Clean Air Strategic Alliance

Annual Report
1996
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1.0 1996 Highlights

Here are some of the highlights from 1996 in which the Clean Air Strategic Alliance and its stakeholders played an important part. See section 5.0, Alliance Activities, for more details.

- We added two new airshed management zones, for a total of three in Alberta. The new Parkland Airshed Management Zone is just south of the existing West Central Zone; in the Sundre-Rocky Mountain House area, and the new Southern Wood Buffalo Zone is in northeast Alberta.

- An Alliance project team organized and delivered a very successful symposium on acidifying emissions, bringing together provincial, national and international speakers and delegates to examine health, ecosystem, and policy aspects of managing these emissions.

- An Ecological Effects Monitoring Program was piloted in Alberta, with the long-term goal of being able to detect changes related to air quality across large areas and over prolonged periods of time.

- The SO$_2$ Management Project Team finished its review of the SO$_2$ management system in Alberta, with 20 recommendations for improving the system. It concluded that the existing regulatory approach, with a new focus on preventing cumulative effects, should remain as the core mechanism to manage these emissions in Alberta.

- The Ambient Air Monitoring Project Team finalized the specifications for a new integrated data collection and information system.

- The Alliance and a number of other partners sponsored Alberta’s first Clean Air Week. The Alliance was also actively involved with the Alberta Lung Association in bringing the SMOG FREE program to Edmonton.

- The difficult and controversial issue of gas flaring was brought to the Alliance near the end of 1996 and will be one of the key areas of activity in 1997.

- The Board endorsed a new three-year business plan for the Alliance and began the process of organizational renewal.

- The Board recognized the need to have better indicators of clean air. It initiated an activity in late 1996 that will culminate in a “report card” on the state of Alberta’s air quality. This will be jointly developed and included in Alberta Environmental Protection’s 1998 State of the Environment report.
2.0 President’s Message

This was my first year of increased personal involvement with the Clean Air Strategic Alliance and I have been struck by the maturity of what is still a young organization. The trust and confidence that have been developed around the table are apparent at every meeting and present in the work of all CASA teams.

Over the past three years, the Alliance has dealt with many issues of concern to one or more sectors who believed that a multistakeholder, consensus-based approach could yield a more productive solution. The Alliance avoids compartmentalized decision making. It provides a forum in which stakeholders with different mandates and spheres of influence can come together to solve problems of common interest related to the quality of Alberta’s air.

While our stakeholder representatives are affiliated with industry, government, or non-government organizations, the Alliance also ensures “a place at the table” for a wide range of groups, from health to oil and gas, agriculture, wilderness, forestry, and many others. The Alliance welcomes diversity. Differing points of view, when applied to a common goal, can build innovation into problem-solving activities. This approach has been a source of strength and will remain a key underpinning as the organization charts its course for the coming years.

A large portion of the Alliance’s work involves quietly assembling information on air quality and its effects, and then applying it to find the most cost-effective means to reach our environmental and health goals. This work is often not newsworthy and does not result in reports that are “best sellers.” That is not our purpose. The primary focus of the Alliance over its first three years of existence has been to put in place information systems for air quality management that will guide air quality decisions well into the next century.

During 1996, the Alliance agreed in principle to a new management regime for sulphur dioxide that will result in refinements to the existing regulatory system. Work was begun on an information management system to assemble ambient air quality data and to use it to support airshed management decisions over the long term, as well as to provide useful information to the public via the Internet and published reports. The foundation of a program to monitor ecological systems was piloted in 1996 in selected areas of Alberta to assess ecological damage that may be caused by air emissions. An assessment of several potentially toxic air emissions was completed in 1996.
Two new airshed management zones were established in 1996 covering regions of the province with intensive new industrial activity: the Fort McMurray region and the Caroline-Sundre-Rocky Mountain House area. Several other projects continue to progress toward important milestones in managing our most precious natural resource – the air we breathe.

Evaluation and renewal are important for the success of any agency. They are absolutely critical for an organization that is truly breaking new ground. The “down side” of our being a leader is that it makes CASA an easy target for those who think we are moving too quickly as well as those who think our progress is too slow. While I believe we can make our organization more efficient and effective, I also believe that an honest assessment of the Alliance’s progress and performance will reveal many accomplishments of which we can be proud. Our next challenge will be to maintain the momentum of the last three years and ensure resources are in place to implement the solutions we have reached. I welcome this challenge and am confident we will meet it.

Much of my confidence stems from the successful working relationships and respect that exist among the Alliance’s board members, project teams, and staff. I commend each of the 200-plus people who have served and continue to serve the Alliance in so many capacities. The Alliance continues to be an organization that is more than the sum of its parts. Through resource sharing, through cooperation across agencies, disciplines, industries, departments, and non-government organizations, and with a focus on results, the Alliance can accomplish great things. Your efforts have helped lay the foundation for a unique organization that will serve the needs of Albertans into the next century.

Rick Hyndman
3.0 What is the Clean Air Strategic Alliance?

The Clean Air Strategic Alliance was incorporated in 1994 as a non-profit association under the Societies’ Act of Alberta. Its membership includes representatives from government, industry, and non-government organizations (See Appendix I for a complete list of members). The Alliance has been given shared responsibility by its members for strategic air quality planning, organizing, and coordination of resources, and evaluation of results in Alberta. Air quality has been and continues to be important to the people of this province because:

- it affects the health of present and future generations;
- it influences the overall health of our ecosystems; and
- our economy is energy-intensive, generating emissions that must be managed in an environmentally responsible and cost-effective manner.

The value placed on good air quality is reflected in the Alliance Vision (noted below), which was developed through extensive public consultation in the early 1990s and subsequently endorsed by the Government of Alberta:

"The air will be odourless, tasteless, look clear and have no measurable short- or long-term adverse effects on people, animals, or the environment."

The mandate of the Clean Air Strategic Alliance is to bring together stakeholders with diverse interests to solve air quality problems using a consensus approach. The overarching goal is to develop a new air quality management system for Alberta. To carry out its mandate, the Alliance will:

- clearly identify the most important air quality issues;
- prioritize specific problems;
- allocate and coordinate resources;
- develop solution-oriented action plans; and
- evaluate results.

The Alliance is accountable to its members and to the people of Alberta for its decisions. It is funded by its members, including the Provincial Government. The Government of Alberta will sanction and implement Alliance decisions that meet two criteria: consensus is reached among the stakeholders, and decisions are based on that consensus. Consensus requires innovation and new ways of thinking to solve problems; it does not mean simply reducing the solution to the “lowest common denominator” to gain acceptance. All project teams associated with the Alliance also use consensus to make their decisions; this approach resulted in many solid and creative solutions to clearly defined problems in 1996.

To guide and provide discipline to its decision-making processes, the Alliance has put in place a multi-step Comprehensive Air Quality Management System (CAM5). The Alliance’s key strategic tool for improving air quality in Alberta, the CAM5 clearly defines the steps required in making decisions that affect air quality. The CAM5 provides an opportunity for members of the public to bring an air quality concern to the Alliance by filing a statement of concern. If the issue is within the Alliance’s mandate and is deemed a high priority, a process is put in place to examine the issue, develop an action plan, and recommend a solution. Project teams, composed of key experts from the stakeholders, are formed to find creative new ways to address air quality issues. The Alliance Board must review and endorse all plans developed by project teams, along with their budget and the initial composition of the multi-stakeholder teams doing the work. Additional details can be found in the Alliance publication Comprehensive Air Quality Management System.

At the end of 1996, 18 sectors from the three stakeholder categories were represented on the Alliance Board. Supported by an Edmonton-based Secretariat, the Board met three times in 1996 with over 200 project team meetings and conference calls. The minutes of these meetings are posted on CASA’s web site at http://www.incentre.net/casa/
4.0 Looking Back, Looking Ahead

The air quality in Alberta’s two main cities, where more comprehensive monitoring is currently done and where most of the population is located, is considered to be “good” more than 90 percent of the time, according to the Index of Air Quality. Maintaining and improving the quality of our air does not happen by accident. Air quality is affected by virtually everything we do, from keeping our homes warm, to industrial production, and transporting ourselves and the products we produce into and out of the province. Ensuring our air is clean and safe to breathe is a multi-billion dollar investment in Alberta. There is thus a need to review and improve the way we manage various aspects of air quality in the province. The Clean Air Strategic Alliance offers a more efficient and less adversarial way of examining these issues by bringing together stakeholders from three sectors to find new approaches that can be supported by industry, government, and non-government organizations alike.

The founders of the Clean Air Strategic Alliance and those who have since become involved are convinced that collaboration and the use of consensus can lead to better solutions. Against this backdrop, the Alliance will be evaluating its performance in the next year, as required by the bylaws. The Board agreed to a process for renewal near the end of 1996 and expects to have consensus on its future direction by the middle of 1997.

As a pre-cursor to renewal, the Board approved a three-year business plan in 1996. Two goals form the backbone of the business plan:

- to achieve measurable improvement in air quality management in response to identified problem areas in Alberta, and
- to achieve a broader consensus on air quality objectives and management.

For each goal, a series of strategic objectives, tasks, and milestones is presented. The business plan also identifies the activity leaders and key result areas for each objective. Copies of the business plan are available upon request to the Alliance Secretariat.

Progress made in 1996 means that several of the key building blocks for the new management system for air quality in Alberta will be put in place during 1997. The new SO$_2$ management system will bring measurable improvements to an already effective regulatory system. A new ambient air information system will, for the first time, bring together data from many monitoring stations and provide for routine reporting of ambient air quality information to the public via the Internet. A growing baseline of biomonitoring data is being assembled to test for adverse effects on vegetation in sensitive areas of the province, and this data will be integrated into the air quality information system. Human health data that may be related to air quality will also be assembled and assessed during the coming year. Each of these projects is designed to protect Albertans from negative health, environmental, and economic consequences of air quality.

One of the prevailing strengths of the Alliance is anticipating future problems and dealing with them in a preventative manner. Looking ahead to the next year, several key issues will be near the top of the agenda for the Board and project teams. One important issue that came to the Alliance near the end of 1996 was concern about emissions associated with the flaring of waste gases in Alberta. This issue was initially raised by the SO$_2$ Management project team, and the Canadian Association of Petroleum Producers subsequently tabled a statement of concern. The Board responded by appointing a task group of key stakeholders to develop terms of reference and an action plan for discussion by the Board early in 1997.
5.0 Alliance Activities

Much of the Alliance’s work is done by teams comprising a mix of individuals from organizations that share interest in a particular issue. The various teams and their terms of reference are ratified by the Alliance Board and the teams are accountable to the Board. Teams are formed when the Alliance assumes responsibility for a project for one of the following reasons:

- no existing agency has sole responsibility;
- no other agency is working in that area;
- the matter requires cross-departmental and cross-sectoral cooperation to be effectively resolved;
- the Alliance is particularly well-positioned to advance and nurture the work; or
- the project is critical to the success of other work to which the Alliance is committed.

The work of many teams has intensified over the last two years. To help them make the best possible decisions and to provide access to leading edge research and innovative techniques being used in other jurisdictions, the Alliance and its partners have hosted several symposia and scientific workshops. One of the most important goals of these events has been to bring together scientists (who do the research and are often the first ones to see possible solutions to problems) and natural resource managers in the public and private sectors (who have responsibility for managing natural resources, including air quality). The expectation is that by improving communications between these groups, we can align the needs of each to find better solutions. Conferences and workshops were held on the following topics in 1996:

- Acidifying Emissions
- Adaptation to Climate Change and Variability on the Prairies
- Air Quality and Human Health Research
- Measuring the Effects of Sulphur Dioxide
- Forest Health and Air Quality
- Integrating the Management of Various Emissions

One of the continuing challenges for the Alliance has been to make sure the work of project teams is done in an integrated manner that allows teams to develop synergy and share resources. This means maintaining excellent communications to avoid duplication, building on the work of others, and ensuring that critical tasks don’t “fall through the cracks.” In September, an “integration workshop” brought together over 50 project team representatives to discuss the work of their respective groups. Presentations and small group discussions identified new ways of managing many emission types and sources in an integrated and consistent manner.
The work and progress of the Alliance’s most active groups in 1996 are summarized in the following paragraphs.

**West Central Airshed Society**

The West Central Airshed Society (WCAS) is an independent, self-funded society responsible for managing Alberta’s first airshed zone, located south and west of Edmonton. In response to a longstanding regional interest in air quality issues, efforts to develop a regional airshed monitoring program began in 1991. Considerable technical and administrative work was done to develop a formal business plan for the proposed zone, and this plan was ratified by the Alliance Board early in 1995. The WCAS was subsequently incorporated with its own Board of Directors, representing nine sectors with an interest in regional air quality. The Society maintains three air monitoring sites in the zone and six agricultural biomonitoring plots, in cooperation with local landowners. Two forestry sites were selected this year and monitoring at these sites will begin in 1997. The first full year’s worth of data was obtained in 1996 from the three air quality monitoring sites, and all parameters were well within provincial guidelines. As part of the Society’s commitment to adapt the program in response to possible air quality impacts, additional monitoring will be done in 1997 near one site where some vegetation stress appeared. A project manager oversees day-to-day operations and works closely with the three contractors engaged by the WCAS. Additional effort will be focused on data interpretation in 1997.

**Parkland Airshed Management Zone**

The region west of Red Deer is an active development area for the oil and gas industry. In 1995, representatives of local industry, government, and the public formed a Steering Committee to discuss the establishment of a zone. The group received Alliance approval in 1995 to proceed. They actively solicited input from local communities and spent most of 1996 developing a structure and process for administering the zone. This work culminated in drafts of a technical program, budget, and process for responding to issues, which led to formal ratification of this zone by the Alliance Board in November 1996. The first task will be to design and implement an air quality monitoring program that shifts the monitoring focus from individual plants to an integrated approach for the entire zone. This will make it easier to determine regional trends and identify potential problems and solutions.
Southern Wood Buffalo Zone

This zone had its origins in the Regional Air Quality Coordinating Committee (RAQCC), which was established in 1989 to address aboriginal concerns about air quality in the Fort McKay region. There are multiple emission sources in this region from existing industries such as the oilsands and forestry, as well as from the residential and MUSH sectors (municipalities, universities, schools and hospitals), and new industrial projects have been proposed for future development. The RAQCC was a diverse group that subsequently evolved to serve the needs of the broader region, using a collaborative approach to manage air quality issues. A number of air quality issues—ranging from human health to acid deposition and effects on vegetation—continue to be important in the region. The group decided to formalize its structure as a zone under the Alliance umbrella to ensure that a proactive approach to managing air quality is maintained and that there is an integrated data gathering and management system for the region. Following preparation and submission of its business and technical plan to guide and update the ambient monitoring system in the oilsands region, the Southern Wood Buffalo Zone was ratified by the Alliance in November 1996.

Ambient Air Monitoring

Near the end of 1995, the Alliance Board approved this group’s three-phase strategy for implementing a redesigned provincial air quality monitoring system. Terms of reference for the implementation team were approved early in 1996, and the group was charged with implementing the first phase of their plan, which is being funded by 11 Alliance stakeholders. This work represents a significant step forward for Alberta, since the existing ambient air monitoring system was designed some 20 years ago and needed to be upgraded. Most of the work this year focused on three areas: (1) assessing available equipment and financial resources and determining how best to allocate or reallocate them; (2) assessing data management requirements and developing a plan to pilot a data management system; and (3) working with the Ecological Effects Monitoring Group to pilot an ecological effects monitoring program with other partners and assess the results. The team identified 10 ambient air quality monitoring stations that will be incorporated into the new network, and possibly seven more will be added in late 1997 or early 1998. The team expects to engage a contractor for the data management tasks early in 1997, after which it will pilot the data management system.
Ecological Effects Monitoring

The Ecological Effects Monitoring (EEM) group formed in response to concerns about the impact of air pollution on natural and managed ecosystems in Alberta. Stakeholders agreed that (1) an improved capacity for receptor monitoring is needed, and (2) effects-based monitoring should be integrated with ambient air quality monitoring to assess these impacts and their causal relationships with air pollutants. The group is developing an implementation plan for the monitoring program. Conceptually, this monitoring program will consist of a number of permanent monitoring sites that cover the major ecozones of the province as well as providing provincial background coverage in conjunction with the provincial ambient monitoring program. In 1996, the group successfully piloted field methodologies and practices for effects-based monitoring. This was done in partnership with the Canadian Forest Service, Syncrude Canada, and the Alliance’s zonal biomonitoring programs, and resulted in significant cost savings and improved efficiencies. Once the implementation plan is approved, the EEM program will be implemented in a phased manner, using partnerships with other monitoring programs wherever possible. In response to a statement of concern brought before the Board in 1996, this group was asked to specifically look at forest health as part of its mandate.

SO₂ Management

This group was formed in 1995 in response to concerns that sulphur dioxide emissions might be having an impact on the environment and that an improved, cost-effective system to manage these emissions is needed. This year, the team completed its comprehensive evaluation of the current SO₂ management system and, in its report to the Alliance at the end of 1996, indicated the existing system is working well but needs refinement. The system being recommended explicitly links the day-to-day management of SO₂ emissions, goals, and objectives for management, with the management tools. The group also recommended better information systems to support periodic evaluation and improvement in SO₂ management by stakeholders. Implementation of the recommendations should result in measurable protection of the environment and optimization of economic performance and efficiency, while providing opportunities for continuous improvement in SO₂ management in Alberta. The team expects to submit its final report to the Alliance Board in early 1997, recommending specific tasks to implement the improvements.
Human Health

The Human Health Resource Group was formed to provide assistance to other groups rather than try to address health concerns in isolation. In 1996, it tried to match substances that may be prevalent in ambient air to possible effects on human health. The group identified three components of this task: substances of concern, health indicators, and comparison methods. Substances considered to be of concern were: particulate matter (both PM$_{10}$ and PM$_{2.5}$), sulphur dioxide, oxides of nitrogen, carbon monoxide in urban areas, and ground-level ozone; more may be added during the process and concentrations of substances will also be considered. Several indicators were also identified, and the group is working on a community exposure matrix that can provide some useful information about geographic areas by matching its inventory with its health indicators.

Air Toxics

This project team was established in early 1996. Its task was to develop a process for dealing with airborne toxic substances that are considered to be a high priority in Alberta and are not being adequately dealt with by any other agency or process. Working with a consultant, the group concluded that between five and eight substances or classes of air toxic substances are a high priority for Alberta and require additional examination. The group will be recommending a management plan to the Alliance Board in 1997.

Acidifying Emissions Symposium

A volunteer steering committee organized and delivered this very successful conference in April to assess the state of knowledge about the environmental and health effects of acidifying emissions. Research from various parts of the world was presented for discussion and incorporation into Alliance project plans. Some 170 delegates heard speakers from universities, industry, and government, and participated in 30 breakout sessions during the three days. The symposium resulted in two volumes of proceedings as well as a number of recommendations to the Alliance Board that focused on raising awareness of research needs relevant to the management of acidifying emissions.

Alberta Eco-Efficient Communities Initiative

This project was initiated to provide small and mid-sized municipalities in Alberta with the detailed tools and information they need to voluntarily develop and implement eco-efficiency actions that will save money and reduce greenhouse gas emissions. It is being managed by the Pembina Institute and supported by a number of Alliance stakeholders. The project team made presentations to several municipal conferences in 1996 and launched the electronic database of municipal success stories on the Internet. The 250-page "how-to" guide is expected to be published early in 1997, and municipal workshops will begin shortly thereafter.
Vehicle Emissions

The mission of this group is to recommend initiatives to help protect public health and the environment from vehicle emissions produced in Alberta. The group developed a list of 57 potential options for reducing vehicle emissions. Using seven criteria, this list was reduced to ten options worth further investigation. These options are now being considered. The group expects to bring recommendations to the CASA Board in mid-1997.

Edmonton Air Quality Zone

Members of this group assessed the issues and decided to move to a broader focus on urban air quality. The members have dispersed to other teams, including Air Toxics, Vehicle Emissions, Ambient Air Monitoring, and Human Health and will work with these groups to address urban air quality issues. To establish a baseline, emissions inventories are being prepared for Edmonton and Calgary.

The following projects have roots with the Alliance but are now being implemented or managed by other agencies. Additional contact information is provided in Appendix III.

Adaptation to Climate Change and Variability on the Prairies
Energy Efficiency Codes for Buildings and Houses
Energy Efficiency in Government Buildings
Energy Efficiency Standards for Appliances
Energy Efficiency Support for the Voluntary Challenge Program
6.0 Communications and Outreach

In 1996, the Alliance participated in several events that helped raise awareness and promote actions that people can take to improve air quality. Participation in these events involved active partnerships with our stakeholders. Co-sponsorships provide an efficient, cost-effective way of reaching the public. These events also provide opportunities for the Alliance to lend its support and expertise to Board members who are pursuing clean-air related initiatives.

**Clean Air Week**

The first annual Clean Air Week in Alberta was held May 27 to June 2. Sponsored by the Alliance, Alberta Environmental Protection, and the Alberta Lung Association, the week was intended to raise awareness of air quality issues and encourage Albertans to take action to keep the air clean. The event coincided with activities happening across Canada to mark Clean Air Month, and was promoted through proclamations issued by the mayors of seven Alberta cities (Calgary, Edmonton, Grande Prairie, Lethbridge, Red Deer, St. Albert, and Wetaskiwin).

The provincial Air Quality Index provided by Alberta Environmental Protection was promoted in the media during Clean Air Week, encouraging Albertans to learn about the index and air quality conditions in their area. The 1996 event was so successful that the Alliance will be spearheading Alberta's participation in the 1997 Clean Air Week, planned for May 26 to June 1.

**SMOG FREE**

SMOG FREE (Save Money On Gas—From Reduced Exhaust Emissions) is a voluntary project supported by CASA stakeholders operating in both Calgary and Edmonton. The Edmonton SMOG FREE program, managed by the Alberta Lung Association with financial support from Environment Canada, was launched on September 9, 1996 at the Northern Alberta Institute of Technology. Its aim is to reduce vehicle emissions that contribute to smog in urban areas by encouraging motorists to have their vehicles checked free of charge at one of SMOG FREE's participating service centers. Service centers donate their time and test equipment to the program. Testing takes about 10 minutes and the technician will indicate whether the vehicle is within the Environment Canada guidelines. Motorists whose vehicles do not meet the standards are encouraged to consider how they can improve fuel efficiency.

The SMOG FREE information line has had up to 120 calls per week and, just six weeks after its launch, over 1,250 cars had been tested. The Edmonton Taxi Cab Commission allowed its cabs to be tested and to display the "I drive SMOG FREE" sticker. Another Edmonton campaign is planned for the spring of 1997.
Energy Awareness Week

The 12th annual Energy Awareness Week was held October 21-26, 1996. The theme “Save Today...Save Tomorrow” refers to saving energy and money now, to help conserve our natural resources and the environment for future generations. During Energy Awareness Week, Edmontonians were encouraged to examine the way they use energy at home, at work, and on the move, with the goal of using energy more wisely. The Alliance and various environmental, industry, and government organizations sponsored this event.

Environment Week, Calgary Mayor’s Enviro Expo

CASA participated in the City of Calgary Mayor’s Enviro Expo during Environment Week in June, sharing display space with the Alberta Lung Association. Thousands of school children along with teachers, parents, and local business people attended the event. The Alliance distributed some 2,000 tree-growing kits donated by the Tree Canada Foundation, and anti-smoking “pogs” donated by the Alberta Lung Association.

Clean Air Views

Through the generous support of the Alberta Lung Association, the Alliance has been able to publish its own magazine, Clean Air Views. This is a valuable and useful method of reaching our stakeholders and the broader public. Three editions were produced in 1996, covering the themes of SO2 Management, Air Quality and Health, and Vehicles and Air Quality.
7.0 Participating Organizations

Representatives from the following organizations participated in Alliance activities in 1996. Without their commitment and effort and the support of their organizations and agencies, the work of the Alliance would not be possible. In the next section of this report, we have attempted to quantify the value of this extremely important in-kind contribution. If we have omitted any organization or agency, we apologize; please let us know.

- Alberta Association of Municipal Districts and Counties
- Alberta Agriculture, Food and Rural Development
- Alberta Asthma Centre
- Alberta Cattle Commission
- Alberta Department of Energy
- Alberta Energy and Utilities Board
- Alberta Environmental Centre
- Alberta Environmental Protection
- Alberta Federation of Rural Electrification Associations
- Alberta Forest Products Association
- Alberta Health
- Alberta Labour
- Alberta Lung Association
- Alberta Motor Association
- Alberta Municipal Affairs
- Alberta Power Limited
- Alberta Public Works, Supply and Services
- Alberta Research Council
- Alberta Transportation and Utilities
- Albertans for a Clean Environment
- Amoco Canada Petroleum Company Limited
- Environmental Foundation
- Calgary Motor Dealers’ Association
- Canada Mortgage and Housing Corporation
- Canadian Association of Petroleum Producers
- Canadian Chemical Producers Association
- Canadian Energy Pipelines Association
- Canadian Forest Service
- Canadian Occidental Petroleum Limited
- Canadian National Parks and Wilderness Society
- Canadian Petroleum Producers Institute Western Division
- Canadian Wind Energy Association
- Cardinal River Coal Limited
- Celanese Canada Inc.
- Chevron
- City of Calgary
- City of Edmonton
- Clean Air Calgary
- CN Rail
- Coopers & Lybrand
- County Mountainview 17
- Dow Chemical Canada Inc.
- Energy Efficiency Association of Alberta
- Environment Canada
- Environmental Resource Centre
- EPCOR
- First Star Energy Ltd.
- Fortis
- Fort McMurray Environmental Association
- Gulf Canada
- Home Oil
- Howell Mayhew Engineering Inc.
- Husky Oil
- Imperial Oil Limited
- Inland Cement
- M.D. Brazeau 77
- M.D. Rockyview 44
- M.D. Yellowhead 94
- Mobil Oil Canada
- Morrison Petroleum
- Norwester Energy Systems Ltd.
- Northern Alberta Institute of Technology (NAIT)
- Northwestern Utilities Limited
- NOVA Gas Transmission
- Novagas Clearinghouse
- Pembina Agricultural Protection Association
- Pembina Institute for Appropriate Development
- Petro-Canada Resources
- Phoenix Engineering Inc.
- Prairie Acid Rain Coalition
- Reid Crowther and Partners
- Rocky Mountain Ecosystem Coalition
- Rocky Mountain House Community Health Centre
- Saskatchewan Environment and Resource Management
- Saskatchewan Environmental Council
- Schuller International Canada
- Shell Canada Limited
- South Peace Environmental Association
- Sunpine Forest Products
- Syncrude Canada Limited
- TransAlta Utilities Corporation
- University of Alberta
- Weyerhaeuser Canada Ltd., Grande Prairie Operations
- Wildrose Agricultural Producers
8.0 Support from Participating Organizations

The Alliance has tried to put an actual dollar figure on the support and assistance provided by participating organizations. These figures are preliminary. They are offered in the spirit of acknowledging and formally recognizing these contributions and to account for the full costs (cash and in-kind) of accomplishing the work of the Alliance in 1996.

In-kind figures were compiled by examining both time and travel costs incurred for representatives to participate in Alliance activities during 1996. For example, people travel from various distances and by various modes to meetings, thus a standard rate of $300 for travel was estimated for any person travelling more than 50 km to attend a meeting or workshop, based on the price of a return air ticket and surface transportation between Edmonton and Calgary. Time was allocated at the rate of $700 per day for Directors of the Alliance to attend meetings, $400 per day for experts and professionals attending meetings, and $125 per day for administrative support.* Meetings considered in the calculations were Board meetings, project team meetings, and specific workshops to advance the work of the project teams.

Time spent on Alliance activities between meetings was allocated at the rate of $100 per hour for Directors, $50 per hour for project teams, and $25 per hour for administrative assistance. These figures are, according to our stakeholders, almost certainly under-recorded and under-estimated.

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* These estimated daily rates were extracted from the October 1994 issue of the Association of Professional Engineers, Geologists, and Geophysicists Newsletter, The PEGG, and reduced by $100 per day.
9.0 Financial Statements

Auditors' Report

To the Members of
The Clean Air Strategic Alliance Association

We have audited the balance sheet of The Clean Air Strategic Alliance Association as at December 31, 1996 and the statements of revenue, expenditures and surplus and changes in financial position for the year then ended. These financial statements are the responsibility of the Association’s management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Association as at December 31, 1996 and the results of its operations and changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Chartered Accountants
Edmonton, Alberta, Canada
February 10, 1997
### Balance Sheet
December 31, 1996

#### ASSETS

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<tr>
<td>Prepaid expenses</td>
<td>23,066</td>
<td>1,097</td>
</tr>
<tr>
<td><strong>TOTAL CURRENT ASSETS</strong></td>
<td><strong>1,025,109</strong></td>
<td><strong>723,631</strong></td>
</tr>
<tr>
<td><strong>CAPITAL ASSETS (Note 3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10,968</td>
<td>8,017</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td><strong>$1,036,077</strong></td>
<td><strong>$731,648</strong></td>
</tr>
</tbody>
</table>

#### LIABILITIES

<table>
<thead>
<tr>
<th>Description</th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>$48,978</td>
<td>$119,860</td>
</tr>
<tr>
<td>Deferred grant revenue (Note 4)</td>
<td>642,857</td>
<td>487,380</td>
</tr>
<tr>
<td>Deferred external project revenue (Note 5)</td>
<td>256,750</td>
<td>67,035</td>
</tr>
<tr>
<td><strong>TOTAL CURRENT LIABILITIES</strong></td>
<td><strong>948,585</strong></td>
<td><strong>674,275</strong></td>
</tr>
<tr>
<td><strong>SURPLUS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>87,492</td>
<td>57,373</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td><strong>$1,036,077</strong></td>
<td><strong>$731,648</strong></td>
</tr>
</tbody>
</table>

#### APPROVED BY THE BOARD

[Signature]

**President**

[Signature]

**Treasurer**
Statement of Revenue, Expenditures and Surplus
Year ended December 31, 1996

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVENUE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants (Note 4)</td>
<td>$ 469,523</td>
<td>$ 514,155</td>
</tr>
<tr>
<td>External projects (Note 5)</td>
<td>190,703</td>
<td>171,257</td>
</tr>
<tr>
<td>Interest</td>
<td>30,119</td>
<td>42,617</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>690,345</strong></td>
<td><strong>728,029</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPENDITURES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External projects</td>
<td>190,703</td>
<td>171,257</td>
</tr>
<tr>
<td>Projects</td>
<td>167,207</td>
<td>164,840</td>
</tr>
<tr>
<td>Board support</td>
<td>92,619</td>
<td>119,720</td>
</tr>
<tr>
<td>Communications</td>
<td>87,529</td>
<td>92,922</td>
</tr>
<tr>
<td>General and administration</td>
<td>82,109</td>
<td>114,095</td>
</tr>
<tr>
<td>Statement of concern and other</td>
<td>29,167</td>
<td>9,635</td>
</tr>
<tr>
<td>Non-government organizations</td>
<td>10,892</td>
<td>12,943</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>660,226</strong></td>
<td><strong>685,412</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCESS OF REVENUE OVER EXPENDITURES</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30,119</strong></td>
<td><strong>42,617</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURPLUS, BEGINNING OF YEAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57,373</strong></td>
<td><strong>14,756</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURPLUS, END OF YEAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 87,492</strong></td>
<td><strong>$ 57,373</strong></td>
</tr>
</tbody>
</table>
Statement of Changes in Financial Position
Year ended December 31, 1996

<table>
<thead>
<tr>
<th>NET INFLOW (OUTFLOW) OF CASH RELATED TO THE FOLLOWING ACTIVITIES</th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess of revenue over expenditures</td>
<td>$ 30,119</td>
<td>$ 42,617</td>
</tr>
<tr>
<td>Item not affecting cash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>4,701</td>
<td>3,305</td>
</tr>
<tr>
<td></td>
<td>34,820</td>
<td>45,922</td>
</tr>
<tr>
<td>Changes in non-cash operating working capital items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accrued interest</td>
<td>6,425</td>
<td>(5,492)</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>13,203</td>
<td>(34,701)</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>(21,969)</td>
<td>1,816</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>(70,882)</td>
<td>80,012</td>
</tr>
<tr>
<td>Deferred grant revenue</td>
<td>155,477</td>
<td>67,035</td>
</tr>
<tr>
<td>Deferred external project revenue</td>
<td>189,715</td>
<td>35,845</td>
</tr>
<tr>
<td></td>
<td>306,789</td>
<td>190,437</td>
</tr>
<tr>
<td>INVESTING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of capital assets</td>
<td>(7,652)</td>
<td>(11,016)</td>
</tr>
</tbody>
</table>

| NET CASH INFLOW | 299,137 | 179,421 |
| CASH POSITION, BEGINNING OF YEAR | 671,841 | 492,420 |

| CASH POSITION, END OF YEAR | $ 970,978 | $ 671,841 |

<table>
<thead>
<tr>
<th>REPRESENTED BY:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$ 331,618</td>
<td>$ 113,596</td>
</tr>
<tr>
<td>Treasury Bills</td>
<td>639,360</td>
<td>558,245</td>
</tr>
<tr>
<td></td>
<td>$ 970,978</td>
<td>$ 671,841</td>
</tr>
</tbody>
</table>
Notes to the Financial Statements

Year ended December 31, 1996

1. DESCRIPTION OF OPERATIONS

The Clean Air Strategic Alliance Association is a non-profit organization incorporated March 14, 1994 under the Societies Act of Alberta. The Association is comprised of members from three distinct stakeholder categories; industry, government, and non-government organizations. The Association has been given shared responsibility by its members for strategic air quality planning, organizing and coordination of resources, and evaluation of results in Alberta. In support of these objectives, the Association receives cash funding from the Province of Alberta as well as cash and in-kind support from other members.

2. ACCOUNTING POLICIES

These financial statements have been prepared in accordance with generally accepted accounting principles and include the following significant accounting policies:

Revenue recognition

Grants monies received are recognized as revenue for accounting purposes when the Association has satisfied the terms of the grant agreements. Funding received in advance is carried as deferred grant revenue.

External project monies received are recognized as revenue for accounting purposes when the Association has satisfied the terms of the projects. Funding received in advance is carried as deferred external project revenue.

Capital assets

Capital assets are recorded at cost. Depreciation, which is based on the cost less the residual value over the useful life of the asset, is computed using the declining-balance method at the rates disclosed in Note 3.

Non-monetary support

Association members contribute non-monetary support including staff resources, meeting space, and publication support. The value of this non-monetary support is not reflected in these financial statements.

3. CAPITAL ASSETS

<table>
<thead>
<tr>
<th>Depreciation Rates</th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost</td>
<td>Accumulated Depreciation</td>
</tr>
<tr>
<td>Computer equipment</td>
<td>$15,095</td>
<td>$6,230</td>
</tr>
<tr>
<td>Furniture and equipment</td>
<td>30%</td>
<td>3,932</td>
</tr>
<tr>
<td></td>
<td>$19,027</td>
<td>$8,059</td>
</tr>
</tbody>
</table>
Notes to the Financial Statements
Year ended December 31, 1996

4. DEFERRED GRANT REVENUE

During the period, the Association received grants totalling $625,000 (1994 - $550,000) from the Province of Alberta. The purpose of the grants is to provide core funding in support of the Association's objectives as described in Note 1. The regulations to the Department of the Environment Act, the Department of Energy Act and the Department of Health Act, under which the grants have been provided, specify that grants must either be used for the purposes specified in the grant, be used for different purposes if such different purposes are agreed to by the applicant and the respective Minister, or be returned to the Province. Accordingly, in the event that the Association does not utilize the funds in pursuit of its objectives, any unexpended grant monies remaining may have to be repaid to the Province of Alberta.

Deferred grant revenue is comprised of the grant monies received which have not yet been expended for the purposes specified in the grant agreements.

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred grant revenue, beginning of year</td>
<td>$ 487,380</td>
<td>$ 451,535</td>
</tr>
<tr>
<td>Grant monies received</td>
<td>625,000</td>
<td>550,000</td>
</tr>
<tr>
<td>Revenue recorded based on allowable expenditures</td>
<td>(469,523)</td>
<td>(514,155)</td>
</tr>
<tr>
<td>Deferred grant revenue, end of year</td>
<td>$ 642,857</td>
<td>$ 487,380</td>
</tr>
</tbody>
</table>

5. DEFERRED EXTERNAL PROJECT REVENUE

Deferred external project revenue is comprised of monies received for specific external projects which have not been expended for the purposes specified in the mandates of the projects.

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred external project revenue, beginning of year</td>
<td>$ 67,035</td>
<td>$    -</td>
</tr>
<tr>
<td>External project monies received</td>
<td>380,418</td>
<td>238,292</td>
</tr>
<tr>
<td>Revenue recorded based on allowable expenditures</td>
<td>(190,703)</td>
<td>(171,257)</td>
</tr>
<tr>
<td>Deferred external project revenue, end of year</td>
<td>$ 256,750</td>
<td>$ 67,035</td>
</tr>
</tbody>
</table>

6. NON-MONETARY SUPPORT

During the year, the Association received non-monetary support in the form of supplies, office space and seconded manpower totalling $99,875 (1995 - $95,000) from the Province of Alberta - Environmental Protection. These amounts have not been reflected in these financial statements.
Appendix I

Alliance Board Members and Alternates

The following were members of the Alliance Board as of December 31, 1996.

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Director/Alternate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta Department of Energy</td>
<td>Rick Hyndman, Deputy Minister</td>
</tr>
<tr>
<td></td>
<td>John Donner, Exec. Director, Env. Affairs Branch</td>
</tr>
<tr>
<td>Alberta Environmental Protection</td>
<td>Al Schulz, Assistant Deputy Minister</td>
</tr>
<tr>
<td>Alberta Health</td>
<td>Jerry Lack, Director, Chemical Assessment and Mgmt</td>
</tr>
<tr>
<td>Environment Canada</td>
<td>Cecile Lord, Assistant Deputy Minister</td>
</tr>
<tr>
<td>Local Government</td>
<td>Stephen Gabos, Sr. Team Leader, Surveillance</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Jim Vollmershausen, Regional Director General</td>
</tr>
<tr>
<td>Alternate Energy</td>
<td>Brian O'Donnell, Director, Environmental Services</td>
</tr>
<tr>
<td>Canadian Petroleum Products Institute</td>
<td>Glen Myers, CPPI Western Division</td>
</tr>
<tr>
<td>Chemical Manufacturers</td>
<td>Ian Brownlie, Celanese Canada Inc.</td>
</tr>
<tr>
<td>Forestry</td>
<td>Wil VandenBORN, Dow Chemical</td>
</tr>
<tr>
<td>Mining</td>
<td>Rick Maksymetz, Weyerhaeuser Canada Ltd.</td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>Tim Whittford, Weldwood of Canada Ltd.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Jim Popovich, Fording Coal Ltd.</td>
</tr>
<tr>
<td></td>
<td>Ron Laing, Inland Cement</td>
</tr>
<tr>
<td>Consumer/Transportation</td>
<td>Doug Baldwin, Imperial Oil Resources Ltd.</td>
</tr>
<tr>
<td>NGO Health</td>
<td>Bill HARLAN, Canadian Association of Petroleum Producers</td>
</tr>
<tr>
<td>NGO Pollution</td>
<td>Jim Leslie, TransAlta Utilities</td>
</tr>
<tr>
<td>NGO Wilderness</td>
<td>David Lewin, EPCOR</td>
</tr>
<tr>
<td>Executive Director</td>
<td>Mike Kelly, CASA</td>
</tr>
</tbody>
</table>

The following individuals left the Board in 1996. For their contribution to our work, the Alliance gratefully acknowledges them and the organizations they represented while on the Board.

Ken Charters, Energy Efficiency Association of Alberta
Bryce Jacobs, Alberta Association of Municipal Districts and Counties
Roy Jensen, Uniform
Rob Macintosh, Pembina Institute for Appropriate Development
Peter Melnychuk, Alberta Environmental Protection
Nancy Reynolds, Alberta Health
J. Doug Wilson, Dow Chemical Canada
Appendix II

Publications

pre-1996 Alliance Publications

The Bulletin. 5 issues produced in 1995.
Clean Air Views. 3 issues produced in 1995, published by the Alberta Lung Association.

pre-1996 Project Team Reports*

(A report to the Alliance Board)
Airborne Human Health Indicators in Alberta. 1995. By Dr. David Bates.

1996 Alliance Publications

The Bulletin. 4 issues produced in 1996.
Clean Air Views. 3 issues produced in 1996, published by the Alberta Lung Association.

Related Publications

Alliance Project Integration and Information Workshop. September 30, 1996.
Symposium on the Science of Climate Change for Decision makers.
Published by Canadian Energy Research Institute and the Clean Air Strategic Alliance. Volume II: Presentation Material.

Project Team Reports*

Air Toxics of Significance in Alberta Omitted from PSL-1 and PSL-2.
By Dr. Tee Guidotti. 1996.
Final Report of the Target Loading Subgroup on Critical and Target Loading in Alberta.
1996.

*These are interim specialized reports.
Appendix III

Contacts for Other Initiatives

Adaptation to Climate Change and Variability on the Prairies
Ross Herrington, Environment Canada

Energy Efficiency Codes for Buildings and Houses
Chris Tye, Alberta Labour

Energy Efficiency in Government Buildings
Goldie Edworthy, Alberta Department of Energy

Energy Efficiency Standards for Appliances
Ken Fenning, Alberta Labour

Energy Efficiency Support for the Voluntary Challenge Program
Goldie Edworthy, Alberta Department of Energy
The Clean Air Strategic Alliance is a non-profit partnership that has been given shared responsibility by its members for strategic air quality planning, organizing and coordination of resources, and evaluation of results in Alberta through a collaborative process. This document is one in a series of Alliance publications. For more information on the Clean Air Strategic Alliance, or for additional copies of this publication, contact:

Clean Air Strategic Alliance  
9th Floor, Sterling Place  
9940 - 106 Street  
Edmonton, Alberta, Canada  
T5K 2N2  
ph: (403) 427-9793  
fx: (403) 422-3127  
em: casa@incentre.net  
http://www.incentre.net/casa

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