:** Broadening CASA's focus and engaging a wider range of stakeholders will require enhanced capacity to facilitate 'interest-based' discussions and to contemplate air quality management issues beyond those associated with regulated emissions.

5.3. Environmental Scan Findings

An environmental scan is commonly defined as 'an analysis and evaluation of internal conditions and external data and factors that affect the goals and direction of an organization.' Many factors can be considered, including socio-cultural, technological, environmental, economic, and political/regulatory trends (often called a STEEP analysis). CASA's environmental scan was to identify emerging issues, trends, patterns and structures which are of particular importance to Alberta air quality.

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The E-Scan[1] examined social, technological, environmental, economic and political developments in the world today. Some of the significant findings were that:

1. Air quality is one of the top three environmental issues related to health;
2. Although new technology may mitigate emissions, this can also lead to unintended consequences and new air quality issues;
3. There is continued concern about the health effects and long-term impacts of oil and gas activities, particularly tailings ponds and sulphur-based pollutants;
4. Fossil fuel demand is up, and increased growth in oil and gas activities will increase air quality concerns and emissions;
5. International pressures feed a growing public interest in credible and accessible environmental monitoring and air quality information; and
6. Odour remains an important issue to the general public.

5.4. Government Initiatives

Federal Government

The new Air Quality Management System (AQMS) is a comprehensive approach for reducing air pollution in Canada. It is the product of an unprecedented collaboration by the federal, provincial and territorial governments and stakeholders. There are several key themes that are currently being discussed:

- Ministers reiterated their support for the current timelines for AQMS development for implementation.

- Comprehensiveness of the system: While BLIERs are recognized as an important component of the AQMS, Ministers underlined the importance of addressing non-point source emissions as well. This element of the work should be given greater visibility.

- Green House Gas (GHG) and BLIERs: The AQMS and GHG both involve sector by sector regulation. Other requirements may impact industry as well. The need to consider these requirements together was another theme. Industry wants to know the full extent of requirements from a cost point of view as well as what makes the most sense to do.

- Federal Regulatory Backstop: The earlier Comprehensive Air Management System (CAMS) work supported an innovative approach with respect to a regulatory backstop for BLIERs, which is currently being worked out. The Ministers want to have a discussion on this topic in the first half of 2012.

- Two Step Approval Process: It is believed that the most successful approach to getting approval of the system and moving to implementation is to review the elements in the entire system as developed in the first part of 2012. Individual cabinet approvals will then be sought, with a view to rolling them up into a collective approval later in 2012.

[1] From: *CASA Environmental Scan Report 2011*; Center for Applied Business Research in Energy and Environment (CABREE), Alberta School of Business; February 28, 2011.

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Provincial Government
The Government of Alberta has two major initiatives that relate to CASA's future – the Land Use Framework for Alberta (LUF) and the Cumulative Effects Management System (CEMS).

The Land Use Framework provides a blueprint for land use management and resource decision-making aimed at achieving Alberta's long term environmental, social and economic goals. A Land Use Secretariat is responsible for preparing or directing the preparation of regional plans and amendments, identifying the need for policies and the integration or coordination of policies, coordinating or supporting the coordination of integrated information systems, periodically monitoring progress, investigating complaints, and other duties described under the *Alberta Land Stewardship Act* (2009).

Regional Plans are developed through Regional Advisory Councils consisting of individuals representing the range of interests within each region, and who are able to appreciate the broad interests of the region. Regional plans are approved by Cabinet and implemented through line departments and the Land Use Secretariat.

Dovetailed with the LUF is Alberta Environment's new Cumulative Effects Management System. This system is intended to be outcome and risk-based, and consider health, economic and social values. It is to be implemented using a place-based approach, a broad set of tools and collaboration with many parties. It is to be adaptive and flexible in assuring the achievement of outcomes. The CEMS represents a shift in scale from managing air quality on a provincial basis to managing air quality on a regional basis, and a change in focus from managing air quality on its own to managing air, land, water, and biodiversity together.

A review of government business plans for the ministries of Environment, Energy, Health & Wellness, Transportation and Municipal Affairs reveals that all five make some mention of the environment; four make reference to the Land Use Framework; only one refers directly to air quality. While four departments list actions that relate to determinants of air quality, it is clear that the Ministry of Environment has the lead role and is the primary authority for matters related to air quality. However, Alberta Energy currently provides all of the core funding for CASA.

Future roles for CASA or for Alberta Airsheds have not been defined within either the Land Use Framework or the Cumulative Effects Management System.

Municipal Government initiatives?

Aboriginal Government initiatives?

5.5. Board's perspective on future issues and challenges to be monitored.

- Performance evaluations
- Retreat proceedings – day 2

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6. Outcomes of Retreat

- Focus on outcomes of day 1 of the retreat – goals and strategies.

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7. Goals and Objectives

- Goals 1 and 2 were identified as forming the basis for CASA's core activities.
- These core activities would inform the nature and scope of CASA's information and communications strategies under Goals 3 and 4.

GOAL 1. TO PROVIDE STRATEGIC ADVICE ON AIR QUALITY ISSUES AND THE IMPACTS OF MAJOR POLICY INITIATIVES ON AIR QUALITY.

What it means: CASA provides proactive and strategic recommendations to the Government of Alberta on the development and effectiveness of policy initiatives. CASA also explores air quality issues in Alberta and develops strategic solutions for addressing these issues.

1a. Facilitate the discussion and evaluation of major policy initiatives on air quality and the determinants of air quality.

Strategies:

- Establish an ongoing board committee/project team that will engage with the GoA to proactively discuss policy initiatives where there is potential for air-related impacts.
- Establish a screen and scope process to identify policy initiatives with air-related impacts and public consultation processes that CASA could provide input.
- Evaluate the effectiveness of existing policies.

1b. Inform Board discussions on the best ways/means to address air quality issues in Alberta through comprehensive problem analysis. Determine, assess, and prioritize existing and emerging air quality issues and provide advice to CASA/other organizations on addressing these issues.

Strategies:

- Conduct a strategic environmental scan to determine and prioritize emerging air quality issues and stakeholders who are associated with these issues.
- Expand the screen and scope activity associated with a Statement of Opportunity to include explicit identification and exploration of alternative ways of responding to the issue. This could include:
  - Commissioning reviews by outside experts.
  - Producing independent research reports and developing white papers for use by others.
  - Facilitating interaction among scientists and other experts to create background information and viable broad policy alternatives.
  - Assessing the immediacy of the issue.
  - Identifying if CASA can address all aspects of the issue and if the issue (or parts of it) is a good candidate for a consensus process.

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GOAL 2. To contribute to the continued development and implementation of effective and efficient air quality management in Alberta.

What it means: CASA identifies and pursues opportunities to provide "strategic interventions" – timely opportunities where CASA stakeholders can model effective engagement and set the stage for further work and implementation. CASA seeks cross-cutting opportunities to model effective multi-stakeholder dialogue and processes, demonstrating the application of a broader collaborative toolkit. CASA offers expertise on the attributes, scope, direction, and process used to develop effective air quality programs.

2a. Through targeted and strategic interventions, model effective multi-stakeholder engagement in the delivery of integrated air quality management. (Linked to 4b.)

Strategies:

- Provide provincial and national context for local air quality planning.
- Connect municipal staff with appropriate expertise in the various components of air quality planning.
- Explore the best ways/means to foster more effective engagement of aboriginal communities in air quality discussions. (This function also has application for 2c.)
- Foster a dialogue amongst CASA stakeholders to identify candidates from regional/place-based initiatives that:
    - Would gain significant benefit from strategic interventions.
    - Align with CASA's vision and mission.

2b. Develop policy advice and frameworks to guide air quality management planning in Alberta.

Strategies:

- Continuation of new and existing project teams.
- Ensure that the development of air quality management frameworks include, where appropriate; (a) a description of how to determine 'green', 'yellow', and 'red' trigger levels similar to the PM and Ozone Management Framework, (b) which air pollutants require trigger levels, and (c) ensuring that needed and timely actions are identified.
- Draw on CASA's experience in developing and implementing frameworks to shape the design and implementation of the National AQMS in Alberta.
- Contribute to the rationalization of the three air quality management levels (i.e. federal, provincial, regional).

2c. Provide a forum for the discussion of air quality issues among various stakeholder groups that exemplifies the collaborative decision-making process.

Strategies:

- Coordinate the input to government from stakeholders on any matter related to air quality, bringing stakeholders together to obtain the range of views.
- At stakeholder request, facilitate public engagement around air related issues.
- Offer process advice with respect to the best ways/means to engage a broad range of stakeholders in collaborative public engagement.

2d. Provide multi-stakeholder advice and oversight on the strategic aspects of program delivery with respect to air quality. (Link to 3a.)

Strategies:

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- Convene stakeholders to provide advice on the implementation of the Clean Air Strategy, including attributes, scope, direction.

GOAL 3. To contribute to the development of a reliable, comprehensive, objective knowledge system with respect to air quality. (E.g. information on emissions, ambient air quality, health and environmental impacts, and management and mitigation mechanisms.)

What it means: CASA provides oversight and strategic advice on the attributes of a reliable, comprehensive, objective knowledge system. CASA ensures that the knowledge and information required to provide useful and relevant policy advice is available. This knowledge system also provides an inventory of knowledge and information that enables stakeholders to analyse gaps and take steps to fill these gaps.

3a. Oversee a systematic process by which knowledge needed for successful air quality management is created, captured, shared and leveraged.

Strategies:

- Operate a clearinghouse for air information and air quality history. (This function also has application for 3b and 3c.)
- Inventory the information that has been developed by CASA and conduct timely and ongoing gap analyses that enable CASA stakeholders and others to address emerging air quality challenges.
- Improve air-related modeling that could be used to inform important policy choices.

3b. To provide strategic advice and recommendations on the elements of knowledge and information required for air management.

Strategies:

- Provide strategic advice on the attributes, scope, accessibility, and direction of the CASA Data Warehouse.
- Store and make accessible technical information gathered by project teams.

3c. To assemble and share cross-jurisdictional information on air monitoring, mitigation measures and best management practices that could be effective in Alberta.

Strategies:

- Create a repository for information in other jurisdictions.

GOAL 4. To communicate information that builds awareness, understanding, and commitment to air quality management in Alberta

What it means: CASA extends its problem-solving model and expertise on collaborative processes and consensus-based dialogue to other interested parties. CASA takes a strategic approach to these activities by focusing on partnering and leveraging of resources. With respect to specific CASA projects and initiatives, CASA undertakes outreach activities and provides information to interested parties.

4a. Establish CASA as a model that exemplifies the application of collaborative processes in multi-party situations.

Strategies

- Mentor other consensus practitioners or groups.
- Provide orientation and training in consensus decision-making and other collaborative tools.
- Develop communities of practice. (This function also has application for 4c.)

4b. Increase awareness of air quality information and specific CASA activities and projects through targeted outreach to all interested sectors.

Strategies:

- Maintain an effective and functional website.
- Publish a newsletter, brochures and reports.
- Hold coordination workshops.
- Provide fact sheets.
- Partner with others on communications about air quality (e.g., Air Quality Health Index).

4c. Build air quality partnerships and working relationships and facilitate the exchange of air quality information among practitioners and decision-makers. (Link to 4b.)

Strategies:

- Convene periodic air forums for exchanging technical and other information on air research and management practices.
- Maintain a list of air quality experts.
- Develop linkages with other air quality organizations and sectors/groups that are not affiliated with CASA.
- Establish contact with other jurisdictions on air related initiatives, policies and research projects.
- Engage academia for scientific/technical knowledge and input into policy development

7.1. Indicators of success.

8. Administration and Resources

8.1. Structures and functions.

Under the terms of the *Alberta Societies Act*, CASA operates in accordance with its own set of bylaws. CASA's operating policies and guidelines are described in a variety of publications which have been developed over its 16-year history.

Membership in CASA is a balance of three broad-based stakeholder groups – industry, government, and non-government organizations (NGOs) – which are further divided into major sectors. Currently, Alliance seats are fully subscribed with 22 member organizations, up from the original 18 in 1994. Each member organization names a representative to the Board of Directors, and may also name an alternate director who can be from a different organization within the stakeholder group and sector.

Support for the work of the Alliance is provided by a small, full-time Secretariat under the direction of an Executive Director. The Executive Director is an *ex officio* member of the Board of Directors.

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The Board of Directors chooses a President and two Vice-Presidents, one from each stakeholder group who, together with the Executive Director, form the Executive Committee. The Executive Director has traditionally served as the Secretary-Treasurer.

Board Committees are formed to further the work of the Alliance, with 'Communications' and 'Performance Measures' being long-term standing committees. Recently a joint standing committee has been formed with the Alberta Airsheds Council.

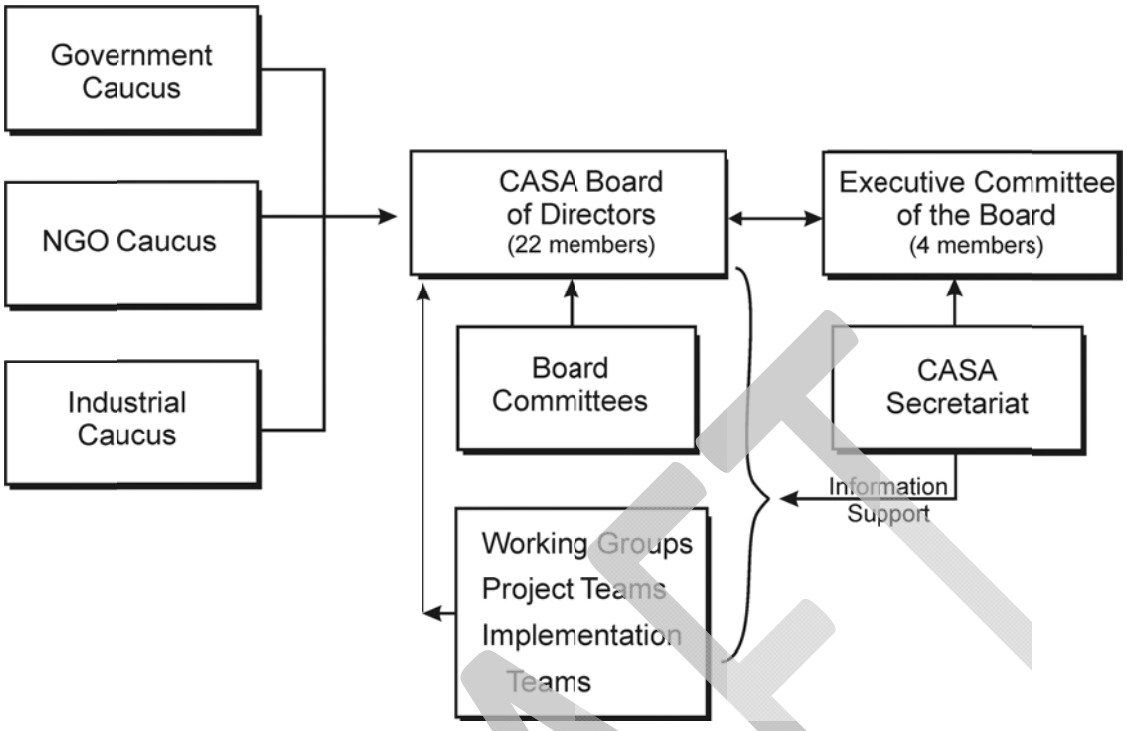
The Board of Directors usually meets four times per year to make decisions on administrative matters and projects, hear implementation progress reports, and plan for the future. Once per year, in conjunction with a regular Board meeting, the Directors meet as members of the association for the Annual General Meeting, at which the annual report and audited financial statements are approved, membership is reaffirmed, and the auditor for the next year is appointed.

The work of the Alliance has been largely directed at the operation of its Comprehensive Air Management System (CAMS) which has three stages; (1) screen and scope proposed work, (2) develop and approve plans for managing projects, and (3) coordinate implementation and evaluate progress. Three different teams of stakeholders (roughly balanced from the three member groups) do the work at each stage. Thus an issue or opportunity brought to the Board in the form of a 'Statement of Opportunity' passes from a working group (stage 1) to a project team (stage 2) to an implementation team (stage 3) in an orderly and disciplined fashion.

The CASA Board and all CASA teams, committees and working groups operate by consensus. Typically, working groups take six months to screen and scope, while project teams take up to two years to develop management plans. Following from a strategic plan for Air Quality Monitoring in Alberta, an Operations Steering Committee provides overall direction for the cooperative air monitoring system.

CASA Structure

2011 DRAFT CASA Strategic Plan



2011 DRAFT CASA Strategic Plan

Structures and Functions *(*These will be amended following the on-going review of CASA roles, responsibilities, functions, and processes.)*

Structure	Function
Board of Directors	◆ Advises the Alberta Government, stakeholders and the public on effective strategies for managing air quality ◆ Sets policies on CASA direction and priorities, with a focus on long-term direction ◆ Creates and disbands Board committees, other than the Executive Committee ◆ Coordinates and commits resources ◆ Evaluates results of CASA projects ◆ Assesses Board progress and functions ◆ Establishes and oversees work of Board, committees and project teams ◆ Engages in strategic planning exercises and provides overall direction to the organization ◆ Oversees and engages in CASA communications ◆ Promotes CASA, its process, priorities and its outcomes
Executive Committee of the Board	◆ Provides leadership in support of strategic direction ◆ Provides guidance to and takes direction from the Board ◆ Brings membership issues to the Board ◆ Provides stewardship for CASA operations through ongoing advice to the Secretariat ◆ Sets Board agendas and chairs Board meetings ◆ Liaises with Ministers ◆ Monitors Board effectiveness ◆ Advocates and markets CASA and the CASA process ◆ Communicates with the media
CASA Secretariat	◆ Supports and facilitates processes and projects ◆ Arranges logistics and manages resources ◆ Facilitates external communications ◆ Coaches individual participants on tools for effective participation ◆ Screens statements of opportunity

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8.2. Roles and responsibilities. *(*These will be amended following the on-going review of CASA roles, responsibilities, functions, and processes.)*

Roles and Responsibilities	
Board Members	◆ Represents views of stakeholder sector ◆ Communicates between meetings ◆ Participates in committees, teams, & tasks ◆ Coordinates with Alternate and others in stakeholder group ◆ Promotes CASA and its activities ◆ Assists in implementation
Executive Director of CASA Secretariat	◆ Manages all aspects of the CASA Secretariat ◆ Ex-officio member of the CASA Board ◆ Works collaboratively as a member of the Executive Committee ◆ Ensures the agreed-upon decision-making process is followed ◆ Brings important issues to the attention of the Board ◆ Assists in maintaining and improving the smooth functioning and group dynamics of the Board ◆ Prepares draft documents for review by the Board ◆ Implements communication and consultation activities ◆ Hires and assigns staff as required to meet the needs of the Board and its project teams ◆ Coordinates and integrates resources across various project teams ◆ Advises the Board on its responsibilities and liabilities

8.3. Organizational issues and adjustment.

8.4. Staffing, funding, and budget planning implications.

9. Implementation Program

9.1. Priorities and phasing.

9.2. Performance indicators and implementation monitoring.

9.3. Process for strategic plan recalibration and formal review.

10. Appendices

10.1. Board members and profiles of who they represent.

10.2. Current Operational Plan.

10.3. Risk Matrix

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10.4. Retreat Proceedings

10.5. Strategic Plan at a Glance

INFORMATION SHEET

ITEM: **3.1 & 3.2 Managing Collaborative Processes Guide and Project Teams**

ISSUE: A new CASA Strategic Plan will be ready for Board approval in Dec 2011. At the same time, CASA stakeholders have committed to "re-engineering" our business processes so that our discussions are more focused, productive and efficient. While CASA is developing a new guide for project managers, several project teams are scheduled to convene or reconvene this Fall and stakeholders will expect to experiment with some of the new approaches suggested at the strategic retreat (e.g. more rigorous problem analysis).

BACKGROUND: A new guide for project managers has been under development for several months at CASA. More recently, Board discussions at the Canmore retreat have resulted in a change in the direction and content of this guide. The revised guide will provide a step-wise approach that requires project managers and stakeholders to take a more disciplined approach to clarifying stakeholder interests, developing project objectives and options, evaluating those options and building agreements through consensus. Where possible the decision-making architecture will continue to track the CAMS process.

The development of the guide and the Board direction from the retreat are already shaping stakeholder's expectations. Project team participants have expressed an interest in experimenting with new ways of doing business. There are few if any project teams that would not benefit from several of the measures suggested by the Board. These may include: requiring a more comprehensive "screen and scope" process; encouraging project managers and co-chairs to provide a more directed approach to team discussions; fostering more effective caucus communications; and setting an expectation that specific deliverables will be developed on time and within scope.

At least three project teams will convene/reconvene this Fall. 1) A working group for a new Vehicle Emissions Team will begin work on a new SoO in the coming weeks. 2) The standing CASA/AAC Joint Committee will have to reconsider its workplan in light of related GoA initiatives that may affect airshed roles/responsibilities. 3) The Confined Feeding Operations Team will reconvene this Fall to discuss what further work can be done to improve the management of air emissions from confined feeding operations in Alberta. Still other committees and project teams are scheduled to continue work prescribed by current Terms of Reference. Each of these teams may decide to incorporate some of the measures suggested by the Board.

STATUS: The concepts behind the practitioner's guide, "Managing Collaborative Processes", and an outline of its contents will be introduced to the Board at the September Board meeting. A first draft of the document will be ready for review mid-Fall. Concurrently, the above listed project teams will be convened this Fall and will, at a minimum, develop a new approach to undertaking comprehensive problem analysis through an improved screen and scope process. These two initiatives will evolve in tandem, the guide

informed by project team discussions and the teams working from templates included in the guide.

ATTACHMENTS: A. Information sheet for Item 3.1
B. Project Status Reports

The will be a presentation on the development of the guidebook, “Managing Collaborative Processes” – Sandra Klashinsky

INFORMATION SHEET

***ITEM*:** **3.1 Managing Collaborative Processes Guidebook**

ISSUE: In December 2010, the CASA Board directed the Secretariat to develop a guidance document for managing projects, as described in the 2010 Business Plan.

BACKGROUND: In June 2011, direction was provided by the CASA Board to renew and strengthen the consensus based approach and emphasize a more focused, efficient collaborative dialogue with timely and durable outcomes. This would also include a broader set of tools to foster collaborative dialogue, rather than consensus based discussions alone. In addition, the following should be included:

- Development of a model that incorporates effective stakeholder engagement and collaborative processes;
- Techniques to increase the efficiency of operating practices given the complexity of air quality issues, escalating concerns, and more diverse range of stakeholders;
- Utilization of alternative collaborative decision making processes for project teams that incorporate a consensus based approach;
- A more efficient process for prioritization and approval of issues to be addressed by CASA, and
- Increased rigor in project management activities to ensure the work is completed on time, within budget and scope.

Based on direction from the Board, the scope of the guidance document has been broadened to encompass a 'collaborative decision-making model'. The project includes the following outcomes:

- A guide for practitioners, project managers, and stakeholders, reflecting leading practices in collaborative decision making processes. The approach will utilize a strengthened consensus based approach to address complex issues involving multiple and competing interests.
- Increased efficiency, effectiveness and credibility in addressing issues impacting air through integrating more rigor in decision making processes.
- Increased utilization of innovative and creative techniques to achieve cooperative strategies and sustainable solutions.
- Strengthened opportunities for stakeholders to influence Alberta's air quality planning and management through policy advice to government.

STATUS: The collaborative decision making model that is under development involves the following key activities:

- Research associated with leading best practices for collaborative decision making processes;
- Engagement of leading experts, interested CASA Board members, and key stakeholders;
- Model design that incorporates:
- Stakeholder engagement;
- Clear and concrete decision making processes;
- Project management activities, and
- Change management approaches.
- In addition, an implementation plan will be developed for the new model and approach, including a communication and training strategy.

WORKPLAN: The project has the following key milestones:

- Complete Associated Research – June to August 2011
- Document developed – July to October 2011
- Refine document and engage stakeholders for feedback – September to November 2011
- Develop Implementation Plan – October to December 2011
- Board to review and approve document – December 2011
- Implementation – January 2012 onwards

ATTACHMENTS: None. A presentation will be provided at the meeting.

CASA
Clean Air Strategic Alliance

Status Report

Project: **CASA and AAC Joint Standing Committee**

Task: The key tasks of this committee are to:

1) Ensure that draft CASA recommendations have been assessed and evaluated to determine their potential effect on AAC and its members.
2) Monitor implementation of 2010 Recommendations from the Airshed Zones Board Committee, assessing progress and proposing other options if necessary.
3) Identify, discuss and make recommendations related to:
   • Policies and strategies that could potentially affect CASA and AAC and its members.
   • Overall policy pressures resulting from government initiatives and pressures coming from stakeholders or the public with respect to air quality management, and
   • Further clarification of the roles, interests and relationship between AAC, airshed zones and CASA.
4) Develop performance measures for the committee's work.
5) Review the "CASA Airshed Zone Guidelines" and, if necessary, revise the document.
6) Propose resolution to the question of AAC membership on the CASA Board by 2013.
7) Communicate and share information about AAC and its members with CASA Board members and others, as opportunities arise.
8) Report annually to the CASA Board, including an assessment of progress against the Terms of Reference and performance measures. Based on content of the CASA board book, the committee may want to prepare updates more than once a year.

Project Chair/ Co-Chairs: Bev Yee (Alberta Environment) and Bob Scotten (West Central Airshed Society/AAC)

Background: This committee was struck to implement the recommendations made by the Airshed Zones Board Committee. CASA work often has an impact on airshed zones and collectively the Alberta Airsheds Council (AAC) and the AZBC recommended the formation of the JSC to strengthen the relationship between CASA, the AAC and the individual airshed zones.

Status: The Committee held its inaugural meeting on February 2, 2011 at which they confirmed both the Terms of Reference and the tasks for the Committee. Committee members agreed that tasks 1, 2 and 7-8 were more administrative in nature and that tasks 3 to 6 were the major work

component. Task prioritization would be based on this breakdown, with task 3 viewed as the first topic for action.

The first step in this task was to establish a common understanding of the roles and interests of the airsheds that could be integrated into a discussion document that could be used in the proposed rollout of the Alberta Environment Planning model. Alberta Environment was also gathering information on the value added by both airsheds and watersheds in the Province. The resulting report "*Review of Value and Funding Options for Airshed Zones and Watershed Planning & Advisory Councils to Support Cumulative Effects Management*" offered several options on how to leverage more value with airsheds, but had limited value in overall role clarification.

The Secretariat will explore options for next steps which will be presented at the next meeting for discussion by the Committee.

Attachments: None

Budget: As this is a CASA Committee, the budget is supported by internal funding and the committee has sufficient funds to complete its work.

CASA
Clean Air Strategic Alliance

Status Report

Project: **Confined Feeding Operations Team**

Task: Update on reconvening of the Confined Feeding Operations (CFO) team.

Background: *Managing Emissions from Confined Feeding Operations* was approved by the CASA Board in March 2008. The report contained 10 consensus recommendations. The team was placed in abeyance until 2011.

In March 2010, the Board approved a statement of opportunity from Alberta Agriculture and Rural Development to convene an Implementation Review Team (IRT) to follow up on the implementation of the recommendations from the 2008 Confined Feeding Operations (CFO) Project Team. The CFO Implementation Review provided their report to the Board in March 2011.

Status: In March 2011, the Board agreed with the advice that the CFO team should reconvene in November 2011. The new CFO working group/team were advised to review the key tasks in their original terms of reference and evaluate the progress that has been made. If there are key tasks from the previous terms of reference that haven't been completed, the group should consider which ones are still relevant and where progress can be made. The group should also consider any new tasks on which the CFO team could make progress.

A Terms of Reference should be provided to the CASA Board for review and approval.

Clean Air Strategic Alliance

Status Report

Project: **Electricity Framework Review Team**

Task: Update on the Electricity Framework Review (EFR) team.

Background: In June 2010, the Federal Minister of Environment announced his intention to regulate CO_2 emissions from coal-fired power plants. The Government of Canada plans to implement a regulation that would require existing coal units to physically meet a 'clean as gas' standard for CO2, at 45 years of age. The proposed regulation would come into effect on July 1, 2015. As there is currently no commercially proven technology available to achieve the clean as gas standard a unit reaching 45 years would be forced to shutdown.

There is the potential for misalignment between the *CASA Emissions Management Framework for the Alberta Electricity Sector* and the proposed federal coal regulation. The CASA framework establishes a design life of 40 years and allows another potential 10 years of operation before new emission limits for SO_2 and NO_x must be physically met at the facility. The proposed federal regulation establishes a hard 45 year design life for coal-fired power plants which, based on current commercially proven GHG control technology, would in effect mean shutting down coal units at 45 years.

Status: The specific details of the proposed federal coal regulation will not be available until it is published in the Canada Gazette, anticipated in summer 2011.

At the March 2011 Board meeting, the Board agreed that:

- The Electricity Framework Review Team be placed in abeyance pending Gazette notice; and
- The CASA Board strike a task group to: a) hold a small number of meetings to review the announced federal system and existing provincial system and b) advise the Board on the implications for the Alberta Electricity Framework and potential work that could be undertaken by a CASA project team.

CASA
Clean Air Strategic Alliance

Status Report

Project: **Human and Animal Health Team**

Task: Update on the status of Human and Animal Health Team (HAHT).

Project Chair/ Co-Chair: Ruth Yanor (Mewassin Community Council) and Alex MacKenzie (Alberta Health and Wellness).

Background: The HAHT was asked to create an implementation plan for previous recommendations to the CASA Board from the Human Health Project Team and the Animal Health Project Team.

The team was working to address the recommendation to implement the Comprehensive Human Health Monitoring System (CHHMS). In February 2008, Alberta Health and Wellness (AHW) told the team about a pilot project, the Syndromic Surveillance Network (SSN), which could be used for enhanced environmental health surveillance.

In March 2008, the CASA Board approved a team recommendation that the SSN be accepted as a means of implementing the CHHMS. The Board also agreed that AHW would report back on the implementation of the SSN.

Status: *Update from Alberta Health and Wellness (AHW) on the Alberta Real Time Syndromic Surveillance Network (ARTSSN):*

The ARTSSN team has begun to review the protocols followed within Health Link that relate to the human health effects of air quality events. These come in two categories. The first is complaints or concerns about air quality. The second are syndromes that medical literature has determined to be associated with air quality events.

The existing air quality protocol does not distinguish between indoor and outdoor air quality. The ARTSSN project team is working with Alberta Health Services (AHS) Environmental Health to determine the best way to split the protocol into indoor and outdoor and then will work with Health Link personnel to ensure appropriate training for the use of the two protocols.

The ARTSSN team is working with Environmental Health Officers (EHOs) to review the previous consultations on human health effect protocols that should be monitored and will augment as necessary. They will then help the ARTSSN team to identify the relevant interested stakeholders amongst Medical Officer of Health (MOHs).

It is the intention of the ARTSSN team to create a working user group (involving EHOs, MOHs and other relevant stakeholders) to:

- Advise and review the development of data presentations, e.g. graphs, maps, line listings from the historical Health Link data in ARTSSN;
- Look for trends, clusters related to known events, e.g. Slave Lake Fire; and
- Evaluate anomalies.

Once the most valuable data presentations have been determined, the ARTSSN team will move to incorporate them into routine ARTSSN reporting by a dashboard on the web site and routine updates to an appropriate mailing list.

Concurrently, ARTSSN is being expanded to include emergency department data province-wide, but that will not be ready for at least one more year. However, once the Health Link project is complete, the ARTSSN team and working user group will be able to examine emergency department data for Edmonton and area and, using a similar process, develop data presentations for routine ARTSSN reporting that can be expanded province-wide once the data from the province is complete.

The team decided to remain in abeyance, as they await further information. AHW will continue to provide updates on the ARTSSN project at least every six months.

Budget: The team has sufficient budget to complete its work.

Attachments: Current Team Membership.

Next Board Update: Alberta Health and Wellness will present an update on ARTSSN at the December 1, 2011 Board meeting.

Human and Animal Health Team Members

Name	Membership
Mark Boulton	Suncor
Simon Cobban	Intensive Livestock Working Group
Marilyn Craig	Energy Resources Conservation Board
Eileen Gresl	COPD & Asthma Network of Alberta (CANA)
Gustavo Hernandez	CASA
Judy Huntley	Bert Riggall Environmental Foundation
Joe Kendall	Alberta Agriculture, Food and Rural Development
Dean Lien	Farmer's Advocate
Dawn Friesen	Alberta Health and Wellness
Laura McLeod	Alberta Health Services
Carol Newman	Canadian Association of Petroleum Producers (CAPP)
Gary Sargent	Canadian Association of Petroleum Producers (CAPP)
Al Schulz	Canadian Chemical Producer's Association (CCPA)
Merry Turtiak	Alberta Health & Wellness
Brenda Woo	Health Canada
Ruth Yanor	Mewassin Community Council

Clean Air Strategic Alliance

Status Report

Project: **Operations Steering Committee (OSC)**

Task: To provide overall direction for the cooperative Ambient Air Monitoring System for Alberta.

Project Chair/ Co-Chair: Tom Dickson (Alberta Environment)

Status: The OSC continues to be responsible for the development and operation of the CASA Data Warehouse (CDW) website and database. The committee last had a face-to-face meeting on June 21, 2010 and a conference call on September 14, 2010.

The future direction for the committee is tied to the Cumulative Effects Management System (CEMS) and the Integrated Monitoring, Evaluation and Reporting Framework (IMERF). The 2009 Ambient Air Monitoring Strategy for Alberta recommended the formation of a Multi-Stakeholder Implementation Committee to oversee the implementation of the 2009 Strategy, similar to the current OSC.

At the June 2011 Board retreat, Board members discussed the CDW in the context of Goal 3: To contribute to the development of a reliable, comprehensive, objective base of knowledge and information on emissions, ambient air quality, health and environmental impacts, and potential management and mitigation mechanisms. Rather than provide an oversight or administrative function, CASA should provide strategic advice regarding the attributes of the CDW, and other air databases, including the functionality, quality, accessibility, transparency, knowledge gaps and relevance to the management of air quality.

While the Committee awaits the release of both CEMS and IMERF, CASA has been providing assistance to the AENV CDW Data Providers committee who are working on data provision requirements that will be incorporated into the Air Monitoring Directive. This will result in data of known quality and quantity in the CDW. This is consistent with the revised thinking regarding Goal 3 above. The Data Providers Committee anticipates having this work completed by March 31, 2012.

Budget: AENV has provided funding in the sum of $120,000.00 for the fiscal year April 1, 2011 to March 31, 2012 for the CASA Data Warehouse.

Attachments: None

Clean Air Strategic Alliance

Status Report

Project: **Performance Measures Committee**

Task: The tasks of this Committee are to:

1. Define one or more performance indicators for each of the performance measures;
2. Develop a plan for obtaining baseline data for each indicator, to calculate the indicator and to define a stewardship process for each indicator;
3. Assess progress by comparing the current value of each indicator to the baseline value;
4. Report to the CASA Board on CASA's performance; and
5. Oversee the implementation and review of the developed CASA performance measuring process (i.e. the calculation of performance indicators.)

Committee Members: Ted Stoner (Canadian Petroleum Products Institute), Bob Myrick (Alberta Environment) and Ruth Yanor (Mewassin Community Council)

Status: At the March 10, 2011 Board meeting, the board accepted the 2010 Performance Measures Report noting that performance measure 1(a) would be reported as trend information only. Board members discussed those elements that are chosen as performance indicators and the resulting information that is disseminated by CASA.

Discussion also took place around the need to determine the best indicators that accurately portray CASA's overall influence on air quality management in the province. It was agreed that there is an opportunity for CASA to provide meaningful data and information to the public.

The need to revisit the performance measures was also discussed at the June Board retreat because of the new strategic direction envisioned.

Several board members expressed an interest in reviewing the current performance measures with the Performance Measures Committee to determine the most appropriate means of reflecting CASA's influence on air quality management.

Attachments: None

CASA
Clean Air Strategic Alliance

Status Report

Project: **Particulate Matter and Ozone Implementation Project Team**

Task: Recommendation 1(c) of the Particulate Management and Ozone (PM & Ozone) Management Framework, including the process for annual analysis of ambient data, simplified mechanisms, and trigger levels, be reviewed by Alberta Environment after three years of practical application and implementation experience, and in conjunction with or immediately following the review of the Canada Wide Standards (CWS) in 2006. This review should involve interested stakeholders and members of the public.

Project Co-Chairs: Claude Chamberland (Shell Canada Energy - Industry), Bob Myrick (Alberta Environment – Government) and Myles Kitagawa (Toxics Watch Society of Alberta – NGO).

Background: The team last provided a status update to the Board in December 2010.

Status: The team has met on February 10 and July 14, 2011 and continues to receive updates on the national Air Quality Management System (AQMS formerly CAMS) from Marc Deslauriers (Environment Canada) and Bill Calder (Alberta Environment). The Canadian Council of Ministers of the Environment (CCME) met in Yellowknife on June 28, 2011 at which time the chairmanship of the CCME was passed to Minister Renner from Alberta and is expected to continue through 2012 during the CCME's final decision-making on the AQMS.

There were several themes in discussion by the Ministers in Yellowknife with a reiteration of their support for the current timelines for AQMS development for implementation, namely the major elements of the AQMS to be completed by the end of 2011 for the Ministers' consideration in 2012. Other themes included:

- the need to address point source as well as non-point source emissions;
- the need to consider the requirements of Green House Gas (GHG) and Base Level Industrial Emissions Requirements (BLIERs) together as both require sector by sector regulation;
- the need for a Federal Regulatory Backstop as the earlier CAMS work supported an innovative approach to a regulatory backstop for BLIERs which continues to be worked out. The Ministers want to discuss this further in the first half of 2012; and
- the need for a Two-Step Approval Process whereby individual cabinet approvals will be sought, with a view to rolling them up into a collective approval later in 2012.

The Lessons Learned Document and accompanying Transmittal letter were provided to the Air Management Committee (AMC) of the Environmental Protection and Planning Committee (EPPC) on March 1, 2011. Both of these documents were very useful to the AMC and as the work continues to go forward, will be taken into consideration, particularly in the guidance document for air zone delineation and in developing the Canadian Ambient Air Quality Standards (CAAQS) and the trigger system.

Andrew Clayton of Alberta Environment presented his analysis of the possible notional CAAQS and the PM and Ozone results to date. He advised that there would likely not have been anything substantially different, but noted that the findings were an approximation only because a definitive result would have required individual backing out for each station.

The team reviewed their Terms of Reference (ToR) to determine the status of completed work and whether or not the ToR are still relevant under the current circumstances. Team members agreed that Objectives 2 and 4 of the ToR seemed relevant, particularly with respect to the ongoing development of the national AQMS. These objectives are:

- Assist with, and provide advice in implementing the PM and Ozone Framework, and the associated recommendations to the CASA Board; and
- Provide input to and share information with the national process and Canada-Wide Standards for fine PM and Ozone process.

The team also reviewed the actions contained in their last Status Report to the Board and agreed that items 1, 2 and 5 (noted below) have been carried out. Health Canada has been invited to give a presentation to the team on the both the derivation and health effects of each of the proposed notional standards. Item 4 on the list is ongoing.

1. Generate a Lessons Learned document on all aspects of the framework and guidance documents to provide input into the federal/provincial stakeholder engagement process that is envisioned.
2. Review the current and past PM 2.5 and Ozone assessments in Alberta and compare with the proposed numerical range for Ozone and PM 2.5 under CAMS.
3. Gain an understanding of the health effects for each of the numbers in the range and invite Health Canada to give a presentation to the team on the derivation of the numbers.
4. Identify any gaps between what is contained in the PM & Ozone Framework and what is contained in CAMS.
5. Provide stakeholder input in support of AENV's participation in the EPPC.

The team will hold a conference call in early September to discuss the contents of the document going to the EPPC/AMC.

Attachments: None

Team Members:

Claude Chamberland	Shell Canada Energy (Industry)	Co-Chair
Bob Myrick	Alberta Environment (Government)	Co-Chair
Myles Kitagawa	Toxics Watch Society of Alberta (NGO)	Co-Chair
Ahmed Idriss	Capital Power Corporation	Industry
Andrew Clayton	Alberta Environment	Government
Crystal Parrell	Alberta Environment	Government
Darcy Walberg	Agrium	Industry
Dennis Stefani	Alberta Health Services (Calgary and Area)	Government
Jill Bloor	Calgary Region Airshed Zone (CRAZ)	Airshed
Karina Thomas	Alberta Health and Wellness	Member
Keith Murray	Alberta Forest Products Association	Member
Kelly Fyhn	Capital Power Corporation	Alternate
Kevin Warren	Parkland Airshed Management Zone	Airshed
Linda Harvey	City of Calgary	Government
Marc Huot	Pembina Institute	NGO
Mike Pawlicki	Lafarge Canada Inc.	Industry
Sara Barss	TransCanada	Industry
Shane Lamden	NOVA Chemicals Corporation	Corresponding Member
Krista Phillips	Canadian Association of Petroleum Producers	Corresponding Member
Long Fu	Alberta Environment	Corresponding Member
Norm MacLeod	CASA	Executive Director
Linda Jabs	CASA	Project Manager

Clean Air Strategic Alliance

Status Report

Project: **Vehicle Emissions Team**

Task: Update on reconvening the Vehicle Emissions Team (VET).

Background: The VET submitted their final report to the CASA Board in September 2010. At that time, the VET felt that it had fulfilled its terms of reference, but that more work remained to be done. The team suggested the development of a Vehicle Emissions Reduction Framework with goals and objectives that could provide the overarching coordination required to make significant progress in reducing vehicle emissions. It would serve to better position and align existing vehicle emission reduction programs, identify gaps and recommend ways to fill the gaps. The VET did some work on a statement of opportunity (SOO) for such a framework but suggested the SOO should not proceed until the renewed Clean Air Strategy is completed. Responsibility for bringing a SOO forward would rest with an ad hoc group.

While the Board did not sanction the proposed Statement of Opportunity, they did make a statement that:

1. Transportation-related air emission issues continue to exist.
2. Understanding the Clean Air Strategy and its guidance will be important in developing future work on transportation emissions.
3. Stakeholders are encouraged to bring a statement of opportunity to CASA, at an appropriate time, to address these issues.

The Vehicle Emissions Team was disbanded at the September 2010 Board meeting.

Status: The CASA secretariat has had preliminary discussions with some interested stakeholders with respect to the nature and focus of a Statement of Opportunity and will continue to pursue a more in-depth screening and scoping process with interested parties.

INFORMATION SHEET

ITEM: **3.3 Alberta Environment (AENV) report on long-term funding options project for ambient air monitoring.**

ISSUE: AENV is providing information to the CASA Board on a project that was completed in 2010-11 on assessing long-term funding options for ambient air quality monitoring.

BACKGROUND: The CASA 2009 Ambient Air Monitoring Strategy for Alberta was approved by the CASA Board in September of 2009 and was submitted to Alberta Environment in the late fall of 2009. In terms of long-term funding, AENV committed to the following as part of the strategic plan:

"Ensuring long-term sustainable funding:

Within 18 months after CASA Board acceptance, Alberta Environment will develop options for a sustainable long-term funding mechanism that assures equitable contributions from large industrial, small industrial and diffuse emitters. Alberta Environment will champion the implementation of a sustainable long-term funding mechanism within three years of CASA Board acceptance. The funding mechanism will be coordinated and consistent with the future Clean Air Strategy and Land-use Regional plans."

STATUS: AENV contracted AMEC Earth & Environmental in the 2010-11 fiscal year to address the first part of this commitment (develop options for a sustainable long-term funding mechanism). The study objectives and deliverables included the following:

1. Review air monitoring practices and funding in other jurisdictions and evaluate in terms of their potential for use in Alberta;
2. Evaluate existing air emission data sources and databases and determine if they can support a monitoring funding system;
3. Determine potential long-term funding options using the principles from the CASA 2009 Ambient Air Monitoring Strategy for Alberta;
4. Evaluate potential long-term funding options; and
5. Recommend a funding option or options for ambient air monitoring that could potentially be applied for Alberta.

The funding options developed through this project will be used to inform the long-term funding discussions for all environmental monitoring being addressed through other initiatives such as the Integrated Monitoring, Evaluation and Reporting Framework. Since the 2009 CASA Strategy was developed, there has been considerable work completed by the Provincial Monitoring Panel and the federal government (Integrated Monitoring Plan for the Oil Sands - Air Quality Component) that may

impact environmental monitoring. The funding options for ambient air monitoring presented as a result of this work will be considered in light of these other important monitoring initiatives.

ATTACHMENTS: PowerPoint presentation to be provided at Board meeting. A detailed PowerPoint presentation and draft report is available to Board members on request.

INFORMATION SHEET

ITEM: **3.4 Board Discussion on the Alberta Greenhouse Gas Offset System**

ISSUE: Alberta Environment will provide an update on the draft Quantification Protocol for Solution Gas Conservation and discuss how draft protocols fit within the regulatory development process.

BACKGROUND:

CASA Flaring and Venting Team

The CASA Flaring and Venting Team was reconvened to look at additional ways to manage observed increases in solution gas flaring and venting emissions from oil and gas production in the province. This team was tasked with developing recommendations to government including recommendations for changes to regulatory thresholds for conservation of the solution gas.

The participants in this multi-stakeholder review reached consensus on two recommendations. However, there were differing views with respect to the priority and the means to pursue further reductions in flaring and venting in Alberta. Project team members were unable to agree on whether or not to continue work on solution gas conservation in a consensus-based process and sought the CASA Board's direction. The Board decided to disband the team in March 2011.

Alberta Offset System

The Alberta Offset System provides a market based compliance option for large industrial emitters regulated under the *Specified Gas Emitters Regulation*. This regulation requires all facilities emitting over 100,000 tonnes CO_2e per year to reduce their greenhouse gas emissions by 12 per cent below a 2003-2005 baseline emissions intensity. New facilities are given a graduated compliance target.

Offset credits are credits for voluntary greenhouse gas emissions reductions. Eligible projects must meet the requirements of section 7.0 of the regulation, which requires credits to be generated from activities not otherwise required by law, be beyond business as usual, and result from actions taken in Alberta on or after January 1, 2002. The regulation also requires offset credits be counted once for compliance, be third party verified, and meet any ministerial guidelines approved by the Director.

These ministerial guidelines are largely comprised of the Technical Guidance Document for Offset Protocol Developers, the Technical Guidance for Offset Project Developers, and the final, approved quantification protocols.

Draft protocols go through a detailed review process including a technical review, broader stakeholder review, formal government review, and 30-day public post. Protocols must have consensus (no sustained objection) to advance through the process.

Fundamental considerations for protocols include making sure that the activity results in real reductions in greenhouse gas emissions from a lifecycle perspective and that reductions result from activities not otherwise required by law and that are beyond business as usual activities. Activities and actions that are mandated by regulation are not eligible for offset credits.

Draft Solution Gas Conservation Protocol

In 2009, a draft Quantification Protocol for Solution Gas Conservation was developed and submitted for consideration in the Alberta Offset System. The draft quantification protocol provided a framework for operators to quantify greenhouse gas emissions reductions achieved by conserving solution gas.

Alberta Environment review identified concerns with the draft protocol largely focused around whether the protocol would result in reduction efforts that are "additional" or go beyond existing regulatory requirements identified in the Energy Resources Conservation Board's Directive 060.

Directive 060 requires conservation of solution gas to the extent that it is economic to do so using a -$50,000 threshold for the decision. Directive 060 also includes a clause that requires all vented gas volumes over 500 m3 per day to be flared. The 500 m3 per day volume is considered the lower threshold volume that can sustain combustion given current technology.

In parallel with the CASA discussions, Alberta Environment met with the Energy Resources Conservation Board to undertake a detailed review of whether the protocol is rewarding action that is better than business as usual, or beyond existing regulatory requirements. Through these discussions, it was determined that the original draft protocol would credit emissions reductions from activities already required by Directive 060 and would not result in significant new reductions in greenhouse gas emissions.

The department is proposing a number of key changes that may not meet industry expectations, but that will bring the protocol into alignment with government offset program requirements. These scope changes include:

- Eligible projects are restricted to vented gas with releases of less than 500 m^3 per day, which is the minimum threshold needed to sustain a flare;
- Use of solution gas as an on-site fuel is considered business as usual for the sector and therefore, is not considered an eligible project condition; and
- Conservation of solution gas in the baseline was removed because this resulted in a shift in emissions from the project site to a downstream point and therefore, did not yield a net

reduction in greenhouse gas emissions from a lifecycle perspective.

STATUS:

At this time, the protocol has not been finalized and Alberta Environment is now working with industry to assess the changes. If accepted, this protocol will go to 30-day public comment period, and would then be submitted to the Director for final approval.

It is hoped, that following this meeting, CASA board members will have:

1. a common understanding of the Alberta Offset program requirements;
2. an understanding of the protocol development process and key program requirements for protocols.
3. developed a common understanding for how protocols fit within other regulatory development processes; and
4. clarity on potential linkages between CASA and provincial initiatives as they may relate to air and greenhouse gas emissions.

ATTACHMENTS:

A. Draft Quantification Protocol for Solution Gas Conservation (June 2011)
B. Summary of Changes for the draft Solution Gas Protocol

OTHER RELEVANT INFORMATION:

1. Specified Gas Emitters Regulation
   http://www.qp.alberta.ca/570.cfm?frm_isbn=9780779758791&search_by=link.

2. Alberta Offset System program information
   http://environment.alberta.ca/02275.html

3. Draft documents for the Solution Gas Conservation protocol
   http://carbonoffsetsolutions.climatechangecentral.com/offset-protocols/alberta-protocol-review-process/5th-cycle-protocol-development

QUANTIFICATION PROTOCOL FOR SOLUTION GAS CONSERVATION

Version 1.0: Draft for Consultation **June 2011**

Specified Gas Emitters Regulation

Government of Alberta

Alberta

Disclaimer:
The information provided in this document is intended as guidance only and is subject to revisions as learnings and new information comes forward as part of a commitment to continuous improvement. This document is not a substitute for the law. Please consult the *Specified Gas Emitters Regulation* and the legislation for all purposes of interpreting and applying the law. In the event that there is a difference between this document and the *Specified Gas Emitters Regulation* or legislation, the *Specified Gas Emitters Regulation* or the legislation prevail.

All Quantification Protocols approved under the *Specified Gas Emitters Regulation* are subject to periodic review as deemed necessary by the Department, and will be re-examined at a minimum of every 5 years from the original publication date to ensure methodologies and science continue to reflect best-available knowledge and best practices. This 5-year review will not impact the credit duration stream of projects that have been initiated under previous versions of the protocol. Any updates to protocols occurring as a result of the 5-year and/or other reviews will apply at the end of the first credit duration period for applicable project extensions.

Any comments, questions, or suggestions regarding the content of this document may be directed to:

Alberta Environment
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Edmonton, Alberta, T5J 1G4
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Technical Guidance for Completing Baseline Emissions Intensity Applications
Additional Guidance for Cogeneration Facilities
Technical Guidance for Landfill Operators

Technical Guidance for Offset Project Developers
Technical Guidance for Offset Protocol Developers
Quantification Protocols (http://environment.alberta.ca/1238.html)

1. Offset Project Description

Solution gas is the gas trapped in well bore and reservoir fluids. These gases typically consist of methane emissions and are released during well production. Solution gas is often vented to atmosphere, although the Energy Resources Conservation Board Directive 060 requires larger volumes of vented gas over the combustion threshold of 500 meters cubed (m^3) per day to be captured and combusted.

The emissions reduction opportunity under this protocol is to capture small, uneconomic vent streams released as part of oil and bitumen extraction processes by sending the captured solution gas to flare or conserved as defined by Directive 060. Vented methane emissions in the baseline are combusted (converted to carbon dioxide (CO_2)) in the project resulting in a net reduction in greenhouse gas emissions for the project expressed as units of CO_2e.

This quantification is written for the solution gas conservation system operator or a solution gas conservation project developer. Familiarity with and general understanding of the operation of a solution gas conservation facility is required.

1.1 Protocol Scope

Solution gas is the natural gas consisting mainly of methane (CH_4) produced in association with crude oil and bitumen extraction. These greenhouse gas emissions associated with solution gas venting are included in Canada's National Greenhouse Gas Inventory. In 2007, 672 million cubic meters (or 42 per cent) of all solution gas produced in Alberta was flared or vented making this a common source of provincial greenhouse gas emissions associated with oil and gas production.

The Alberta Energy Resource Conservation Board's (ERCB) regulates oil and gas production in Alberta. *Directive 060: Upstream Petroleum Industry Flaring, Incinerating and Venting* outlines regulatory requirements for solution gas handling in the province including setting out minimum thresholds for flaring and gas conservation.

Conservation of solution gas can generally be achieved in three ways:

i) injection into a natural gas pipeline;
ii) on-site use as fuel gas; and/or
iii) combustion to generate electrical power.

This protocol **only** applies to solution gas conservation that is not required by *Directive 060* where vented solution gas flow rates do not support combustion as outlined in Section 8.1.2 in *Directive 060.*

For the purposes of this protocol, baseline greenhouse gas emissions are considered to be vented solution gas emissions from sources less than 500 m^3 per day. Vented emission sources over 500 m^3 per day are required to be combusted by the Energy Resources Conservation Board's Directive 060 and are **excluded** from the scope of this protocol.

Conservation of solution gas from flare is also **excluded** from this scope of this protocol because it is assumed that the conserved gas will be combusted in the project condition. Therefore, no net reductions in greenhouse gas emissions will occur over the lifecycle of the conserved gas.

Table 1: List of Included and Excluded Emission Sources

Included	Excluded
▪ Vent gas sources less than 500 m^3 per day; and ▪ On-site use of solution gas for fuel or electricity production for streams below 500 m^3 per day	▪ Vent gas sources over 500 m^3 per day; and ▪ Flared solution gas.

Projects implemented under this protocol must meet the quantification requirements outlined in this protocol and must result in a reduction in provincial greenhouse gas emissions.

Table 2: Relevant Greenhouse Gases Applicable for Solution Gas Conservation

Specified Gas	Formula	100-year GWP	Applicable to Project
Carbon Dioxide	CO_2	1	✓
Methane	CH_4	21	✓
Nitrous Oxide	N_2O	310	✓
Sulphur Hexafluoride	SF_6	23,900	×
Perfluorocarbons*	PFCs	Variable	×
Hydrofluorocarbons*	HFCs	Variable	×

* A complete list of perfluorocarbons and hydrofluorocarbons regulated under the *Specified Gas Emitters Regulation* is available in Technical Guidance for Offset Project Developers.

1.2 Protocol Applicability

To demonstrate that a project meets the requirements under this protocol, the project developer must provide evidence that:

1. The baseline condition for the solution gas immediately prior to implementing the offset project was venting to the atmosphere.
2. The volume of solution gas being vented to the atmosphere in the baseline condition was under 500 m^3 per day and was therefore not required by the Alberta Energy Resource Conservation Board's (ERCB) *Directive 060: Upstream*

Petroleum Industry Flaring, Incinerating and Venting at the time the project was commissioned.

3. All projects must comply with current regulations and maybe required to adjust the project baseline reflect any changes in regulatory requirements;
4. Metering of solution gas volumes is required for solution gas that is flared or injected into a natural gas pipeline in the project condition and used to calculate the baseline emissions.
5. The quantification of reductions achieved by the project is based on actual measurement and monitoring and must be done in accordance with the Energy Resources Conservation board *Directive 017: Measurement Requirements for Upstream Oil and Gas Operations;* and
6. The project must meet the requirements for offsets eligibility as specified in the applicable regulation and guidance documents for the Alberta offset system.

1.3 Protocol Flexibility

Flexibility in applying the quantification protocol is provided to project developers in the following ways:

1. Site specific emission factors may be substituted for the generic emission factors indicated in this protocol document. The methodology for generation of these factors must comply with *Directive 017* methodology in order to ensure a reasonable level of accuracy; and

2. The project developer may aggregate offsets from multiple projects to facilitate offset commoditization

If applicable, the project developer must indicate and justify why flexibility provisions have been used.

1.4 Glossary of New Terms

Conservation	Is the recovery of solution gas for use as fuel for production facilities, other useful purposes (e.g. power generation), sale, or beneficial injection into an oil or gas pool.
Directive 007	*Volumetric and Infrastructure Requirements* outlines regulatory requirements for facility construction. http://www.ercb.ca/docs/documents/directives/Directive007.pdf
Directive 017	*Measurement Requirements for Upstream Oil and Gas Operations* outlines regulatory requirements for monitoring and record retention for upstream oil and gas projects. http://www.ercb.ca/docs/documents/directives/Directive017.pdf

Directive 060	*Upstream Petroleum Industry Flaring, Incinerating, and Venting* outlines regulatory requirements for flaring and vented emissions management in oil and gas operations. http://www.ercb.ca/docs/documents/directives/Directive060.pdf
Flaring	Is the controlled combustion of a gas stream produced on site for purposes other than producing energy. This includes, but is not limited to, the incineration of waste petroleum and other hazardous materials, safety flares, and test wells. All project flaring is subject to requirements set out in relevant Alberta regulations and directives.
Gas Gathering System	Consists of pipelines used to move gas production from oil batteries, gas batteries and/or other facilities to another facility (usually gas plant) and may include compressors, line heaters, dehydrators, measurement and other equipment.
Injection Facility	Is a system or arrangement of surface equipment associated with the injection of solution gas into a natural gas pipeline.
Solution Gas	Refers to dissolved gas in well bore or reservoir fluids. This gas is largely comprised of methane and remains in solution until the pressure or temperature conditions within the reservoir change at which time it may break out of solution to become a free gas.
Transmission Line	Refers to the system of pipes used for transporting liquids and /or gases.
Venting	Is the intentional, controlled release of uncombusted gas streams.

2.0 Baseline Condition

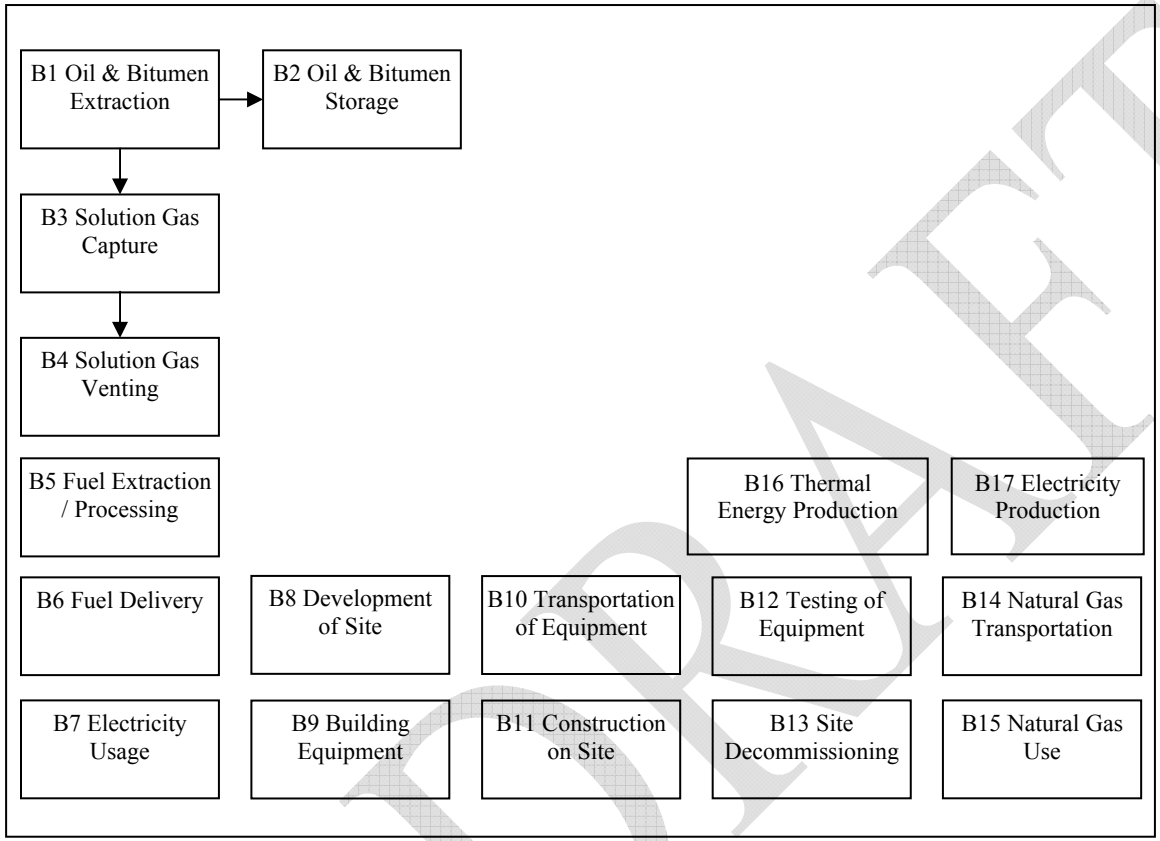
This protocol uses a **dynamic, site-specific** baseline. Under this scenario, each facility or site being included in the project condition is required to prove that the baseline operations for the site were to vent solution gas (methane) to atmosphere as a result of oil and/or bitumen extraction. That is, the baseline emissions from the project are calculated on the basis of how much solution gas was actually conserved and injected into the gas pipeline rather than being vented. The baseline is recalculated annually based on the total solution gas conserved that would otherwise have been vented, and that is below the *Directive 060* combustion rate of 500 m^3 per day.

Baseline measurements must be from direct metering of the conserved solution gas supported by periodic gas analyses and follow the requirements of Directive 017. Direct measurement is required to account for the variability of solution gas volumes over time and by emission source.

Figure 1 below offers a process flow diagram for a typical baseline configuration.

The baseline condition, including the relevant source and sinks, and processes, is shown in Figure 1 below**.**

Figure 1: Process Flow Diagram for the Project Baseline



2.1 Identification of Baseline Sources and Sinks

Based on the process flow diagrams provided in Figure 1 the project sources/sinks were organized into life cycle categories in Figure 2. Descriptions of each of the sources/sinks and their classification as either 'controlled', 'related' or 'affected' is provided in Table 2**.**

Controlled:	The behaviour or operation of a controlled source and/or sink is under the direction and influence of a Project Developer through financial, policy, management, or other instruments.
Related:	A related source and/or sink has material and/or energy flows into, out of, or within a project but is not under the reasonable control of the project developer.
Affected:	An affected source and/or sink is influenced by the project activity through changes in market demand or supply for projects or services associated with the project.

Figure 2: Baseline Sources and Sinks for Solution Gas Venting

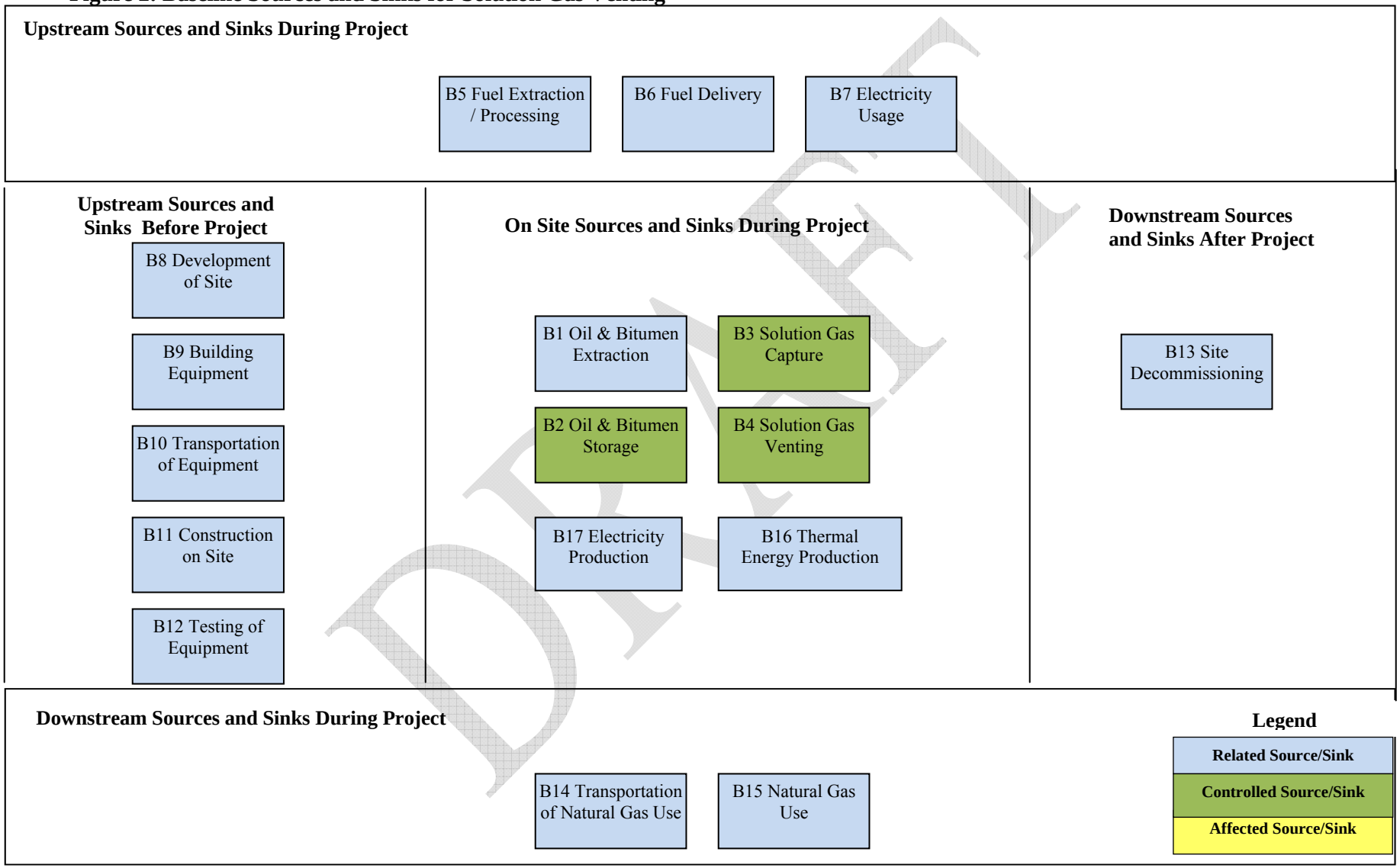


Table 2: Baseline Sources and Sinks

1. Sources and Sinks	2. Description	3. Controlled, Related or Affected
Upstream Sources/Sinks During Baseline		
B5 Fuel Extraction / Processing	Each of the fuels used throughout the on-site component of the project will need to be sourced and processed. The total volumes of fuel for each of the on-site SS's are considered under this source/sink. Volumes and types of fuels are the important characteristics to be tracked.	Related
B6 Fuel Delivery	Each of the fuels used throughout the on-site component of the project will need to be transported to the site. This may include shipments by tanker truck or pipeline, increasing greenhouse gas emissions. It is reasonable to exclude fuel sourced by taking equipment to an existing commercial fuelling station as the fuel used to take the equipment to the site is captured under other sources/sinks.	Related
B7 Electricity Usage	Electricity may be produced off-site. Measurement of the quantity of electricity required by the facility would need to be tracked.	Related
Onsite Sources/Sinks During Baseline		
B1 Oil & Bitumen Extraction	Oil and bitumen is extracted from a single or group of adjacent wells. The oil and bitumen gas is piped to a storage tank to await transportation. The types and quantities of fuels used in extraction equipment would need to be tracked.	Related
B2 Oil & Bitumen Storage	On-site oil and bitumen storage tanks may be heated via combustion of fossil fuels such as propane, or solution gas. Quantities and types for each of the energy inputs may need to be tracked.	Controlled
B3 Solution Gas Capture	The compressor and dehydration systems may be fuelled by fossil fuels; these additional greenhouse gas emissions are incremental to the project. Quantities and types for each of the energy inputs may need to be tracked.	Controlled
B4 Solution Gas Venting	Under the baseline condition, solution gas is released directly to the atmosphere post-capture. The quantity and characteristics of the vented solution gas would need to be tracked.	Controlled
B16 Thermal Energy Production	The production of thermal energy may be required to meet the demands of facilities being provided with thermal energy from the project site. This thermal energy may have been derived from waste heat recovery systems resulting in an energy burden on the systems from which the heat is being recovered or directly from combustion of fossil fuels. Energy requirements, fuel volumes and fuel types will need to be tracked.	Controlled

1. Sources and Sinks	2. Description	3. Controlled, Related or Affected
B17 Electricity Production	Electricity may be produced off-site to match the electricity being produced by the energy from the solution gas net of parasitic loads. This electricity will be produced at an emissions intensity as deemed appropriate by the Program Authority. Measurement of the gross quantity of electricity produced by the facility will need to be tracked to quantify this source. The gross quantity of electricity produced should be net of any electricity sold as Renewable Energy Credits (RECs) as defined by the Environmental Choice Program.	Controlled
Downstream Sources/Sinks During Baseline Operation		
B14 Transportation of Natural Gas	Compressed natural gas may be shipped via natural gas pipeline for use in a variety of applications. Fugitive emissions may occur from equipment used to transport the natural gas. The quantity of fugitive emissions would need to be tracked.	Related
B15 Natural Gas Use	Natural gas in pipelines is assumed to be combustion during end-use. Because the methane contained in the solution gas is not destroyed with 100 per cent efficiency, the volume of solution gas injected into the pipeline would need to be tracked.	Related
Other Soruces/Sinks		
B8 Development of Site	Development of the site could include clearing, grading, building access roads as well as civil infrastructure such as access to electricity, gas, water supply and water treatment. Building and structures on the site including offices, storage facilities, storm water drainage, and structures to enclose, support and house equipment may need to be developed. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels and electricity used to power equipment required to develop the site.	Related
B9 Building Equipment	Equipment may need to be built either on-site or off-site. This includes all of the components of the storage, handling, processing, combustion, air quality control, system control and safety systems. These may be sourced as pre-made standard equipment or custom built to specification. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels and electricity used to power equipment for the extraction of the raw materials, processing, fabricating and assembly.	Related
B10 Transportation of Equipment	Equipment built off-site and the materials to build equipment on-site, will all need to be delivered to the site. Transportation may be completed by truck, barge and/or train. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels to power the equipment delivering the equipment to the site.	Related
B11 Construction on Site	The process of construction at the site will require a variety of heavy equipment, smaller power tools, cranes and generators. The operation of this equipment will have associated	Related

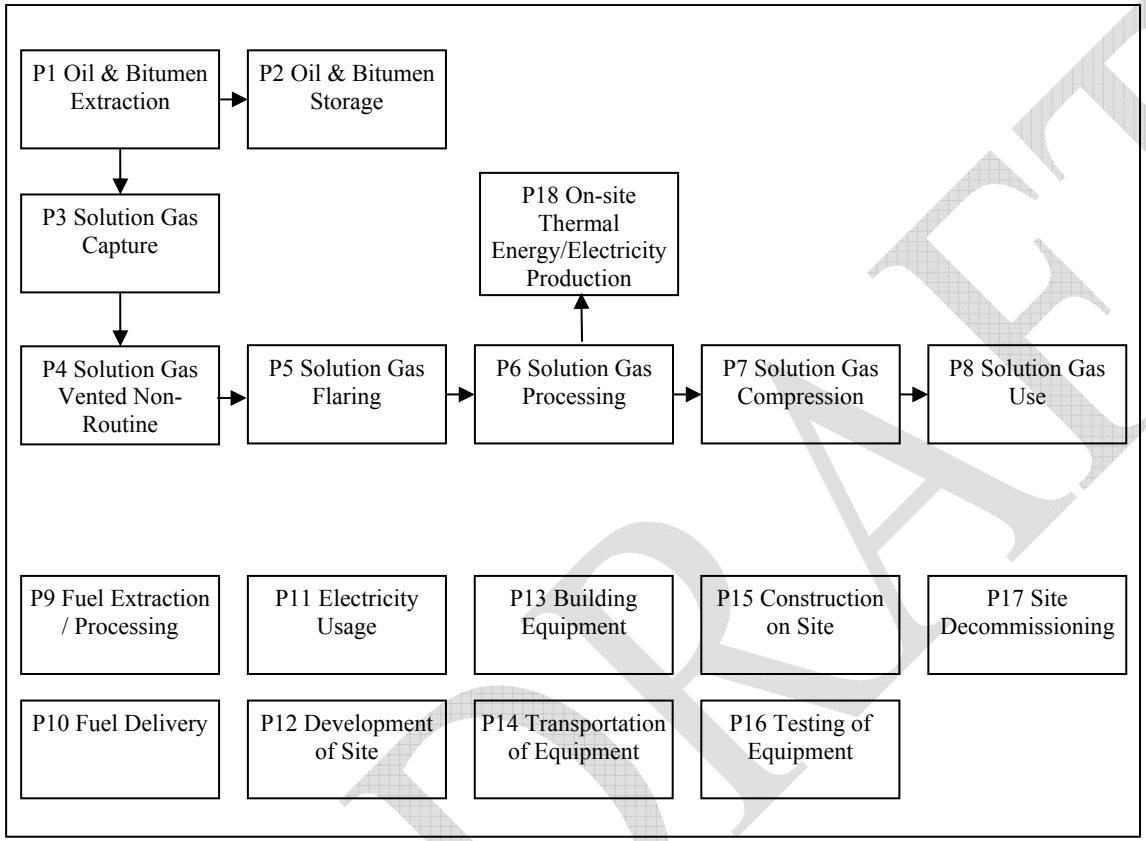
1. Sources and Sinks	2. Description	3. Controlled, Related or Affected
	greenhouse gas emission from the use of fossil fuels and electricity	
B12 Testing of Equipment	Equipment may need to be tested to ensure that it is operational. This may result in running the equipment using fossil fuels in order to ensure that the equipment runs properly. These activities will result in greenhouse gas emissions associated with the combustion of fossil fuels and the use of electricity.	Related
B13 Site Decommissioning	Once the facility is no longer operational, the site may need to be decommissioned. This may involve the disassembly of the equipment, demolition of on-site structures, disposal of some materials, environmental restoration, re-grading, planting or seeding, and transportation of materials off-site. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels and electricity used to power equipment required to decommission the site.	Related

3.0 Project Condition

The project condition is represented by the flaring and/or conservation of the solution gas stream by combustion or injection into a natural gas pipeline that would otherwise have been vented to the atmosphere. The project emissions are calculated through direct metering of conserved solution gas supported by periodic gas composition analysis.

The process flow diagram for a typical solution gas conservation project is provided in Figure 3 below.

Figure 3: Process Flow Diagram for the Project Condition



3.1 Identification of Project Sources and Sinks

Based on the process flow diagrams provided in Figure 3, the project sources/sinks are organized into life cycle categories in Figure 4. Descriptions of each of the source/sink and its classification as controlled, related or affected are provided in Table 3

Figure 4: Project Conditions Sources and Sinks for Solution Gas Conservation

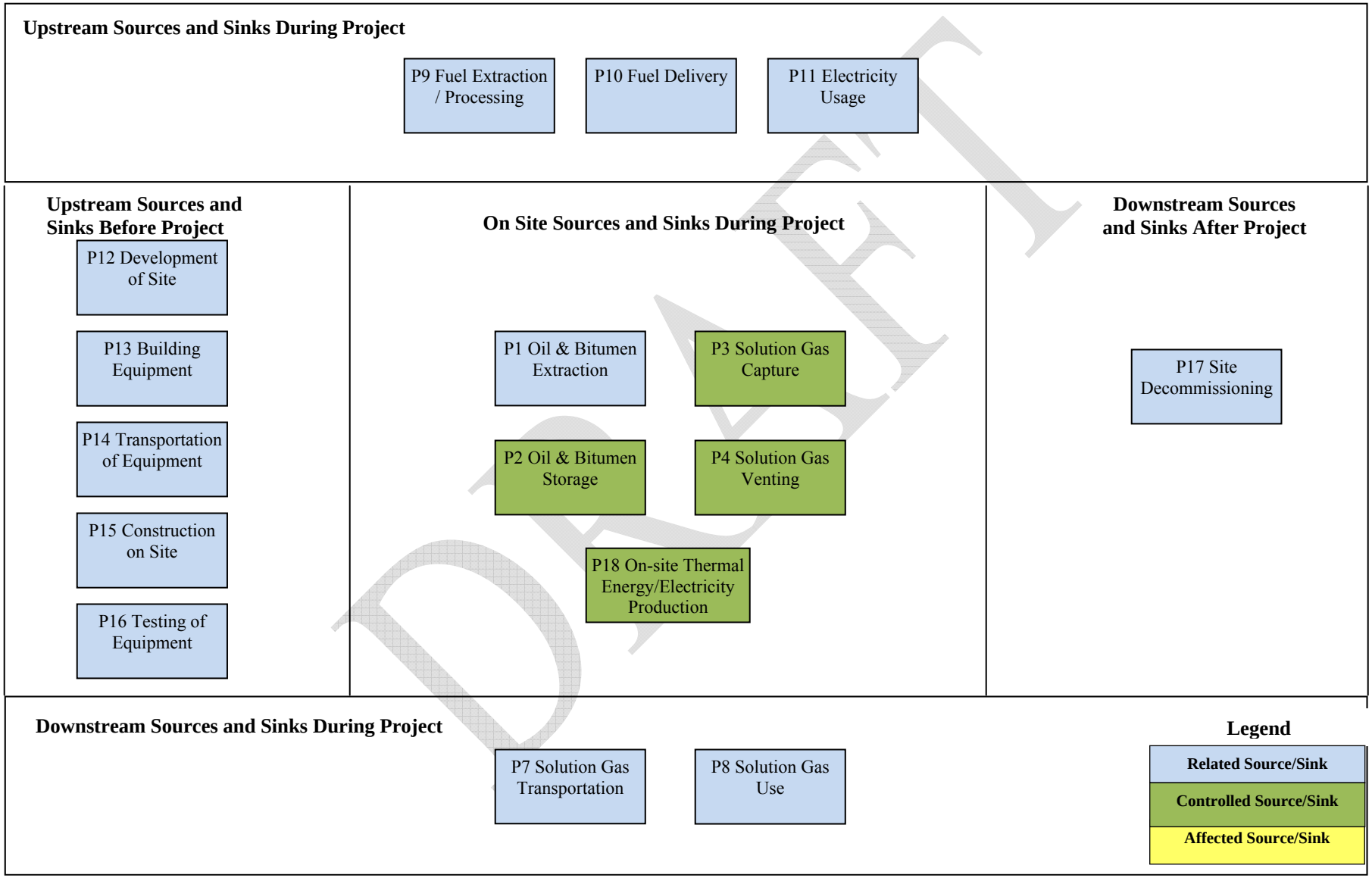


Table 3: Project Condition Sources and Sinks

1. Sources and Sinks	2. Description	3. Controlled, Related or Affected
Upstream Sources and Sinks During Project		
P9 Fuel Extraction / Processing	Each of the fuels used throughout the on-site component of the project will need to be sourced and processed. The total volumes of fuel for each of the on-site sources/sinks are considered under this source/sink. Volumes and types of fuels are the important characteristics to be tracked.	Related
P10 Fuel Delivery	Each of the fuels used throughout the on-site component of the project will need to be transported to the site. This may include shipments by tanker truck or pipeline, increasing greenhouse gas emissions. It is reasonable to exclude fuel sourced by taking equipment to an existing commercial fuelling station as the fuel used to take the equipment to the site is captured under other sources/sinks.	Related
P11 Electricity Usage	Electricity may be produced off-site. Measurement of the quantity of electricity required by the facility would need to be tracked.	Related
On-Site Sources and Sinks During Project		
P1 Oil & Bitumen Extraction	Oil and bitumen is extracted from a single or group of adjacent wells. The oil and bitumen is placed into a storage tank to await transportation. The types and quantities of the fuels used to operate the extraction equipment would need to be tracked.	Related
P2 Oil & Bitumen Storage	On-site oil and bitumen storage tanks may be heated via combustion of a fossil fuel such as propane, or solution gas. Quantities and types for each of the energy inputs may need to be tracked.	Controlled
P3 Solution Gas Capture/Processing	A processing system may be required to refine the solution gas prior to injection into a natural gas pipeline. The compressor, processing equipment and dehydration systems may be fuelled by fossil fuels; these additional greenhouse gas emissions are incremental to the project. Quantities and types for each of the energy inputs may need to be tracked.	Controlled
P4 Solution Gas Venting	Non-routine venting of solution gas may occur under the project condition during compressor maintenance or other scenarios. The quantity and characteristics of the vented solution gas would need to be tracked.	Controlled
P18 On-site Thermal Energy/Electricity Production	Captured solution gas may be used to generate on-site thermal energy and/or electricity. The quantity of solution gas or other fuel types used must be tracked.	Controlled

Downstream Sources and Sinks During Project		
P7 Solution Gas Transportation	Compressed solution gas may be shipped via natural gas pipeline for use in a variety of applications. Fugitive emissions may occur from equipment used to transport the solution gas in the natural gas pipeline. The quantity of fugitive emissions would need to be tracked.	Related
P8 Solution Gas Use	Once injected into the pipeline, the ultimate fate of the solution gas is assumed to be combustion during end-use.	Related
Other		
P12 Development of Site	Development of the site could include clearing, grading, building access roads as well as civil infrastructure such as access to electricity, gas, water supply and water treatment. Building and structures on the site including offices, storage facilities, storm water drainage, and structures to enclose, support and house equipment may need to be developed. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels and electricity used to power equipment required to develop the site.	Related
P13 Building Equipment	Equipment may need to be built either on-site or off-site. This includes all of the components of the storage, handling, processing, combustion, air quality control, system control and safety systems. These may be sourced as pre-made standard equipment or custom built to specification. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels and electricity used to power equipment for the extraction of the raw materials, processing, fabricating and assembly.	Related
P14 Transportation of Equipment	Equipment built off-site and the materials to build equipment on-site, will all need to be delivered to the site. Transportation may be completed by truck, barge and/or train. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels to power the equipment delivering the equipment to the site.	Related
P15 Construction on Site	The process of construction at the site will require a variety of heavy equipment, smaller power tools, cranes and generators. The operation of this equipment will have associated greenhouse gas emission from the use of fossil fuels and electricity	Related
P16 Testing of Equipment	Equipment may need to be tested to ensure that it is operational. This may result in running the equipment using fossil fuels in order to ensure that the equipment runs properly. These activities will result in greenhouse gas emissions associated with the combustion of fossil fuels and the use of electricity.	Related
P17 Site Decommissioning	Once the facility is no longer operational, the site may need to be decommissioned. This may involve the disassembly of the equipment, demolition of on-site structures, disposal of some materials, environmental restoration, re-grading, planting or seeding, and transportation of materials off-site. Greenhouse gas emissions would be primarily attributed to the use of fossil fuels and electricity used to power equipment required to decommission the site.	Related

4.0 Quantification

The baseline and project conditions were assessed against each other to determine the scope for reductions quantified under this protocol. Sources and sinks were either included or excluded depending how they were impacted by the project condition. Sources that are not expected to change between baseline and project condition are excluded from the project condition. It is assumed that exclude activities will occur at the same magnitude and emission rate during the baseline and project and so will not be impacted by the project.

Emissions that increase or decrease as a result of the project must be included and associated greenhouse gas emissions must be quantified as part of the project condition.

All sources and sinks identified in Table 2 and 3 above are listed in Table 4 below. Each source and sink is listed as include or excluded. Justification for these choices is provided.

Table 4: Comparison of Sources/Sinks

1. Identified Sources and Sinks	2. Baseline (C, R, A)	3. Project (C, R, A)	4. Include or Exclude from Quantification	5. Justification
Upstream Sources and Sinks				
P9 Fuel Extraction / Processing	N/A	R	**Include**	This source is included as captured solution gas may displace fossil fuels that would have been used for on-site energy generation.
B5 Fuel Extraction / Processing	R	N/A		
P10 Fuel Delivery	N/A	R	Exclude	Excluded as emissions from fuel delivery are not impacted by the implementation of project and as such baseline and project conditions will be functionally equivalent.
B6 Fuel Delivery	R	N/A		
P11 Electricity Usage	N/A	R	Exclude	Excluded as these sources/sinks are not relevant to the project as the emissions from these practices are covered under proposed greenhouse gas regulations.
B7 Electricity Usage	R	N/A		
Onsite Sources and Sinks				
P1 Oil & Bitumen Extraction	N/A	R	Exclude	Excluded as the extraction of solution gas is functionally equivalent under the baseline and project conditions.
B1 Oil & Bitumen Extraction	R	N/A		
P2 Oil & Bitumen Storage	N/A	C	Exclude	Excluded as the storage of solution gas is functionally equivalent under the baseline and project conditions.
B2 Oil & Bitumen Storage	C	N/A		
P3 Solution Gas Capture/Processing	N/A	C	**Include**	Included as the capture of solution gas will be greater in the project period relative to the baseline condition.
B3 Solution Gas Capture	C	N/A		
P4 Solution Gas Venting	N/A	C	**Include**	Included because this is the baseline scenario for this reduction activity. All venting of the captured solution gas occurring in the project must be quantified.
B4 Solution Gas Venting	C	N/A		

1. Identified Sources and Sinks	2. Baseline (C, R, A)	3. Project (C, R, A)	4. Include or Exclude from Quantification	5. Justification
B16 Thermal Energy Production	C	N/A	**Include**	Included as thermal energy and/or electricity that is generated through the use of captured solution gas will displace the on-site use of fossil fuels in the baseline period.
B17 Electricity Production	C	N/A		
P18 On-Site Thermal Energy/Electricity Production	N/A	C		
Downstream Sources and Sinks				
P7 Solution Gas Transportation	N/A	R	Exclude	Excluded as fugitive emissions from the transportation of natural gas and solution gas are functionally equivalent under the baseline and project conditions.
B14 Natural Gas Transportation	R	N/A		
P8 Solution Gas Use	N/A	R	Exclude	Excluded as emissions from the use (i.e. combustion) of natural gas and solution gas are functionally equivalent under the baseline and project conditions.
B15 Natural Gas Use	R	N/A		
Other Sources and Sinks				
P12 Development of Site	N/A	R	Exclude	Emissions from site development are not material given the long project life and the minimal site development typically required.
B8 Development of Site	R	N/A		
P13 Building Equipment	N/A	R	Exclude	Emissions from building equipment are not material given the long project life and the minimal equipment typically required.
B9 Building Equipment	R	N/A		
P14 Transportation of Equipment	N/A	R	Exclude	Emissions from transportation of equipment are not material given the long project life and the minimal transportation of equipment typically required.
B10 Transportation of Equipment	R	N/A		
P15 Construction on Site	N/A	R	Exclude	Emissions from construction on site are not material given the long project life and the minimal construction on site typically required.
B11 Construction on Site	R	N/A		
P16 Testing of Equipment	N/A	R	Exclude	Emissions from testing of equipment are not material given the long project life and the minimal testing of equipment typically required.
B12 Testing of Equipment	R	N/A		

1. Identified Sources and Sinks	2. Baseline (C, R, A)	3. Project (C, R, A)	4. Include or Exclude from Quantification	5. Justification
P17 Site Decommissioning	N/A	R	Exclude	Emissions from site decommissioning are not material given the long project life and the minimal site decommissioning typically required.
B13 Site Decommissioning	R	N/A		

4.1 Quantification Methodology

Quantification of the reductions, removals and reversals of relevant sources for each of the greenhouse gases will be completed using the methodologies outlined in Table 5, below. A listing of relevant emission factors is provided in Appendix A. These calculation methodologies serve to complete the following three equations for calculating emission reductions from the comparison of baseline and project conditions

$$\text{Emissions Reduction} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

$$\text{Emissions}_{\text{Baseline}} = \text{Emissions}_{\text{Solution Gas Venting}} + \text{Emissions}_{\text{Fuel Extraction and Processing}} + \text{Emissions}_{\text{Thermal Energy Production}} + \text{Emissions}_{\text{Electricity Production}}$$

$$\text{Emissions}_{\text{Project}} = \text{Emissions}_{\text{Solution Gas Venting}} + \text{Emissions}_{\text{Solution Gas Capture/Processing}} + \text{Emissions}_{\text{Fuel Extraction / Processing}} + \text{Emissions}_{\text{On-Site Thermal Energy/Electricity Production}}$$

Where:

Emissions Baseline = sum of the emissions under the baseline condition.

- $\text{Emissions}_{\text{Solution Gas Venting}}$ = emissions under B4 Solution Gas Venting
- $\text{Emissions}_{\text{Fuel Extraction and Processing}}$ = emissions under B5 Fuel Extraction / Processing
- $\text{Emissions}_{\text{Thermal Energy Production}}$ = emissions under B16 Thermal Energy Production
- $\text{Emissions}_{\text{Electricity Production}}$ = emissions under B17 Electricity Production

Emissions Project = sum of the emissions under the project condition.

- $\text{Emissions}_{\text{Solution Gas Venting}}$ = emissions under P4 Solution Gas Venting
- $\text{Emissions}_{\text{Solution Gas Capture}}$ = emissions under P5 Solution Gas Processing +emissions under P6 Solution Gas Compression
- $\text{Emissions}_{\text{Fuel Extraction / Processing}}$ = emissions under P9 Fuel Extraction / Processing
- $\text{Emissions}_{\text{On-Site Thermal Energy/Electricity Production}}$ = emissions under P18 On-Site Thermal Energy/Electricity Production

Table 5: Quantification Methodology

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
Project Sources and Sinks						
P3 Solution Gas Capture/Processing	Emissions $_{\text{Solution Gas Capture/Processing}}$ = Σ (Vol. Fuel $_{i}$ * EF Fuel $_{i\ CO2}$) ; Σ (Vol. Fuel $_{i}$ * EF Fuel $_{i\ CH4}$) ; Σ (Vol. Fuel $_{i}$ * EF Fuel $_{i\ N2O}$); Vol. $_{\text{Solution Gas Capture /Processing}}$* % CH_4 * EF $NG_{CO2\ producer}$; Vol. $_{\text{Solution Gas Capture/Processing}}$ * % CH_4 * EF $NG_{CH4\ producer}$; Vol. $_{\text{Solution Gas Capture/Processing}}$ * % CH_4 * EF $NG_{N2O\ producer}$;						
	Emissions $_{\text{Solution Gas Capture/Processing}}$	kg of CO_2; CH_4 ; N_2O	N/A	N/A	N/A	Quantity being calculated in aggregate form as fuel use on site is likely aggregated for each of these SS's.
	Volume of Each Type of Fuel Used / Vol. $Fuel_i$	L / m^3 / other	Measured	Direct metering or reconciliation of volume in storage (including volumes received).	Continuous metering or monthly reconciliation	Both methods are standard practice. Frequency of metering is highest level possible. Frequency of reconciliation provides for reasonable diligence. This volume may be excluded if the corresponding volume is not included under the baseline.
	CO_2 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CO2}$	kg CO_2 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – Propane (1.51 kg CO_2/L)	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	CH_4 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CH4}$	kg CH_4 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – Propane (0.000027 kg CH_4/L)	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	N_2O Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ N2O}$	kg N_2O per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – Propane (0.000108 kg N_2O/L)	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
	Volume of Solution Gas Used for Processing / Vol. $_{\text{Solution Gas Capture/Processing}}$	L/ m^3/ other	Measured	Direct metering of volume of solution gas used for processing.	Continuous metering	Direct metering is standard practice. Frequency of metering is highest level possible.
	CO_2 Emissions Factor for Combustion by Producer/ EF $NG_{CO2\ producer}$	kg CO_2 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – 2.389 kg CO_2 / m^3	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	CH_4 Emissions Factor for Combustion by Producer/ EF $NG_{CH4\ producer}$	kg CH_4 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – 0.0065 kg CH_4 / m^3	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	N_2O Emissions Factor for Combustion by Producer / EF $NG_{N2O\ producer}$	kg N_2O per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) - 0.00006 kg N_2O / m^3	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
P9 Fuel Extraction and Processing	Emissions $_{\text{Fuel Extraction / Processing}} = \sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ CO2}$) ; $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ CH4}$) ; $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ N2O}$)					
	Emissions $_{\text{Fuel Extraction / Processing}}$	kg of CO2e	N/A	N/A	N/A	Quantity being calculated in aggregate form as fuel and electricity use on-site is likely aggregated for each of these SS's.
	Volume of Fuel Combusted for On-Site Thermal Energy and/or Electricity Production / Vol. Fuel	L/ m^3/ other	Measured	Direct metering or reconciliation of volume in storage (including volumes received).	Continuous metering or monthly reconciliation.	Both methods are standard practise. Frequency of metering is highest level possible. Frequency of reconciliation provides for reasonable diligence.
	CO_2 Emissions Factor for Fuel Including Production and Processing / EF Fuel $_{CO2}$	kg CO_2 per L/ m^3/ other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
	CH_4 Emissions Factor for Fuel Including Production and Processing / EF Fuel $_{CH4}$	kg CH_4 per L/ m^3/ other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
	N_20 Emissions Factor for Fuel Including Production and Processing / EF Fuel $_{N2O}$	kg N2O per L/ m^3/ other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
P4 Solution Gas Venting	Emissions $_{Solution\ Gas\ Venting}$ = Vol. $_{Solution\ Gas\ Vented}$ * % CH_4 * ρ_{CH4}					
	Emissions $_{Solution\ Gas\ Venting}$	kg CH_4	N/A	N/A	N/A	Quantity being calculated.
	Volume of Solution Gas Vented During Non-Routine Procedures / Vol. $_{Solution\ Gas\ Vented}$	L/ m^3/ other	Measured	Direct metering of volume of solution gas vented.	Continuous metering	Direct metering is standard practice. Frequency of metering is highest level possible. This volume may be excluded if this volume of gas is excluded from the baseline.
	Methane Composition of Solution Gas / % CH_4	%	Measured	Direct Measurement as outlined in *Directive 017*. Measurement of the concentration may take place anywhere within the project boundary.	Annual sampling	Gas composition should remain relatively stable. Frequency of reconciliation provides for reasonable diligence.
	Density of CH_4 / ρ_{CH4}	kg/m^3	Constant	0.68 kg/m^3 at STP[1]	N/A	Accepted value.
	Emissions $_{On\text{-}Site\ Thermal\ Energy/Electricity\ Production}$ = $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ CO2}$); $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ CH4}$) ; $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ N20}$)					

[1] STP (Standard Temperature and Pressure) is defined in this case as 15°C and 101.3 kPa. This value must be adjusted as needed to reflect appropriate meter calibrations and project specific conditions.

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
P18 On-Site Thermal Energy/Electricity Production	Emissions $_{\text{On-Site Thermal Energy/Electricity Production}}$	kg of CO_2 ; CH_4 ; N_2O	N/A	N/A	N/A	Quantity being calculated in aggregate form as fuel and electricity use on site is likely aggregated for each of these SS's.
	Volume of Each Type of Fuel / Vol Fuel $_i$	L, m^3 or other	Measured	Direct metering or reconciliation of volume in storage (including volumes received).	Continuous metering or monthly reconciliation.	Both methods are standard practise. Frequency of metering is highest level possible. Frequency of reconciliation provides for reasonable diligence.
	CO_2 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CO2}$	Kg CO_2 per L, m^3 or other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
	CH_4 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CH4}$	kg CH_4 per L, m^3 or other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
	N_20 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ N2O}$	kg N2O per L, m^3 or other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
Baseline Sources and Sinks						
B3 Solution Gas Capture	Emissions $_{\text{Solution Gas Capture}}$ = Σ (Vol. Fuel $_i$ * EF Fuel $_{i\ CO2}$) ; Σ (Vol. Fuel $_i$ * EF Fuel $_{i\ CH4}$) ; Σ (Vol. Fuel $_i$ * EF Fuel $_{i\ N2O}$); Vol. $_{\text{Solution Gas Capture}}$ * % CH_4 * EF $NG_{CO2\ producer}$; Vol. $_{\text{Solution Gas Capture}}$ * % CH_4 * EF $NG_{CH4\ producer}$; Vol. $_{\text{Solution Gas Capture}}$ * % CH_4 * EF $NG_{N2O\ producer}$;					
	Emissions $_{\text{Solution Gas Capture}}$	kg of CO_2; CH_4 ; N_2O	N/A	N/A	N/A	Quantity being calculated in aggregate form as fuel use on site is likely aggregated for each of these SS's.
	Volume of Each Type of Fuel Used / Vol. $Fuel_i$	L / m^3 / other	Measured	Direct metering or reconciliation of volume in storage (including volumes received).	Continuous metering or monthly reconciliation	Both methods are standard practice. Frequency of metering is highest level possible. Frequency of reconciliation provides for reasonable diligence. This volume may be excluded if the corresponding volume is not included under the baseline.

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
	CO_2 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CO2}$	kg CO_2 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – Propane (1.51 kg CO_2/L)	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	CH_4 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CH4}$	kg CH_4 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – Propane (0.000027 kg CH_4/L)	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	N_2O Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ N2O}$	kg N_2O per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – Propane (0.000108 kg N_2O/L)	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	Volume of Solution Gas Used for Processing / Vol. $_{\text{Solution Gas Capture/Processing}}$	L/ m^3/ other	Measured	Direct metering of volume of solution gas used for processing.	Continuous metering	Direct metering is standard practice. Frequency of metering is highest level possible.
	CO_2 Emissions Factor for Combustion by Producer/ EF $NG_{CO2\ producer}$	kg CO_2 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – 2.389 kg CO_2 / m^3	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	CH_4 Emissions Factor for Combustion by Producer/ EF $NG_{CH4\ producer}$	kg CH_4 per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) – 0.0065 kg CH_4 / m^3	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.
	N_2O Emissions Factor for Combustion by Producer / EF $NG_{N2O\ producer}$	kg N_2O per L / m^3 / other	Estimate	From Environment Canada reference documents. (Appendix A) - 0.00006 kg N_2O / m^3	Annual	Reference values adjusted annually as part of Environment Canada's emissions inventory.

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
B4 Solution Gas Venting	Emissions $_{\text{Solution Gas Venting}}$ = (Vol. $_{\text{Solution Gas Injected}}$ + Vol. $_{\text{Solution Gas Capture/ Processing}}$) * % CH_4 * ρ_{CH4}					
	Emissions $_{\text{Solution Gas Venting}}$	kg CH_4	N/A	N/A	N/A	Quantity being calculated.
	Volume of Solution Gas Injected into Pipeline / Vol. $_{\text{Solution Gas Injected}}$	L/ m^3/ other	Measured	Direct metering of volume of solution gas injected into natural gas pipeline under project condition.	Continuous metering	Direct metering is standard practice. Frequency of metering is highest level possible.
	Volume of Solution Gas Used for Processing / Vol. $_{\text{Solution Gas Capture/ Processing}}$	L/ m^3/ other	Measured	Direct metering of volume of solution gas used for processing solution gas under project condition.	Continuous metering	Direct metering is standard practice. Frequency of metering is highest level possible. This volume may excluded as it is conservative to do so; if this volume is included, SS P3 must be included.
	Methane Composition of Solution Gas / % CH_4	%	Measured	Direct measurement of the concentration may take place anywhere within the project boundary.	Annual sampling	Gas composition should remain relatively stable during steady-state operation. Frequency of reconciliation provides for reasonable diligence.
	Density of CH_4 / ρ_{CH4}	kg/m^3	Constant	0.68 kg/m^3 at STP[2]	N/A	Accepted value.
B5 Fuel Extraction and Processing	Emissions $_{\text{Fuel Extraction / Processing}}$ = $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\,CO2}$) ; $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\,CH4}$) ; $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\,N2O}$)					
	Emissions $_{\text{Fuel Extraction / Processing}}$	kg of CO2e	N/A	N/A	N/A	Quantity being calculated in aggregate form as fuel and electricity use on-site is likely aggregated for each of these SS's.
	Volume of Fuel Combusted for Baseline On-Site Thermal Energy/Electricity Production / Vol. Fuel	L/ m^3/ other	Measured	Direct metering or reconciliation of volume in storage (including volumes received).	Continuous metering or monthly reconciliation.	Both methods are standard practise. Frequency of metering is highest level possible. Frequency of reconciliation provides for reasonable diligence.

[2] STP (Standard Temperature and Pressure) is defined in this case as 15°C and 101.3 kPa.

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
	CO_2 Emissions Factor for Fuel Including Production and Processing / EF Fuel $_{CO2}$	kg CO_2 per L/ m^3/ other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
	CH_4 Emissions Factor for Fuel Including Production and Processing / EF Fuel $_{CH4}$	kg CH_4 per L/ m^3/ other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
	N_20 Emissions Factor for Fuel Including Production and Processing / EF Fuel $_{N2O}$	kg N2O per L/ m^3/ other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
B16 Thermal Energy Produced	Emissions $_{Thermal\ Heat}$ = $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ CO2}$); $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ CH4}$) ; $\sum$ (Vol. Fuel $_i$ * EF Fuel $_{i\ N20}$)					
	Emissions $_{Thermal\ Heat}$	kg of CO_2 ; CH_4 ; N_2O	N/A	N/A	N/A	Quantity being calculated.
	Volume of Each Type of Fuel / Vol Fuel $_i$	L, m^3 or other	Measured	Calculated relative to metered quantity of thermal energy delivered to the customer by the project facility, converted to an equivalent volume of fuel.	Continuous metering	Method is standard practise.
	CO_2 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CO2}$	kg CO_2 per L, m^3 or other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.

Source/Sink	Parameter / Variable	Unit	Measured/ Estimated	Method	Frequency	Justify measurement or estimation and frequency
	CH_4 Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ CH4}$	kg CH_4 per L, m^3 or other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
	N_2O Emissions Factor for Each Type of Fuel / EF Fuel $_{i\ N2O}$	kg N2O per L, m^3 or other	Estimated	From Environment Canada reference documents.	Annual	Reference values adjusted annually as part of Environment Canada reporting on Canada's emissions inventory.
B17 Electricity Production	Emissions $_{Electricity}$ = Electricity * EF $_{Elec}$					
	Emissions $_{Electricity}$	kg of CO2e	N/A	N/A	N/A	Quantity being calculated.
	Electricity Produced at Site / Electricity	kWh	Measured	Direct metering of all electricity produced at the facility, net of parasitic load.	Continuous metering	Continuous direct metering represents the industry practise and the highest level of detail.
	Emissions Factor for Electricity / EF $_{Elec}$	kg of CO2e per kWh	Estimated	From Alberta Environment reference documents.	Annual	Reference values adjusted as appropriate by Alberta Environment.

5.0 Data Management

Data quality management must be of sufficient quality to fulfill the quantification requirements and be substantiated by company records for the purpose of verification.

The project developer must establish and apply quality assurance and quality controls (QA/QC) management procedures to manage project data and information. Written procedures must be established for each measurement task outlining responsibility, timing and record location requirements. The greater the rigour of the management system for the data, the more easily verification will be to conduct for the project.

5.1 Project Documentation

Data collection, management and project monitoring for solution gas conservation projects must be done according to the requirements stated in the Energy Resources Conservation Board's *Directive 017: Measurement Requirements for Upstream Oil and Gas Operations* and must meet all the requirements outlined in this protocol.

It is anticipated that projects compiled under this protocol will be small sites and that a number of sites will need be aggregated to create projects of sufficient volume to support verification, registration and transaction costs. Site visits for a sample set are required for verification. Justification for the selection of sites must be provided in the verification.

5.2 Record Keeping

Alberta Environment requires that project developers maintain appropriate supporting information for the project, including all raw data for the project for a period of 7 years **after** the end of the project credit period. The project developer must keep the information listed below and disclose all information to the verifier and/or government auditor upon request.

Record Keeping Requirements:

- Raw baseline period data, independent variable data, and static factors within the measurement boundary
- A record of all adjustments made to raw baseline data with justifications
- All analysis of baseline data used to create mathematical model(s)
- All data and analysis used to support estimates and factors used for quantification
- Expected end of life date of equipment removed or renovated under the project
- Common practices relating to possible greenhouse gas reduction scenarios discussed in this protocol
- Metering equipment specifications (model number, serial number, manufacturer's calibration procedures)
- A record of changes in static factors along with all calculations for non-routine adjustments
- All calculations of greenhouse gas emissions/reductions and emission factors
- Measurement equipment maintenance activity logs
- Measurement equipment calibration records

- Initial and annual verification records and audit results

In order to support the third party verification and the potential supplemental government audit, the project developer must put in place a system that meets the following criteria:

- All records must be kept in areas that are easily located;
- All records must be legible, dated and revised as needed;
- All records must be maintained in an orderly manner;
- All documents must be retained for 7 years after the project crediting period;
- Electronic and paper documentation are both satisfactory; and
- Copies of records should be stored in two locations to prevent loss of data.

Note: Attestations will not be considered sufficient proof that an activity took place and will not to meet verification requirements.

5.3 Quality Assurance/Quality Control Considerations

Quality assurance/quality control (QA/QC) can also be applied to add confidence that all measurements and calculations have been made correctly. These include, but are not limited to:

- Ensuring that the changes to operational procedures continue to function as planned and achieve greenhouse gas reductions
- Ensuring that the measurement and calculation system and greenhouse gas reduction reporting remains in place and accurate
- Checking the validity of all data before it is processed, including emission factors, static factors, and acquired data
- Performing recalculations of quantification procedures to reduce the possibility of mathematical errors
- Storing the data in its raw form so it can be retrieved for verification
- Protecting records of data and documentation by keeping both a hard and soft copy of all documents
- Recording and explaining any adjustment made to raw data in the associated report and files.
- A contingency plan for potential data loss.

Contingent means for calculating or estimating the required data for the equations outlined in section 4 are summarized in Table 6 below.

Table 6.0: Contingent Data Collection Procedures

1.0 Project/Baseline Sources/Sinks	2. Parameter / Variable	3. Unit	4. Measured / Estimated	5. Method	6. Frequency	7. Justify measuren or estimation and frequency
Project Sources and Sinks						

P3 Solution Gas Capture	Volume of Each Type of Fuel Used / Vol. $Fuel_i$	L / m^3/ other	Estimated	Reconciliation of volume of fuel used or purchased within a given time period	Monthly	Provides reasonab estimate of the parameter, when m accurate and preci method cannot be us
P4 Solution Gas Venting	Volume of Solution Gas Vented During Non-Routine Procedures / Vol. $_{Solution\ Gas\ Vented}$	L / m^3 / other	Measured as outlined in D017	Obtained from required reporting records as per ERCB Directive 007 and 017.	Monthly	Provides reasonab estimate of the parameter, when m accurate and preci method cannot be us
P10 Fuel Extraction / Processing	Volume of Each Type of Fuel Combusted (excluding solution gas) for P5 and P6 / Vol. $Fuel_i$	L / m^3 / other	Estimate	Reconciliation of volume of fuel purchased within a given time period.	Monthly	Provides reasonab estimate of the parameter, when m accurate and preci method cannot be us
Baseline Sources and Sinks						
B4 Solution Gas Venting	Methane Composition of Solution Gas / % CH_4	%	Estimated	Interpolation of previous and following measurements taken or 90%, whichever is lower.	Annually	Solution gas composition shou remain relatively sta during steady-stat operation. Interpola gas composition provides a reasonal estimate when the m accurate and preci method cannot be us
	Volume of Solution Gas Injected into Pipeline / Vol. $_{Solution\ Gas\ Injected}$	L/ m^3/ other	Measured as outlined in D017	Obtained from required reporting records as per ERCB Directive 007; or, Reconciliation of volume of solution gas injected within given time period based on average flow rates.	Monthly	Provides reasonab estimate of the parameter, when th more accurate an precise method can be used.
	Volume of Solution Gas Used for Extraction / Vol. $_{Solution\ Gas\ Extraction}$	L/ m^3/ other	Measured as outlined in D017	Obtained from required reporting records as per ERCB Directive 007; or, Reconciliation of volume of	Monthly	Provides reasonab estimate of the parameter, when th more accurate an precise method can be used.

				solution gas injected within given time period based on average flow rates.		
	Volume of Solution Gas Used for Heating / Vol. Solution Gas Storage	L/ m^3/ other	Measured as outlined in D007	Obtained from required reporting records as per ERCB Directive 007; or, Reconciliation of volume of solution gas injected within given time period based on average flow rates.	Monthly	Provides reasonab estimate of the parameter, when t more accurate an precise method can be used.

5.4 Liability

Offset projects must be implemented according to the approved protocol and in accordance with government regulations. Alberta Environment reserves the right to audit offset credits and associated projects submitted to Alberta Environment for compliance under the *Specified Gas Emitters Regulation* and may request corrections based on audit findings.

2.2 Registration and Claim to Offsets

It is anticipated that emissions reductions from individual sites will be small and that multiple sites (offset projects) will need to be aggregated to form a single, corporate level project with sufficient volume to support verification and transaction costs.

Aggregated projects will need to track data based on GPS coordinates for the well sites where the solution gas conservation projects are being implemented. This information must be submitted to the Alberta Emissions Offset Registry as part of the required project documentation and will be used to track individual wells being included in the system. Information is kept confidential by the registry and is used to inform double counting checks on like project types registered on the Alberta Emissions Offset Registry.

If offset credits are being claimed for wells owned or operated by a different company, contractual arrangements must be made between all parties that may have an claim to the offset credits. Alberta Environment will not accept any offset credits for compliance that have unresolved ownership claims.

6 References

APPENDIX A:

Relevant Emission Factors

Table A1: Emission Intensity of Fuel Extraction and Production (Diesel, Natural Gas, and Gasoline)[3]

Diesel		
Production		
Emissions Factor (CO_2)	0.138	kg CO_2 per Litre
Emissions Factor (CH_4)	0.0109	kg CH_4 per Litre
Emissions Factor (N_2O)	0.000004	kg N_2O per Litre
Natural Gas		
Extraction		
Emissions Factor (CO_2)	0.043	kg CO_2 per m^3
Emissions Factor (CH_4)	0.0023	kg CH_4 per m^3
Emissions Factor (N_2O)	0.000004	kg N_2O per m^3
Processing		
Emissions Factor (CO_2)	0.090	kg CO_2 per m^3
Emissions Factor (CH_4)	0.0003	kg CH_4 per m^3
Emissions Factor (N_2O)	0.000003	kg N_2O per m^3
Gasoline		
Production		
Emissions Factor (CO_2)	0.138	kg CO_2 per Litre
Emissions Factor (CH_4)	0.0109	kg CH_4 per Litre
Emissions Factor (N_2O)	0.000004	kg N_2O per Litre

Table A2: Emission Factors for Natural Gas and NGL's[4]

Source	Emission Factors		
	CO_2	**CH_4**	**N_2O**
	g/m^3	**g/m^3**	**g/m^3**
Natural Gas			
Electric Utilities	1891	0.49	0.049
Industrial	1891	0.037	0.033
Producer Consumption	2389	6.5	0.06
Pipelines	1891	1.9	0.05
Cement	1891	0.037	0.034
Manufacturing Industries	1891	0.037	0.033
Residential, Construction, Commercial/Institutional, Agriculture	1891	0.037	0.035
	g/L	**g/L**	**g/L**
Propane			
Residential	1510	0.027	0.108
All Other Uses	1510	0.024	0.108
Ethane	976	N/A	N/A
Butane	1730	0.024	0.108

[3] Source: Quantification Protocol for Acid Gas Injection, v.1, May 2008. Alberta Environment.
[4] Source: Annex 12, Table A12-1 of the National Inventory Report: Greenhouse Gas Sources and Sinks in Canada, 1990 – 2006.

Table A3: Emission Factors for Refined Petroleum Products[5]

Source	Emission Factors (g/L)		
	CO_2	CH_4	N_2O
Light Fuel Oil			
Electric Utilities	2725	0.18	0.031
Industrial	2725	0.006	0.031
Producer Consumption	2643	0.006	0.031
Residential	2725	0.026	0.006
Forestry, Construction, Public Administration, and Commercial/Institutional	2830	0.026	0.031
Heavy Fuel Oil			
Electric Utilities	3124	0.034	0.064
Industrial	3124	0.12	0.064
Producer Consumption	3158	0.12	0.064
Residential, Forestry, Construction, Public Administration, and Commercial/Institutional	3124	0.057	0.064
Kerosene			
Electric Utilities	2534	0.006	0.031
Industrial	2534	0.006	0.031
Producer Consumption	2534	0.006	0.031
Residential	2534	0.026	0.006
Forestry, Construction, Public Administration, and Commercial/ Institutional	2534	0.026	0.031
Diesel	2663	0.133	0.4

Please refer to - http://www.glossary.oilfield.slb.com/MainIndex.cfm?ID=1

[5] Source: Annex 12, Table A12-2 of the National Inventory Report: Greenhouse Gas Sources and Sinks in Canada, 1990 – 2006.

SUMMARY OF CHANGES		
Original Submission (Husky Energy)	**AENV Revisions (in consultation with the ERCB)**	**Reason for Change**
	Up-dated to the new protocol format	Program consistency
Scope of protocol included all gas conservation including vented gas, flared gas, and on-site fuel gas use.	Scope of the protocol was restricted to vented gas less than 500m3 per day in the baseline scenario	Offsets must be generated from activities that are beyond business as usual and regulatory requirements. ▪ Directive 060 requires all vented gas over 500 m3 per day to be flared. ▪ Directive 060 applies a -$50,000 economic test for solution gas conservation. ▪ Use of solution gas as an on-site fuel is business as usual for the sector based on economic drivers. Offset projects must result in actual (permanent) reductions in greenhouse gas emissions. ▪ Shifting gas from flaring in the baseline to conservation will result in downstream (potentially outside Alberta) flaring in the project condition, and will not result in a net reduction in GHG emissions.
Scope included conservation of solution gas by injection into a natural gas pipeline.	Project eligibility was refined based on the emissions sources outlined in the point above.	

Seven protocol flexibility options existed to expand the scope of the protocol.	Two flexibility mechanisms were determined to meet offset system requirements. ▪ Ability to use site-specific emission factors generated in accordance with Directive 017 methodology; and ▪ Projects from multiple sites maybe aggregated to support offset commoditization.	Original flexibility mechanism and rational for rejection: ▪ Use of alternate monitoring methodologies – *Being removed from all protocols as projects must be implemented according to government accepted methodology reflected in the protocols.* ▪ Conservation of solution gas through use as a fuel gas or to generate on-site power – *deemed to be business as usual practice for the sector*. ▪ Ability to exclude sources and sinks – *projects must include all sources and sinks stated in the protocol. Sources and sinks that do not exist for a certain project will have a value of 0 and will not affect the project quantification.* ▪ Ability to use a baseline scenario of flaring – *baseline flaring to conservation results in a shift in emissions downstream of the project (combustion of the gas elsewhere in the system).* ▪ Flexibility to adapt to changing regulations – *does not meet the requirements of a flexibility mechanism.*
	Glossary of terms has been expanded to be more comprehensive and specific to Alberta.	

Solution gas capture and processing were excluded from credit quantification.	These sources/sinks have been included.	Included because solution gas capture will be greater in the project condition that in the baseline.
Solution gas processing and solution gas compression were listed as separate sources/sinks.	These sources were determined to be part of solution gas capture and processing.	
Vented solution gas had the option to be excluded	Included and all emissions must be metered and quantified.	Inventory completeness and directly affected by the revised scope of the protocol.
	Monitoring requirements expanded to meet new protocol requirements and Directive 017.	

PLACEHOLDER

ITEM: **4.1 New/Other Business**

ISSUE: Subject to the availability of selected Board members in the month of August, the Secretariat may table suggested amendments to CASA processes and procedures for discussion.

Clean Air Strategic Alliance
List of Stakeholder Groups and Representatives
as July 28, 2011

Stakeholder Group	***Sector***	***Member***	***CASA Board Representative***	
			Director, Association/Affiliation	***Alternate Director, Association/Affiliation***
Industry	Petroleum Products	Canadian Petroleum Products Institute	**Cindy Christopher**, Manager Environmental Policy & Planning Imperial Oil Limited	**Ted Stoner**, Vice President Western Division Canadian Petroleum Products Institute
Industry	Oil & Gas – Large Producers	Canadian Association of Petroleum Producers	**Vacant**	**Bill Clapperton**, Vice President Regulatory Stakeholder & Environmental Affairs Canadian Natural Resources Limited
Government	Federal Government	Environment Canada	**Mike Norton,** Executive Director Environment Canada	**Rachel Mintz**, Head, Air Quality Science Unit Environment Canada
Industry	Mining	Alberta Chamber of Resources	**Peter Darbyshire**, Vice-President Graymont Limited	**Dan Thillman**, Plant Manager Lehigh Cement
Government	Provincial Government – Environment	Alberta Environment	**Jim Ellis**, Deputy Minister Alberta Environment	**Bev Yee**, Assistant Deputy Minister Environmental Stewardship Division Alberta Environment
Industry	Forestry	Alberta Forest Products Association	**Brian Gilliland**, Manager Environmental Affairs Canada Weyerhaeuser Co. Ltd.	**Keith Murray**, Director Environmental Affairs Alberta Forest Products Association
Industry	Alternate Energy		**Vacant**	**David Lawlor**, Manager Environmental Affairs ENMAX
NGO	NGO Health	The Lung Association - Alberta & NWT	**Leigh Allard**, President & CEO The Lung Association - Alberta & NWT	**Eileen Gresl Young**, Manager COPD & Asthma Network of Alberta
Aboriginal Government	First Nations	Samson Cree Nation	**Holly Johnson Rattlesnake** Samson Cree Nation	**Vacant**
Government	Provincial Government – Health	Alberta Health and Wellness	**Margaret King,** Assistant Deputy Minister Public Health Division Alberta Health and Wellness	**Dawn Friesen**, Acting Executive Director Health Protection Alberta Health and Wellness
NGO	NGO Pollution	Toxics Watch Society of Alberta	**Myles Kitagawa**, Senior Associate Director Toxics Watch Society of Alberta	**Vacant**
Government	Local Government - Rural	Alberta Association of Municipal Districts & Counties	**Carolyn Kolebaba,** Vice President Reeve, Northern Sunrise County Alberta Association of Municipal Districts & Counties	**Vacant**

Clean Air Strategic Alliance
List of Stakeholder Groups and Representatives
as July 28, 2011

Industry	Chemical Manufacturers	Canadian Chemical Producers Association	**Yolanta Leszczynski,** SD/ Env Regulatory Coordinator Scotford Manufacturing	**Al Schulz**, Regional Director Chemistry Industry Association of Canada
Aboriginal Government	Métis	Métis Settlements General Council	**Louis Pawlowich**, Environmental Coordinator Métis Settlements General Council	**Vacant**
NGO	NGO Pollution	Pembina Institute	**Chris Severson-Baker**, Managing Director Energy Watch Program Pembina Institute	**Ruth Yanor** Mewassin Community Council
NGO	NGO Wilderness	Prairie Acid Rain Coalition	**David Spink** Prairie Acid Rain Coalition	**Ann Baran** Southern Alberta Group for the Environment
Government	Local Government – Urban	Alberta Urban Municipalities Association	**Linda Sloan**, Vice President & Director Cities over 500,000 Alberta Urban Municipalities Association	**Cindy Jefferies**, Director Cities up to 500,000 Alberta Urban Municipalities Association
Industry	Oil & Gas – Small Producers	Small Explorers and Producers Association of Canada	**John Squarek** Small Explorers and Producers Association of Canada	**Vacant**
Industry	Agriculture	Alberta Beef Producers	**Rich Smith**, Executive Director Alberta Beef Producers	**Dwayne Marshman** Wild Rose Agricultural Producers
NGO	Consumer Transportation	Alberta Motor Association	**Don Szarko**, Director Alberta Motor Association	**Vacant**
Government	Provincial Government – Energy	Alberta Energy	**Peter Watson**, Deputy Minister Alberta Energy	**Jennifer Steber**, Assistant Deputy Minister Alberta Energy
Industry	Utilities	TransAlta Corporation	**Don Wharton**, Vice President Sustainable Development TransAlta Corporation	**Jim Hackett**, Senior Manager, Aboriginal Relations Health, Safety & Environmental ATCO Power Canada Ltd.

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For September 2011 Briefing Package

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