ALBERTA'S PM AND OZONE MANAGEMENT FRAMEWORK
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AIRNET
A Thematic Network on
Air Pollution and Health

NERAM
Network for Environmental Risk
Assessment and Management

Introduction

National Standards (called Canada Wide Standards [CWS]) were established for PM2.5 and Ozone in June, 2000.

CWS NUMERIC STANDARDS BY 2010
PM2.5:
   30 µ/m3, 24 hour avg., achievement based on 98th percentile annual ambient measurements, averaged over 3 consecutive years
Ozone:
   65 ppb, 8 hour avg., achievement based on 4th highest annual ambient measurement, averaged over 3 consecutive years
OTHER COMPONENTS OF THE CWS:
"Keeping Clean Areas Clean" and "Continuous Improvement".
The CWS includes a mechanism to analyze exceedances caused by transboundary or naturally occurring levels

In Alberta, the Clean Air Strategic Alliance (CASA) is the multi-stakeholder, consensus-driven process used to manage ambient air quality issues in the province[1]. CASA was asked by the Provincial Government to set up a Team to develop consensus recommendations for an *implementation plan* to achieve the provisions of the CWS. Specifically, they were requested to:

• Recommend strategies to achieve the CWS for PM and ozone
• Recommend key components of strategies
• Achieve stakeholder support for the implementation plan

The Implementation Plan

To deliver the Implementation Plan, the Team developed a "management framework", comprising a series of "Trigger Levels" (ie ambient air concentrations - see Table) at which various actions would be taken a specific "structiure" (see Figures 1 and 2), plus a series of accompanying "principles" for guidance purposes.

FIGURE 1: FINE PARTICULATE MATTER AND OZONE MANAGEMENT FRAMEWORK

Fig 2: Annual Analysis of Monitoring Data for PM, O_3 in Each Air Zone
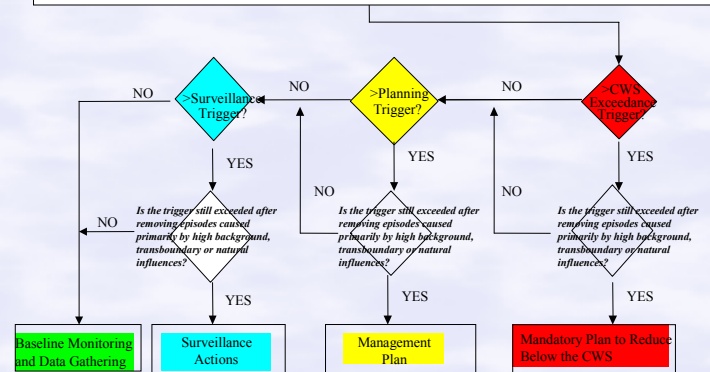
The trigger levels shown in the Table below required extensive and prolonged discussion, and were chosen in parallel with agreements on specific management actions identified at each trigger level[3]

Level	PM2.5	Ozone
Exceedance	30 micrograms/m3	65 ppb
Management	20.0 micrograms/m3	58.0 ppb
Surveillance	15.0 micrograms/m3	Determined by AENV[2]
Baseline	< 15.0 micrograms/m3	Determined by AENV

The Principles include the following:
The trigger concentrations are neither "pollute up to" levels nor "not to exceed" levels.
Activities should be prioritized according to available resources and contextual factors, including:
   •population density
   •trends in ambient levels
   •the predicted impact of existing activities and initiatives
   •economic growth forecasts
   •age of facilities, and
   •any factors related to the overall practicality of actions
stringent management tools are to be used as levels approach the CWS, more flexible management tools are to be used when ambient levels are at baseline or surveillance levels
Trigger Levels will be used for airshed planning and will not be applied as "point of impingement" concentrations in relation to approval limits and conditions.
Examples of Management Tools include:
Regulatory
   • approvals, regulations, prohibitions
Standards, codes of practice
   • air quality guidelines, new source performance stds
Programs
   • pollution prevention planning, education
Agreements, Targets and Objectives
   • emissions trading programs (could be regulated)
Incentives
   • economic instruments, recognition programs

Conclusions

The Team's recommendations have been accepted and are being implemented within the province. The framework may be adopted in other jurisdictions due to its flexibility and broad stakeholder buy-in.

Notes

1. See: www.casahome.org

2. AENV: Alberta Environment

3. Details are included in the final report, see: http://www.casahome.org/uploads/PMO3_ManagementFrameworkSEP-18-2003.pdf