



Due to its geographic location, meteorological conditions, and the location and proximity of industry to the community, Prince George has historically been susceptible to poor air quality.

Improving air quality in Prince George is a top priority for the B. C. government, city officials and local residents. The city has experienced air quality episodes that have exceeded the provincial objectives for particulate matter (PM10) and fine particulate matter (PM2.5), triggering the air quality advisories we're all familiar with.

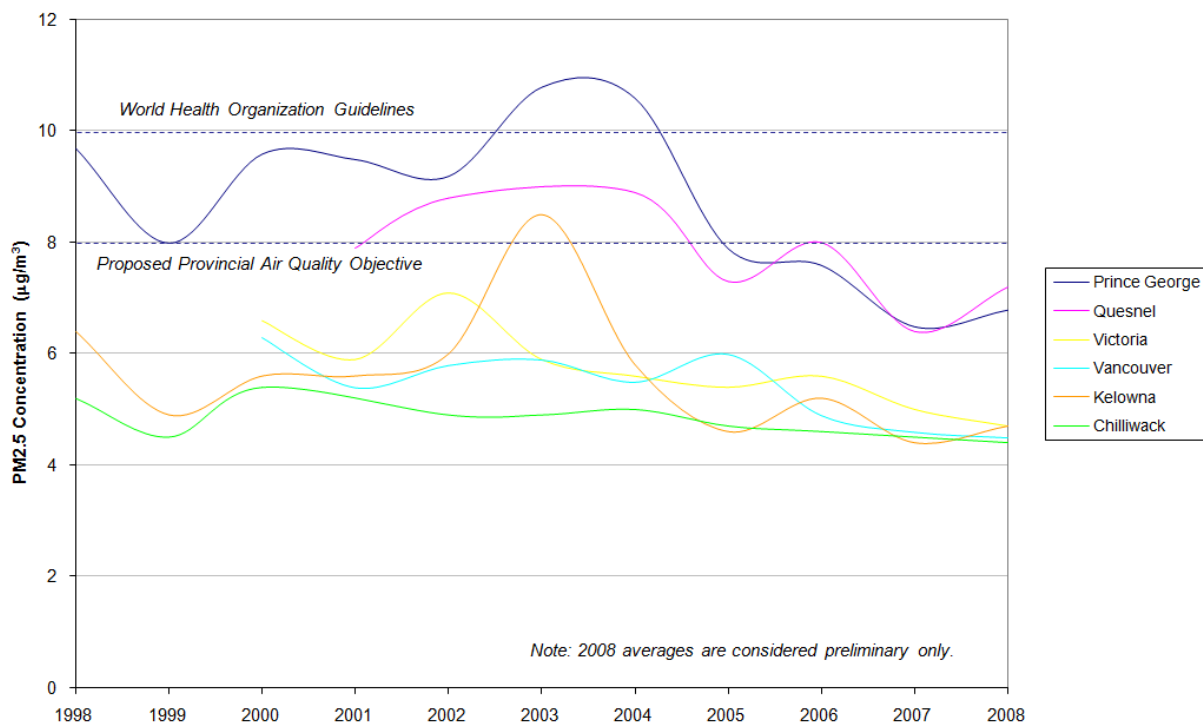
However, there have been significant improvements in the management of air quality in Prince George, thanks in no small part to the combined efforts of the Ministry of Environment and our local airshed management group, the Prince George Air Improvement Roundtable (PGAIR).



Minister Barry Penner, along with Prince George MLAs Pat Bell and Shirley Bond, discusses Prince George air quality with members of the People's Action Committee for Healthy Air (PACHA). Jan., 2009.

In recent years, Prince George air quality has shown some general improvement, and it now meets B.C.'s proposed air quality objective – an objective that is the most aggressive in the country. But while there has been progress in recent years, there is still more to be done.

**Annual PM2.5 Concentrations at Select Sites in B.C.**



- Sites represented in this chart were selected to reflect the range of concentrations observed in populated areas around the province.
- Annual PM2.5 concentrations are compared against two benchmarks:
  - The World Health Organization's recommended guideline of 10 ug/m3
  - B.C.'s proposed air quality objective of 8 ug/m3
- The proposed air quality objective is the best in Canada and is competitive with the most stringent criteria in use elsewhere (e.g. Australia).

## Clearing the Air

Through its Environmental Protection Division (EPD) regional office, the Ministry of Environment oversees the permit application process for industrial air permit discharges for activities specified in the Environmental Management Act, while also providing leadership and technical support to PGAIR.

For several years, the Prince George EPD regional office has been working closely with other local government agencies, including the municipality and regional district, to address air quality issues.

## *Controlling Pollution*

The Prince George regional office has drafted an emissions offset guidance document for new and expanded industrial facilities that fall under the Environmental Management Act (EMA) air permit requirements. This offset policy requires either a 2:1 or 3:1 offset of particular matter emissions from industrial facilities, depending on which area of the city the proposed facility will be operating.

The Ministry of Environment's Best Achievable Technology (BAT) interim policy is another tool that the regional office can use in requiring emission reductions during Phase Three of the Prince George Airshed Management Plan.

The BAT policy sets waste discharge standards that apply to air permits, approvals, and regulations overseen by regional offices. This policy applies to new facilities, facilities undergoing significant or major amendment to an existing permit or approval, and to existing facilities in sensitive environments.

The BAT policy defines a "sensitive environment" as an area where it has been scientifically determined that a substance being discharged is causing or is likely to cause pollution, and where specific action is required to reduce or eliminate the threat of damage to the environment from the cumulative impacts of these discharges.

Since Prince George meets this definition, the EPD regional office will be able to apply the BAT policy to require existing permit holders to upgrade their pollution control technology. This also satisfies a recommendation in Phase Two of the Airshed Management Plan, which states that the Environment Ministry must be called upon to evaluate new sources of air contaminants based on their lowest achievable discharge rate – i.e. the lowest discharge rates they can reasonably be expected to release.

To complement the offset and BAT policies, PGAIR has set both ambient air quality and emission reduction objectives for the airshed plan.

## *Working Together for a Cleaner Airshed*

Since 2007, the Ministry of Environment's regional office has evaluated several major reports and provided input for projects with the potential to affect air quality, including the City of Prince George Community Energy System proposal, the Prince George Airport Light Industrial Expansion Plan and Air Quality Dispersion Modeling Project, the City of Prince George Dangerous Goods Route Study, and the Regional District of Fraser Fort George Industrial Land Use Strategy.

The EPD regional office also provides input to zoning applications, conservation easements, Official Community Plans, and bylaw development.

In addition, two representatives from the EPD regional office proudly hold the seats of president and secretary of PGAIR, providing technical support for research studies. These representatives also sit on monitoring, research, and education and awareness working groups.

The regional office provides project management, occasional funding and volunteer support for airshed management-related projects, including anti-idling campaigns, vehicle emission clinics, and woodstove exchange programs. In February 2008, they helped co-sponsor the People's Action Committee for Healthy Air (PACHA) clean air symposium, which attracted over 400 people.



## *Monitoring Air Quality*

The Ministry of Environment, in partnership with the Prince George Air Quality Monitoring Working Group, currently runs an ambient air monitoring network in Prince George. The ministry analyzes and interprets the air quality data, and publishes an annual report that compiles data from nine air quality sites and seven meteorological sites.

The ministry also leads a second monitoring program in the North Nechako Bench to identify localized impacts from residential heating sources and industrial asphalt plant and gravel pit sources.



Minister of Environment Barry Penner (right) and Prince George-Omineca MLA John Rustad (left) receive a demonstration of new air quality monitoring equipment on the roof of the ministry's Prince George office from Air Technician Steve Lamble. Aug., 2005.

## *Working with the community*

In January 2009, Environment Minister Barry Penner and MLAs Pat Bell, Shirley Bond and John Rustad met in Prince George with members of the PACHA and announced a \$40,000 government grant to aid PGEAIR in its efforts to improve air quality in the Prince George airshed. The funds will support initiatives under Phase Two of the Prince George Airshed Management Plan that include hiring a third party to review the results of a source-receptor modelling study.

## *Regulating Open Burning*

The Ministry of Environment works closely with other local agencies to restrict open burning in the airshed. The City of Prince George's Clean Air Bylaw prevents open burning, and the fire department and the Environment Ministry regularly work together to investigate cases of suspected burning. If necessary, bylaw officers and/or the Conservation Officer Service may follow up on an investigation.

The EPD regional office is also providing input to review the current Open Burning Smoke Control Regulation (1993), advocating for a 'no burn area' to be extended the maximum allowed distance from the municipal boundary.

## *Amendments to Permits*

The Ministry of Environment has been working on a number of permit-related amendments that have already resulted in significant changes in managing air quality. Highlights include:

- **Changes in Cyclone Emissions in Carrier Lumber's Permit:** Carrier Lumber proposed the use of offsets in exchange for a two-year extension to operate a modified silo burner under extenuating circumstances. Offsets were achieved by replacing a 1977 cyclone burner with a newer model at a cost of \$100,000, and modifying their dust collection system so that shavings and low-pressure cyclones are never operated simultaneously. This had the equivalent impact of having one less cyclone.
- **Brewery Permit:** The Ministry of Environment recently issued an emissions permit regulating discharges from a brewery's natural gas boilers, grain-unloading and handling facility, and other sources. The company is required to submit a report by Dec. 31, 2009 to evaluate areas within the operation where emissions-reduction improvements are feasible. The permit contains clauses that allow the ministry to require odour-control measures.
- **Marsulex:** A recent permit amendment required the company to upgrade their manufacturing process. The company installed a new converted tower in June 2008. The upgraded equipment has resulted in about a 50 per cent reduction in both daily total emissions and in peak emissions on start-up.
- **Pacific Bioenergy:** A permit issued in 2007 required the replacement of an old pellet plant with a new plant. Compared to the previous plant, this resulted in an average decrease of 78 per cent in particulate matter from all sources, including fugitive emissions, and an estimated 40 per cent decrease from point sources. The new permit expires on Dec. 31, 2010, at which time the plant will be required to shut down unless the company submits a plan to further reduce particulate matter emissions, and that plan is approved by the EPD director. The permit also restricts production levels to three stages, with compliance testing required before production moves to a next phase.
- **Asphalt Plants in Prince George:** Over the past few years, particulate matter from three plants – Columbia Bithulithic, Pittman Asphalt and RD Moyen – has at times exceeded the Asphalt Plant Regulation limit of 120 mg/3. In 2007, the Ministry of Environment logged about 175 complaints related to this. The Asphalt Plant Regulation was amended in June 2008 with regard to emission limits for the Prince George area, requiring a 25 per cent reduction in particulate matter and a 50 per cent reduction in organics. In 2008, the number of complaints went down to 58. There have been a number of significant upgrades at Columbia and Pittman in the past couple of years, resulting in 99 per cent reduction in particulate from the baghouse at Columbia, and 98 per cent reduction in organics from the drum mixer and burner at Pittman. RD Moyen has chosen not to operate within the city limits as of August 2008.