PRINCE GEORGE air IMPROVEMENT ROUNDTABLE



ACCEPTABLE AIR QUALITY IS EVERYONE'S RIGHT
PROTECTING AIR QUALITY IS EVERYONE'S RESPONSIBILITY

Prince George Air Improvement Roundtable
Phase III Implementation Plan

November 2011



The Prince George Air Improvement Roundtable (PGAIR) is a volunteer planning group with representatives from the BC Government, Northern Health, University of Northern BC, People's Action Committee for Healthy Air, City of Prince George, Regional District of Fraser-Fort George, Northern Medical Association, industry, and the public.

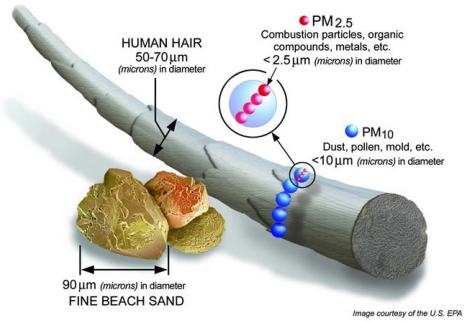
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Explaining PGAIR's Phase III Implementation Plan



Particulate matter refers to tiny solid or liquid particles that float in the air. Some particles are large or dark enough to be seen as smoke, soot or dust. Others are so small that they can only be detected with a powerful, electron microscope.

We measure particulate matter in microns (micrometres). One micron is a millionth of a metre. Particulate matter that is 2.5 microns and less is called PM2.5 — they are about **1/20th** the diameter of a **human hair**.

This is the particulate matter of greatest concern because it can travel deep into the lungs and become lodged there, causing **heart** and **lung disease**, and premature death even if levels are below those for air quality advisories.

Despite many years of improvements to our air quality, **Prince George** still has some of the **highest levels** of PM2.5 in the province.



PGAIR has set emission reduction targets for PM2.5 by **2013**:

- A daily average not to exceed 25 micrograms per cubic meters of air and;
- An annual average of 6 micrograms per cubic meters of air.

And by **2016**:

- A 40% reduction from all significant sources; and
- An annual average of 5 micrograms per cubic meters of air.



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What are the Key Strategies?

Collaborate with PGAIR member organizations to develop policies that reduce air quality impacts from new or expanding **industries** (e.g, identify lands outside the airshed for industry) and provide feedback to industry to encourage the use of best practices and technology to reduce emissions.





Through **research** and **education**, increase public understanding of air quality issues, advisories, potential solutions and success-stories.

Establish a PGAIR **awards** and **recognition** program to recognize achievements in air quality by local businesses.

Collaborate with the **transportation** sector to reduce emissions through best practices and technology, or through improved transportation planning and infrastructure.



Reduce emissions from **woodburning** heating systems and backyard **recreation fires** by encouraging woodstove upgrades to EPA/CSA certified models, increasing knowledge of proper burning practices and increasing awareness of the City's Clean Air Bylaw.



Reduce **dust** by encouraging more paving, improved street and private lot sweeping, appropriate off-road use, and improved residential yard maintenance.



Reduce **vehicle emissions** by encouraging more alternative transportation such as biking, transit and car-pooling, and improved traffic flow, less idling, and more efficient fleet movement. PGAIR may also work with stakeholders to help establish a local vehicle emission testing requirements similar to other jurisdictions.



How does PGAIR decide what it can do?

First, we use research to determine the major sources of PM2.5. These include:

- Dust from roads, parking lots and gravel pits;
- Vehicle emissions;
- Industry;
- Wood burning;
- Other (including restaurants with cooking grills); and
- Naturally occurring sources;

Then we look at ways to reduce PM2.5 that include:

- Updating equipment and technology;
- Changing our practices or behaviour; and
- Making changes easier for industry and the public.

We also need to **communicate** what PGAIR can do, what its member organizations can do, and what we can influence:

- First there are actions that PGAIR can undertake such as public education and awareness.
- Second there are strategies that our member organization can implement (subject to priorities, funding, regulations and policies).
- Third there are activities by organizations that are not PGAIR members, or those that have major barriers (for example regulation or policy changes).

Where To From Here?

Our goal is to continuously improve our knowledge and strategies. Please keep informed through our website and various community initiatives and forums! Visit our web site for more information: www.pgairquality.com

PGAIR's Phase III Implementation Plan (2011-2016)

Approved November 29, 2011

This matrix of strategies is generally intended to be implemented over a five year period (2011 – 2016). However, some of the strategies are longer-term and may extend beyond 2016. Strategies cannot all be implemented by PGAIR itself: some strategies would be communicated to the relevant member organization that would become the lead for a particular strategy, or to a relevant lead that is external to the PGAIR membership.

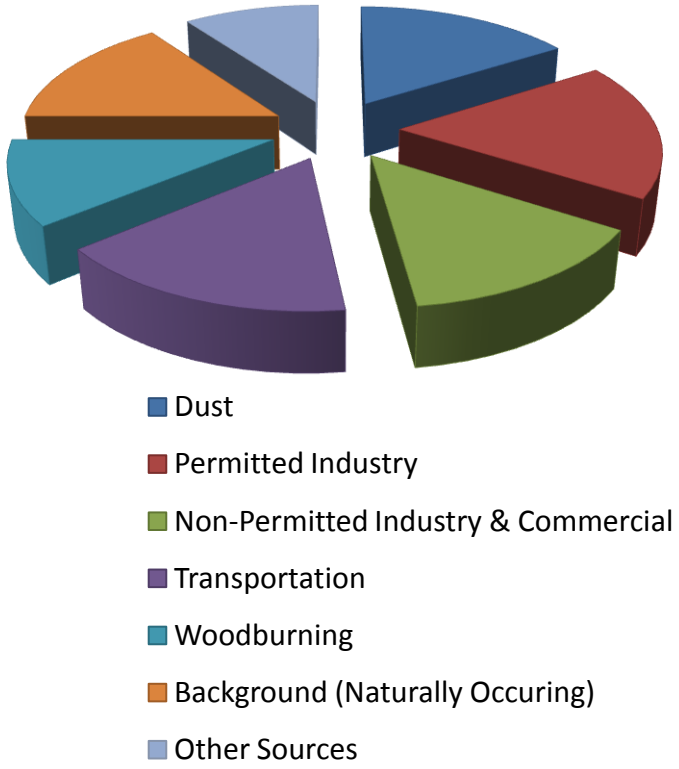
In this way, PGAIR's key role is in the multi-stakeholder development of strategies, which are then communicated to others as needed. In cases where PGAIR is not the lead, its role is to promote, encourage, and follow-up with strategy leads who are members of PGAIR or who are not members of PGAIR, as the case may be.

Each year, PGAIR will develop an annual priority list (work plan) from this matrix and confirm leads and partners and associated actions. The annual work plan will refine the actions to provide more detail where necessary and will also establish a measure or indicator to gauge the success of the outcome.

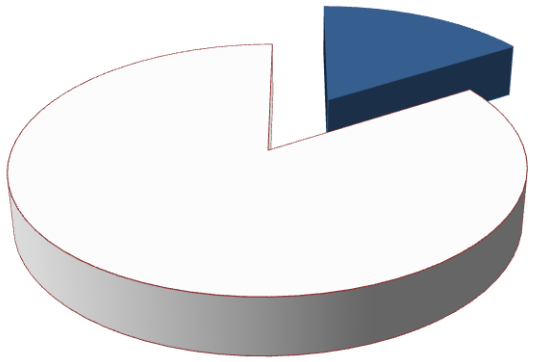
This matrix will be amended on occasion where information or strategies & actions are identified.

The chart below shows the relative proportion of PM2.5 emissions that each category contributes to the total emissions within the airshed (based on recent research). This chart shows that there is no individual category of air emissions that is a single issue. Of the 7 categories below, this plan provides strategies for 5 of the emission sources that have the best opportunity for improvements.

Relative Proportion of Total PM2.5 Emissions (*2005 Information*)



Category: Dust



GOAL: Reduce dust. Dust emissions sources mainly include "fugitive" (wind-blown dust from open areas), on-road and off-road vehicles use, unswept parking lots, and industrial yards. Dust contains larger visible particles and smaller invisible particles (PM2.5 microns – 1/10th the width of a hair), which are the ones with the greater health concerns.

Strategies

1. Mitigate the causes of dust in areas that are not paved and at gravel pit operations, construction sites, residential and commercial lots and industry sites, including the BCR Site.

2. Mitigate dust in paved areas, in particular, roads, parking lots, and commercial and industry sites.

Potential Actions

1. Investigate potential property tax opportunities and other financial incentives or mechanisms such as private-public partnerships that could facilitate new paving projects where dust is an issue.

2. Encourage additional paving where dust is an issue.

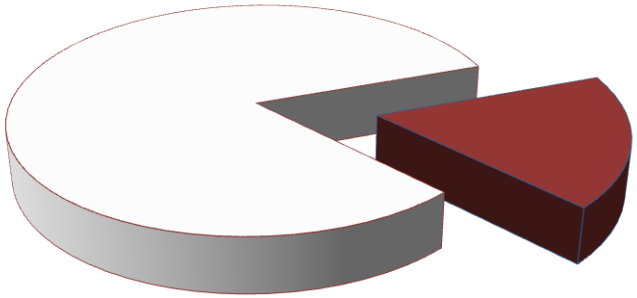
3. Improve street and lot sweeping operations (both City and private).

4. Promote dust management best practices such as the use of dust suppression materials.

5. Work with clubs, stakeholders, police, and land owners to reduce inappropriate off-road use.

6. Reduce dust from residential lot maintenance through education and awareness campaign.

Category: Permitted Industry



■ Permitted Industry □ All other Sources

Goal: Reduce emissions from permitted industry. Permitted industries are those that are regulated by the Provincial government and/or require an emissions permit. Given the relationship between the regulator and the industry to ensure standards are met and to look for improvements over time, there is less of a direct role for PGAIR covering this category.

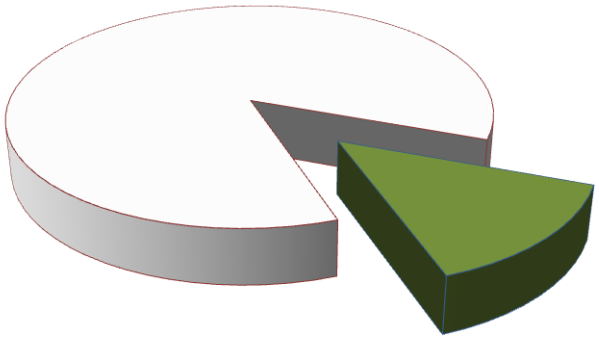
Strategies

1. Encourage implementation of Province's regional-office developed off-setting policy for new or expanding industry in Prince George.
2. Secure commitment for the Regional District of Fraser-Fort George – City of Prince George Heavy Industry Land Use Plan (suitable development lands outside of airshed).
3. Encourage continuous improvement and use of "best available technology" for current, expanding and new permitted industry.

Potential Actions

1. Facilitate information sharing between permitted emitters.
2. Provide input and feedback to industry on plans for expansion, new technologies or new practices.
3. Encourage and promote greater industry involvement and participation in PGAIR

Category: Non-Permitted Industry & Commercial



Goal: Reduce emissions from relevant businesses. Non-permitted industries and commercial includes large and small businesses, such as restaurants, fabricators, airport emissions, commercial heating, autobody shops, building construction, gravel pits and farm operations.

Strategies

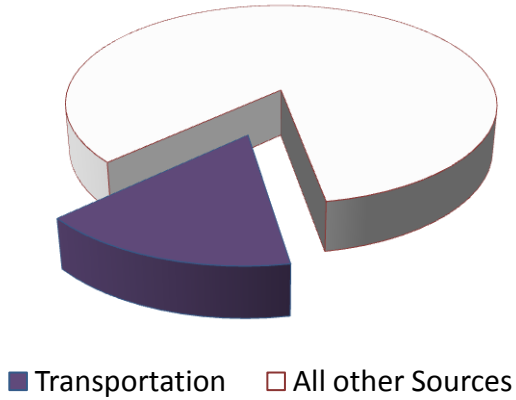
1. Encourage the use of best available technology and best practices to reduce emissions.
2. Recognize best practices within the commercial and industrial sector.

Potential Actions

1. Establish a PGAIR annual awards and recognition program to promote industries and commercial businesses that have taken significant action towards clean air.
2. Facilitate, through research, education and awareness and exploring incentives, the use of best available technology to reduce emissions from non-permitted industry & commercial operations such as restaurants and auto-body businesses.
3. Investigate the use of social media tools (twitter, blogs, and facebook) to foster personal responsibility.
4. Encourage information sharing with other agencies and organizations such as Chamber of Commerce, “Downtown PG” and Initiatives Prince George.
5. Develop and distribute information on health effects of emissions related to restaurants.

Category: Transportation

Goal: Reduce emissions from vehicles. Transportation category includes emission from vehicles of all types including personal, commercial, industrial, airplane and locomotive.



Strategies

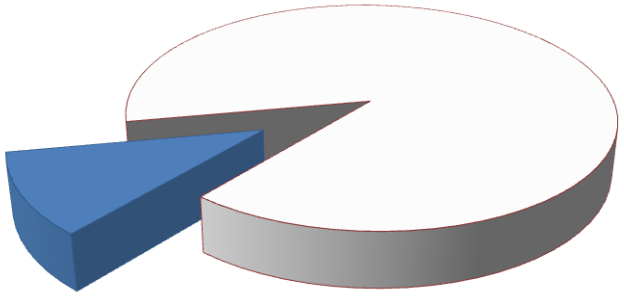
1. Reduce vehicle idling.
2. Encourage vehicle efficiency programs such as E3Fleet Program and voluntary vehicle emission testing.
3. Encourage alternative transportation.
4. Work with relevant agencies and stakeholders to examine the feasibility for establishing local vehicle emission testing requirements.
5. Collaborate with railway industry to develop emission reduction or mitigation strategies.
6. Encourage alternative fuel/energy sources for transportation.

Potential Actions

1. Develop or support the development of an information paper on the pros and cons of drive-thrus and idling at locations such as parking lots and school pick-up zones.
2. Develop partnerships (schools, governments, businesses, and industry) to develop policies, visible commitments strategies, an "Idle-Free Day" initiative and awareness materials that support idle reductions.
4. Encourage alternative transportation through improved biking opportunities, supporting Bike to Work Week, use of transit, car-pooling and the implementation of the City's Active Transportation Plan.
5. Encourage continuous improvement of transportation infrastructure that supports reduced emissions (e.g. coordination of traffic lights, use of round-abouts, road bypass infrastructure).
6. Encourage pilot project to develop and test rail and/or air transport emission reduction or mitigation.
7. Develop with partners, an education and awareness program for E3 Fleet, eco-driving, vehicle right-sizing, and voluntary vehicle emission testing.
8. Provide feedback into planning processes to ensure air quality improvement is a key consideration.
9. Develop partnerships that promote, showcase and highlight use of best available technology and alternative fuel/energy programs.

Category: Woodburning

Goal: Reduce wood smoke. Woodburning category includes residential space heating using woodburning appliances and open burning. The City's Clean Air Bylaw regulates this activity.



Strategies

1. Reduce emissions from space heating.
2. Encourage clean-burning practices for "back-yard" recreation fires.
3. Reduce incidences of illegal burning.
4. Reduce open-burning emissions within the Prince George airshed (City and portion of RDFFG)

Potential Actions

1. Continue, and look for opportunities to expand, the woodstove exchange program and burn it smart clinics.
2. Develop or encourage/support the development of education & awareness tools and materials that promote reduced emissions from wood-sourced space heating (residential and commercial).
3. Encourage the development and promotion of best-practices or alternatives for farmers needing to conduct open-burns as part of their farm operations.
4. Encourage the effective education and enforcement of the City's Clean Air Bylaw.
5. Develop input to Clean Air Bylaw update processes and Provincial regulation intention papers.
6. Encourage and promote the development of a Clean Air Bylaw for the RDFFG.
7. Encourage and support the development of local capacity in an education and awareness role as a first responder to improper or illegal burning.

Research, Education & Coordination

Goal: A community that is well informed and aware of air quality issues, trends, and actions for improvement. PGAIR is a voluntary membership with a broad range of stakeholders and interests related to air quality. Through the work of its members, PGAIR plays an important role in facilitating and supporting research on air quality, developing and delivering education and awareness initiatives, and coordinating outreach projects.

Strategies

1. Maintain or improve capacity for PGAIR to deliver its programs and initiatives through sustainable funding.
2. Facilitate public forums and events that promote and encourage clean air practices.
3. Improve awareness of air quality issues and potential solutions.
4. Focus research on improving source and distribution of emissions within the airshed

Potential Actions

1. Improve ability to broadly distribute air quality advisories.
2. Support Bike to Work Week.
3. Release a PGAIR annual report on air quality and initiatives.
4. Investigate the use of social media tools (twitter, blogs, facebook) to foster personal responsibility.
5. Encourage health messages in education and outreach materials and initiatives.
6. Ensure research findings are communicated in clear and understandable terms for the general public.
7. Use “community-based social marketing” techniques to improve effectiveness of education and awareness initiatives in changing air quality related behaviour.

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