

Canada-Wide Standards for PM and Ozone

**Implementation Plan
for the Province of New Brunswick**

December 2008

New Brunswick Department of Environment

Be informed

Canada-Wide Standards for PM and Ozone
Implementation Plan for New Brunswick

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Prepared by:

Sciences and Reporting Branch
Project Assessment and Approvals Branch

Department of Environment

www.gnb.ca/Environment

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Background

Extensive research has shown that particulate matter (PM) and ground level ozone, two key constituents of smog, are associated with significant health and environmental effects. This has led to the development of the Canada-wide Standards (CWS) for PM and ozone through the Canadian Council of Ministers of the Environment (CCME). This document describes New Brunswick's Implementation Plan to achieve the CWS for PM and ozone which the province adopted in January 2001.

The CWS for PM and ozone set annual numerical targets for PM_{2.5} (airborne particles that have an effective diameter of 2.5 microns or less) and ozone that are to be achieved by 2010. Even when air quality levels are below these standards they are still considered to be within the health effects range. Consequently, under terms of the CWS, federal, provincial and territorial governments have agreed that polluting "up to a limit" is unacceptable. The standards include provision for Continuous Improvement and Keeping Clean Areas Clean programs to reduce ambient concentrations of PM and ozone even in areas where the numerical targets may already be achieved.

As a basic requirement, jurisdictions are required to report on CWS achievement for PM and ozone for population centres over 100,000. However, jurisdictions may also report on CWS achievement for communities less than 100,000. In New Brunswick the cities of Moncton, Saint John and Fredericton have been initially designated for achievement determination. This document includes preliminary analysis of air quality data in these communities in relation to the CWS numerical targets. In future years a relatively new monitoring site in Bathurst will provide the opportunity to compare PM and ozone levels to the CWS in northern New Brunswick, once sufficient data from that site has been collected.

Emissions from a broad range of point and area sources within the province, including industry, transportation and residential wood combustion, influence local air quality. New Brunswick's Clean Air Act provides the regulatory authority to regulate many of these sources. Actions being taken and ongoing efforts to reduce emissions from various sources in the province are described in this document.

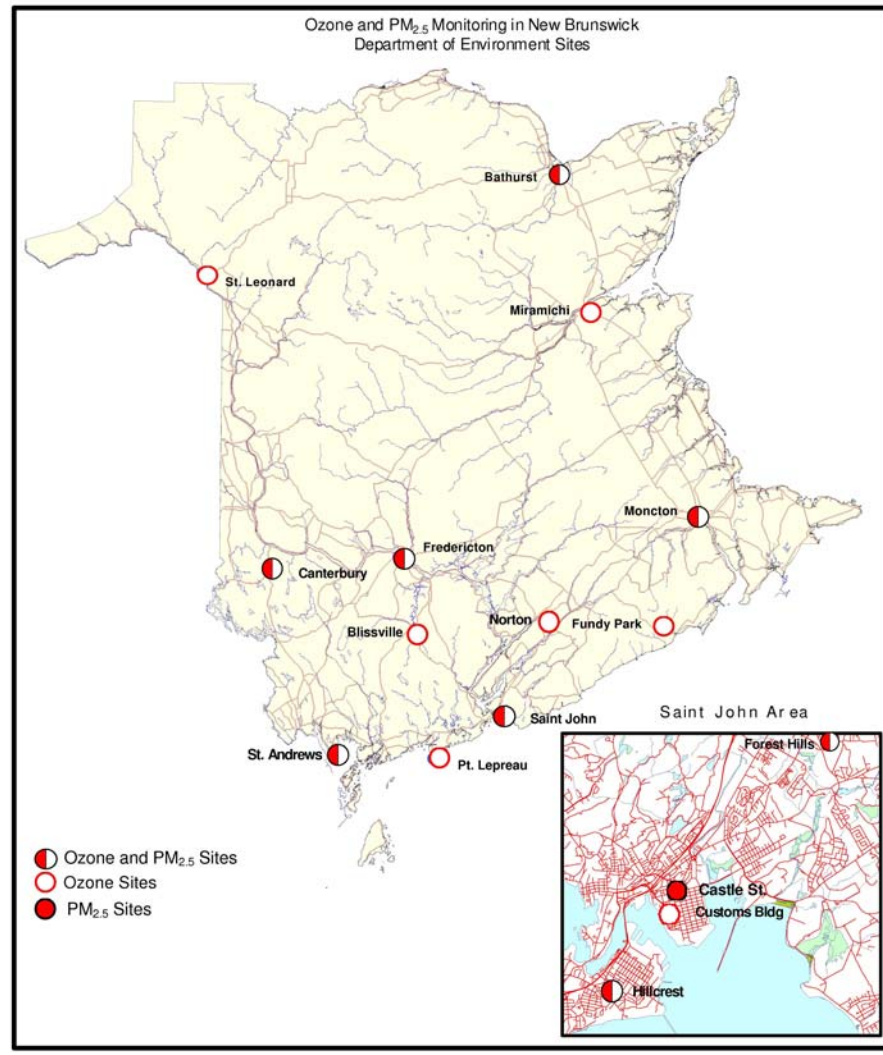
Air quality in New Brunswick is also strongly influenced by the transboundary flow of air pollution. Transboundary pollution typically originates from large urban and industrialized areas of the United States and Canada to the west and south of the province. Even natural events within the region, such as large forest fires, can cause PM levels to rise resulting in deterioration of air quality. The CWS include provisions for accounting for the influence of background levels, natural events and transboundary flow when determining achievement of the standards.

Air Quality Monitoring

New Brunswick has maintained an extensive air quality monitoring network for ground level ozone since the early 1990s. The PM_{2.5} monitoring network is not as large but it has grown in more recent years in part due to technological advances and interest in real-time air quality measurements.

Figure 1 shows areas of the province where monitoring for PM_{2.5} and ozone is conducted by the Department of Environment.

Figure 1



Air quality monitoring programs in New Brunswick also include measurements of precursor gases that can contribute to ozone formation such as nitrogen oxides (NO_x) and volatile organic compounds (VOCs), and other air pollutants such as sulphur dioxide and carbon monoxide. These monitoring programs are supported by Environment Canada through the National Air Pollution Surveillance program (NAPS) and are important for health and environmental research studies, for determining long-term trends and for performing source contribution analysis.

Additionally, PM_{2.5} intercomparison studies are underway at a few selected sites in New Brunswick in support of a national strategy supported by NAPS. The strategy is designed to compare the performance of co-located PM_{2.5} instruments and to better understand the variation in results that can occur between instruments of different technological design. The results will provide important information for future reporting on CWS achievement.

Results from air quality monitoring programs in New Brunswick, including industry monitoring programs, are reported annually in the Department's Air Quality Monitoring Results report available on the Department's website: <http://www.gnb.ca/0009/index-e.asp>

Preliminary Assessment of CWS PM and Ozone Achievement in New Brunswick

Determining achievement of the PM or ozone numerical targets involves statistical analysis of a large dataset of air quality values, up to three years of hourly PM_{2.5} or ozone data from one or several monitoring sites in a community. The CWS for PM_{2.5} is 30 µg/m³ (micrograms per cubic meter), daily 24-hour averaging period, achievement based on the 98th percentile value in a year, and averaged over 3 consecutive years. The CWS for ozone is 65 ppb (parts per billion), running 8-hour averaging period, achievement based on the 4th highest measurement in a year, and averaged over 3 consecutive years. The achievement date for both standards is 2010 although it is important to remember that data from 2008 and 2009 as well as 2010 are considered in determining achievement by 2010 because the required averaging period is 3 years,.

The CCME Guidance Document on Achievement Determination (GDAD) was developed with input from all CCME jurisdictions to ensure consistent and comparable methods by which jurisdictions report on achievement of the CWS for PM and ozone. The GDAD provides guidance to jurisdictions in identifying communities and monitoring sites for achievement determination and achievement calculation methods. It also describes the methods for accounting for transboundary flow, background levels and natural events that can affect ambient levels of PM and ozone in Canada.

Data up to 2006 from monitoring sites in Moncton, Saint John and Fredericton are summarized below and provide an early indication of New Brunswick's ability to achieve the CWS targets in advance of the 2010 achievement date. In Moncton and Fredericton there is one monitoring site in each city that is used to assess compliance with the PM_{2.5} and ozone CWS. In Saint John there are three sites (Forest Hills, Customs Building and Hillcrest) used to assess compliance with the ozone CWS and three sites (Forest Hills, Hillcrest and Castle Street) used to assess compliance with the PM_{2.5} CWS. The Castle Street site was added in June 2007. As mentioned previously, a relatively new monitoring site in Bathurst will be used to determine achievement of the standards in northern New Brunswick once sufficient data has been gathered from that site.

Analysis of ground level ozone concentrations, Figure 2, shows that the CWS ozone level of 65 ppb was reached in Saint John in 2002 and 2003. Since that time levels have remained below the standard as they have in Moncton and Fredericton.

Figure 2

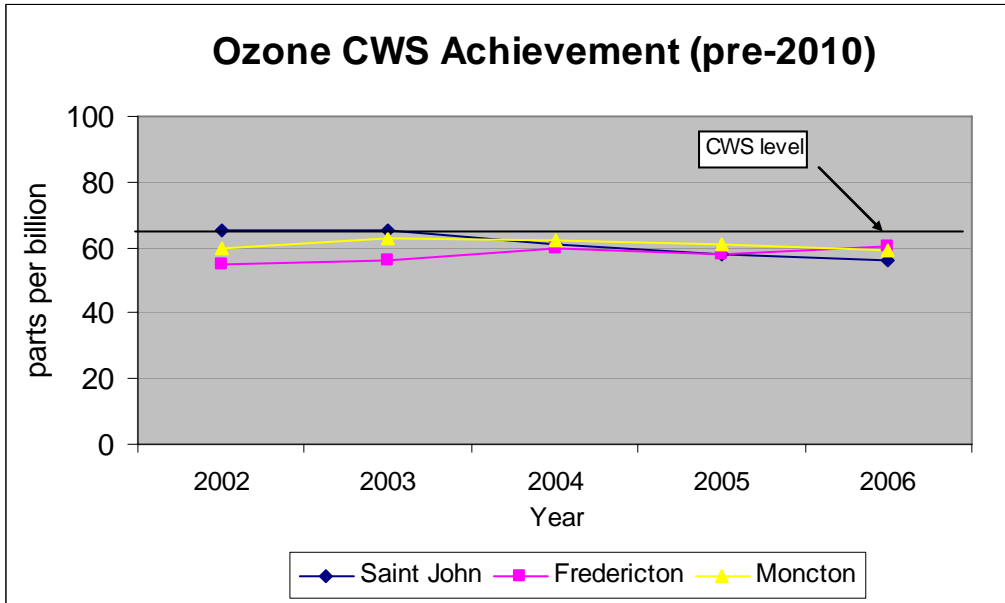
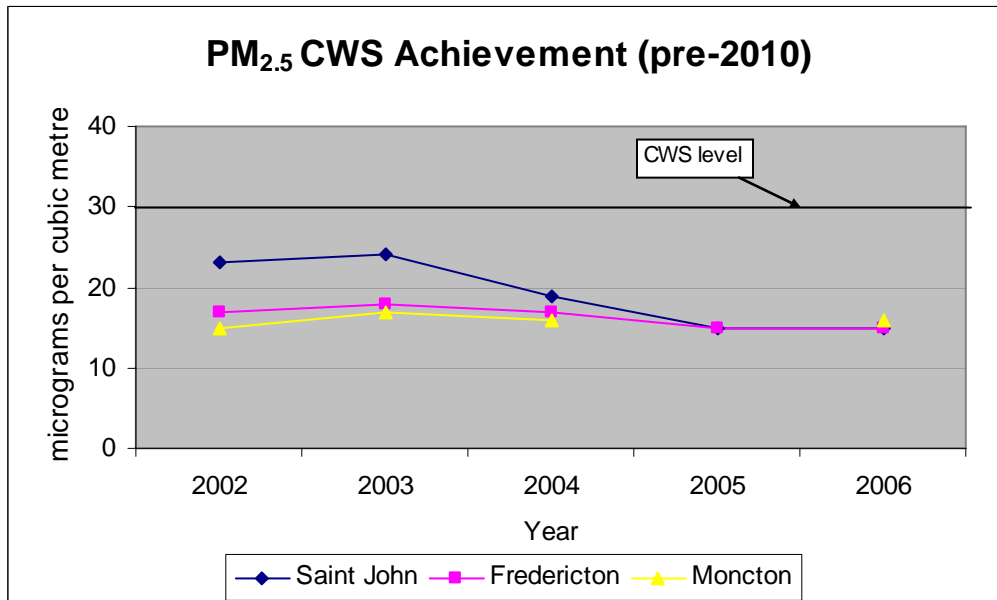


Figure 3 shows that the PM_{2.5} standard of 30µg/m³ is achieved in Fredericton, Moncton and Saint John. In fact levels appear to have declined in the last few years. No result is available for Moncton in 2005 because of insufficient data.

Figure 3



In advance of the 2010 achievement date for the CWS for PM and ozone, the Department of Environment will be working collaboratively with Environment Canada to test various aspects of the GDAD. Most importantly this will include assessing the influence of background levels,

natural events and transboundary flow particularly for regional air quality episodes in which quality levels have approached or exceeded the CWS levels.

Air Emissions in New Brunswick

New Brunswick emissions data are prepared by Environment Canada with input from the Department of Environment. Emissions presented are for the year 2005, the most recent year for which emissions have been tabulated. The emission forecast data for 2010 summarized in the section below on Trends uses the year 2000 as the base year upon which future emissions are estimated.

Interpreting Emission Inventories and Forecasts

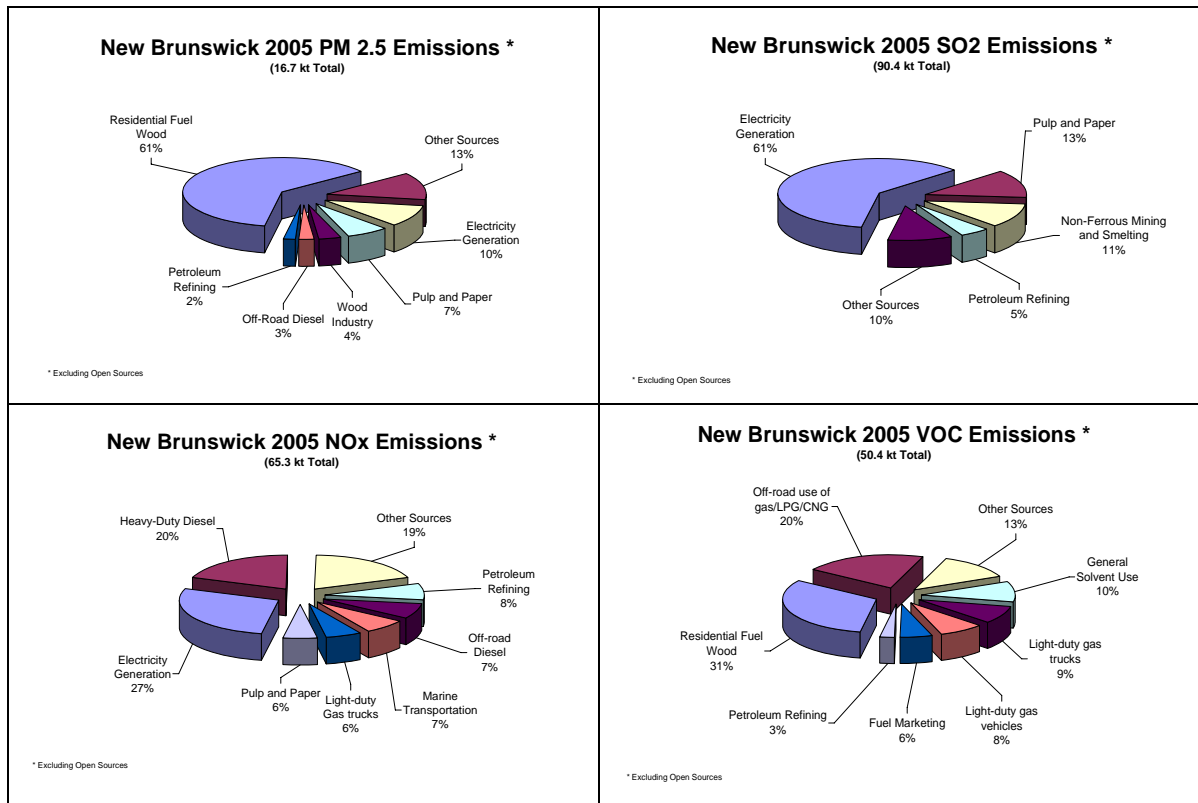
A variety of estimation techniques are employed to quantify past emission levels and emissions expected in the future. Efforts are continually being made to improve these estimation techniques and caution should be employed when comparing emissions between different years. Generally speaking, inventory estimates for recent years are more accurate than data from 10 years ago or more. Also, the confidence levels associated with inventory data is not consistent across all pollutants or between sectors. For example, the majority of sulphur dioxide (SO₂) emitted comes from a relatively small number of large point sources that typically measure emissions “in stack” directly. On the other hand, VOCs are emitted from a broad spectrum of small sources for which emissions are estimated indirectly, relying more on emission factors applied to usage pattern datasets.

2005 Emission Profiles

The four pie charts in Figure 4 show the relative contribution of smog forming pollutants from anthropogenic or ‘man-made’ sources in New Brunswick. The pollutants include PM_{2.5}, SO₂, NO_x and VOCs. Emissions of SO₂, NO_x and VOCs are important because they are considered precursor gases in the formation of secondary PM. Additionally NO_x and VOCs are precursors in ground-level ozone formation.

The pie-charts include emissions from point sources (e.g. industrial facilities) and area sources (e.g. motor vehicles) but do not include emissions from open sources. Examples of open source emissions are dust from paved and unpaved roads, landfills, and forest fires. Open sources can often dominate an emissions profile and are typically managed differently than point and area sources. For example road dust, which is ubiquitous, can be controlled by the application of local dust suppression measures. With forest fires, their magnitude and frequency are highly variable from one year to the next and are difficult to control.

Figure 4



The main sources of PM_{2.5} emissions are typically the result of combustion of fuels of all types. In 2005, 16.7 kilotonnes (kt) of primary PM_{2.5} were emitted from New Brunswick point and area sources. By far the most significant proportion is represented by the residential fuel wood combustion sector at 61% and a diverse group of other sectors making up the remainder.

Emissions of SO₂ are largely the result of the combustion of sulphur containing fossil fuels in New Brunswick. Of the total of 90.4 kt of SO₂ emitted in 2005, 61% is associated with electricity generation, 13% with the pulp and paper industry, and 11% associated with non-ferrous mining and smelting.

In 2005, 65.3 kt of NO_x were emitted from New Brunswick sources. NO_x emissions are typically generated from sectors that are fuel combustion intensive. As a result transportation sources and electricity generation figure prominently in the NO_x emission profile.

Figure 5 shows that 50 kt of VOCs were emitted in New Brunswick in 2005. Residential fuel wood combustion accounts for 31% of VOC emissions followed by offroad use of fuel at 21%. VOC emission sources are quite diverse and include wood combustion, transportation, fuel dispensing, and solvents. Emissions of VOCs in these sectors are difficult to quantify accurately because they tend to be emitted in small quantities from many sources.

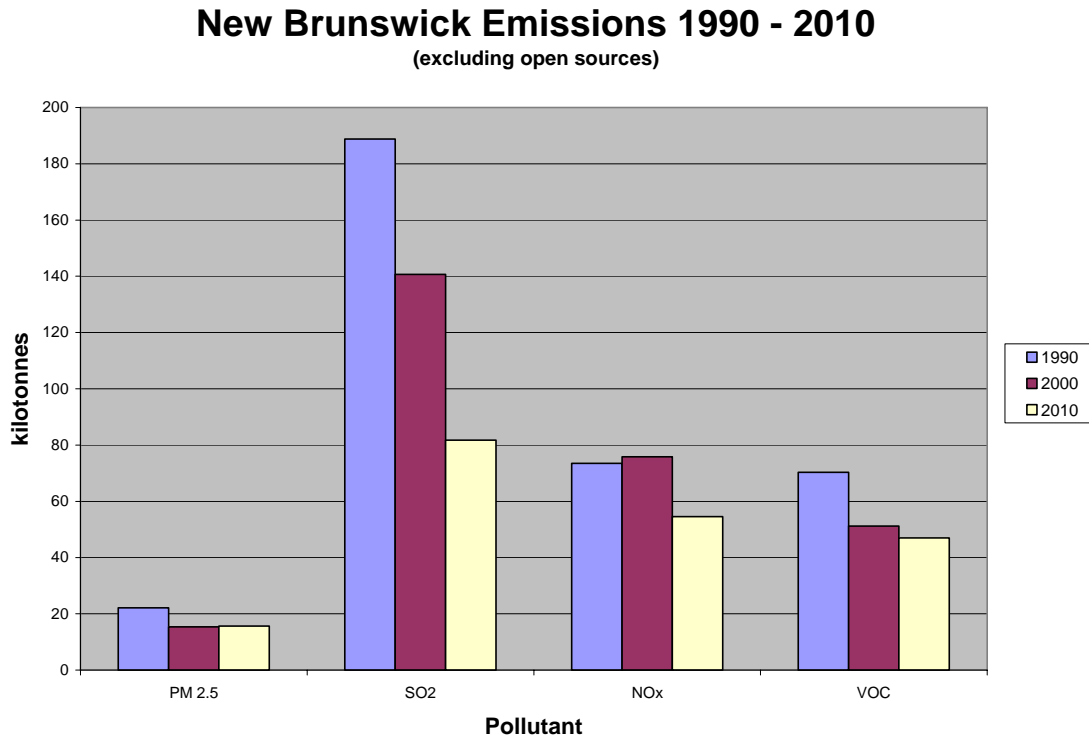
Although not included in the VOC emission profile, VOCs from open sources are significant and are estimated to be in the order of 200 kt per year in the province. A considerable amount of VOCs are emitted from natural sources in New Brunswick, the most significant being forests.

Examples of VOCs important in ozone formation and emitted from forest stands include isoprene and a-pinene.

Emission Trends in New Brunswick 1990-2010

Figure 5 illustrates emission trends for PM_{2.5}, SO₂, NO_x and VOCs using emission inventory data for the years 1990 and 2000 and forecast data for 2010.

Figure 5



By switching heavy oil-fired boilers to wood waste fired units and installing particulate pollution control devices such as electrostatic precipitators, many sources within the pulp and paper industry in New Brunswick realized significant PM_{2.5} emission reductions in the 1990's. PM_{2.5} emissions are forecast to remain at present levels for the next several years.

Figure 5 shows significant SO₂ emission reductions from 1990 to 2000. Further reductions for the period 2000 to 2010 are expected due to efforts to cut emissions that cause acid rain. NB Power has realized significant SO₂ reductions as a result of the re-powering of Coleson Cove, NB's largest SO₂ source, with flue gas desulphurisation technology. Other sectors have shown reductions in SO₂ emissions as well but are relatively small when compared to the nearly 100 kt reduction anticipated from the annual total by NB Power in the period from 1990 to 2010.

Overall emissions of NO_x increased slightly between 1990 and 2000. A 3 kt reduction in the transportation sector, mostly as a result of more stringent vehicle emission standards, was offset by a 6 kt increase from the Electricity Generation and Petroleum Refining sectors. The increases reflected growth in electricity demand and an expansion at the Irving Oil Refinery

during the 1990's. While NO_x emissions from electricity generation in New Brunswick increased in the 1990's, reductions within this sector are anticipated to occur in the period 2000-2010 due primarily to the addition of new pollution control at the Coleson Cove generating station. As well, more stringent emission standards for new gasoline and diesel vehicles introduced over the past number of years by Environment Canada are expected to contribute significantly to reduced emissions of NO_x as new cars replace older, higher-emitting vehicles.

Emissions of VOCs dropped from 70 kt to 51 kt between 1990 and 2000. This is due largely to a 12 kt reduction in the residential fuel wood sector and a 6 kt reduction in the transportation sector. Revised emission estimation methods since 1990 are probably responsible for some of the apparent decrease in VOC emissions, especially in the residential fuel wood sector. More stringent vehicle and engine emissions standards have contributed to overall emission reductions of VOCs and the effect of these new standards should continue to contribute to lower emissions over the next several years.

Emission Reductions Initiatives in the Industrial Sector

New Brunswick's *Clean Air Act* provides the legislative authority to protect and improve air quality in the province. The Act is supported by several regulations including the *Air Quality Regulation* that sets out detailed requirements and provisions in a wide range of areas including industrial approvals, open fires, sulphur content in fuels, and the designation of air quality standards and objectives.

Industrial facilities emitting contaminants into the air in New Brunswick are required to obtain an approval from the Minister of Environment. Approvals may be issued for a maximum period of 5 years and are renewable at the discretion of the Minister. Operating approvals for the largest industrial facilities are subject to public review and comment as prescribed by the *Public Participation Regulation* under the *Clean Air Act*.

More information about the public participation process in New Brunswick and specific air quality approvals is available on the *Clean Air Act* Public Information Access Site at www.qnb.ca/0009/0355/0005/index-e.asp.

In ongoing efforts to control acid rain and its effects on sensitive ecosystems in eastern Canada, the provinces east of Manitoba signed the Canada-wide Acid Rain Strategy for Post-2000 in 1998. Under the Strategy, New Brunswick committed to reducing overall provincial emissions of SO₂ by 30% and 50% by 2005 and 2010 respectively from previous caps established under the Eastern Canada Acid Rain Program.

The following sectoral summaries highlight recent initiatives that have been completed or are underway by various industries in New Brunswick. These initiatives come as the result of the application of the Department's regulatory tools and in some cases proactive environmental policies exercised by facility owners.

Electric Power Sector

NB Power's Coleson Cove facility, the largest fossil fuel fired thermal generating station in the province, completed a major refurbishment project in 2005, including the installation of

extensive air pollution control equipment. This results in approximately 70% reduction in SO₂, 50% reduction in NO_x, and 60% reduction in PM from previous emission levels at this facility.

The refurbishment at Coleson Cove brings the total number of power plants in the province outfitted with flue gas desulphurisation, commonly known as scrubbers, to three. The other two are located at Belledune and Dalhousie.

New Brunswick's commitments under the Acid Rain Strategy for Post-2000 are to be primarily fulfilled through emission reductions in the electric power sector. In addition to SO₂ reductions already achieved at Coleson Cove, additional SO₂ reductions will be achieved as the Grand Lake coal fired power plant is either de-commissioned or outfitted with pollution control by 2010.

The refurbishment and life extension of the Lepreau Nuclear Power Plant will increase its net output resulting in lower fossil-fuel generation and associated air emissions. In addition, the Electricity from Renewable Resources Regulation under the Electricity Act requires NB Power to acquire at least 10% of its supply from new renewable resources by 2016. Developments in excess of 400 MW of wind power will also displace significant fossil-fuel generation.

Pulp and Paper Sector

During the period 1990-2000, emissions of particulate matter from the pulp and paper sector were reduced by 70%. These improvements have resulted from company initiatives to reduce costs through the utilization of waste fuels and regulatory requirements to control emissions from these activities. At one large kraft mill equipment has been installed to enhance the utilization of solid waste and reduce emissions of SO₂, PM and odorous sulphur compounds in the order of 80%, 25%, and 10% respectively.

Several mills in the province have closed in recent years. The December 2004 shutdown of the UPM kraft pulpmill in Miramichi, the July 2005 shutdown of the Smurfit-Stone corrugating mill in Bathurst, the December 2007 shutdown of the UPM papermill and the UPM groundwood mill in Miramichi and the January 2008 shutdown of the AbitibiBowater newsprint mill in Dalhousie also result in reduced emissions from the Pulp & Paper Sector.

Base Metal Smelting Sector

At the sole primary smelter in the province emissions of SO₂ and PM have been reduced by approximately 50% and 70% respectively over the past two decades. Approximately 20% of the PM emission reductions have occurred over the last decade. Emissions of heavy metals have been reduced by over 80% since 1985 with approximately half of the reductions occurring in the last decade. Work on particulate matter impacts continues with an investigation of the potential for improvements to the PM monitoring network surrounding the facility.

Petroleum Refining Sector

The one crude oil refinery in the province is the largest in the country. Emissions of SO₂ from this facility have been reduced by over 25% in the last decade. Further reductions are expected as the refinery has constructed a new Tail Gas Unit in 2008. This should result in additional SO₂ emission reductions and consequently less secondary particulate matter formation. As well, emissions of VOCs from the storage, handling and distribution of volatile fuels are expected to be reduced through improvements to tank seals and the provision of vapour controls on fuel transfers.

Conditions have been included in the new Air Quality Approval to operate that require compliance with the National Framework for Petroleum Refinery Emission Reductions. The Framework, completed in 2005, calls for the establishment of “facility-level annual caps for emissions of a range of air pollutants from Canadian petroleum refineries, including SO₂, NO_x, VOCs, PM, carbon monoxide, and benzene”. Over a ten year period, it is expected to result “in an improved level of health protection as a result of improved environmental performance, at least on par with the current or anticipated performance of comparable U.S. refineries.”

Lumber and Allied Wood Manufacturing Sector

The largest lumber and allied wood manufacturing facility in New Brunswick is currently undertaking a Source Contribution Analysis and Emission Reduction Assessment that is intended to provide a detailed assessment of PM and NO_x sources within the facility and options for future reductions of these contaminants. This same facility is also undertaking a pilot scale project that, if successful, could realize a facility wide reduction of its formaldehyde emissions in the range of 50 to 70%.

Asphalt Plant Sector

All asphalt plants in New Brunswick are required to undertake regularly scheduled source testing analysis to determine emission levels of PM, NO_x, carbon monoxide and total non-methane hydrocarbons. They are also required to limit their emissions of these contaminants to a level specified in their Approvals. Also, all plants are to operate their facilities in such a manner as to prevent nuisance impacts from odour, noise and dust. The continued adherence to these requirements results in control of emissions from this sector as well as a better understanding of air emission impacts that will assist in future efforts to reduce air quality impacts.

Concrete Plant Sector

All concrete plants in New Brunswick are required to operate pollution control technologies to control particulate matter emissions. Also, all plants are to operate their facilities in such a manner as to prevent nuisance impacts from odour, noise and dust. The continued adherence to these requirements results in control of emissions from this sector as well as a better understanding of air emission impacts that will assist in future efforts to reduce air quality impacts.

Future Efforts to Reduce Emissions in the Industrial Sector

In April 2007 the federal government announced a new Regulatory Framework for Air Emissions. The framework includes provisions to significantly reduce overall national emissions of SO₂, NO₂, PM and VOCs. Details about how these emissions reductions are to be achieved are presently under discussion through CCME.

Within New Brunswick's Industrial Sector Approvals Program opportunities are continually being sought to reduce air emissions from industrial sources toward the goal of continuous improvement in ambient air quality. The Approvals Branch is planning to compliment its current Regulatory Approach for Industrial Sector Air Emissions with a more standardized approach that will include provision for a formal Continuous Improvement Program. The content and timing of this work will be dependent upon the outcome of the current discussions surrounding the new federal Regulatory Framework.

Emission Reductions from Non-Industrial Sources

Residential Wood Combustion

Using wood for space heating, either as a primary or secondary source of heat, is a popular practice in New Brunswick. In fact residential wood combustion represents the largest source of primary emissions of PM_{2.5} in the province. In addition, burning wood emits other toxic gases and particles. Consequently additional efforts are needed to reduce the impact of emissions from wood burning appliances on local air quality, especially if space heating with wood remains a popular alternative to fossil fuel derived heating.

New national level regulations are required to ensure that wood-burning appliances imported and sold in Canada meet low emissions standards similar to the Environmental Protection Agency (EPA) requirements in the US. New Brunswick encourages the federal government to adopt such regulation as soon as possible.

New Brunswick supports public education and awareness programs to encourage cleaner wood burning practices. The New Brunswick Lung Association has often delivered these programs that have also included change-out incentives to support the replacement of old, less efficient wood burning units with cleaner burning and more efficient stoves and furnaces.

The Department of Environment was involved nationally in the development of a Model Municipal By-law for Regulating Woodburning Appliances. This document draws upon the experience of a number of local governments in North America that have introduced by-laws in an effort to control impacts on local air quality from residential wood combustion.

Open Burning

Burning of wood waste, slash, and yard waste can release a large amount of smoke and associated toxic compounds into the air and as a result it should only be considered as a last resort when other alternatives are not available. Alternatives to open burning include composting, chipping, re-use and setting the material aside for pick-up on designated collection days in one's community.

Several communities in New Brunswick have banned open burning, including Bathurst, St. Andrews, St. George, Miramichi and Neguac. Many other communities in the province have restrictions in place to control open burning.

Open burning of domestic garbage, various synthetic materials, treated lumber, electrical wire and other designated material is prohibited in New Brunswick. For more information on open burning please see New Brunswick's Policy on Open Burning, available at the following web site www.qnb.ca/0009/0355/0011/0001-e.pdf.

Transportation

The transportation sector contributes significantly to emissions of NO_x and VOCs, precursors pollutants involved in the formation of ground level ozone. The Department of Environment has actively supported efforts to reduce vehicle and engine emissions through federal government regulatory initiatives on Cleaner Vehicles, Engine and Fuels. These regulations include new or

strengthened emission standards for motor vehicles and engines found in construction, mining, farming and forestry, small gasoline-powered engines, outboard engines, personal watercraft, all-terrain vehicles and other off-road vehicles. They also include fuel quality standards that target specific components in fuels such as sulphur or benzene. Future plans include regulations to address large spark-ignition engines, typically gasoline or propane powered engines used in industrial applications.

The New Brunswick Department of Transportation has in recent years introduced a number of initiatives aimed at reducing emissions, both with respect to its fleet as well as through improvements to the movement of goods and people.

Of particular note is the introduction of lifecycle accounting principles for the government's tendering of light duty trucks and passenger vehicles. This process requires the proponents to include the operational costs, including fuel, as part of the tender proposal.

Three weigh-in-motion facilities have been installed on the new Trans Canada Highway with plans to install more in the coming years. These facilities enable more efficient truck traffic flow, thereby reducing emissions and operating costs. Similarly, the construction of a new border crossing in St. Stephen will greatly reduce waiting times and therefore idling times. This is the eighth busiest border crossing in Canada.

The trucking industry can apply to operate long combination vehicles on all four-lane highways beginning in June 2008 resulting in improved transportation efficiencies. In addition, a new type of wide tire in the trucking industry is allowed under special permit on certain highways in the province that result in lower rolling resistance and savings on fuel.

The Department of Environment has provided support to the New Brunswick Lung Association in various efforts to reduce emissions from motor vehicles. The Lung Association played a key role in the Department of Education adopting a province-wide policy banning the idling of school buses on school grounds. The Lung Association also administers a vehicle scrappage program, with support from Environment Canada, where incentives are provided for eligible owners to retire their older vehicles that typically have higher emissions than newer ones.

Other Actions in Support of New Brunswick's Implementation Plan for Canada-wide Standards for PM and Ozone

New Brunswick Climate Change Action Plan

Many of the same emission sources that contribute to PM and ozone formation also emit greenhouse gases that contribute to global warming. Therefore, actions taken to reduce emissions of greenhouse gases often have a co-benefit effect on air quality by reducing emissions of PM and PM and ozone precursors.

In June 2007 New Brunswick released its Climate Change Action Plan, an ambitious plan to reduce provincial greenhouse gas emissions and manage adaptation to climate change. Details about the Climate Change Action Plan are available from the following web site of the Department of Environment: www.gnb.ca/0009/0369/0015/0001-e.asp.

Environmental Trust Fund

New Brunswick's Environmental Trust Fund provides funds for community-based environmental activities. The Fund has supported many air quality and related energy conservation projects throughout the province. Examples of such programs include commuter vehicle anti-idling initiatives, commuter ride share programs, promotion of "cleaner" commuting alternatives, street light upgrades, and replacing traffic signal lights with energy efficient "LED" technology.

Other Regional Initiatives

New Brunswick continues to actively support and contribute to regional cooperative activities through the New England Governors Eastern Canadian Premiers partnership (NEG/ECP). The NEG/ECP Acid Rain Action Plan, adopted in 1998, has led to coordinated efforts to reduce SO₂ and NO_x. It has also resulted in a collective appeal to both United States and Canadian federal governments to seek further emission reductions from other areas that affect this region through long range transport of pollution. The Plan has also supported coordinated data collection and management, and public education and outreach, an example being web based near-real-time mapping of ozone and PM_{2.5} levels throughout the region. These maps are available at the web site: www.airnow.gov/index.cfm?action=airnow.canadamaps.

Outreach

Information on current air quality in New Brunswick is available from the following web site of the Department of Environment www.qnb.ca/0009/0001-e.asp or Environment Canada www.ns.ec.gc.ca/airquality/index_e.html and as an audio message on Environment Canada's weather phone line available locally throughout the province. Daily air quality forecasts are issued by Environment Canada during the smog season and if levels exceed or are forecast to exceed air quality standards, public health advisories may be issued in collaboration with the Department of Health.

The Department of Environment has collaborated with the Department of Health and the federal government to pilot a new Air Quality Health Index (AQHI) in Saint John that was launched in late June 2008. The AQHI is a new way to describe current air quality conditions in terms of health effects with a special emphasis on health protection advice to those particularly sensitive to air pollution.

Additional information on air quality programs in New Brunswick, including the Department of Environment's annual air quality report, is available on the Department's web site listed above.

Conclusion

The Canada-wide Standards for PM and ozone include provision for demonstrating the influence of transboundary flow of pollution, and consequently New Brunswick is expected to meet the numerical targets of the Standards by the achievement date of 2010. However the province recognizes that health effects can still occur below these levels and therefore New Brunswick will continue to take all reasonable steps to reduce emissions toward the goal of continuously improving air quality. To do so will require continuing collaboration and partnership with industry, all levels of government, stakeholders, and the public to reduce emissions from many sectors of society.