CASA's Performance Measurement Strategy: A "how to" guide to performance measurement at CASA



Prepared by the

Performance Measures Review Working Group
for the

Clean Air Strategic Alliance
Board of Directors

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Acronyms

AER Alberta Energy Regulator

AMSP Ambient Monitoring Strategic Plan

AQ Air quality

AQM Air quality management

CAMS Comprehensive Air quality Management System

CASA Clean Air Strategic Alliance CC Communications Committee CDM Collaborative decision making

CDW CASA Data Warehouse EC Environment Canada

ESRD Alberta Environment and Sustainable Resource Development

GoA Government of Alberta

MCP Managing Collaborative Processes guide
NPRI National Pollutant Release Inventory
PMC Performance Measures Committee
PMF Performance measurement framework

PMRWG Performance Measures Review Working Group

ppm Parts per million

SMART Specific, Measurable, Action-oriented, Realistic, Time-bound

SoE State of the Environment

List of Chemical Formulas

H₂S Hydrogen sulphide NO₂ Nitrogen dioxide NO_x Nitrogen oxides

O₃ Ozone

PM_{2.5} Particulate matter of a size of 2.5 microns in diameter or less

SO₂ Sulphur dioxide SO_x Sulphur oxides

Glossary

Activity An operation or work process that is internal to an organization and

uses inputs to produce outputs.1

Balanced Scorecard An integrated framework for describing and translating strategy

through the use of linked performance measures in four balanced perspectives: Customer, Internal Process, Employee Learning and

Growth, and Financial.²

CASA Stakeholder Specific entities (e.g. organizations, departments, companies) that have

a stake in the outcome and/or an interest in the particular air quality

issue being addressed by CASA.³

CASA Strategic Plan This document sets out the vision, mission, and principles for CASA. It

describes the purpose CASA will fulfill, outlines the organization's four goals, and provides the blueprint for achieving those goals. The plan provides a structure that can be used to amend operating policy

and make day-to-day decisions.

Criteria The development and review of performance measures/indicators at

CASA is governed by a set of Criteria and Principles that were developed and approved by the CASA Board in 2001. Criteria are defined as "must do", while Principles are defined as "should do".

Impact The fundamental intended or unintended change occurring in

organizations, communities or systems as a result of program activities

within 7 to 10 years.⁴

Input Resources available to do work.

Logic Model Provides stakeholders with a road map describing the sequence of

related events connecting the need for the planned program with the

program's desired results.⁴

Metric A qualitative or quantitative standard of measurement.

¹ Treasury Board of Canada Secretariat. (2010). *Supporting Effective Evaluations: A guide to Developing Performance Measurement Strategies*. Available Online http://www.tbs-sct.gc.ca/cee/dpms-esmr/dpms-esmr00-eng.asp.

² Niven, Paul R. (2008). *Balanced Scorecard Step-by-Step for Government and Nonprofit Agencies*, 2nd Edition. John Wiley & Sons, Inc.: New Jersey.

³ CASA Procedural Guidelines Committee. (2009). CASA Procedural Guidelines.

⁴ W.K. Kellogg Foundation. (2004). W.K. Kellogg Foundation Logic Model Development Guide. Available Online http://www.wkkf.org/knowledge-center/resources/2006/02/WK-Kellogg-Foundation-Logic-Model-Development-Guide.aspx.

Objective

A concise statement describing the specific things an organization must do well in order to execute its strategy. Objectives often begin with an action verb such as "increase", "reduce", "improve", "achieve" and so on.²

Outcome

Specific changes in behaviour, knowledge, skills, status and level of functioning. Short-term outcomes should be attainable within 1 to 3 years, while longer-term outcomes should be achievable within a 4 to 6 year timeframe.⁴

Output

The direct products of program activities and may include types, levels and targets of services to be delivered by the program.⁴

Performance indicator

A quantitative and/or qualitative metric that allows an organization to indirectly measure organizational goals/objectives in order to understand the impact of its activities on societal norms and behaviours. It differs from a performance measure in that the results go beyond the scope of the organization to describe the performance of a higher-level, complex system and are not compared to a desired target.

Example: A pulp and paper mill located on a lake is undertaking an effluent reduction program. One objective of this program is to improve overall lake health and the mill chooses to monitor levels of a few key substances in the lake as a performance indicator. The mill has minimal control over this outcome as there are many other non-point sources of pollution on the lake, but this indicator can help to illustrate what is going on in the big picture, determine future areas requiring action and could potentially show the influence of the program on lake health over time.

Performance measure

A quantitative and/or qualitative metric that measures the results from organizational goals/objectives and compares them to a desired target in order to assess organizational efficiency. It differs from a performance indicator in that it measures results over which an organization has some degree of control.

Example: A pulp and paper mill located on a lake is undertaking an effluent reduction program. One objective of this program is to reduce effluent released into the lake and the mill chooses volume of effluent released into the lake per year as a performance measure with a target of a 50% reduction in effluent volume over the first 5 years. The mill has a high degree of control over this outcome and the measure directly shows the success/failure of the program.

Performance measurement

The ongoing monitoring and reporting of program accomplishments, particularly progress towards pre-established goals. It can serve as an

early warning system to management and as a vehicle for improving accountability.⁵

Performance measurement framework Sets out an objective basis for collecting information related to a department's programs. A PMF includes performance measures/indicators and associated targets, data sources and data

collection frequency.¹

Performance measurement strategy

The selection, development and ongoing use of performance measures to guide program or corporate decision making.¹

Performance review

A periodic re-examination of a performance measurement system to ensure that the system is up-to-date, relevant and well-designed.

Principle

The development and review of performance measures/indicators at CASA is governed by a set of Criteria and Principles that were developed and approved by the CASA Board in 2001. Criteria are defined as "must do", while Principles are defined as "should do".

Qualitative

Qualitative indicators are expressed in expository form, e.g. assessment of research quality. As much as possible, qualitative indicators should be condensed into a rating scale, e.g. research quality is rated as "excellent," "average" or "below average." allowing for comparability over time.¹

Quantitative

Quantitative performance measures/indicators are composed of a number and a unit. The number indicates the magnitude (how much) and the unit gives the number its meaning (what), e.g. the number of written complaints received.¹

Target

Represents the desired result of a performance measure. Targets make meaningful the results derived from measurement and provide organizations with feedback regarding performance.²

⁵ United States Government Accountability Office. (2011). *Performance Measurement and Evaluation: Definitions and Relationships*. Available Online http://www.gao.gov/new.items/d11646sp.pdf.

1. Introduction

A performance measurement strategy is a results-based management tool that is used to guide the selection, development and ongoing use of performance measures and indicators. CASA's Performance Measurement Strategy (the Strategy) is meant to act as a repository and guide about all aspects of performance measurement at CASA. The Strategy is based on the model from the Treasury Board of Canada with input from the Office of the Auditor General of Canada.

2. History of Performance Measurement at CASA

The 1993 Stakeholder Prospectus and Business Plan outlines CASA's original strategy for performance measurement. It states that there are two distinct types of performance criteria to measure:

- "First, the environmental and economic consequences of the Alliance initiatives; and
- Second, the efficiency and effectiveness of the Organization."

It goes on to say that "[t]his will include specific performance measures for the process used, the specific outputs of the activities, the longer term results of these outputs, and the degree to which these air quality issues are resolved and do not [re]occur. Measures of success will include levels of public and stakeholder satisfaction with processes used and the content of outcomes." In 1995, work to develop performance measurement continued as four expectations were defined for CASA:

- Improved air quality,
- Trust and credibility,
- Effective organization, and
- Recognized/influential organization.

These expectations were used to develop CASA's first performance measures which were laid out in the 1999-2002 Business Plan:

- 1. Improved air quality indicators in areas of CASA action.
- 2. Capability to measure air quality effects on humans and ecosystems.
- 3. Number of recommendations through CAMS process implemented.
- 4. Degree of CASA members, partners and clients' satisfaction with the CASA approach.
- 5. Degree of recognition by emitters and general public of CASA as the vehicle for delivering improved air quality management for Alberta.

In 2000, a subcommittee of the Board (now the Performance Measures Committee (PMC)) was tasked to establish a framework, select indicators, and assess CASA's performance with respect to the five performance measures. The subcommittee worked from 2001-2004 to develop metrics for each of the five performance measures. In 2004, the CASA Board determined that a process should be developed to periodically review performance measurement at CASA with the

⁶ The expectations, and associated goals, can be found in the CASA 1999-2002 Business Plan.

first review being completed in 2007. At this time, #1 from the original five performance measures was expanded so that CASA's performance measures read:

- 1. a) Improved air quality indicators in areas of CASA action.
 - b) Change in emissions of substances of concern in areas of CASA action.
 - c) Energy use as an indirect measure of air quality in areas of CASA action.
- 2. Capability to measure air quality effects on humans and the ecosystem.
- 3. Number of recommendations implemented through CAMS.
- 4. Degree of CASA members, partners and clients' satisfaction with the CASA approach.
- 5. Degree of recognition by emitters and general public of CASA as a major vehicle for delivering improved air quality management for Alberta.

The 2007 review also saw some of the original indicators altered as was the case during the 2009 review. The 2012 review resulted in the creation of CASA's Performance Measurement Strategy which guides performance measurement at CASA.

3. Guidance for Performance Measurement at CASA

The purpose of this section is to describe the key pieces of information that underlie performance measurement at CASA and the choice of measures and indicators that are used.

3.1. Purpose

Performance measurement at CASA is meant to track the overall performance of the organization as well as progress made towards CASA's vision, mission and goals from the Strategic Plan.

As a result, according to CASA's original work on developing performance measures from October 2000, performance measurement at CASA should clarify:

- Decisions to be made
- Accountability/comparison
- What works and what doesn't
- The need for course corrections
- Opportunities for continuous improvement

Traditionally, performance measurement at CASA has been driven by the four expectations and by the Strategic Plan (previously termed the Business Plan).

3.1.1. Four Expectations

In 1995, four expectations were defined to guide performance measurement at CASA:

- Improved air quality,
- Trust and credibility,
- Effective organization, and
- Recognized/influential organization.

⁷ Details on the 2007 and 2009 reviews can be found in Section 6-Performance Review Strategy.

The 2011 CASA Mission Review found that these four expectations continue to be consistently reflected in CASA's performance measures.⁸

3.1.2. Strategic Plan

The work of the Performance Measures Committee has traditionally been driven by the Strategic Plan. It is important to report on activities related to the Strategic Plan in order to measure organizational efficiency. The 2012-2016 Strategic Plan which was approved by the CASA Board in March 2012 states that "...there is a need to regularly assess CASA's effectiveness across a range of performance measures and for periodic evaluation of CASA's performance by members and stakeholders. These measures and assessments will contribute to plan revisions".

3.2. Audience

In CASA's original work on developing performance measures from October 2000, the audience for CASA's performance measures was identified as CASA teams/CASA Board, CASA stakeholders and the general public. In March 2001, CASA stakeholders (i.e. individuals and organizations associated with CASA) were identified as the primary audience for CASA's performance measurement.⁹

As CASA has evolved, the audience for performance measurement at CASA has now been refined to include:

- CASA stakeholders (including CASA teams),
- CASA Secretariat.
- CASA Board, and
- The general public.

3.3. Criteria and Principles

The development and review of performance measures/indicators is governed by a set of Criteria and Principles that were developed and approved by the CASA Board in 2001 and updated in 2012. Criteria are defined as "must do", while Principles are defined as "should do".

3.3.1. Criteria

Performance measures/indicators must:

- Be defensible, open to independent scrutiny, and transparent in their selection and evaluation.
- Be understandable and meaningful.
- Clearly identify whether progress has been made.
- Be measurable.

3

⁸ Consequently, if there is ever a change in organizational direction at CASA, these expectations will need to be revisited.

⁹ Report to Board March 2001

3.3.2. Principles

Performance measures/indicators should:

- Relate to CASA's vision, mission and goals from the Strategic Plan.
- Not be required to be comprehensive and need only apply to some measurable changes ¹⁰ that can be expected as a result of CASA's activities.
- Be based on current knowledge and current measurements (or easily obtainable measurements).
- Use data that is readily available, accessible and reliable.
- Be cost effective.
- Use baseline information to assess progress.
- Where appropriate, incorporate existing measures/indicators rather than duplicate the effort and work of others.
- Assist analysis by focusing attention on key issues.

4. Methodology

This section briefly outlines the methodology that was used to develop CASA's performance measures and indicators which are presented in section 5 of the Strategy. The application of performance measurement theory to performance measurement at CASA adds legitimacy and credibility to the development and choice of performance measures and indicators. It increases the overall robustness of the Strategy.

Performance measurement at CASA draws from two theories of performance measurement: the Logic Model and the Balanced Scorecard. The Logic Model forms the backbone of performance measurement at CASA while select concepts from the Balanced Scorecard were incorporated to enhance the Logic Model. CASA's Logic Model Diagram is used as a tool to guide the selection of appropriate performance measures and indicators (see Appendix 1).

¹⁰ The principle that was actually approved by the board was stated as "the indicators need not be comprehensive and need only apply to some measurable changes in air quality that can be expected as a result of CASA's activities" but the words "in air quality" were subsequently deleted by the subcommittee to make the principle applicable for all performance indicators.

¹¹ Refer to the 2012 Performance Measures Review Report for details on the theory of the Logic Model and the Balanced Scorecard.

5. Performance Measurement Framework

The Performance Measurement Framework identifies the performance measures and indicators used to assess the performance of an organization. Additionally it provides a blueprint that describes the collection, calculation and reporting of those measures and indicators.

5.1. CASA's Performance Measures and Indicators

CASA's performance measures and indicators are presented in two tables: one for measures (Table 1) and one for indicators (Table 2). For simplicity, the Comprehensive Performance Measurement Framework including targets, baselines, data collection and reporting as well as detailed Calculation Protocols for each measure and indicator are located in Appendix 2 and 3 respectively.

Measures and indicators should be delivered to the CASA Board at the March Board meeting by the PMC in the form of a report and presentation so that the results can be approved for inclusion in the CASA annual report, if appropriate. Some performance measures are meant only for consideration by the CASA Board while others are relevant both to the CASA Board and beyond (see Appendix 2).

Table 1: CASA's Performance Measures.

Objective	Performance Measure	Target	Initiative(s)
	Secre	tariat	
Ensure that CASA is financially efficient and accountable.	 Annual operations and cash flows are in accordance with Canadian generally accepted accounting principles (GAAP). Sufficient operating funds are available to bridge CASA's and GoA's fiscal years. 	In compliance 3 months of operating funds	CASA annual audit; Monthly bank reconciliation; Prepare and track budgets, etc.
Implement the CASA Strategic Plan.	 Percentage of objectives from the Strategic Plan listed as in progress or complete (according to the Secretariat's colour coded rating system). 	100%	Secretariat implements and monitors implementation of the Strategic Plan
Monitor the implementation of CASA recommendations.	 Percentage of low-rated recommendations being monitored. 	100%	PMC monitors and follows-up on low-rated recommendations and reports annually to Board; Board makes decisions regarding next steps on low-rated recommendations
Provide support to CASA stakeholders.	 Degree of CASA members, partners and stakeholders' satisfaction with CASA. Project teams' degree of satisfaction with support provided by Secretariat. 	Maintain or increase Maintain or increase	Providing training and advice on CDM and MCP; Anticipating and monitoring issues; Coordinating the production of project team publications; Drafting and reviewing background, policy and communications materials; Tracking progress on workplans and "making things happen"; Facilitating meeting processes and arranging meeting logistics
	Во	oard	
Encourage Board member participation in CASA.	 Percentage of Board attendance at Board meetings by sector. Project teams' degree of satisfaction with support provided by Board member counterparts, by sector. 	75% Maintain or increase	Commitment from the Board to CASA; Regular liaising between the Secretariat, the Board and project team members.
Strategic Plan G	•	•	nd the impacts of major policy initiatives on air
Influence and inform AQ policy.	Documents produced to inform GoA & other stakeholders which includes a	Demonstrate influence	Periodically determining and prioritizing emerging air quality issues; Expanding screen and scope activities;

	summary of the document and a		Reports produced by project teams and committees;
	qualifying description of the anticipated		Documents developed to inform policy through the
	influence on air quality.		board, etc. (outside of project teams or committees)
Strategic Plan Go	oal 2: To contribute to the continued develop	ment and imp	plementation of effective and efficient air quality
	managemen	t in Alberta.	
Develop reports and recommendations using the CDM process.	 Degree of satisfaction with project team work by team: The Project Charter was completed. The work was completed in a timely manner. The process was collaborative. The team developed SMART (Specific, Measurable, Actionable, Realistic, Timebound) recommendations. 	75% 75% 75% 75%	Foster dialogue amongst stakeholders; Effectively engage stakeholders; Coordinate the provision of policy advice through new and existing project teams
			nprehensive, objective knowledge system with
	to air quality, health, and environmental imp		
Provide available	Number of visits to CASA's Information	Maintain or	Create and maintain a clearinghouse for air information
AQ information.	Portal webpage.	increase	and air quality history; Create and maintain a repository
	Number of phone inquiries for	Maintain or	for information from other jurisdictions; Provide
	information.	increase	strategic advice on the CASA Data Warehouse
Strategic Plan G			, understanding, and commitment to air quality
	managemen		
Improve project	 Project teams' degree of satisfaction with 	Maintain or	Orientation and training for project teams; Promote use
team knowledge of	capacity to participate in collaborative	increase	of MCP guide; Develop and maintain a community of
the CDM process.	processes.		practice; Support from Secretariat and Board members
Increase awareness	Number of 3 rd party requests for CASA	Maintain or	Promote CASA's key messages; Maintain an effective
of CASA, CASA	assistance.	increase	and functional website; Explore various avenues for
projects and CDM.	 Number of return and unique visitors to 	Maintain or	outreach and public awareness campaigns; Partner with
	website.	increase	other stakeholder on communications; Convene
	 Number of news stories about CASA. 	Maintain or	periodic air forums for exchanging information;
		increase	Develop and maintain a community of practice;
			Promote CASA as a hub of information-sharing and
			networking

Table 2: CASA's Performance Indicators.

Objective	Performance Indicator
Implement CASA recommendations.	 Percentage of substantive recommendations from 4 years prior that have been implemented.
Measure impact of completed project team work.	• Each completed project team comes up with one specific metric to measure success of team 5 years in the future.
Improve air quality in Alberta.	 Annual average ambient concentrations of: NO₂, SO₂, PM_{2.5}, H₂S, O₃, benzene, and wet acid deposition Annual peak concentrations of: NO₂, SO₂, PM_{2.5}, H₂S, O₃, and benzene Percent hourly exceedances of: NO₂, SO₂ and H₂S Percentage of stations assigned to all management levels defined by the Canadian Ambient Air Quality Standards based on annual three-year data assessments completed by Alberta Environment and Sustainable Resource Development. Annual total emissions from power generation for NO_x, SO_x, PM_{2.5}, and mercury The change in flaring and venting associated with solution gas, well test and coalbed methane
Improve capacity to monitor AQ in Alberta.	 The percentage of monitoring stations and/or parameters implemented from the 2009 Ambient Monitoring Strategic Plan (AMSP). Geographic percentage of province covered by airshed zones.

5.2. Guidelines for Project Teams

The performance measures and indicators outlined in Section 5.1 are for CASA as an organization. An important part of CASA's work is that of the Project Teams. Project Teams are responsible for their own performance measures and should also be aware of any requirements to provide data to CASA's performance measures and indicators (see Appendix 4).

6. Performance Measurement Review Strategy

6.1. <u>History of the Performance Measurement Review</u>

In 2004, the CASA Board determined that a process should be developed to periodically review performance measurement at CASA with the first review being completed in 2007, the second in 2009 and the third in 2012.

In March 2007, an extensive review was completed and 22 recommendations were brought to the CASA Board. The Board asked the PMC to make some changes and clarifications and report back. The PMC brought forward revised reports in June and September 2007 when a final agreement was reached and 14 recommendations from the PMC were approved. At this time, #1 from the original five performance measures was expanded so that CASA's performance measures read:

- 1. a) Improved air quality indicators in areas of CASA action.
 - b) Change in emissions of substances of concern in areas of CASA action.
 - c) Energy use as an indirect measure of air quality in areas of CASA action.
- 2. Capability to measure air quality effects on humans and the ecosystem.
- 3. Number of recommendations implemented through CAMS.
- 4. Degree of CASA members, partners and clients' satisfaction with the CASA approach.
- 5. Degree of recognition by emitters and general public of CASA as a major vehicle for delivering improved air quality management for Alberta.

It also established the current performance measurement review process that is outlined later in this section. 12

In December 2009, the PMC presented their recommendations to the CASA Board arising from the 2009 review. The CASA Board approved these recommendations in principle subject to further detail being provided at the next Board meeting. In June 2010, the Board approved 4 out of 5 of the PMC's recommendations. These recommendations encompassed 2 new indicators and 2 revised indicators. During the discussions around the 2010 Performance Measures report in March 2011, it was clarified that there would be 1 new indicator and 2 revised indicators used going forward:¹³

¹² All 14 recommendations can be found in the September 2007 report "Performance Measures Review Updated Final Report to the Board".

¹³ Please note that during the 2007 and 2009 reviews, different definitions of performance measure and indicator were used that are defined in the glossary of this Strategy. At this time performance measures were used to assess

- Performance Measure 1a:
 - Indicator: Percentage of stations assigned to action by the CASA Particulate Matter and Ozone Management Framework based on annual three-year data assessments completed by Alberta Environment. (new)
- Performance Measure 1b:
 - o Indicator: The change in flaring and venting associated with solution gas, well test and coalbed methane. (revised)
- Performance Measure 2:
 - o Indicator: The percentage of monitoring stations and/or parameters implemented from the 2009 Ambient monitoring Strategic Plan (AMSP). (revised)

6.2. Review Process

A review should be conducted every 3 years, with reviews scheduled to occur in 2015, 2018, 2021, etc. The review is led by the PMC. In the past, members of the CASA Board have volunteered to participate in the review process alongside the PMC. Given the length of time this process can take, it is recommended to begin the process early in the year, potentially even in the fall prior to the year the results are due. In terms of timing, the review should follow the review and approval of CASA's Strategic Plan. Any changes that are made to performance measurement as a result of the review should be updated in the CASA Performance Measurement Strategy (upon approval by the Board).

The performance measurement review should include the following steps:

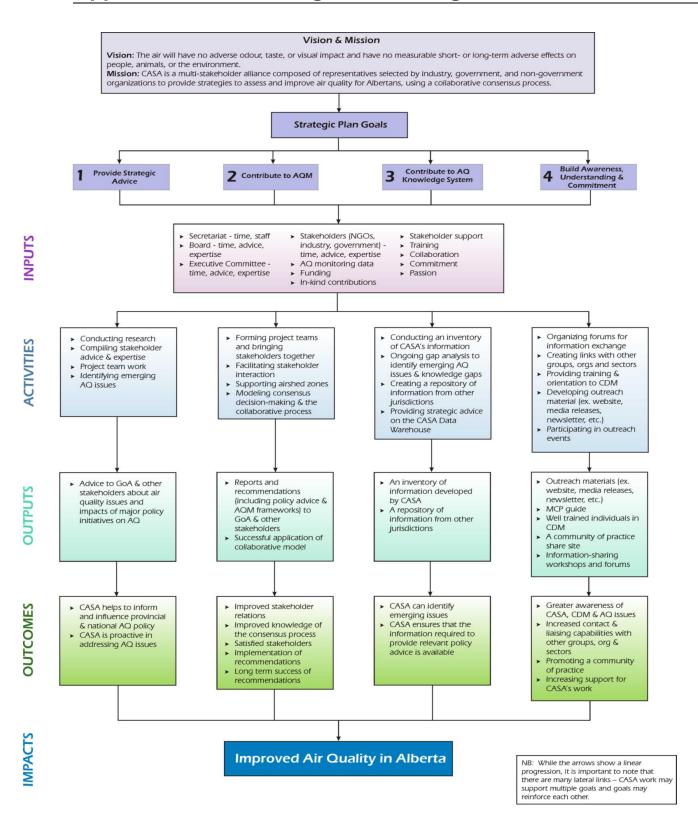
- review the relevancy of the existing performance measures and indicators to the CASA mission, vision, and goals from the Strategic Plan;
- review the consistency of the existing performance measures and indicators with the Principles and Criteria;
- solicit input from the Board on all aspects of the performance measures and indicators, including the Principles and Criteria, the existing performance measures and indicators and desirable additional measures and indicators;
- solicit input from CASA teams and review past team reports regarding all aspects of the performance measures and indicators;
- review relevant reports and documents for ideas and information on all aspects of performance measurement;
- review, and update if required, the CASA Logic Model Diagram (Appendix 1);
- review whether a qualitative or quantitative metric (or combination of both) is the most appropriate way to present results;
- review targets and initiatives associated with each performance measure and indicator;
- from information gathered in these ways decide what measures and indicators should be dropped, revised or added;
- develop calculation protocols for new and revised measures and indicators; and

• report to the Board.

6.3. Soliciting Input During the Review Process

The steps outlined in the review process state that the CASA Board and CASA project teams should be solicited for input on performance measurement. The method and extent of consultation is at the discretion of the reviewers who are expected to incorporate consultations whenever it is suitable in order to complete a comprehensive review. In the past, consultations have consisted of a survey to project team members, questionnaires to project team co-chairs, presentations and discussion questions delivered at the CASA Board meetings and consultations with the Communications Committee.

Appendix 1: CASA's Logic Model Diagram



Appendix 2: Comprehensive Performance Measurement Framework

Table 3: CASA's Performance Measures.

Objective	Performance Measure(s)	Tar-get	Date to achieve target	Data Source	Reporting Frequency	Reporting Venue	Baseline	Responsible for data Collection	Responsible for Data Calculation	Cost (\$)
	,		Secretar		1	1		_		
Ensure that CASA is financially efficient and accountable.	Annual operations and cash flows are in accordance with Canadian generally accepted accounting principles (GAAP).	In compl iance	Annually	CASA Secretari at	Annually	PMC annual report, CASA annual report	2013	CASA Financi al Admini strator	PMC	0
	Sufficient operating funds are available to bridge CASA's and GoA's fiscal years.	mont hs of operat ing funds	Annually	CASA Secretari at	Annually	PMC annual report	2013	CASA Financi al Admini strator	PMC	0
Implement the CASA Strategic Plan.	Percentage of objectives from the Strategic Plan listed as in progress or complete (according to the Secretariat's colour coded rating system).	100%	Annually	CASA Secretari at	Annually	PMC annual report	2013	CASA Secretar iat	PMC	0
Monitor the implementation of CASA recommendations.	Percentage of low-rated recommendations being monitored. ¹⁴	100%	Annually	CASA Secretari at	Annually	PMC annual report	2013	PMC	PMC	0
Provide support to CASA stakeholders.	Degree of CASA members, partners and stakeholders' satisfaction with CASA.	Maint ain or increa se	Every 3 years	CASA Satisfacti on Survey	Every 3 years	PMC annual report, CASA annual report	2007	PMC	PMC	0

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¹⁴ See Appendix 6 for more information on low-rated recommendations.

Objective	Performance Measure(s)	Tar-get	Date to achieve target	Data Source	Reporting Frequency	Reporting Venue	Baseline	Responsible for data Collection	Responsible for Data Calculation	Cost (\$)
0	Project teams' degree of satisfaction with support provided by Secretariat.	Maint ain or increa se	Annually	CASA Project Team Biannual Survey	Annually	June results: provided to project managers December results: PMC annual	2013	Project Manage rs	PMC	0
			Board	1		report				
Encourage Board member participation in CASA.	Percentage of Board attendance at Board meetings by sector.	75%	Annually	CASA Secretari at	Annually	PMC annual report, CASA annual report	2013	PMC	PMC	0
C/IO/I.	Project teams' degree of satisfaction with support provided by Board member counterparts by sector.	Maint ain or increa se	Annually	CASA Project Team Biannual Survey	Annually	June results: provided to project managers December results: PMC annual report	2013	Project Manage rs	PMC	0
	Goal 1: To provide strategic advice on	air quali	ty issues and	d the impact	ts of major p	1	n air qu	ality.		<u> </u>
Influence and inform AQ policy.	Documents produced to inform GoA & other stakeholders which includes a summary of the document and a qualifying description of the anticipated influence on air quality.	Demo nstrat e influe nce	Annually	CASA Secretari at records	Annually	PMC annual report, CASA annual report	2013	CASA Secretar iat	PMC	0
	: To contribute to the continued developm	ent and i								
Develop reports and recommendatio ns using the CDM process.	Degree of satisfaction with project team work by team: -The Project Charter was completedThe work was completed in a timely manner.	75% 75%	By completi on of project team	CASA Project Team Exit Survey	Annually (as required)	PMC annual report, CASA annual report	2013	Project manage rs	PMC	0

Objective	Performance Measure(s) -The process was collaborative.	Tar-get	Date to achieve target	Data Source	Reporting Frequency	Reporting Venue	Baseline	Responsible for data Collection	Responsible for Data Calculation	Cost (\$)
	-The team developed SMART (Specific, Measurable, Actionable, Realistic, Time-bound) recommendations.	75%								
Goal 3: To contr	ibute to the development of a reliable, con impacts, o				e system with mechanisms		ıality, he	alth, and e	nvironmeni	tal
Provide available AQ information.	Number of visits to Information Portal webpage.	Maint ain or increa se	Annually	Google analytics	Annually	PMC annual report, CASA annual report	2014	PMC	PMC	0
	Number of phone inquiries for information.	Maint ain or increa se	Annually	CASA Secretari at	Annually	PMC annual report, CASA annual report	2014	CASA Executi ve Assistan t	PMC	0
	: To communicate information that build									
Improve project team knowledge of the CDM process.	Project teams' degree of satisfaction with capacity to participate in collaborative processes.	Maint ain or increa se	Annually	CASA Project Team Biannual Survey	Annually	June results: provided to project managers December results: PMC annual report meeting	2013	Project manage rs	PMC	0
Increase awareness of CASA, CASA projects and CDM.	Number of 3 rd party requests for CASA assistance.	Maint ain or increa se	Annually	CASA Secretari at	Annually	PMC annual report, CASA annual report	2014	CASA Executi ve Director	PMC	0
	Number of return and unique visitors to	Maint	Annually	Google	Annually	PMC annual	2006/	PMC	PMC	0

Objective	Performance Measure(s)	Tar-get	Date to achieve target	Data Source	Reporting Frequency	Reporting Venue	Baseline	Responsible for data Collection	Responsible for Data Calculation	Cost (\$)
	website. Number of news stories about CASA.	ain or increa se	Annually	analytics Infomart	Annually	report, CASA annual report	2011	CC	CC	0
		ain or increa se				report, CASA annual report				

Table 4: CASA's Performance Indicators.

Objective	Performance Indicator	Data Source	Reporting Frequency	Reporting Venue	Baseline	Responsible for data Collection	Responsible for Data Calculation	Cost (S)
Implement CASA recommendations.	Percentage of substantive recommendations from 4 years prior that have been implemented.	Various, see Appendi x 3	Annually	PMC annual report, CASA annual report	1997	PMC	PMC	0
Measure impact of completed project team work.	Each completed project team come up with one specific metric to measure success of team 5 years in the future.	Unique to each project	Once, 5 yrs post project	PMC annual report, CASA annual report	5 years prior	PMC	PMC	0
Improve air quality in Alberta.	Annual average ambient concentrations of: NO ₂ , SO ₂ , PM _{2.5} , H ₂ S, O ₃ , benzene, and wet acid deposition.	CDW, ESRD SoE Report	3 years	PMC annual report, CASA annual report	1994	ESRD	ESRD	0
	Annual peak concentrations of: NO ₂ , SO ₂ , PM _{2.5} , H ₂ S, O ₃ , and benzene.	CDW, ESRD SoE Report	3 years	PMC annual report, CASA annual report	1994	ESRD	ESRD	0

	Percent hourly exceedances of: NO ₂ , SO ₂ and H ₂ S.	Industrial complian ce data, all available ambient monitori ng stations ESRD	3 years	PMC annual report, CASA annual report	1994	ESRD	ESRD	0
	Percentage of stations assigned to all management levels defined by the Canadian Ambient Air Quality Standards based on annual three-year data assessments completed by Alberta Environment and Sustainable Resource Development.	CDW, ESRD SoE Report	3 years	PMC annual report, CASA annual report	2001	ESRD	ESRD	0
	Annual total emissions from power generation for NO _x , SO _x , PM _{2.5} , and mercury.	NPRI report from EC	3 years	PMC annual report, CASA annual report	1990	ESRD	ESRD	0
	The change in flaring and venting associated with solution gas, well test and coalbed methane.	ST60B report issued by the AER	3 years	PMC annual report, CASA annual report	2000	PMC	PMC	0
Improve capacity to monitor AQ in Alberta.	The percentage of monitoring stations and/or parameters implemented from the 2009 Ambient Monitoring Strategic Plan (AMSP).	ESRD	3 years	PMC annual report, CASA annual report	2009	ESRD	ESRD	0
	Geographic percentage of province covered by AZ organizations.	Airshed zones	3 years	PMC annual report, CASA annual report	2013	PMC	PMC	0

Appendix 3: Performance Measure and Indicator Calculation Protocols

Table 5: CASA's Performance Measures Calculation Protocols.

Objective	Performance	Calculation Instructions					
	Measure(s)						
Secretariat							
Ensure that CASA is financially efficient and accountable.	Annual operations and cash flow are in accordance with Canadian generally accepted accounting principles (GAAP).	Each year CASA is subject to an audit and CASA's Financial Administrator is provided with the auditor's report. The report includes a letter which states whether CASA's operations and cash flows are in accordance with Canadian generally accepted accounting principles (GAAP). This letter is usually available in February (ex. for the 2013 PMC report, the letter from February 2014 is used).					
	Sufficient operating funds are available to bridge CASA's and GoA's fiscal years.	CASA's fiscal year ends in December while GoA's fiscal year ends in April. CASA keep 3 months worth of operating funds in reserve in order to bridge this gap as the GoA supplies CASA's funding grant. This measure is tracked by CASA's Financial Administrator. As the amount to operate may shift slightly from year to year, the measure is reported in term's on # of months of operating funds in reserve rather than in dollars. Using the bank balance account from December 31 of the year in question (please note that this number is based on the unaudited bank balance because the audit will not yet have occurred), subtract the major monthly expenses (which are the payables and payroll) until there is insufficient monies remaining to meet monthly expenses. Note that the bank balance amount is from liquid accounts.					
Implement the CASA Strategic Plan.	Percentage of objectives from the Strategic Plan listed as in progress or complete (according to the Secretariat's colour coded rating system).	Each objective under the four goals from the CASA Strategic Plan is rated according to a colour coded scheme: • Green – work is in progress and on track to be completed within the specified timeframe; work is complete • Yellow – work is in progress, but may not be completed within the specified timeframe • Red – project/initiative has not been initiated on time; work has been suspended and/or postponed • White – Not applicable This table is updated by the Secretariat. The PMC Project Manager will count the number of objectives that are rated yellow or green and use the following calculation: # of objectives rate yellow or green x100% Total # of objectives					
Monitor the implementation of CASA recommendations.	Percentage of low-rated recommendations being monitored.	The PMC Project Manager will count the total number of recommendations in the low-rated recommendation matrix. The Project Manager will then count the number of low-rated recommendations in the matrix that are being monitored. To be considered in this category either the Project Manager has received an update on the status of that recommendation within the year (using template in Appendix 5),					

Objective	Performance Measure(s)	Calculation Instructions
	nacusur e(s)	has received an update on the status of the recommendation in the past that asks for implementation to wait until certain milestones are met (ex. this recommendation will be covered when the Clear Air Strategy is released), or the Project Manager has made a reasonable effort to obtain an update but has not been able to do so yet. A reasonable effort constitutes making a determined attempt to locate an implementer or other (according to the decision tree – see Appendix 6) to obtain an update by email or telephone. Since many of the recommendations in the low-rated recommendation matrix are older, it can often be difficult to locate the correct person to provide an update. The Project Manager will then use the following calculation: # of recommendations being monitored Total # of recommendations in matrix
Provide support to CASA stakeholders.	Degree of CASA members, partners and stakeholders' satisfaction with CASA.	The PMC is responsible for this measure. This survey is conducted every three years (1995, 2001, 2004, 2007, 2010) and was last completed in October 2013. Next scheduled survey would be 2016, 2019, etc. It has been administered online using Survey Monkey since 2007. Paper copies or laptops, however, can be provided for those without internet access. This should be considered ahead of time. The survey includes a number of questions of which 7 are used to calculate this measure. They relate to satisfaction with: overall approach (question 1); openness and transparency (question 2); implementation of recommendations (question 6); resources for teams (question 10); achievements (question 4); support to airshed zones (question 7); and communication between teams (question 9). See Appendix 7. Outside of these "core questions," questions may be added for use by teams or committees. The CASA Secretariat should review the questions before each survey is administered. The survey is distributed to all CASA stakeholders involved in project teams, board committee and the Board of Directors in the CASA database who participated in the last 3 year period (ex. for the 2013 survey: use period from 1 January 2011 to 1 September 2013). The list should be sent out as 'Bcc' for privacy of stakeholders. A few (2-3) reminders are appropriate. Stakeholders should be invited via Survey Monkey. The survey responses are strictly confidential and known only to the survey administrator. Responses will be tracked to draw for prizes if desired (no other reason). The email message accompanying the survey should include: • Invitation to participate and recognition their input is valuable • Why they were chosen to participate (i.e. as a stakeholder, participant in a team or the board) • Follow-up (report to the board, action taken to address concerns) • Time needed to complete the survey • The survey link • Assurance of confidentiality. All results will be aggregated to avoid any individual from being identified. The survey is open for 6

Objective	Performance Measure(s)	Calculation Instructions
		Total # of responses
		The results of the seven questions are then averaged to present stakeholders overall satisfaction with
		CASA. These responses are then compared to the previous year.
	Project teams' degree of satisfaction with support provided by the Secretariat.	The CASA Project Team Biannual Survey is administered online (using an online service such as Survey Monkey) to all current CASA project teams twice per year (June and December). If a stakeholder belongs to multiple project teams, they will be asked to fill out a survey for each team. The PMC project manager will prepare the survey and the link will be sent out to project teams by the teams' project manager. A separate survey link should be send to each team. The June results will be presented to the appropriate project manager for their continued improvement and December results will feed into CASA's performance measurement annual reporting. Project teams should be given two weeks to respond to the survey. A reminder should be sent one week prior to the due date. The survey should take no longer than 5 minutes to complete. All responses are anonymous. Question 3 from the survey corresponds to this measure. See Appendix 8. All responses from teams should be combined and the following calculation should be completed for each sector (industry, government and NGO): # of respondents who answered "satisfied" or "very satisfied" x100%
		Total # of respondents
		Board Time Discount of the Control o
Encourage Board member participation in CASA.	Percentage of Board attendance by sector.	The PMC Project Manager will calculate this measure and information on Board attendance is available from the Board meeting minutes. Board attendance is calculated by sector (industry, government and NGO) for each Board meeting and averaged (special Board meetings are included). Ex. **\frac{\%}{2}\$ industry attendance at Board meeting #1 + \% industry attendance at Board meeting #2 + # of board meetings To calculate the \% attendance at each meeting, count the number of stakeholder groups (agriculture, federal, NGO health, etc.) under each sector (industry, government and NGO) and compare this to the list of attendees. If both the Director and Alternate Director for a sector are in attendance, this still counts as "1" towards the total count. If a seat is vacant, this counts as a '0'. Divide the total numbers of attendees by the total number of possible sector attendees and multiply by 100\% to create a percentage. Repeat for each sector.
	Project teams' degree of satisfaction with support provided by Board member counterparts by sector.	The CASA Project Team Biannual Survey is administered online (using an online service such as Survey Monkey) to all current CASA project teams twice per year (June and December). If a stakeholder belongs to multiple project teams, they will be asked to fill out a survey for each team. The PMC project manager will prepare the survey and the link will be sent out to project teams by the teams' project manager. A separate survey link should be sent to each team. The June results will be presented to the appropriate project manager for their continued improvement and December results will feed into CASA's performance measurement annual reporting. Project teams should be given two weeks to respond to the survey. A reminder should be sent one week prior to the due date. The survey should take

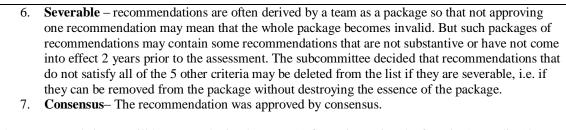
Objective	Performance	Calculation Instructions							
	Measure(s)	and have a final and the second at the secon							
		no longer than 5 minutes to complete. All responses are anonymous. Question 5 from the survey corresponds to this measure. See Appendix 8. All responses from teams should be combined and the							
			ould be completed for each sector (
		# or respo	ondents who answered "satisfied" or						
		ND. N/A management and	Total # of respondents - # of						
		NB: N/A responses are not included in total # of respondents because they are Board members. gic advice on air quality issues and the impacts of major policy initiatives on air quality.							
Influence and inform	Documents produced to			that CASA produced in the year in question.					
AQ policy.	inform GoA & other stakeholders which		e not limited to: project charters, sta	and other stakeholders vis-à-vis air quality.					
	includes a summary of the document and a			issioned consultant's report, advice provided locument should be provided along with a					
				anticipated influence on AQ policy (see					
	qualifying description of the anticipated influence	example below).	is taken with that document and the	anticipated influence on AQ poncy (see					
	on air quality.		D	A .: 17 (I					
	on an quanty.	Document Title	Document Description	Anticipated Influence on Air Quality					
		Air quality and CASA	This report was written by the	This report was distributed to GoA,					
		CASA	Air Quality and CASA Project Team as their final report. This	industry and NGOs. It is also available on the CASA website. This report will create					
			team explored how CASA	opportunities for CASA to impact specific					
			impacts air quality in Alberta	areas of air quality policy in Alberta.					
			and offers recommendations as	areas of all quality policy in Alberta.					
			to issues that would be suitable						
			for CASA involvement in the						
			future.						
Goal 2: To	contribute to the continued	d development and implementation of effective and efficient air quality management in Alberta.							
Develop reports and	Degree of satisfaction	Once a project team's fi	nal report has been approved by the	Board and the team is disbanded, the					
recommendations	with project team work			MC) will administer the CASA Project Team					
using the CDM	by team:			n be completed in person on a hard copy. See					
process.	-The Project Charter was			each team and each question, the following					
process.	completed.								
	-The work was	calculation should be completed for each sector (industry, government and NGO): # of respondents who answered "satisfied" or "very satisfied" x100%							
	completed in a timely	Total # of respondents							
	manner.	Total # of respondents							
	The process was								
	collaborative.								
	-The team developed								
	SMART (Specific,								
	Measurable, Actionable,								
	Tricasurable, Actionable,	1							

Objective	Performance Magging (g)	Calculation Instructions
	Measure(s) Realistic, Time-bound)	
	recommendations.	
Coul 2. To constribu		lible comment and a biodical beautiful and a section with managed to six smaller bould and assistance and a
Goal 3: 10 contribu	te to the aevelopment of a re	cliable, comprehensive, objective knowledge system with respect to air quality, health, and environmental
Provide available	Number of visits to the	impacts, and management and mitigation mechanisms.
		CASA tracks detailed statistics about visitors to our website using Google Analytics.
AQ information.	Information Portal webpage.	(http://www.google.com/analytics/) CASA's Communications Coordinator maintains the user name and password in the Communications Folder. Once logged in, choose PTf3 account UA-11807375-7. The main dashboard defaults to providing the current month's 'Visitor Overview' including the overall number of page views, visitors and their time spent on-site. The 'In-Page Analytics' function tracks (among other things) the number of visitors to each page.
	Number of phone	The CASA Executive Assistant tracks the number of phone inquiries asking CASA to provide
	inquiries for information.	information and the PMC Project Manager tallies these results. The number of phone inquiries is tracked
		in addition to the number of visits to the Information Portal webpage to account for those Albertans
		without access to internet. An inquiry entails a caller asking for information from CASA indicating that
		they are using CASA as a hub for information gathering.
		that builds awareness, understanding, and commitment to air quality management in Alberta.
Improve project	Project teams' degree of	The CASA Project Team Biannual Survey is administered online (using an online service such as Survey
team knowledge of	satisfaction with capacity	Monkey) to all current CASA project teams twice per year (June and December). If a stakeholder
the CDM process.	to participate in	belongs to multiple project teams, they will be asked to fill out a survey for each team. The PMC project
	collaborative processes.	manager will prepare the survey and the link will be sent out to project teams by the teams' project
		manager. A separate survey link should be sent to each team. The June results will be presented to the
		appropriate project manager for their continued improvement and December results will feed into CASA's performance measurement annual reporting. Project teams should be given two weeks to
		respond to the survey. A reminder should be sent one week prior to the due date. The survey should take
		no longer than 5 minutes to complete. All responses are anonymous. Question 7 from the survey
		corresponds to this measure. See Appendix 8. All responses from teams should be combined and the
		following calculation should be completed for each sector (industry, government and NGO):
		# of respondents who answered "satisfied" or "very satisfied" x100%
		Total # of respondents
Increase awareness	Number of 3 rd party	The CASA Executive Director tracks and the PMC Project Manager tallies the number of requests
of CASA, CASA	requests for CASA	received from third party for CASA assistance. These include: requests for speaking engagements,
projects and CDM.	assistance.	requests for advice, request for services, etc. A request is included in the tally even if CASA chooses not to accept the request.
	Number of return and	CASA tracks detailed statistics about visitors to our website using Google Analytics.
	unique visitors to	(http://www.google.com/analytics/) CASA's Communications Coordinator maintains the user name and
	website.	password in the Communications Folder. Once logged in, choose PTf3 account UA-11807375-7. The

Objective	Performance	Calculation Instructions			
	Measure(s)				
		main dashboard defaults to providing the current month's 'Visitor Overview' including the number of unique visitors (which is called 'new' in Google Analytics) to the site.			
	Number of news stories about CASA.	The PMC Project Manager calculates this measure. It is calculated using the news tracking service "Infomart" by conducting a search for "CASA" and "Clean Air Strategic Alliance".			

Table 6: CASA's Performance Indicators Calculation Protocols.

Objective	Performance Indicator	Calculation Instructions
Implement CASA recommendations.	Percentage of substantive recommendations from 4 years prior that have been implemented.	In late fall, the PMC Project Manager will compile a list of project team recommendations that were approved by the Board 4 years prior (ex. for the year 2011, examine 2007 recommendations). This list can be compiled using the minutes and agendas from the CASA Board meetings. The PMC will then decide if each recommendation is operational, administrative or substantive. • Administrative (decisions that relate to appointing directors, banking, budgeting, etc.) • Operational (decisions that relate to process. i.e. an operational decision is one step in a process toward a final product. Note that fund raising is operational and not administrative) • Substantive (decisions that result in a product that is directly related to air quality or air quality management).
		 CAMS – the recommendation had to have been derived through the Comprehensive Air Management System process. Approved/Actionable – the recommendation had to have been approved by the board and it must represent a specific action that can be carried out. For instance, "approved in principle" is not considered actionable. 2 years prior – this means that a recommendation must have come into force at least 2 years prior to it being assessed. Sometimes teams make recommendations that are not to be implemented immediately but only at a future time. Although the procedure for calculating the indicator for performance measure #3 means that recommendations implemented immediately after board approval would only be assessed after 3 to 4 years, recommendations that come into force only some time after board approval may be assessed after a shorter time for implementation. Substantive – the recommendation must result in a product that is directly related to air quality or air quality management. Final – the recommendation must be in its final form. Sometimes teams come before the board more than once and the same recommendation may be presented to the board for approval more than once.



The recommendation(s) will be sent to the implementer(s) for review using the form in Appendix 10. Review forms should be sent out in late fall and implementers should be given two weeks to complete the form. If the implementer is not readily discernible it is important to make inquiries early so that the forms can be filled out in advance of the deadline.

Once the forms are completed, the PMC should review the results and any recommendations rated 3 or lower will be considered low-rated and placed in the low-rated recommendation matrix for continued follow-up.

Below is sample calculation for this indicator.

		Project Team Rating of Recommendations												
		(No. of substantive (Original recommendation numbers placed in appropriate rating column)												
		recommendations)							_	_	1			
		T1 1	0	1	2	3	4	5	6	7	8	9	10	
		Flaring and Venting Project						46, 47,		26, 35,		31,	2-13, 16-25,	
		Team (42)						47,		39			28-34,	
		1 cam (42)											36-38,	
													40-44	
		Airsheds Project					3		2					
		Team (2)												
		EPT Greenhouse												
		Gas Allocation Subgroup												
		Transportation			1			2				3		
		Demand			1			2				3		
		Management												
		Subgroup (3)												
		Total number (47)			1		1	3	1	3		2	36	
			+ 1x4	+ 3x 5	+ 1x6	+ 3x7			10 = 42			-		
		Overall (average ra	. +i.u. ~\	- 426	/ 47									
		Overall (average ra	0,	= 9.06										
		Reviewers:												
		Airsheds Zone Proje												
		Flaring and Venting				ew Hig	gins (C	NRL); l	Michae	l Brown	(ERCB	(and	Chris	
		Severson-Baker (Per Transportation Dem				haroun	· Mulac	Vitaga	wa (To	vios Wa	tah Saa	ietu) o	nd Alan	
		Brownlee (City of E			nem su	ogroup	. Wrytes	Knaga	.wa (10.	Ales wa	ich soc.	icty) a	nu Alan	
Measure impact of	Each completed project	When a project tea			leting i	ts fina	ıl team	repor	t and i	s ready	to dis	band,	, the tear	n should create
completed project	team come up with one	one performance in												
team work.	specific metric to	the future. The tea	m sh	ould o	conside	er: "Fi	ve yea	rs fron	n now,	how w	vill we	knov	w if our	work has been
	measure success of team	successful?". The												
	5 years in the future.	consideration data	avail	ability	. The	y shou	ld pro	vide c	lear in	structio	ons for	the F	PMC to f	ollow-up on the
		indicator in the fut	ure.	Projec	t team	s shou	ıld con	tact th	e PMO	C for ac	dvice o	n cre	ating the	e indicator and to
		review the final ch	oice.	Proje	ect tear	ns can	consu	ılt the	guidel	ines in	Apper	ndix 4	as well	as this Strategy.
Improve air quality	Annual average ambient	This indicator is ca												
in Alberta.	concentrations of: NO ₂ ,	calculated and stati												
	SO ₂ , PM _{2.5} , H ₂ S, O ₃ ,	calculated in conju												
	benzene, and wet acid	for an example of t												
	deposition. 2013, etc.). If calculating for the year 2013, for example, data up to the year 2012 is included.													
		This indicator is calculated by ESRD's air policy group. Data is downloaded from the CDW, trends are												
	Annual peak	This indicator is ca	ılcula	ited by	/ ESRI)'s air	policy	y grouj	p. Dat	a is do	wnload	ded fi	rom the	CDW, trends are

concentrations of: NO₂, SO₂, PM_{2.5}, H₂S, O₃, and benzene.

calculated and statistical significance tests are run to see if the trends are significant. This indicator is calculated in conjunction with ESRD's annual SoE report. Please consult the 2013 CASA Annual Report for an example of the reporting of this indicator. This indicator is calculated every 3 years (ex. 2010, 2013, etc.). If calculating for the year 2013, for example, data up to the year 2012 is included.

Percent hourly exceedances of: NO₂, SO₂ and H₂S.

This indicator is calculated by ESRD's air policy group. The data is obtained from industrial compliance data and all available ambient (airshed and government operated) monitoring stations, beginning in 1994. For industry stations, a 90% average operational time is assumed. For each year at least 75% of the possible data must be available for that year to be included. The indicator is presented as the trend in annual percent exceedances and a trend description (increasing, decreasing, or no trend) for each substance. Trends are tested for statistical significance. Detailed information on the statistical significance test can be found at http://environment.alberta.ca/02850.html. Consult the 2013 CASA Annual Report for an example of the reporting of this indicator. This indicator is calculated every 3 years (ex. 2010, 2013, etc.). If calculating for the year 2013, for example, data up to the year 2012 is included.

Percentage of stations assigned to all management levels defined by the Canadian Ambient Air Quality Standards based on annual three-year data assessments completed by ESRD.

This indicator is calculated by ESRD's air policy. This indicator is based on the action levels assigned on an annual basis to individual ambient monitoring stations, and shows the annual trend. This indicator is calculated in conjunction with ESRD's annual SoE report. Please consult the 2013 CASA Annual Report for an example of the reporting of this indicator. This indicator is calculated every 3 years (ex. 2010, 2013, etc.). The most recent data available should be used that allows the results to be presented to the Board at the appropriate time.

Annual total emissions from power generation for NO_x, SO_x, PM_{2.5}, and mercury.

This indicator is calculated by ESRD's air policy group and the data can be found in EC's NPRI report. The indicator is comprised of annual trends in i) total emissions of Criteria Air Contaminants (NO_x , SO_x , $PM_{2.5}$) from power generation, ii) total solution gas flared and vented from upstream oil and gas sectors as asll as well test and coalbed methane. Please consult the 2013 CASA Annual Report for an example of the reporting of this indicator. This indicator is calculated every 3 years (ex. 2010, 2013, etc.). The most recent data available should be used that allows the results to be presented to the Board at the appropriate time.

The change in flaring and venting associated with solution gas, well test and coalbed methane.

This indicator is taken from the AER ST60B report which is available online from their website (usually published in the fall). The figures "Flared from all upstream oil and gas sources" and "Vented from all upstream oil and gas sources" are excerpted directly. Please consult the 2013 PMC Annual Report for an example of the reporting of this indicator. This indicator is calculated every 3 years (ex. 2010, 2013, etc.). The most recent data available should be used that allows the results to be presented to the Board at the appropriate time. For example, at the time of writing of the 2013 PMC Report the ST60B-2012 report was available and used.

Improve capacity to	The percentage of	This indicator is calculated by ESRD's air policy group. The ambient monitoring indicator is given by
monitor AQ in	monitoring stations	the number of monitoring sites and instruments, as identified in the strategy and implementation plan, that
Alberta.	and/or parameters	have been implemented, divided by the number identified in the plan. The number is represented as a
	implemented from the	percentage. The formula is:
	2009 Ambient	Number of sites and instruments implemented x100%
	Monitoring Strategic	Number of sites and instruments in plan
	Plan (AMSP).	
		This is calculated using a table comparing the substances monitored for at each station in Alberta and
		citing if the location and substances coincide with the AMSP. There are seven monitoring subprograms
		recommended in the 2009 AMSP. The results from each will be aggregated. Please consult the 2013
		CASA Annual Report for an example of the reporting of this indicator. This indicator is calculated every
		3 years (ex. 2010, 2013, etc.). The most recent data available should be used that allows the results to be
		presented to the Board at the appropriate time.
	Geographic percentage	'Airshed zone' in this case is defined according to CASA's Airshed Zone Guidelines. The PMC Project
	of province covered by	Manager should add up the area of each airshed zone to get a total area of province covered by an airshed
	airshed zone	zone.
	organizations.	area (km^2) airshed zone A + area (km^2) of airshed zone B = total (km^2)
		Then use this number to find a percentage:
		Total area of province covered by airshed zones (km²) x100% Total area of province (km²)
		Current available data:
		Area of province = 661848 km^2
		$ACA = 13742.38 \text{ km}^2$
		$CRAZ = 32000 \text{ km}^2$
		$FAP = 4500 \text{ km}^2$
		$LICA = 16000 \text{ km}^2$
		$PAS = 45000 \text{ km}^2$
		$PAMZ = 42000 \text{ km}^2$
		$PAZA = 38000 \text{ km}^2$
		$WCAS = 46000 \text{ km}^2$
		WBEA = 68454 km^2

Appendix 4: Guidelines for Project Teams

Project Team Internal Performance Measures:

At CASA, project teams are responsible for creating team performance measures. Performance measures relating to timelines, budget, etc. are embedded in the CASA Project Charter. The Project Charter provides detailed information about what the team should accomplish and by when. These specifications help the project team to track their progress, remain on task and remain accountable to the CASA Board. One of the roles of the team's Project Manager is to regularly monitor these items. The Performance Measures Committee (PMC) encourages project teams to review their progress against their Project Charter on a regular basis. Information on the Project Charter as well as step-by-step advice for managing and participating on a successful project team can be found in CASA's MCP guide.

If project teams have questions about performance measures or would like to create additional performance measures, they are encouraged to contact the PMC for advice.

Project Teams' Role in CASA's Performance Measurement:

While project teams are responsible for creating their own internal performance measures, project teams have two requirements to CASA with respect to performance measurement that must be satisfied.

1. First, when project teams craft recommendations they must ensure that they are SMART (Specific, Measurable, Action-oriented, Realistic, Time-bound). This facilitates tracking the implementation of recommendation by the PMC. When a project team is ready to begin crafting recommendations, they should contact the PMC for advice on creating SMART recommendations. The PMC is available to review draft recommendations to ensure that they meet the SMART standards.

Here is an example of a "SMART recommendation" as well as a recommendation that does not meet the SMART standards:

Example: The Alberta Department of Energy should extend the Otherwise Flared Solution Gas (OFSG) program to include bitumen wells by 2011.

The wording of this recommendation meets all the SMART standards. It states specifically who is the implementer, what they are expected to accomplish and by when. The action required is reasonable and can realistically be accomplished in the time allowed. In the future, when the recommendation is reviewed, there is no ambiguity as to whether the recommendation has been implemented.

Example: Alberta Agriculture, Food and Rural Development (ARD) improve the collection of animal health data respecting the impacts of solution gas flaring.

The wording of this recommendation does not meet the SMART standards. It is not time-bound. It does name the implementer and request an action but the action required is not specific or measurable. Rather it is ambiguous as to what needs to be accomplished in order to consider this recommendation implemented. What is considered improvement? What is considered *enough* improvement? How is this wording to be accomplished? As such the wording is not realistic either. In the future, when the recommendation is reviewed, it will be unclear whether the recommendation has been implemented and opinions on implementation will be subjective and possibly conflicting. A better solution would be to specifically describe what actions ARD will do to improve the collection of data and when this will be accomplished.

- 2. Second, project teams should be aware of any requirements to provide data to feed into CASA's performance measures and indicators. This can be determined by reviewing the Performance Measurement Framework section of the Performance Measurement Strategy or contacting the PMC. If project teams have any questions regarding the requirements, they are encouraged to contact the PMC. Here is a list of current requirements:
 - Performance measures:
 - o Completing the CASA Project Team Biannual Survey in June and December.
 - o Completing the CASA Satisfaction Survey every 3 years.
 - Completing the CASA Project Team Exit Survey upon completion of project work.
 - Performance indicators:
 - Each completed project team come up with one specific metric to measure success of team 5 years in the future.

Appendix 5: Low-rated Recommendation Implementation Questionnaire

Low-rated Recommendation Implementation Assessment Questionnaire

for recommendations made by the XX Team in [Year]

Recommendation				
[List recommendation here]				
Question	Response			
1. What work has been done to implement				
the recommendation?				
2. Please describe any future actions that				
are planned concerning the				
recommendation.				
3. To your knowledge, is the				
recommendation being addressed by				
another venue? If yes, please provide				
the contact information for the				
appropriate person to speak to this				
work.				
4. With respect to the future of the				
recommendation, do you believe that				
more work is warranted? Please				
provide your rationale.				

Appendix 6: Low-rated Recommendation Decision Tree

After three years of implementation, CASA assesses the implementation of recommendations by engaging stakeholders involved in the original team and/or the implementing agency. Assessors are asked to rate the degree of implementation on a scale of 0-10. Low rated recommendations are defined as recommendations receiving a 0-3 rating.

The Decision Tree, as illustrated on the next page, is intended to provide guidance on how to follow-up on low-rated recommendations. The Decision Tree will only be used for low-rated recommendations. The Committee will first follow-up with the implementer for information on why a recommendation was not implemented. If no implementer is discernable, the Committee approaches a CASA team (if available) for information. Should neither be available, the Committee can make a recommendation to the CASA Board. Recommendations, whether from the implementer, CASA team or Committee, could include:

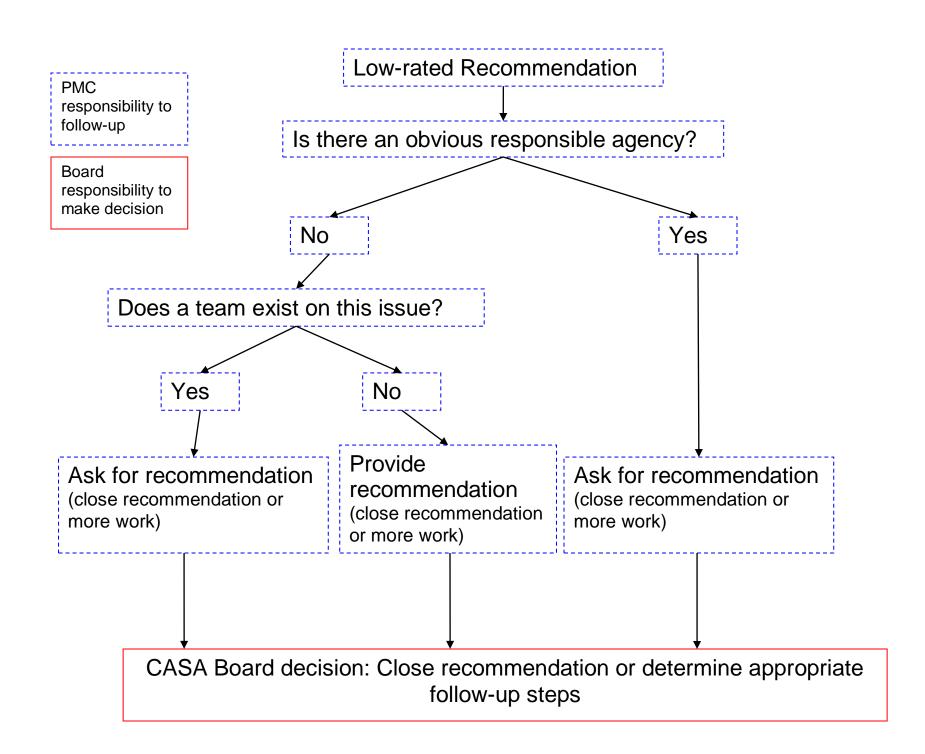
- Close the recommendation, and document the explanation
- More work that could be required, such as an implementation team, new work for an existing team, Board involvement, etc
- More information the Board would require to make its decision regarding follow-up or closure of the recommendation.

CASA Board Decision

The Performance Measures Committee will use the information to advise to the CASA Board on appropriate follow-up for the low-rated recommendation. The CASA Board has decision-making power whether to follow-up or to close the recommendation (i.e. render the recommendation no longer required).

There are three criteria to inform the board's decision to close a recommendation:

- 1. Priority level: Is the current importance of the issue and/or recommendation high, medium or low?
- 2. Need for the recommendation: Given legal, technological, societal, and economic changes since the recommendation was made, is the action prescribed still needed?
- 3. Practical challenges: Given the current work of the implementing body, are the necessary resources and capacity available to implement the recommendation?



Appendix 7: CASA Satisfaction Survey

CASA Stakeholder Satisfaction Survey					
CASA Stakeholder Survey					
The Clean Air Strategic All CASA. As a CASA stakeh CASA.			-		
Your responses are confid CASA's performance mea- outcomes. The results will improvement.	sures, which measur	res stakeholder satisfactio	on with various aspec	cts of CASA process and	
This survey has 16 question November 8, 2013.	ons and should take	about 10 minutes to fill or	ut. Please complete t	this survey by Friday	
Section 1: Stakeho	lder Satisfact	tion			
*1. How satisfied a	re you with the	CASA way of addre	ssing air quality	issues?	
1- Very unsatisfied	2	3	4	5 - Very satisfied	
0	0	0	0	0	
Comment				Ü	
*2. How satisfied a	re you with the	onenness and trans	snarency with w	hich CASA	
conducts its busines	-	openness and trans	sparency with w	IIIOII OAOA	
1 - Very unsatisfied	2	3	4	5 - Very satisfied	
	\circ	0	\circ	\circ	
Comment					
3. How satisfied are	you that CASA i	s contributing to im	proved air quali	ty in Alberta?	
1 - Very unsatisfied	2	3	4	5 - Very satisfied	
0	0	0	0	0	
Other (please specify)	0	0	0	0	
(prease speedy)					
*4. In general, how	satisfied are yo	u with CASA's achi	evements?		
1 - Very unsatisfied	2	3	4	5 - Very satisfied	
	\bigcirc	\circ	0	$\hat{\bigcirc}$	
Other (please specify)					
Otiei (piease specily)					

CASA StakeHoli	der Satisfac	tion Survey			
5. What, in your vi	ew, are CASA'	s achievements?)		
Achievement 1:]	
Reason:					
Achievement 2:					
Reason:					
Achievement 3:					
Reason					
Other/Comments					
★6. CASA recom r	nendations are	e implemented b	v stakeholder	s and others.	Α
"substantive" reco		_	_		
satisfied are you v			-	-	
1 - Very unsatisfied	2	3		4	5 - Very satisfied
0	0	0		0	\circ
Comment					
*7. CASA assists	airshed zones	s, on request, wit	h start-up, co	nsensus dec	ision-making
and links to other	air issues wor	k. How satisfied	are you with	CASA's supp	ort to airshed
zones?					
20nes? 1 - Very unsatisfied	2	3	4	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied	2	3	4	5 - Very satisfied	Don't know/No opinion
	²	3	4 O	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied	²	3	0	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied	Ō	Ó	0	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm	nunicating at	CASA	4 O	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment	nunicating at	CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm	nunicating at	CASA	4 O A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm	nunicating at	CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings	nunicating at	CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings At team meetings	nunicating at	CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings At team meetings Through the website Through direct contact	nunicating at	CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings At team meetings Through the website	nunicating at	CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings At team meetings Through the website Through direct contact	nunicating at	t CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings At team meetings Through the website Through direct contact	nunicating at	t CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings At team meetings Through the website Through direct contact	nunicating at	t CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion
1 - Very unsatisfied Comment Section 2: Comm *8. How do you a At Board meetings At team meetings Through the website Through direct contact	nunicating at	t CASA	4 A's work?	5 - Very satisfied	Don't know/No opinion

CA Ctokobole	or Caliat	action Cur	1011			
CASA Stakeholder Satisfaction Survey						
*9. Thinking of the different ways that CASA communicates with you, please rate on a						
scale of 1 (very unsatisfied) to 5 (very satisfied) how satisfied you are with communications:						
ommunications.	1	2	3	4	5	N/A
Overall	0	0	0	0	0	0
Between the CASA Board and yourself	0	0	0	0	0	0
Between the CASA Becretariat and yourself	0	0	0	0	0	0
Between CASA teams	Ŏ	<u> </u>	Q	0	Q	0
Vithin your team	Ŏ	O	Ŏ	Ö	O	Ö
Vithin your sector	\circ	\circ	\circ	\circ	\circ	\circ
ther/Comments						
						A.
						7

participated in. If you the appropriate team comments you may	. A commen	t area is availa		-	-		
Board	1	2	3	4	5		
CASA and AAC Joint Standing Committee	ŏ	ŏ	ŏ	ŏ	ŏ		
Communications Committee	\circ	0	0	0	0		
Confined Feeding Operations Implementation Team	0	0	0	0	0		
Electricity Framework Review	0	0	0	0	0		
Human and Animal Health Team	\circ	\circ	\circ	\circ	0		
Odour Management Team	0	0	0	0	0		
Operations Steering Committee	\circ	\circ	\circ	\circ	\circ		
Performance Measures Committee	0	0	0	0	0		
PM and Ozone Implementation Team	\circ	\circ	0	\circ	\circ		
Other (please specify)							
▲							
11. The value my org	janization pl	aces on its inv	olvement in CA	ASA is:			
Cow							
Moderate							

OAOA Otalahaldaa Oatiafaatiaa Oaraaa
CASA Stakeholder Satisfaction Survey
13. What air quality issue(s), if any, should CASA pursue next?
Section 5: Participation in CASA
*14. I am a member of the following stakeholder sector:
Industry
Government
○ NGO
Other
Other (please specify)
*15. I have participated in CASA for a total of:
Less than 1 year
1 - 5 years
6-10 years
11-15 years
Since the dawn of time
Comment
★16. Between 2011 and the present, I have been a member of: (choose one option)
Board of Directors ONLY
Board + Team(s) and/or Committee(s) and/or Team Subgroup(s)
Team(s) and/or Committee(s) and/or Team Subgroup(s) ONLY
Thank you!
CASA appreciates your time and opinions!

Appendix 8: CASA Project Team Biannual Survey

Dear CASA project team member,

Thank you for participating on a CASA project team! In an effort to serve you better and promote continuous improvement at CASA, the Secretariat asks you to complete this short, 5-minute survey. Your answers will remain anonymous and confidential. Your team's responses to some of these survey questions will be compiled and presented in CASA's Annual Report as part of CASA's performance measures.

Thank you for your time and participation, The CASA Secretariat

- 1. To which project team to do you belong?
 - a. List all current CASA project teams.
- 2. Who do you represent?
 - a. Government
 - b. Industry
 - c. Non-government organization
 - d. Airshed group
- 3. How satisfied are you with the support provided to you by the CASA Secretariat? The Secretariat provides strategic, advisory and administrative support to assigned project teams and their co-chairs, including:
 - providing advisory support to, and close liaison with, the co-chairs:
 - anticipating and monitoring issues;
 - coordinating the production of project team publications;
 - drafting and reviewing background, policy and communications materials;
 - tracking progress on workplans and "making things happen";
 - facilitating meeting processes and arranging meeting logistics; and
 - preparing agendas, and records of decisions.
 - a. Very dissatisfied
 - b. Dissatisfied
 - c. Satisfied
 - d. Very satisfied
 - e. Include comment box for additional written comments.
- 4. Space for an additional follow-up question from the Secretariat. This question can change on a biannual basis in response to specific information needs. It is not reported as a performance measure but is in support of continuous improvement.

- 5. How satisfied are you with the support provided to you by your Board member counterparts? The Board provides support to project teams members from their sector, including:
 - providing advice on content and procedural issues;
 - mentoring on how to be effective in a collaborative process;
 - helping to overcome impasse; and
 - helping to report back to constituents from their sector.
 - a. Very dissatisfied
 - b. Dissatisfied
 - c. Satisfied
 - d. Very satisfied
 - e. Not applicable, I am a Board member
 - f. I do not have a Board member counterpart
 - g. Include comment box for additional written comments.
- 6. Space for an additional follow-up question from the Secretariat. This question can change on a biannual basis in response to specific information needs. It is not reported as a performance measure but is in support of continuous improvement.
- 7. How satisfied are you with your team's capacity to effectively participate in the collaborative process?
 - a. Very dissatisfied
 - b. Dissatisfied
 - c. Satisfied
 - d. Very satisfied
 - e. Include comment box for additional written comments.
- 8. Space for an additional follow-up question from the Secretariat. This question can change on a biannual basis in response to specific information needs. It is not reported as a performance measure but is in support of continuous improvement.

Appendix 9: CASA Project Team Exit Survey

Name: Organization:	Project Team:
Today's date (D/M/Y):	

Dear CASA project team member,

Thank you for participating on a CASA project team! In an effort to evaluate the work done by your team and promote continuous improvement at CASA, the Secretariat asks you to complete this short, 5-minute survey. Your answers will remain anonymous and confidential. The ratings provided by your entire team will be compiled and presented in CASA's Annual Report as part of CASA's performance measures.

Thank you for your time and participation, The CASA Secretariat

Please rate the following questions on a scale from 1 to 4 and provide comment to support your rating.

- 1- Very dissatisfied
- 2- Dissatisfied
- 3- Satisfied
- 4- Very satisfied

Ex. Sample question

HOW SATISFIED WERE YOU WITH YOUR LUNCH TODAY?

YOUR RATING: 4

My lunch today was highly satisfying. The sandwich I ate was very tasty and well presented. The ingredients used were healthy and fresh. It kept me full and provided energy for the entire afternoon. I enjoyed eating it and would eat this sandwich again.

Survey Questions	
HOW SATISFIED ARE YOU THAT THE TEAM'S PROJECT CHARTER IS COMPLETE?	YOUR RATING:
Please provide comment here.	
HOW SATISFIED ARE YOU THAT THE WORK WAS COMPLETED IN A TIMELY MANNER?	YOUR RATING:
Please provide comment here.	
HOW SATISFIED ARE YOU THAT THE PROCESS WAS COLLABORATIVE?	YOUR RATING:
Please provide comment here.	
HOW SATISFIED ARE YOU THAT THE TEAM'S RECOMMENDATIONS ARE SMART (SPECIFIC, MEASURABLE, ACTION-ORIENTED, REALISTIC, TIME-BOUND)?	YOUR RATING:
Please provide comment here.	

Appendix 10: Recommendation Implementation Assessment Questionnaire

Implementation Assessment Report

for recommendations made by the XX Project Team in [Year]

Implementation is to be rated:

- 0 if nothing has been done
- 1, 2, 3, 4, 5, 6, 7, 8, 9 if something has been done
- 10 if everything has been done.

Red	comme	endation	Assessed by:	Rating 0 to 10			
1							
	Briefly	state the rationale for the Rating:					
	16						
		d from 0 to 3: Is the recommendation still relevant?					
	2. Does CASA have a team on working on this issue?						
	3.	Is there an obvious responsible implementing agency	?				
	4. Why wasn't the recommendation fully implemented, in your opinion? What were the challenges?						