

clean air

strategic alliance

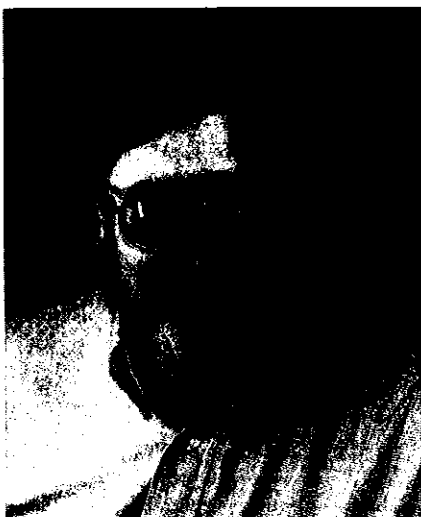


1998 Highlights	1
President's Message	2
Strength Through Consensus	3
Alliance Activities	4
Air Quality Management Zones	5
Wood Buffalo Zone	5
West Central Airshed Society	6
Parkland Airshed Management Zone	6
Project Updates	7
Air Toxics	7
Ambient Air Quality Monitoring	8
Climate Change	8
Ecological Effects	9
Human Health	9
Multi-Stakeholder Group for Fine Particulates and Ozone	10
Solution Gas Flaring	10
Sulphur Dioxide Management	11
Vehicle Emissions	11
Implementation Initiatives	12
Alliance Outreach	12
Participating Organizations	13
Support for the Alliance	14
Financial Statements	15
Auditor's Report	15
Balance Sheet	16
Statement of Revenue, Expenditures and Surplus	17
Statement of Changes in Financial Position	18
Notes to Financial Statements	19
Notes to Financial Statements	20
Board Members and Alternates	21

HIGHLIGHTS

Further detail on each of these topics is provided throughout the report:

- The Solution Gas Flaring Project Team presented its recommendations to the Alliance board, for transmittal to the Alberta Energy and Utilities Board (EUB). The recommendations call for reductions in routine solution gas flaring of 15 per cent and 25 per cent by the end of 2000 and 2001 respectively. Future, reviewable targets were proposed for reductions of 70 per cent by 2007.
- In June, a team was formed to examine opportunities for reducing greenhouse gas emissions in Alberta. The Climate Change Project Team is investigating a variety of early options suitable for implementation by government, the Alliance, or other stakeholders.
- The Alberta ROVER (Roadside Optical Vehicle Emissions Reporter) Project of the Vehicle Emissions Implementation Design Team received extensive media attention during its data-collection visits to four Alberta municipalities. It was one of ten recommendations the team received approval for at the June board meeting.
- In response to a generally expressed need to provide better information about the impacts of air quality on human health in Alberta, the board accepted a recommendation to establish a comprehensive human health monitoring system in Alberta.
- The Wood Buffalo Environmental Association (WBEA) received the 1998 Financial Post Environment Award for Business Partnerships, in recognition of its community-driven environmental activities within the Wood Buffalo Airshed Management Zone.
- A fifth station was activated in the West Central Airshed Zone's air quality monitoring network. In addition, alfalfa sub-plots were added to existing agricultural bio-monitoring sites. This will increase the amount of data available for the zone's computer modelling study of air quality impacts on biomass production.
- The Parkland Airshed Management Zone (PAMZ) celebrated its first full year of operation in March, and completed the design of its air quality monitoring program in September.
- Board members reviewed the strategic direction of the Alliance, and developed a revised strategy with discrete goals and objectives for the Alliance's four focus areas. The new strategy also reflects the board's decision to integrate a pollution prevention approach into board and project team work.



Five years ago, I was involved in a process called the Clean Air Strategy for Alberta, which responded to requests from Albertans for a new approach to air quality management.

PRESIDENT'S MESSAGE

There were no guarantees attached to its new management ideas, and no promises of success. To the people involved, however, promises and guarantees were not as important as commitment. To this day, it is *commitment* that has made this process, the Clean Air Strategic Alliance, a reality.

The keys to Alliance success are, and will continue to be, consensus decision-making and multi-stakeholder involvement. To truly appreciate these concepts, one must get involved, be active, and be committed to making a difference. In short, one must believe this process can yield results.

Results were exactly what 1998 was all about. The most publicized of these involved the Flaring Project Team. The conclusion reached by the team — to reduce or eliminate routine solution gas flaring — was praised by those who live near flares, those who conduct flaring, and those who have held a role somewhere between the two. This praise is well-deserved, because this project represented the Alliance at its best: team participation was large, and came from many diverse sectors; consensus was achieved; and, the resulting innovative recommendations were accepted by the parties most able to achieve their implementation.

Other tangible results from 1998 included the enhancement of the ambient monitoring data warehouse, the refinement of Alberta's air toxics management program, and the much-publicized travels of the vehicle emissions-tracking ROVER, which made stops at four centres across the province. In each case, the degree of awareness created by the project was as important, in its own way, as the actual end result.

Working behind the scenes in support of our many projects is the Alliance's board of directors. In 1998, board members were actively involved in reviewing the strategic direction of the Alliance. The result of this work is a revitalized strategy that sets out discrete goals and objectives in each of four focus areas. The new strategy also reflects the board's decision to integrate pollution prevention principles and processes into the work of the Alliance. This addition will require the board and project teams to consider pollution prevention and continuous improvement approaches when developing strategies to resolve air quality issues.

The renewed strategic plan is an example of the hard work conducted by the board in support of our commitment to deliver on the original vision for clean air. The strategic planning activity will result in a crucial re-injection of energy that will provide both the momentum and guidance needed as we move into the next phase of air quality management in Alberta.

As I look back on 1998, from its strong beginnings to its activity-filled end, I would like to thank Doug Baldwin and Tom Marr-Laing whose preceding terms as co-presidents were crucial to the Alliance. For every board, group, and project member who contributed to this year of activity, and to the sponsors who renewed their commitments to the Alliance, I offer my sincere thanks. Alberta's air quality has never been as well-protected or understood as it is right now.

Ken Smith

STRENGTH THROUGH

Consensus requires innovative thinking to resolve concerns and address opportunities.

**From individuals, it demands an open mind,
a willingness to listen to others,
and a commitment to finding solutions.
It represents a better way of doing business,
and as such, is the cornerstone upon which
the Clean Air Strategic Alliance was built.**

The Alliance was incorporated in 1994 as a non-profit association under the Societies Act of Alberta. Its mandate is to address opportunities to improve Alberta's air quality by bringing together stakeholders with diverse interests, using a consensus approach to decision-making. The overarching goal of the Alliance is to build and operate a new air quality management system for Alberta that can address emerging issues. To carry out its mandate, the Alliance will:

- **Clearly identify the most important air quality issues;**
- **Prioritize specific problems and opportunities;**
- **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 generally sanction and implement Alliance decisions that meet two criteria: consensus is reached among the stakeholders (including government), and decisions are based on that consensus.

To guide and empower its decision-making processes, the Alliance has put in place a multi-step Comprehensive Air Quality Management System (CAMS). The CAMS provides an avenue for members of the public to bring an air quality concern to the Alliance by filing a Statement of Opportunity. If the area identified is within the Alliance's mandate and is deemed a high priority, a process is put in place to clarify the environmental, economic, and health implications of the issue, develop an action plan, and resolve the concern. Project teams composed of interested citizens and key experts from stakeholder groups are then formed to develop creative ways to bring the resolutions to life.

To help them make the best possible decisions and to provide access to leading-edge research and innovative techniques'



ACTIVITIES

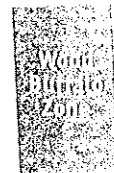
Much of the Alliance's work is done by teams with a mix of individuals from organizations that share interest in a particular issue. The various teams and their terms of reference are ratified by the Alliance board. Individual members of each team are accountable to their stakeholder groups, and the teams are accountable to the board. Teams are formed when the Alliance assumes responsibility for a project for one or more of the following reasons:

- **No existing agency has sole responsibility;**
- **No other agency is working in that area;**
- **Key stakeholders agree that the Alliance provides the best approach;**
- **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 three 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 will continue to host symposia and scientific workshops. The expectation is that by improving communications between scientists and natural resource managers, we can better align the needs of each to find better solutions.

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 do not "fall through the cracks." Integration workshops, which bring together representatives from each Alliance team, continue to provide an important venue for such communication. A communications planning model for Alliance teams, completed in 1997, helps focus team reporting and clarifies the responsibilities of stakeholders in the communications process. The goals, progress, and results of various Alliance groups are summarized in the following sections.

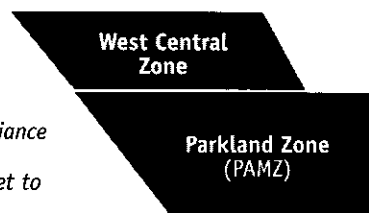
AIR QUALITY MANAGEMENT ZONES



**Air quality concerns vary across the province
due to landscape, weather patterns, population,
industrial activity, and other, more subtle factors.**

CASA Regional Zones

Air quality management zones allow stakeholders in a shared geographical area to identify air quality concerns and implement management solutions suited to those concerns. By following the Alliance model of consensus decision-making, concerned stakeholders can meet to discuss and resolve their concerns in a productive, collaborative manner. The following zones were established by the Alliance, and operate according to Alliance principles. Their boards of directors are separate from the Alliance's, however, and include representatives from local government, health authorities, industries, and communities.



Wood Buffalo

The Regional Air Quality Coordinating Committee (RAQCC) assumed air monitoring activities in the Southern Wood Buffalo Zone on December 1, 1997.

In a move to include more communities in its monitoring area, and to improve the management link between ecological and air monitoring data, members of RAQCC formed the Wood Buffalo Environmental Association (WBEA) in the spring of 1998. WBEA's revised monitoring area expanded the boundaries that had been set for the Southern Wood Buffalo Zone, so the name of the Alliance-recognized zone was also updated.

Beyond any confusion these name changes may have created, 1998 was a phenomenal year for WBEA. The air monitoring network, consisting of eight air monitoring stations and 13 passive stations is now fully operational. Scientifically credible data is gathered from this network and communicated openly, through the Internet and a telephone hotline.

WBEA also established an Ozone Modelling Working Group whose mandate is to progress the understanding of ground level ozone in the region, and our capability to predict future ozone levels.

The Terrestrial Ecological Effects Monitoring Program conducted soil and vegetation studies on jack pine and aspen sites in the region. The study is designed to provide baseline information; possible changes may be detected in similar studies, scheduled to be conducted on a five year cycle.

One of the highlights of the year was receiving the Financial Post Environment Award for Business Partnerships. The judging panel said: "The Wood Buffalo Environmental Association is a Canadian role model for community-driven environmental activities and monitoring. The Association focuses on being proactive and encourages ongoing dialogue with the regional stakeholders — everyone wins when you dialogue and work together."

By the end of 1998, the Association had increased its board membership to 14, with the addition of the Athabasca Chipewyan First Nation, Nunece Health Board (Fort Chipewyan), Metis Local 122 (Fort MacKay), Alberta Health, the Pembina Institute for Appropriate Development, Shell Canada Ltd., and Mobil Oil.



West Central

The West Central Airshed Society (WCAS) made steady progress toward achieving its goals and objectives in 1998. The Society consists of over 70 companies, government departments, and non-government organizations linked by a common interest in maintaining air quality. Upon its inception in 1995, the Society implemented a dynamic and evolutionary monitoring program to identify and respond to air quality issues. In 1998, to increase coverage of the zone, the fifth air quality monitoring station in the WCAS network was commissioned near Carrot Creek. This new station is strategically located in an area marked by considerable industrial activity but no regional air quality monitoring.

Monitoring within the West Central Airshed Zone over the past three years has shown regional air pollutant concentrations of sulphur dioxide and nitrogen dioxide to be well below Alberta provincial guidelines. Concentrations reached a maximum of twenty percent of the guideline values in 1998. Ozone levels exceeded guideline values for a total of six hours in 1998; four hours at a monitoring site in the more developed eastern part of the zone, and two hours at a remote background monitoring site in the western part

of the zone. These elevated ozone concentrations may be the result of natural processes, or may reflect the influence of human activities.

In the summer of 1998, saskatoon bushes at one of the agricultural test plots showed symptoms of stress consistent with exposure to sulphur dioxide. During the growing season, the atmospheric concentrations of sulphur dioxide averaged one part per billion (ppb), and the maximum of 23 ppb was well below the guideline of 170 ppb. The agricultural bio-monitoring program will be intensified in the 1999 growing season to identify the cause of the symptoms, and to determine if this was an isolated occurrence.

The year also marked the second of a five-year program that utilizes a computer model to determine the influence of air quality on biomass production. Measurements of alfalfa growth and yield, which provide input into the model, were increased by adding sub-plots at each of the five agricultural bio-monitoring sites. The number of sub-plots will be increased in 1999.

The Annual Report of WCAS activities is available in May of each year at the Society's Annual General Meeting.

Parkland Airshed

The Parkland Airshed Management Zone (PAMZ) marked its first full year of operation in 1998. The focus of energy during this time has been on developing plans to manage air quality in the zone. As an important first step, PAMZ conducted an Emissions Inventory and Study, to identify and track sources of emissions in the zone.

A business plan was developed to outline the mission, goals, objectives, and planned activities for the zone. It also acts as the main tool in the zone's communications strategy. A survey and several public meetings were also held as part of this strategy. From these, human health was identified as a high priority issue; a Human Health Committee was subsequently established to address these concerns. Terms of

reference under which this committee will function have been drafted, and will be finalized early next year.

Work continued on the design of an air quality monitoring program, which received its final approval near the end of the year. The program consists of air quality monitoring, quality control/quality assurance, data management, and information reporting; it will provide a basis for the majority of the zone's 1999 work.

A project manager position was also approved for the zone. Advertising for the position took place at the end of 1998, and zone members hope to have the position filled by the spring of 1999.

PROJECT UPDATES

Air

The Air Toxics Project Team (ATPT) submitted its final report and recommendations to the Alliance board in June 1998.

The mandate of the ATPT was to identify significant air toxics issues in Alberta that are not being addressed elsewhere, and to propose a management plan to deal with them.

The project team retained a consultant, Dr. Tee L. Guidotti of the University of Alberta¹, to identify air toxics which might be of high priority in Alberta. Dr. Guidotti recommended that five substances be evaluated from an Alberta-specific viewpoint: hydrogen sulphide (H₂S), chlorine dioxide, glutaraldehyde, isocyanates, and terpenes.

To evaluate these substances, the project team developed a screening process which leaves the existing regulatory framework as the core management mechanism, while allowing for more stakeholder input into the decision process. The outcome of the evaluation of the five

substances identified by Dr. Guidotti is that only H₂S appears to merit further action at present.

The team recommended its screening process be formally incorporated into the CASA Comprehensive Air Quality Management System (CAMS) for issues that come to light in the future. The team also recommended that air quality guidelines be periodically reviewed.

The Alliance board agreed to incorporate the screening process for air toxics into the CAMS, accept the recommendations related to the five substances, and endorse the recommendation for a periodic review of air quality guidelines.

¹ (Dr. Guidotti is now with George Washington University, Washington, D.C.)

Ambient Air Quality

A multi-stakeholder Operations Steering Committee (OSC) was established in 1998 to oversee the implementation of the provincial ambient air quality monitoring system. The OSC is working with a cooperative network of 16 continuous (hourly) station owners, including Alberta Environmental Protection, Environment Canada, the Strathcona Industrial Association, the West Central Airshed Society, the Wood Buffalo Environmental Association, and the Parkland Airshed Management Zone. Air quality data collected by the network is directly accessible through the Alberta Ambient Air Data Management System.

This system, more commonly known as the Alliance data warehouse, emerged from the pilot phase to a fully operational data management system, with a web site as its public interface: www.casadata.org. The fundamental concept behind the data warehouse is to provide easy access to air quality data for all Albertans. Significant improvements to the system in 1998 include:

- **Subscriber-free interface: anyone entering the site can access any of the available types of reports without the use of a password and user i.d.;**
- **Direct data links to the air monitoring stations operated by the West Central Airshed Society;**
- **Data download reports: information from the site can be imported into the user's spreadsheet application of choice, and organized according to his or her needs;**
- **More historical data: information from as far back as 1993 is now accessible; and,**
- **An improved data validation routine, to ensure "good" data.**

The warehouse has proven to be an important source of air quality data and information to many Albertans. In 1998, a total of 4743 hits were registered at the web site, and 1046 data reports were created by these visitors between July and December.



Climate

In June 1998, the Alliance board agreed it could play an important role in helping Albertans respond to the issue of climate change, and approved the formation of a multi-stakeholder Climate Change Working Group (CCWG). At the November 25 board meeting, the working group's terms of reference were approved, and it began to operate as the Climate Change Project Team (CCPT).

The team's goal is to contribute to greenhouse gas reductions by developing, assessing, prioritizing, explaining, and recommending actions and measures to government and other stakeholders that will broaden the scope of early action, and assist in deciding on subsequent action. A variety of early actions have been identified, and most of these are being investigated by team members.

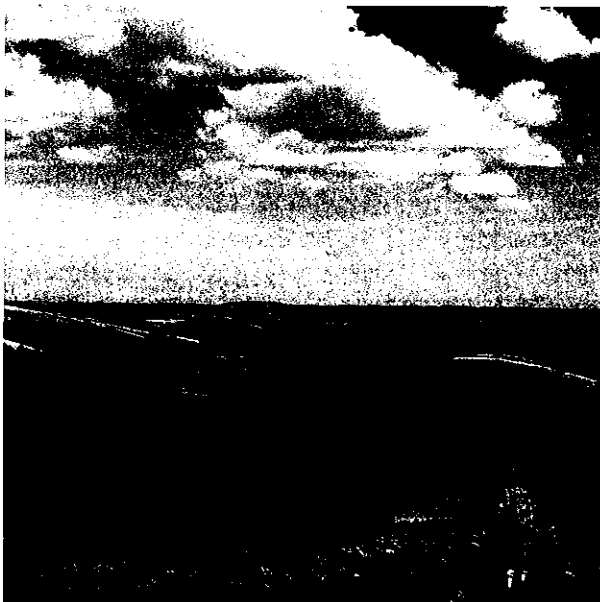
On December 15, the team, in conjunction with the Alberta Department of Energy and other stakeholders, sponsored a workshop to investigate demand management and conservation in Alberta's electricity industry. The workshop was well attended, and a number of opportunity areas were identified. The project team is developing plans to implement the most promising of these initiatives.

Ecological

The work of the Ecological Effects Monitoring Implementation Design Team focused on three areas in 1998:

- **Ambient monitoring of ozone concentrations in agricultural and forested areas;**
- **Receptor monitoring of acid deposition in forested areas; and,**
- **Information sharing on bio-monitoring in Alberta.**

The team continued efforts to coordinate ozone monitoring at existing sites, and worked to establish or co-locate the additional sites required for an ozone monitoring network in Alberta's agricultural and forested areas. The team also developed a proposal and budget for monitoring acid deposition effects on forests. As part of this work, the team sent letters to stakeholders involved in the acid deposition issue, seeking commitment and financial support. Efforts to establish the funding and commitments necessary for a long-term partnership-driven monitoring program will continue in 1999. The team also took the first steps toward establishing a database of current activities in ecological effects research. The database will allow for improved information-sharing and coordination among researchers.



Human

The need to understand the possible impacts of air quality on human health has never been greater. The first step in this understanding is to obtain credible information relative to the health of Albertans. This need for information, on the links between sources of emissions, ambient air, and personal exposure, has been expressed numerous times around the world. Over the past two years, the Human Health Project Team (HHPT) has developed a framework within which a comprehensive ongoing Human Health Monitoring System can be operated in Alberta. The framework is intended to integrate a series of components, including air quality and health effects data, special ("one-off") studies for specific issues, and a health complaint collection service, together with administrative mechanisms for analyzing, sharing, and communicating information. It will take considerable time and effort to implement all parts of the framework, but the HHPT sees a future where Albertans will be able to readily access information relating to the impacts of air quality on health.

The framework is currently being evaluated by comparing it against the Alberta Oil Sands Community Exposure and Health Effects Assessment Program. It is expected that specific components will be fine-tuned, and that coordination mechanisms between major stakeholders (including Alberta Health, the Regional Health Authorities, and Alberta Environmental Protection) will be worked out over the next year. An implementation team is coordinating these activities, and the Alliance board has agreed to audit the success of the framework in 2001. This initiative was set up to respond to stakeholder concerns, and has created high expectations; the team is confident that, given time, the program will provide the information needed by all Albertans.

Multi-Stakeholder Group for

In March 1998, the Alliance board accepted a proposal from Alberta Environmental Protection (AEP) to establish a multi-stakeholder group to provide recommendations on new standards and guidelines for fine particulates (PM₁₀ and PM_{2.5}) and ground level ozone (O₃).

To fulfill its mandate for public consultation under Section 14 of the Environmental Protection and Enhancement Act, AEP requested the Alliance's assistance to: establish a multi-stakeholder consultation process; and, to recommend participants for the consultative process. In April 1998, a 21 member group was established with representation from a broad range of sectors: oil and gas, forestry, non-government health, environmental groups, utilities, agriculture, and municipalities. The objectives of the group are to:

- **Provide advice to AEP on the development of Canada-wide standards for particulate matter and ozone;**
- **Recommend the level, form, and application of Alberta Guidelines for PM₁₀, PM_{2.5} and ground level ozone;**
- **Recommend the plan of action by which guidelines/standards will be pursued; and,**
- **Recommend a generic process for the regular review of air quality guidelines with a focus on determining whether a guideline needs to be updated or a new guideline established.**

Since April, the multi-stakeholder group has held regular meetings and a workshop. The group has developed a work plan to address the issues involved in setting an appropriate standard. Some of these issues include technological implications, source apportionment, health and environmental effects, socio-economic considerations, and ambient monitoring requirements. Some members of the multi-stakeholder group are also participating in national discussions on this matter. The target date for developing a recommendation on the Canada-wide standard is currently set for the fall of 1999. The group will likely take until the spring of 2000 to develop recommendations for how the new standard should be pursued in Alberta.



Solution Gas

In March 1997, the Alliance board approved the establishment of a project team to address potential and observed impacts of routine solution gas flaring. The Solution Gas Flaring Project Team presented its final report to the board on June 24, 1998. The team also provided its report to the Alberta Energy and Utilities Board (EUB). In response to the team's recommendations, the EUB is preparing a flaring-related Informational Letter (IL) for industry.

The project team recommended a staged, voluntary approach to eliminating or reducing flaring, supported by regulatory requirements. Firm, short-term targets call for provincial reductions of 15 per cent and 25 per cent by the end of 2000 and 2001 respectively. The project team also recommended the EUB restrict the volume of gas flared at individual sites, if the voluntary targets are not met. Long-term targets call for flaring to be reduced by up to 70 per cent by the end of 2007. Specific strategic actions were recommended to help achieve these targets.

Further recommendations include:

- **An EUB approval process for new flaring facilities that encourages operators to assess options for eliminating or reducing flaring;**
- **Public consultation and notification specific to solution gas flaring;**
- **Greater opportunities for the public to comment on, or object to, routine solution gas flaring;**
- **New performance requirements for all solution gas flares;**
- **New performance requirements for existing flares, to be met within three years;**
- **Continued research into flaring efficiencies and impacts;**
- **Improvements to the EUB's database regarding solution gas flaring; and,**
- **A review, in 2001, of the effectiveness of the framework for managing routine flaring.**

IMPLEMENTATION

Alliance Recommendations in Action

ECO-EFFICIENT COMMUNITIES

Project Leader: **Brian Mitchell**, The Pembina Institute for Appropriate Development

ENERGY EFFICIENCY FOR GOVERNMENT BUILDINGS

Contact: **John Gibson**, Alberta Public Works, Supply and Services

ENERGY EFFICIENCY LEGISLATION – CODES FOR BUILDINGS AND HOUSES

Project Leader: **Chris Tye**, Alberta Labour

ENERGY EFFICIENCY PROGRAMS TO SUPPORT VOLUNTARY INITIATIVES FOR CLIMATE CHANGE

Contact: **Brent Lakeman**, Alberta Department of Energy

ENERGY EFFICIENCY STANDARDS FOR APPLIANCES

Group Leader: **Rene Leduc**, Alberta Labour

OUTREACH

Many of these involved active partnerships with Alliance stakeholders and sponsors, which helped to make Alliance outreach activities as cost-effective and widely-attended as possible.

CLEAN AIR WEEK (MAY 24 TO 31)

After launch events in Edmonton and Grande Prairie, activities were held in schools across the province in support of the week's "Clean Air Communities" theme. Vehicle emissions testing clinics were set up across Edmonton, and Calgary Mayor Al Duerr helped support the "make a difference" portion of the week by agreeing to walk to work. Kelly Wester, of Medicine Hat, was the grand prize winner in the Clean Air Week poster design contest.

CONFERENCES AND DISPLAYS

Alliance representatives met with delegates and attendees at each of the following events:

- **Earthquest at the Provincial Museum** (February 16)
- **InfoCity at the Edmonton Shaw Conference Centre** (February 16 and 17)
- **Alberta Lung Association's Annual General Meeting in Calgary** (March 14)
- **The Calgary Mayor's Environment Expo** (June 2 to 4)
- **The Calgary Environmental Conference and Trade Show** (October 27 and 28)
- **The Alberta Association of Municipal Districts and Counties' 90th Annual Convention and Trade Show in Edmonton** (November 16 to 18)

The Alliance participated in, and hosted, several events throughout 1998 to raise awareness of its activities.

NEWS CONFERENCES

- **Announcement of the Flaring team's final report** (Calgary, June 24)
- **Announcement of ROVER project launch** (Edmonton, October 7)
- **Follow-up to electricity workshop** (Edmonton, December 15)

Ongoing

CLEAN AIR VIEWS

The Alliance published three issues of Clean Air Views in 1998. The newsletter is a valuable tool for reaching stakeholders and the broader public. Continuing the popularity of theme issues, the three 1998 newsletters covered the themes of Flaring in Alberta, Air Quality and Health, and A Review of 1998 Air Quality Developments.

ALLIANCE WEB SITE

Located at www.casahome.org, the web site provides a publications library, Alliance background, board meeting executive summaries, project team status reports, event information, board meeting schedules, climate change updates, and a link to the Alliance-supported Alberta Ambient Air Data Management System.

PARTICIPATING

Representatives from the following organizations participated in Alliance activities in 1998. Without their commitment and effort, and the support of their organizations and agencies, the work of the Alliance would not be possible.

The next section of the report attempts to place a dollar value on these important contributions. If any organization or agency has been omitted from this list, we apologize; please contact the Secretariat office to let them know.

Agrium Inc.
Alberta Agriculture
Alberta Association of Municipal Districts and Counties
Alberta Cattle Commission
Alberta Department of Energy
Alberta Energy and Utilities Board
Alberta Environmental Network
Alberta Environmental Protection
Alberta Federation of Rural Electrification Associations
Alberta Forest Products Association
Alberta Health
Alberta Labour
Alberta Lung Association
Alberta Motor Association
Alberta Pacific Forest Industries Incorporated (ALPAC)
Alberta Power Limited
Alberta Research Council
Alberta Transportation and Utilities
Alberta Urban Municipalities Association
Albertans For A Clean Environment
Amoco Canada Petroleum Company Limited
Athabasca Chipewyan First Nation
Bert Riggall Environmental Foundation
Calgary Commuter Challenge
Calgary Motor Dealers' Association
Canadian 88 Energy Corporation
Canadian Association of Petroleum Producers (CAPP)
Canadian Chemical Producers Association (CCPA)
Canadian Forest Service
Canadian Petroleum Products Institute (CPPI)
Canadian Energy Research Institute (CERI)
Cardinal River Coals Limited
City of Calgary
City of Edmonton
City of Red Deer
CN Rail
County of Mountain View
David Thompson Health Authority
Dow Chemical Canada Inc.
Environment Canada
Environmental Resource Centre
EPCOR
First Star Energy Ltd.
Fording Coal Limited
Fort MacKay First Nation
Fort McMurray Environmental Association
Gulf Canada Resources Limited
Husky Oil
Imperial Oil Limited
Inland Cement Limited
Limeco Products Limited
Mobil Oil
Mount Royal College
Northern Lights Health Region
Northland Forestry Products Ltd.
Northwestern Utilities Limited
Norwester Energy Systems Ltd.
NOVA Chemicals Limited
NOVA Gas Transmission
Nunee Health Board
Ocelot Energy Inc.
The Ontario Ministry of the Environment
Pembina Agricultural Protection Association
The Pembina Institute for Appropriate Development
Petro Canada Resources
The Power Pool of Alberta
Prairie Acid Rain Coalition
Red Deer River Naturalists
Regional Municipality of Wood Buffalo
Saskatchewan Environment and Resource Management
Shell Canada Limited
South Peace Environment Association
Suncor Energy Inc.
Syncrude Canada Limited
Town of Canmore
Toxics Watch Society of Alberta
TransAlta Utilities Corporation
University of Alberta
University of Calgary
Weldwood of Canada Limited
Weyerhaeuser Canada Ltd.
Wild Rose Agricultural Producers

SUPPORT FOR

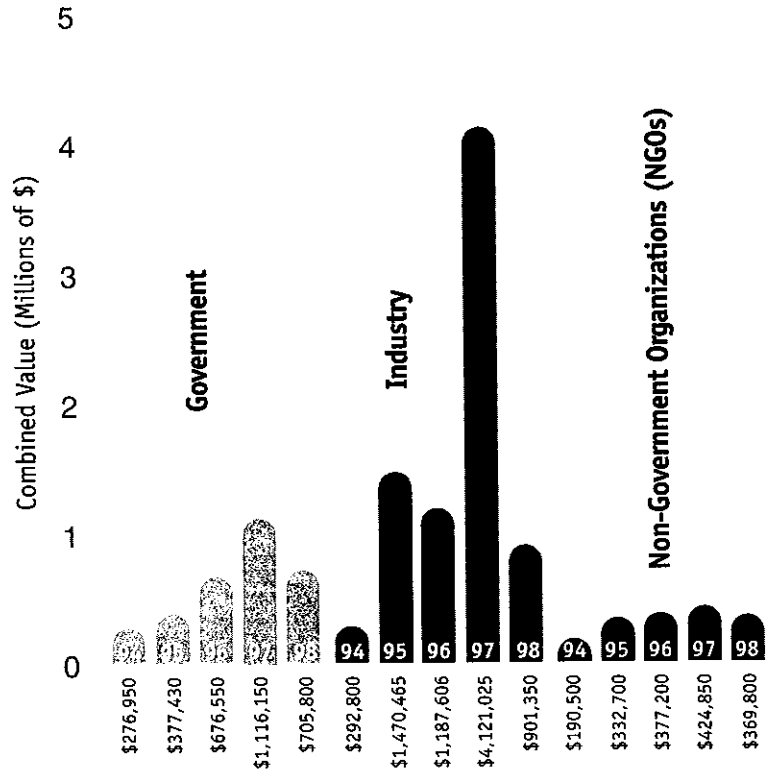
The Alliance has tried to put an actual dollar figure on the support and assistance provided by participating organizations.

The figures were compiled by examining time and travel costs, as well as cash contributions.

Further information on the calculation methods used can be obtained from the Alliance Secretariat.

These figures are almost certainly under-recorded and under-estimated, but are offered in the spirit of acknowledging and formally recognizing participant contributions.

In-Kind Contributions and Cash Committed



The CASA board of directors is proud to acknowledge

Mahmuda Ali
Cecil Andersen
Randy Angle
Hank Archibald
Dana Atwell
Dave Ballagh
Richard Banyard
Darren Barber
David Barr
Larry Begoray
Ron Bell
Vic Benz
Ron Bradley
James Brandt
Mark Brostrom
Alan Brownlee
Mark Burley
Gary Burns
Linda Burrell
Richard Chant
Lawrence Cheng
Ralph Christian
Jim Coombes
Peter Cordingley
Maureen Cormier
Aldo Corti
Lois Cramer
Ryan Cromb
Lloyd Cumming

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B. Evans
Howard Ewashko
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Shannon Flint
Ken Foster
Robert Franchuk
Bruce Friesen
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Stephan Gabos
Brian Gallis
Tim Gondek
Cathy Good
Geoff Granville

Tee Guidotti
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Lloyd Harman
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John Hawkins
Chris Hay
Anthony Heinrich
Grant Hilsenteger
Rod Hodgson
Ted Hogg
Bill Howard
Bill Hunter
Judy Huntley
Bev James
Bryon Jeffers
Dwight Jenkinson
Kim Johnson
Kevin Johnston
Les Johnston
Ila Johnston
Doug Jones
Damian Kajnc
Robyn Keist
Gordon Kemp
Joe Kendall
Blair Kidney
Myles Kitagawa

Hal Knox
Don Kochan
Joe Kostler
Martha Kostuch
Brent Lakeman
Dermot Lane
Mike Leaist
Ingrid Liepa
Chow-Seng Liu
Gail MacCrimmon
Don Macdonald
Bill Macdonald
Rob Macintosh
Alexander MacKenzie
Ian MacKenzie
Tom Marr-Laing
David McCoy
Karen McDonald
Kevin McLeod
Trish Merrithew-Mercredi
Bob Mitchell
Steve Morck
Phillip Mulder
George Murphy
Bob Myrick
Orysia Nakonechny
Miles Nystrom
Ron Pauls
Eric Peake

Jack Peck
Pat Pelton
Henry Pirker
Jim Popowich
William Post
Dennis Prince
David Pryce
Tony Punko
Brent Rabik
Jim Reid
Karen Reiter-Stecyk
Dave Reynolds
Yves Richard
Brian Riphagen
Greg Ritz
Gary Sargent
Sherry Scheunert
Ron Schmitz
Al Schulz
Herman Schwenk
Chris Severson-Baker
Susan Shaw
Neil Shelly
Ken Shipley
Elizabeth Siarkowski
Kem Singh
Dan Smith
Judith Smith
David Spink

John Squarek
Lidia Stefaniw
Dennis Stokes
Kent Stuehmer
Andy Teal
Robin Telasky
Jack Thompson
John Torneby
James Tweedie
Dan VanKeecken
Srikanth Venugopal
JoAnne Volk
Darcy Walberg
Frank Wandler
Al Watson
Reg Watson
Cash Webster
D. Whelton
Cliff Whitelock
Tim Whitford
Mike Willoughby
Scott Wilson
Judy Wish
Raymond Wong
Mike Woods
Rudy Zimmer

FINANCIAL

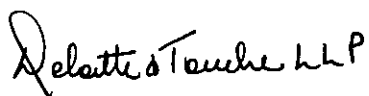
AUDITOR'S REPORT

We have audited the balance sheet of The Clean Air Strategic Alliance Association as at December 31, 1998 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, 1998 and the results of its operations and changes in its financial position for the year then ended in accordance with generally accepted accounting principles.



March 5, 1999

BALANCE SHEET

December 31, 1998


Assets	1998	1997
CURRENT		
Cash	\$141,925	\$130,941
Treasury Bills	500,163	483,779
Accrued Interest	2,813	1,127
Accounts Receivable	58,041	29,544
Prepaid Expenses	7,359	2,290
	710,301	647,681
CAPITAL ASSETS (Note 3)	6,547	9,356
	\$716,848	\$657,037

Liabilities	1998	1997
CURRENT		
Accounts Payable	\$ 75,058	\$ 51,537
Deferred Grant Revenue (Note 4)	353,476	282,555
Deferred External Project Revenue (Note 5)	157,578	218,247
	586,112	552,339
SURPLUS	130,736	104,698
	\$ 716,848	\$657,037

APPROVED BY THE BOARD



 PRESIDENT



 TREASURER



STATEMENT OF REVENUE, EXPENDITURES AND SURPLUS

Year Ended December 31, 1998

Revenue	1998	1997
Grants (Note 4)	\$580,079	\$510,302
External Projects (Note 5)	162,535	136,833
Interest	26,038	17,206
	786,652	664,341
Expenditures	1998	1997
Projects	\$ 209,454	\$ 176,845
Communications	143,324	132,003
External Projects	144,266	113,869
Board Support	128,143	106,934
General and Administration	78,274	89,757
Non-governmental Organizations	24,786	14,056
Statement of Concern and Other	14,367	13,671
	742,614	647,135
EXCESS OF REVENUE OVER EXPENDITURES	26,038	17,206
SURPLUS, BEGINNING OF YEAR	104,698	87,492
SURPLUS, END OF YEAR	130,736	104,698

STATEMENT OF CHANGES IN FINANCIAL POSITION

Year Ended December 31, 1998

NET INFLOW (OUTFLOW) OF CASH RELATED
TO THE FOLLOWING ACTIVITIES

Operating	1998	1997
Excess of Revenue Over Expenditures	\$26,038	17,206
Item Not Affecting Cash	—	—
Depreciation	2,809	4,009
	<u>28,847</u>	<u>21,215</u>
CHANGES IN NON-CASH OPERATING WORKING CAPITAL ITEMS		
Accrued Interest	\$ (1,686)	\$ 145
Accounts Receivable	(28,497)	249
Prepaid Expenses	(5,069)	20,776
Accounts Payable	23,521	2,559
Deferred Grant Revenue	70,921	(360,302)
Deferred External Project Revenue	(60,669)	(38,503)
	<u>27,368</u>	<u>(353,861)</u>
Investing	1998	1997
Purchase of Capital Assets	\$ —	\$ (2,397)
NET CASH OUTFLOW	(27,368)	(356,258)
CASH POSITION, BEGINNING OF YEAR	614,720	970,978
CASH POSITION, END OF YEAR	<u>642,088</u>	<u>614,720</u>
Represented By:		
Cash	141,925	130,941
Treasury Bills	500,163	483,779
	<u>642,088</u>	<u>614,720</u>



NOTES TO THE FINANCIAL STATEMENTS

December 31, 1998

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

Grant 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

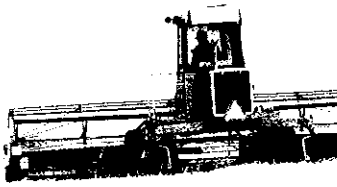
Capital assets are recorded at cost. Depreciation, which is based on the cost less the residual value over the useful life of the asset, is computed using the declining-balance method at the rates disclosed in Note 3.

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

Capital Assets	1998		1997	
	Depreciation Rates	Cost	Accumulated Depreciation	Net Book Value
Computer Equipment	30%	\$17,491	\$11,974	\$5,517
Furniture and Equipment	30%	3,932	2,902	1,030
		\$21,423	\$14,876	\$6,547
				\$9,356



NOTES TO THE FINANCIAL STATEMENTS

December 31, 1998

4. DEFERRED GRANT REVENUE

During the period, the Association received grants totalling \$651,000 (1997 - \$150,000) 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.

Deferred Grant Revenue	1998	1997
Deferred Grant Revenue, Beginning of Year	\$282,555	\$642,857
Monies Received	651,000	150,000
Revenue Recorded Based on Allowable Expenditures	(580,079)	(510,302)
	<u>353,476</u>	<u>282,555</u>

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.

Deferred External Project Revenue	1998	1997
Deferred Grant Revenue, Beginning of Year	\$218,247	\$256,750
External Project Monies Received	(101,866)	98,330
Revenue Recorded Based on Allowable Expenditures	(162,535)	(136,833)
Deferred External Revenue at End of Year	<u>157,578</u>	<u>218,247</u>

6. NON-MONETARY SUPPORT

During the year, the Association received non-monetary support in the form of supplies, office space and seconded manpower totalling \$25,900 (1997 - \$70,098)

from the Province of Alberta - Environmental Protection. These amounts have not been reflected in these financial statements.

7. UNCERTAINTY DUE TO THE YEAR 2000 ISSUE

The Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. Date-sensitive systems may recognize the year 2000 as 1900 or some other date, resulting in errors when information using year 2000 dates is processed. In addition, similar problems may arise in some systems which use certain dates in 1999 to represent something other than a date. The effects of the Year 2000 Issue

may be experienced before, on, or after January 1, 2000, and, if not addressed, the impact on operations and financial reporting may range from minor errors to significant systems failure which could affect an entity's ability to conduct normal business operations. It is not possible to be certain that all aspects of the Year 2000 Issue affecting the entity, including those related to the efforts of customers, suppliers, or other third parties, will be fully resolved.

BOARD MEMBERS

AS OF DECEMBER 31, 1998

Stakeholder Group

Agriculture
Alberta Department of Energy
Alberta Environmental Protection
Alberta Health
Alternate Energy
Canadian Petroleum Products Institute
Chemical Manufacturers
Consumer/Transportation
Environment Canada
Forestry
Local Government
Mining
NGO Health
NGO Pollution
NGO Pollution
NGO Wilderness
Oil & Gas
Utilities

Director and Alternate

Herman Schwenk and Jennifer Boccock
President Ken Smith and John Donner
Doug Tupper and David Spink
Cecilie Lord and Stephen Gabos
Jason Edworthy and David Baker
Steve Griffiths and Bill Levy
Wil VandenBorn and Ken Tsang
Rob Taylor and Dan VanKeeken
Jim Vollmershausen and Tim Goos
(vacant)
Bob Hawkesworth and Bart Guyon
Dermot Lane and Ron Laing
Jerry Hall and Al Kennedy
James Tweedie and Trent Hardin
Vice-President Tom Marr-Laing and Dan Smith
Henry Pirker and Martha Kostuch
Vice-President Doug Baldwin and Gord Lambert
David Lewin and Dick Walthall

Executive Director Mike Kelly

1998 Departures

The Alliance is proud to acknowledge the contribution of the following former board members:

Bob Anderson
Local Government

Dave Barr
Consumer/Transportation

Ian Brownlie
Chemical Manufacturers

Jon Burkinshaw
Utilities

Cathy Good
NGO Health

Bob King
Alberta Department of Energy

Jerry Lack
Alberta Environmental Protection

Rick Maksymetz
Forestry

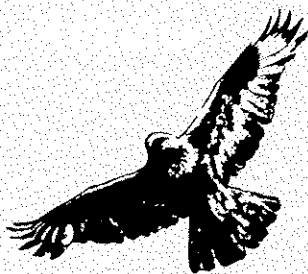
Jim Popowich
Mining

Al Schulz
Alberta Environmental Protection

Tim Whitford
Forestry

*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 Clean Air Strategic Alliance
is a stakeholder partnership
that has been given shared
responsibility by its members,
including the Government of
Alberta, for strategic planning,
organizing and coordinating
resources, and evaluation of air
quality in Alberta through a
collaborative process.*



9th Floor, Sterling Place
9940-106 Street,
Edmonton, Alberta
Canada T5K 2N2
T. 780.427.9793
F. 780.422.3127
E. casa@casahome.org
<http://www.casahome.org>



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20% Post-Consumer Waste