

ENSC 412/612

Week 10

Readings for this week

- Text Chapters 5, 26, 27
- Millar, G., 2007: Best Practices in Air Quality Management. Prince George Mayor's Air Quality Task Force. 43 pp.
- Longhurst et al, 2009: The development of effects-based air quality management regimes. *Atmos. Env.*, 43, 64-78.

How to manage air quality

- Traditional methods include such as “Command and Control” – by regulation and law. (e.g. EMA)
- Works well when sources can be identified and regulated, especially if they can be tied to a specific emitter who is a legal entity
- More difficult when there are multiple sources or the sources are poorly defined and quantified
- Increasingly management of these sources is being done by multi-stakeholder collaborative groups

HOLISTIC AQ MANAGEMENT: Multi-stakeholder collaborative management

- Boundaries should be “airshed” based and work across administrative boundaries
- Recognize the dynamic nature of the airshed

HOLISTIC AQ MANAGEMENT: Multi-stakeholder collaborative management

- Interagency cooperation
- Includes input from all stakeholders

HOLISTIC AQ MANAGEMENT: Multi-stakeholder collaborative management

- Promote local action
- Based on best available science and monitoring

Strengths / Weaknesses

- What are the strengths and weaknesses of the more holistic approaches?
- The local example...

PRINCE GEORGE

Process

- Prince George Airshed Management Committee
- Background Report (1996)
- Consultation Period
- Prince George Air Quality Management Plan-
Phase One (1998)
- [http://www.pgairquality.com/files/pdf/PRAQMP-P1\(1998\).pdf](http://www.pgairquality.com/files/pdf/PRAQMP-P1(1998).pdf)

Brief history leading up to the phase I plan

- Agreement reached between City, Regional District and MOE in December 1995 to coordinate air quality management in the Prince George Airshed, forming the Prince George Airshed Technical Management Committee
- Background report indicated fine particulates and total reduced sulphur air quality objectives were consistently exceeded in residential areas
- Public Consultation Period followed in early 1997
- With public input, the Prince George Air Quality Management Plan (Phase One) was prepared and approved in 1998
- 28 recommendations were made, including the formation of a multi-stakeholder group that would implement the plan

Prince George Air Quality Committee Structure

PRINCE GEORGE AIR QUALITY STEERING COMMITTEE

MOE Regional Manager
Regional District of Fraser-Fort George
City of Prince George
Industry Representative (Canfor)
Northern Health Authority

PRINCE GEORGE AIR QUALITY IMPLEMENTATION COMMITTEE

- Ministry of Environment
- Ministry of Transportation
- Northern Health Authority
- City of Prince George
- Regional District of Fraser-Fort George
- Industry Representation-
 - Canfor,
 - CN Rail,
 - Husky Oil,
 - Wood Pellet Association of Canada,
 - Carrier Lumber
- UNBC
- Prince George Chamber of Commerce
- Prince George and District Medical Society
- Non-Government Organizations (Fraser Basin Council and PACHA)
- Lheidli T'enneh
- Public Members

MONITORING WORKING GROUP

Standing committee that reports on status of monitoring

RESEARCH WORKING GROUPS

Standing committee that reports on a variety of research and health topics

Guiding Principles Of The Phase I Plan

- Acceptable air quality is everyone's right; protecting air quality is everyone's responsibility.
- Acceptable air quality is an important contributor to a healthy community and a sustainable economy.
- Achieving acceptable air quality requires that local, provincial and federal government agencies work together. Public and industry involvement is also necessary.

Prince George

Public Consultation 1997

- Public Open Houses
- Community Workshops (Medical and Health, Industrial, Environmental)
- Public Presentations at UNBC
- Formal Public Survey (Oster, 1997)

Prince George

Public Consultation 1998

- Draft AQMP distributed to all those who attended previous workshops/ open houses
- Consultation workshops
- Consultation report and recommendations by Workshop facilitator
- Final Draft AQMP

Phase 1 Progress Highlights

- Burning was eliminated from local beehive burners
- The City banned all open burning on properties in the Bowl and all properties during and Air Quality Advisory
- The City and Regional District require that any new or replacement wood burning appliance meets the emission standards
- Reductions in pulpmill particulate emissions including the Canfor upgrade of Intercon power boiler, and lime kiln scrubber
- Hard surfacing of a portion of the Willowdale Forest Road within the Fraser River floodplain to reduce dust emissions

PHASE II AQ Management Plan

- Seen as an “interim” plan, recognizing the need for better information
- Research Plan to include speciation modelling and dispersion modelling to prepare for Phase III
- Phase 2 plan completed with 30 recommendations in November 2006
- [http://www.pgairquality.com/files/pdf/PRAQMP-P2\(2006\).pdf](http://www.pgairquality.com/files/pdf/PRAQMP-P2(2006).pdf)

Mayor's Task Force on Air Quality Improvement (2007)

- Established to independently examine the progress being made to improve air quality in Prince George
- Three phase process including a review of past activities, public consultation, interim report, a feedback period and final recommendation report
- http://www.pgairquality.com/files/pdf/Air_Quality_TF_Final_report.pdf

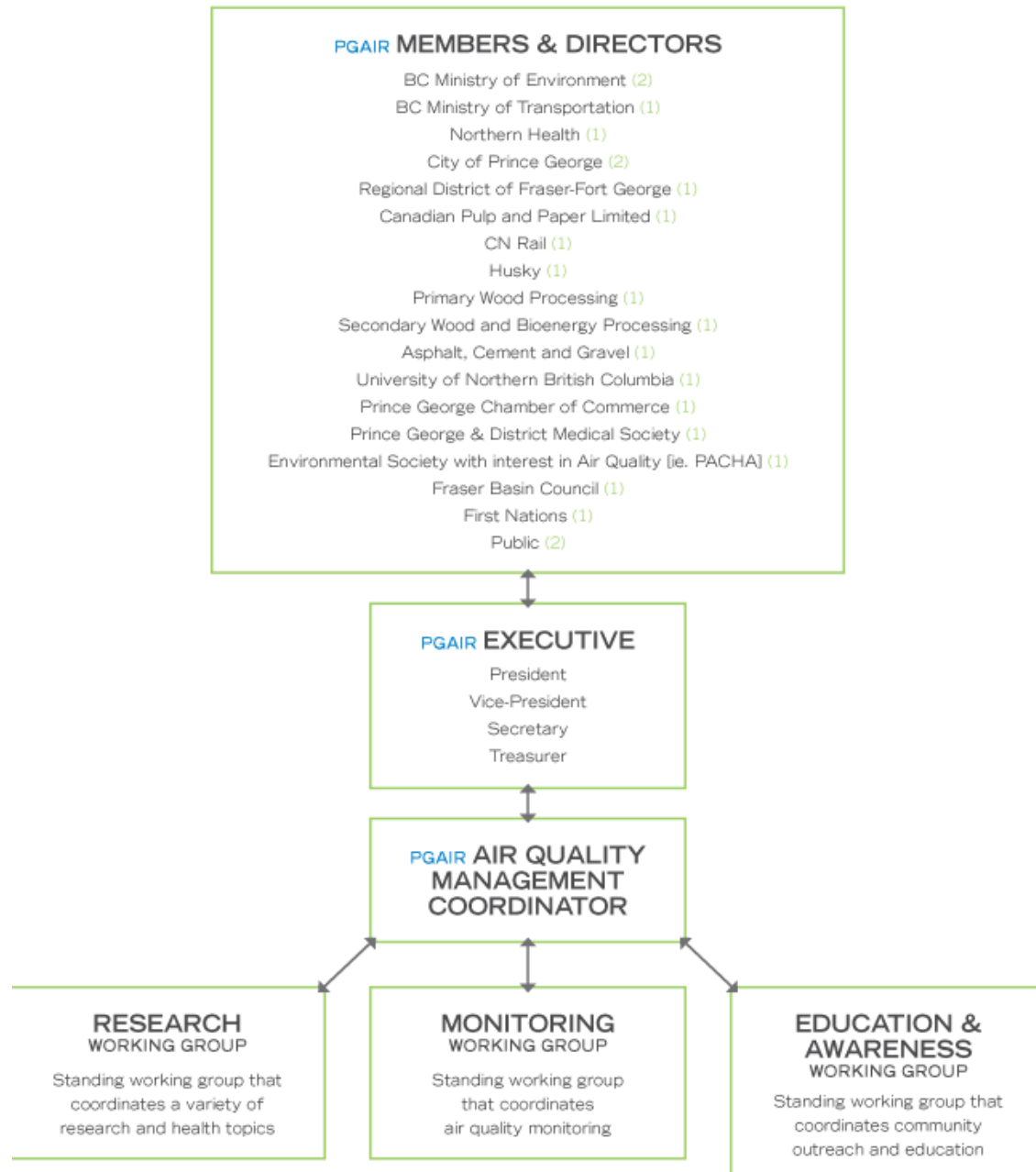
AQTF

- Made 40 recommendations on:
 - AQ governance and mgmt
 - Regulatory tools
 - Education and public awareness
 - Land use and development
 - Industrial air pollution emissions
 - AQ monitoring
 - Research
 - Emerging issues
- Most of which have been implemented or are being implemented

PGAIR – Prince George Air Improvement Roundtable

- Created following a suggestion in the AQTF report to consider collapsing the hierarchical structure into a round table structure...

PRINCE GEORGE AIR IMPROVEMENT ROUNDTABLE [PGAIR]
ORGANIZATIONAL STRUCTURE (2008)



Phase III AQ Management Plan (2011)

- An update to Phase II plan
- 2013 Targets:
 - PM_{2.5} 24 h average not to exceed 25 ug/m³ by 2013
 - PM_{2.5} annual average < 6 ug/m³
- 2016 Targets:
 - 40% reduction from all sig. sources
 - PM_{2.5} annual average < 5 ug/m³

Phase III strategies

- Broad strategies to address 5 categories of PM sources: dust, industry, commercial, transportation, woodburning
- Refer to http://www.pgairquality.com/uploads/PGAIR_PhaseIII.pdf

Municipal Implementation

- The City of Prince George
Clean Air Bylaw, 2005, revised 2010
 - http://princegeorge.ca/cityhall/legislativeservices/citybylaws/Bylaw%20Documents/BL8266_Clean_Air_Bylaw.doc
- Discusses burning, dust, sweeping, etc.

People's Action Committee for Healthy Air (PACHA)

- Watchdog society dealing with air quality issues in the Prince George airshed
- Primary Goals:
 - Effect improvement in air quality in the airshed of Prince George and its adjacent regions through advocacy, education, and research.
 - Promote understanding among the various stakeholders about the environmental and economic impacts of activities and policies regarding the air quality within the airshed as well as on the periphery affected by such activities and policies.