



# Airshed Zones Guidelines

## Purpose

This pamphlet provides guidance as to when airshed zones (also referred to as “zones”) are appropriate, how they can be established, the criteria for endorsement by the Clean Air Strategic Alliance (CASA), and what alternatives exist for dealing with local or regional air quality issues.

## CASA Vision

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

## What is CASA?

CASA was established in March 1994 as a new way to manage air quality issues in Alberta. It is a non-profit association composed of diverse stakeholders from three sectors – government, industry, and non-government organizations such as health and environmental groups (known as NGOs or ENGOs). All CASA participants make decisions by consensus as they work to achieve a shared vision and mission.

CASA is responsible for strategic planning related to air quality issues in Alberta. To guide this process, CASA has endorsed a Comprehensive Air Quality Management System (CAMS) for the province. This system promotes the establishment of airshed zones to address regional air quality issues when and where appropriate. For more information, visit [www.casahome.org](http://www.casahome.org)

Many of the issues of concern to local stakeholders are shared by other Albertans and, in some cases, CASA has established project teams to address these issues. If a zone is interested in particular issues being addressed by CASA, it is invited to send a representative to participate on those teams.

CASA also maintains a standing committee that provides overall guidance for ambient air quality monitoring in Alberta. This committee has representatives from a number of monitoring agencies, including zones; its role is to optimize monitoring strategies, minimize data gaps and ensure consistency of monitoring methods. Data from the various monitoring programs in the province goes into the CASA data warehouse at [www.casadata.org](http://www.casadata.org) and is accessible to anyone with an Internet connection.

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## What is an airshed zone?

Many of Alberta's air quality issues are local, both in their cause and the solutions required. In these cases, province-wide approaches may be inappropriate and inefficient. Instead, an airshed zone can enable local stakeholders to design local solutions to address local air quality issues.

Airshed zones are guided by local or regional multi-stakeholder non-profit societies who use the CASA consensus model to make decisions. These societies work within a designated area to monitor, analyze, and report on air quality and they recommend and implement actions to improve air quality within that zone. Stakeholders involved in airshed zone management may also develop a response plan to deal with air quality concerns in their region.

The management system should consider related problems within the zone as well as in adjacent areas, and should be flexible enough to meet the needs of the stakeholders. In some cases, provincial management frameworks anticipate that zones could participate in planning and developing responses to the particular air quality issues the framework was designed to address. An example is the Particulate Matter and Ozone Management Framework, online at [www.casahome.org/uploads/PMO3\\_ManagementFrameworkSEP-18-2003.pdf](http://www.casahome.org/uploads/PMO3_ManagementFrameworkSEP-18-2003.pdf).

## Why consider an airshed zone?

The airshed zone approach makes it possible to:

- Improve existing monitoring in the region
- Make local and regional monitoring systems more efficient
- Collect data to address regional air quality concerns
- Obtain information about regional air quality.

Airshed zones have many benefits; for example:

- They facilitate open communication among stakeholders
- They promote the CASA data warehouse as a tool and source of information on air quality
- They create good will and credibility through greater community involvement in an important issue (that is, local air quality).

Collaboration among zones improves access to and sharing of resources, such as use of consultants, community meetings and speakers, and education opportunities.

For zones considering CASA endorsement, the issues should be defined broadly, reflecting CASA's support for the following three air quality management goals:

1. Protect the environment
2. Optimize economic performance and efficiency
3. Seek continuous improvement.

## When is an airshed zone appropriate?

An airshed zone is appropriate when a group of local stakeholders believes that it is an effective way to respond to their local air quality concerns. An airshed zone can be defined on the basis of emission sources and volumes, dispersion characteristics, impacts, and administrative characteristics.

Airshed zones may be appropriate when there is a geographical focus to the issue – that is, when the issue is local or regional in origin, and is most effectively addressed at the local or regional level. A zone approach is helpful when:

- There are multiple emission sources
- There are many stakeholders
- The emissions sources, the associated impacts and concerns, and the stakeholders are located in one geographical area
- The problem relates to topographical, meteorological, or ecological conditions that are unique or common to one area
- Atmospheric transport of pollutants into and out of a definable area occurs regularly.

For online information on airsheds in Alberta and to view a map of airshed zones visit [www.airsheds.ca](http://www.airsheds.ca)

## Options other than forming an airshed zone

In some cases, other means of addressing air quality issues may be more appropriate to a particular situation than a formal airshed zone. Stakeholders may want to consider:

- Addressing the issue through the Alberta Energy and Utilities Board's Alternative Dispute Resolution process, synergy groups, and approvals processes
- Informal discussion among stakeholders, perhaps with facilitation assistance from CASA or existing zones
- Bringing the issue to the CASA board in the form of a proposal to establish a project team to address the issue. This would normally be done only for province-wide issues.

Individuals who have a specific concern about air quality can contact the regional office of Alberta Environment. More information about community monitoring and possible options for responding to local air quality concerns is available online at [www.airsheds.ca](http://www.airsheds.ca).

## Who should participate?

When an airshed zone is being considered, some stakeholder groups will be obvious members. In general, the following groups should be considered for membership:

- Local municipalities, counties, and municipal districts
- Associations or companies representing major emission sources
- Local business groups
- Local agricultural groups
- Environmental organizations
- Academic or research-oriented organizations
- Community-based groups comprising citizens at large
- Regional health authorities
- Local aboriginal communities
- Alberta Environment and other provincial government departments or agencies
- Federal government departments or agencies
- Public at large.

Membership numbers must be manageable, keeping in mind that a consensus-based process should be used to establish the zone and that considerable commitment and active participation will be required from all members. It is advisable to consult widely in identifying potential members; existing zone membership lists can be used as examples and the CASA secretariat can provide contact information for many organizations and agencies.

In most cases, a board will be selected from the broader membership as part of the process of establishing a non-profit society. The board should broadly reflect the membership, and all sectors should be represented at the board level.

## Establishing airshed zone boundaries

Stakeholders determine the boundaries of the proposed airshed zone, using a consensus process and considering factors such as:

- Landforms, watersheds, climate, animal behavior patterns
- Wind, temperature stratification, turbulence, deposition patterns
- Boundaries of municipalities, national parks, and First Nations and aboriginal communities
- Effects of emissions on visibility, vegetation, animal and human health; chemical content of water, soil and plant/animal tissues
- Emission sources, volumes, types, and dispersion patterns
- Boundaries of existing zones.

Local management factors, such as land use patterns, and the type and number of industrial users and other stakeholder organizations in the area are also likely to affect boundaries. Airshed zone boundaries should be discrete, they should follow natural and obvious markers, and they should be related as much as possible to air quality concerns. Stakeholders will also need to consider that political boundaries – the traditional basis for making decisions – are unlikely to align with regional air quality issues.

## Establishing and operating an airshed zone management system

### Developing a management system and plan

When the decision to establish an airshed zone is made, stakeholders can begin negotiating how to allocate responsibilities for developing the management system and plan. This is an important step, and success will require cooperation and commitment on the part of all participants. Although the details will vary, the following steps are likely to be part of developing such a plan.

#### 1. Establish a society under the Alberta Societies Act

- Establish a governance structure
- Define and seek membership
- Draft bylaws and operating policies. (Existing zone structures and bylaws can be used as models.)

#### 2. Prepare a business plan, including mechanisms and processes for:

- Establishing goals
- Defining options and setting objectives and targets
- Seeking funding for start-up costs and ongoing work
- Assessing and selecting options
- Preparing implementation plans
- Evaluating success.

#### 3. Prepare a monitoring plan that includes:

- Locations and types of equipment
- Requirements for compliance monitoring
- Submission requirements for technological and legal data.

#### 4. Prepare a communications plan that describes:

- How to access monitoring data
- Data interpretation
- The zone's monitoring plan and the locations of monitors
- Air quality issues in the region
- Emissions in the region.

Work may also be required in any or all of these areas:

- Identifying and addressing air quality issues
- Assessing impacts
- Monitoring ambient air quality
- Compiling emissions inventories
- Modeling air quality
- Examining trends.

## Collaboration among airshed zones

New airshed zones may find it useful to learn from and coordinate with existing zones in areas such as bylaws and governance issues, communications ideas, and funding allocation models. Most existing zones have a Web site and the CASA Web site at [www.airsheds.ca](http://www.airsheds.ca) links to them. The CASA secretariat can also provide contact information.

## Funding

The society established to manage the airshed zone is responsible for obtaining and managing its own funds. The primary source of funding for most zones is the reallocation of monitoring resources and other environmental spending by zone emitters. Zones may develop a funding formula based on emissions inventories, production levels, or other criteria. Additional technical and financial resources will also be needed and these should be identified in the zone's business plan.

## Decision making

The decision-making process for airshed zone stakeholders should be based on the same process used by the Clean Air Strategic Alliance – that is, collaboration and consensus. A consensus exercise brings people together to address the interests or concerns that underlie the stakeholders' positions on an issue. The goal is to find solutions to the problems faced by each party so that all participants can agree to a set of recommendations or actions.

Agreements reached by consensus are likely to be more innovative and long lasting than those reached through traditional negotiation processes. CASA has published a short document on consensus decision making, which zone stakeholders are encouraged to use. This document, entitled *Beyond Consultation*, is available online at [www.casahome.org/uploads/CASA\\_beyond\\_consultation.pdf](http://www.casahome.org/uploads/CASA_beyond_consultation.pdf) or on request to the CASA office.

Unlike CASA project teams, zones are independent organizations and typically do not require the CASA board to be involved in their decisions, although they do generally keep the board apprised of their work through communications updates.

Zones are encouraged to include a conflict resolution process in their operating procedures or bylaws, which provides a backstop in the event that zone stakeholders cannot reach consensus. Most zones have a clause in their bylaws whereby such issues can be taken to the CASA board for assistance if necessary. In addition, when conflicts arise between zones, stakeholders may refer to other professionals or processes for help in resolving the dispute.

## The role of the Clean Air Strategic Alliance

### CASA and airshed zones

Consistent with its role in promoting air quality monitoring in Alberta, CASA secretariat staff will provide unbiased assistance, on request, to stakeholder groups that are considering forming an airshed zone; for example, staff can facilitate workshops on consensus decision making and help with organizational meetings. The secretariat can also help identify stakeholders through its contacts with many organizations, and it provides a link to other air issues work, such as CASA project teams. CASA may be able to provide modest funds to assist zones in the start-up phase.

When a group of stakeholders has formed a zone and wishes to become affiliated with CASA they can seek endorsement of their zone by the CASA board. Benefits of being involved with CASA and receiving board endorsement include:

- Enhanced credibility of monitoring data through the application of recognized standards and participation in the CASA data warehouse
- Clear recognition of alignment with CASA's air quality goals
- More efficient mechanisms for addressing issues common to other airshed zones, through CASA project teams or standing committees
- Better community relationships formed through multi-stakeholder work
- Assistance from the secretariat and other zones to deal with process and operational issues, as required.

### Airshed zone endorsement process and principles

Stakeholders should incorporate the elements listed below into their airshed zone formation activities, and should ensure these aspects have been addressed before they seek CASA endorsement:

- A clear process for engaging a diversity of stakeholders should be demonstrated prior to critical decisions being made, including but not limited to decisions in the following areas:
  - Terms of reference
  - Representation
  - Financing
  - Boundaries
  - Bylaws
  - Program design.
- Consensus decision making
- Boundaries – A statement of how the zone's boundaries were determined
- A business plan.

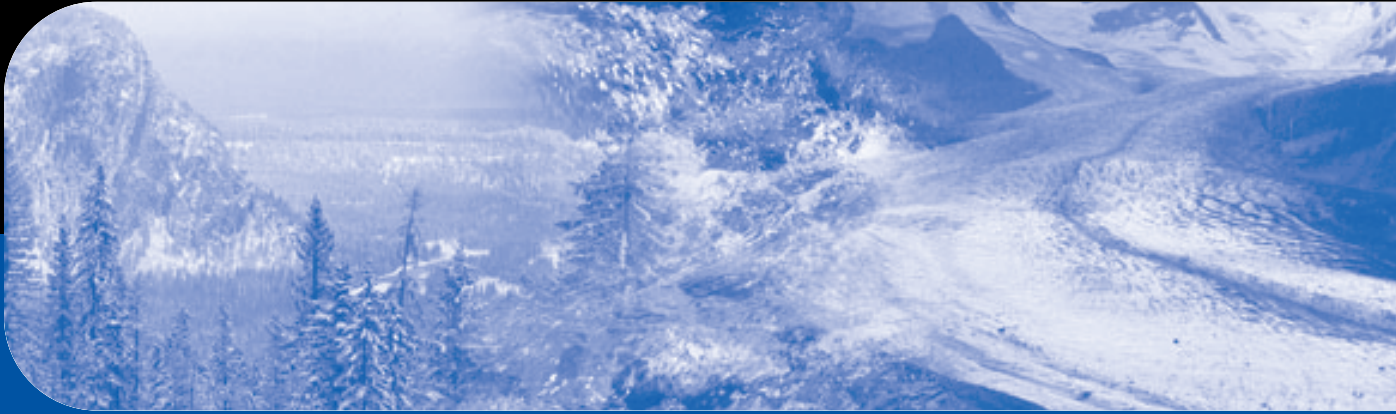
### Endorsement process

Endorsement of an airshed zone is normally decided at a regular meeting of the CASA board. At least one board member or alternate is expected to be closely involved with the zone proposal, ideally as one of the stakeholders. The zone is responsible, with the secretariat's assistance, for finding a board member to liaise between the zone stakeholders and the board, ensuring that CASA is aware of the zone's activities.

## Communications

Groups who are considering forming an airshed zone should contact the CASA secretariat as early as possible. Board processes and timelines, stakeholder contacts, and other details change over time and the secretariat can provide current information.

Zones that have received CASA endorsement are encouraged to actively participate in CASA processes. This includes communicating to their members about the work that CASA is doing and to CASA about their work, including forwarding copies of minutes, annual reports, newsletters and other documents.



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