



cleanairplan.ca

Address:

BAG 5000
3756 Alfred Avenue
Smithers BC V0J 2N0
Attn: Barry Watson,
Secretary

Email:

coordinator@cleanairplan.ca

BVLD Airshed Management Implementation Plan

A companion to the BVLD Airshed
Management Plan: A Community
Action Plan for Clean Air, June 12,
2012



.....

.....

TABLE OF CONTENTS

INTRODUCTION	1
Particulate Matter (PM)	2
Sources of emissions	2
BVLD AMS COMMITMENTS AND CAPACITY	3
Consolidated commitments	3
CAMP General Goals, Strategies and Indicators	6
Working in Partnership	8
The Role of the Board	9
SUCCESSFUL IMPLEMENTATION PLANNING	11
Create a Coordinating Committee	11
Create a Communications Group	12
Appoint Stakeholder liaisons	14
Fundraising (Treasury)	16
Moderating and Information technology support	16
Monitoring and Compliance	16
Educators	18
THE BUDGET	18
Phases	21

BVLD Airshed Management Society (BVLD AMS) Implementation Plan

A companion to the BVLD Airshed Management Plan: A Community Action Plan for Clean Air, June 12, 2012

Introduction

"Airshed management planning is a holistic, collaborative community process to address the cumulative impact of human activities on air quality."
Foreword CAMP

This implementation plan is intended to expand on goals, strategies and indicators laid out in the BVLD Airshed Management Plan: A Community Action Plan for Clean Air (CAMP) written in 2012 when David Duncan was President, and Ben Weinstein Secretary of the BVLD Airshed Management Society. Ben is credited as a major contributor although the plan has been revised numerous times based on valuable feedback from stakeholders, previous and current members and a Clean Air Plan Update Committee. To see a copy of this plan or find out more on any topic referenced here please visit our website www.cleanairplan.ca or contact the society at the addresses on the cover.

The Clean Air Management Plan (CAMP) presents a set of goals, indicators and strategies that together provide a road map to achieving better air quality (with respect to a pollutant called Particulate Matter). BVLD AMS is a tripartite society made up of industry, health officials, Non Government Organizations (NGOs), concerned citizens and government (local, regional and provincial) officials. The society is primarily concerned with ambient air pollution and its effects on people. Its role is one that bridges 6 emission sources and their strategies to continuously improve and reduce the frequency, severity and duration of periods of poor air quality. The society is currently the only group in the airshed with a holistic view of air quality and its Directors and members have hands on experience applying strategies and overseeing the Clean Air Management Plan. This means the BVLD AMS is in a unique position to track and comment on the status of sector specific responsibilities.

Presented in this paper is essentially a business plan for the society. Whether it's a one-year 3-year or 5 year plan depends on uptake and financing. A single coordinator can work on the general goals and strategies of the society but needs to work in conjunction with several committees or volunteers in order to implement strategies to cover off the 6 sources of emissions as identified in the CAMP. While some literature or

solutions will apply to different source emitters, implementation plans need unique solutions and requires sign off by lead stakeholders.

Particulate Matter (PM)

The density of Particulate Matter (PM_{2.5}) is measured in microns and the composition of PM is a complex mix of minerals, chemicals and compounds such as sulphur oxides, nitrogen oxides, ammonia, and volatile organic compounds. PM is toxic, it enters our bodies and is known to irritate the lungs and worsen asthma and other lung diseases. It causes inflammation and exposure to short term spikes or long-term high concentrations are also linked to early deaths (CAMP, Chapter 2).

The specialized cancer agency of the World Health Organization, the International Agency for Research on Cancer announced on October 2013 that it has classified outdoor air pollution as carcinogenic to humans. PM is a major contributor to outdoor air pollution.

Sources of emissions

Fine particulate matter comes from a number of human and natural sources. A total of six emission source categories are targeted in the CAMP. These categories are:

- Open Burning
- Industrial Sources
- Wood Burning Appliances
- Backyard Burning
- Transportation - 1) Road Dust and 2) Vehicle Emissions

This graphic was development by the Ministry of the Environment in 2009:



Developing and implementing source specific goals and indicators have begun and continues in each of these sources with varying degrees of success. There have been large gains in air quality management over the years and we owe this largely to a Provincial abatement order requiring industry to shut down of beehive burners. (In 2004 the CAMP identified this as 1 of 6 emission sources but it no longer remains.) Burn Operators in the forest industry are also improving smoke outcomes by using best management practices to manage burns as guided by the Smoke Management Plan. The Open Burning Smoke Control Regulations (enforced by the BC Ministry of the Environment) have also helped in reducing emissions. Credited in this process is the requirement to use Custom Venting Forecasting, which is providing more detailed local projections for venting and dispersion conditions. (These 2 strategies were identified as a goal to reduce emissions from Open Burning.) Finally a joint partnership

between the society, the BC Lung Association, Burn It Smart (a strategy identified to target wood burning appliances) and the Province also had a large impact on educating home wood appliance users. Combined with a Provincial and Municipal rebate this program also removed about 15% of the estimated inefficient, smoke emitting wood stoves in the airshed. The importance of the collaboration of the active recruiting and contributions of each partner in these initiatives is obvious. The implementation plan requires their continued contributions.

Technically we should get a handle on the largest contributors of air pollution in order to see the largest reductions. Unfortunately the issues to air quality management are complicated and working concurrently on sources identified doesn't necessarily mean a reduction in emissions will result. New and emerging industries threaten the airshed and so does increased rail and truck transport, wildfire, retail and product sales. Preliminary goals, strategies and indicators for sources are set out in the CAMP. To develop a holistic implementation plan we would need stakeholders from each source to agree on the strategy and get involved in developing an implementation plan, including the identification of the specific work needed to implement the strategy, a timeline for implementation, and roles and responsibilities for those involved.

BVLD AMS Commitments and Capacity

Consolidated commitments

Consolidated commitments as identified in the CAMP:

1. AMS will continue to look for opportunities to integrate with other airshed planning and compatible planning processes through the ongoing development of this plan.
2. AMS is committed to working with local groups to promote energy efficiency and improved air quality.
3. AMS is prepared to provide continued support for value added alternatives research and development for emissions reduction issues, until they are resolved satisfactorily.
4. AMS can also work with local government in an advisory or referral role for the review of official community plans and for locating developments with airborne emissions. Developments may include industries such as manufactured wood products including fiberboard or wood stove pellet manufacturing.
5. AMS commits to submitting comments related to zoning or rezoning land for industrial development.
6. AMS to provide advice and guidance to Provincial, Regional, and Municipal Governments; Industry, and the public.
7. AMS to oversee the implementation of the Clean Air Plan, including the development of an annual workplan, budget, and communications strategy. This role would also include fundraising as needed.

Suggestions in response to these goals:

Goal #	Achieved in 2013/2014	Specific Work to be Needed	Timeline 2014/2015	Role and Responsibilities
---------------	------------------------------	-----------------------------------	---------------------------	----------------------------------

1	Y	<ol style="list-style-type: none"> 1. Municipal Engineering, Planning or Infrastructure Departments should be invited to present at quarterlies. 2. Participation in LNG or other industrial hearings, open houses. 3. See other opportunities to Work in Partnership in the index. 	Quarterly	<p>Chair – Agenda Item: schedule and invite participants to quarterly</p> <p>Director - Appointment</p>
2	Y	<ol style="list-style-type: none"> 1. Issue invitations to present at coordinated events and open houses. 2. Clean air Day 2014 - 25 invitations to local organizations and agencies were issued, 2 (Skeena Wild, Canyon Creek Ranch) organizations took up the offer. 3. The Comfort Zone is up for sale – let's help Frits turn this over to someone who will benefit from his expertise and carry on the legacy. He and the society has approached the Babine Nation but they don't have the Capacity to run this operation – perhaps the Gitxsan do – worth a shot , we need to pos this idea and see where it goes – start with the Gitxsan Development Corp. – Jako Krushnisky 4. Moricetown Band is part owner of Pinnacle Pellet – our Director suggested they ask Pinnacle for some arrangement of free wood pellet stoves and pellets for the band. Even having 5 replaced reduce local smoke. The band is hiring a new Band Manager but the idea was run by the retiring Manager and Rob Mitchell, the Health Director. Both folks would like cooperation to help make this happen. We need to follow up and facilitate this if we can. 	<p>Quarterly</p> <p>Ad Hoc</p>	<p>Committee</p> <p>Committee or Director – Appointment (see lessons learned in OBAC final report)</p>
3	Y	<p>3 Forestry Industry possibilities emerged:</p> <ol style="list-style-type: none"> 1. Office of the Wetsuweten, Natural Resource Management: David DeWitt willing to consider using a test pile or 2 of debris in the Community Forest as a habitat reconstruction pilot. Use resources at the BVRC. 2. Gitxsan Development Corporation (Jako Krushnisky and RFP Andrew ? same deal. 3. PIR Gary Quanstrom, neglected to use an alternative to burn – make this into a case study – how does the economics work? 	Ad Hoc	<p>Committee or Director - Appointment</p> <p>Hook these projects up with scientific support at the BVRC.</p> <p>Ask FLNRO to waive timber or licensee fees associated with not burning.</p> <p>Continue conversation with Gary around holistic management of the Quick Burns in Sept. 2013</p>
4	Y	<ol style="list-style-type: none"> 1. Municipal Engineering, Planning or Infrastructure Departments should be invited to present at quarterlies. 2. Gitxsan Development Corporation, Jako K. should meet with Directors concerning locating pellet plant. Also apparently they have installed a biomass heating system to supply a Burns Lake commercial district. Plus they are conducting a biomass heating 	<p>Quarterly</p> <p>Ad Hoc</p>	<p>Chair – Agenda Items</p> <p>Director – Appointment – follow up with the agencies re: biomass heating – what standards are emerging? Delineate</p>

		<p>feasibility study for a 1.7 km stretch in Old Hazelton.</p> <p>3. Skeena Wild, Greg Horne also conducting feasibility study for a biomass-heating project in Old Hazelton.</p> <p>4. Lake Babine Nation, Bernard Patrick involved in outsourcing a feasibility study for a biomass-heating project in Old Hazelton.</p>		<p>emission projections, energy efficiencies, strategies in reducing emissions and monitoring including best available technology and more</p>
5	Y	<p>1. Submit unsolicited expressions of interest or letters of intent.</p> <p>2. Newpro – that facility had a detrimental effect on health of the airshed, request a building code permit/inspection - should it be demolished? Sit or invite Mark Allen of the Town of Smithers to speak to this or other development plans.</p> <p>3. See goals 1 and 4</p>	Ad Hoc	<p>Chair – Agenda Item</p> <p>Chair – Agenda Item Director – Appointment</p>
6	Y	<p>1. Submit unsolicited expressions of interest or letters of intent or requests for audience. Alternatively invite these folks in person to our next AGM or event.</p> <p>2. Along with targeting industry or proponents of oil and gas development projects also target specifically:</p> <ul style="list-style-type: none"> a) MLA in combination with b) Heads Environmental Quality Section, Air Quality Sections, Ministry of the Environment in Victoria (Ian Sharp, Arvind Sarasat) c) Heads Forestry and BC Timber Sales, Ministry of Natural Resources and Operations d) Assistant Deputy Minister, Deputy Minister, Province of BC e) North Central Local Government Association f) Union of BC municipalities <p>3. Maintain, publish and expand with case studies, photo log or audio video presentation a database for observations or Air Quality.</p> <p>4. See goals 1 and 4</p>	Ad Hoc	<p>Chair – Agenda Item Board – Approval Director – Appointment or Committee</p>
7	Y	<p>1. Rebuild treasury.</p> <p>2. Spend some time developing the consolidated goals above.</p> <p>3. Conduct some formal organizational planning. Include in the vision which approach to take when performing advocacy: oversight and advice, education and awareness or calls to action</p> <p>4. Coordinate and Submit grant requests using the Regional District of Bulkley Nechako's grant writing applicant process. This needs initiating</p> <p>5. Same for BVRC offering them a 10% take incentive.</p>	Ongoing	<p>Chair – Agenda Item Board – Approval Director – Appointment or Committee</p>

		6. Issue open offer to members same terms as above but on agreed projects. 7. Follow up with the PG Air society for funding – perhaps they are potential partners 8. Also Town of Smithers grant writer Tara and Village of Telkwa Jane Stevenson.		
--	--	--	--	--

Notes: In references to local governments, Bands and village administrations are considered like local governments but First Nation Governments Commissions or Offices may also have bureaucratic capacity to act with even more authority. It depends on the Nation.

CAMP General Goals, Strategies and Indicators

Table A: General Goals, Strategies and Indicators

GENERAL GOAL	STRATEGIES	INDICATORS
<ul style="list-style-type: none"> Maintain and improve our understanding of air quality science in the BVL 	<ul style="list-style-type: none"> Maintain ambient monitoring for PM and meteorology Update micro emission inventory (MEI) Consider future impact assessment studies Encourage academia to conduct relevant and local research 	<ul style="list-style-type: none"> Number and % of instruments that pass MOE audits MEI not more than 10 years old Others as developed and suggested by AMS and stakeholders
<ul style="list-style-type: none"> Meet ambient air quality targets at MOE monitoring stations in Smithers, Telkwa, Houston, BL: <ul style="list-style-type: none"> PM₁₀ – 50 (24hr Avg) PM₁₀ – 15 (Annual Avg) PM_{2.5} – 25 (24hr 98%ile) PM_{2.5} – 8 (Annual Avg) PM_{2.5} – 6 (Long-term goal for 2020, confirmed after careful review in 5yrs once new instruments in place: 2017) 	<ul style="list-style-type: none"> MOE Meteorologist collects, analyzes and annually reports out on data 	<ul style="list-style-type: none"> Statistics (identifying attainment of 5 targets), as calculated for 4 monitoring stations
<ul style="list-style-type: none"> Improve stakeholder awareness of and participation in Airshed Mgmt activities 	<ul style="list-style-type: none"> Hire a coordinator Maintain an updated website Maintain board representation for the following stakeholder groups: provincial government, industry, local government, health and the general public (NGOs, etc.) Develop and deliver community presentations Develop and implement an annual reporting procedure to 	<ul style="list-style-type: none"> Number of community presentations delivered Website updated at least semi-annually Number of entities reporting annually (at AGM or other venue) Number of partners contributing to implementation, both financially and in-kind
<ul style="list-style-type: none"> Reduce emissions in all sectors 	<ul style="list-style-type: none"> See chapters 4-9 for detailed sector-specific strategies 	<ul style="list-style-type: none"> See chapters 4-9 for detailed sector-specific indicators
<ul style="list-style-type: none"> Strengthen linkage between air quality and human health by identifying specific goals, indicators and strategies as appropriate 	<ul style="list-style-type: none"> Invite NHA health experts to a board meeting to discuss options Strike committee to review options and prepare recommendation to board 	<ul style="list-style-type: none"> Incorporation of health information and/or indicators in an update by June 2013

Improving stakeholder awareness in 2014:

Indicators for this task are as follows:

- 1) Community presentations delivered: 10
- 2) Website updated at least semi annually: updated biweekly
- 3) Number of entities reporting annually at AGM: 4 plus Executive reports
- 4) # of partners contributing to implementation: financially (2) and in kind (10)

In addition we can say in 2013/2014 we:

- ✓ are 63 members
- ✓ produced 3 newsletters and various other reports and presentations – distributed to members and in public spaces
- ✓ have in kind provincial support and board representation from the BC Ministry of the Environment in Smithers
- ✓ have board representation from Northern Health
- ✓ have forestry and manufacturing industry board representation

- ✓ have 4 municipal and 1 regional government's support and board representation
- ✓ contacted at least 35 agencies to invite participation
- ✓ submitted 1 unsolicited expression of interest in PNG Looping project
- ✓ are submitting a 2nd expression in regard to amending the Burn Operator's Smoke Management Plan
- ✓ had over 50 individual participants in all events and meetings
- ✓ had 3 free press articles, 1 community radio spot and subsequent postings on line
- ✓ documented 2 case studies, Stearns Community and an outdoor wood boiler, and the Quick community and slash pile burning

Reporting out on the above to goals after the 2013/2014 year also requires inputs from other agencies.

New Strategy 1:

In order to better manage these relationships we need to **CONSULT** with government and health agencies to:

1. brainstorm the full list of inputs they can supply
2. agree to service level agreements

Example 1: The relationship with the BC MOE

Currently: our mailing address is that of the BC MOE and we have storage of flyers and data and signage at a cubicle on Alfred Street. Our secretary is a MOE Meteorologist and we have been lucky to have such great community minded staff within the MOE over the years. We should work on securing the levels of service we've come to expect!

Count	Work to be Done	Timeline	Roles and Responsibilities
1	Executive Member of the board	March Annual	Secretariat role
2	Permitting and Compliance activities <ul style="list-style-type: none"> o CAC when cycled 	Annual: Last Report Date? 2009? Every 5 years - waiting on 2005	# of relevant non-compliances (reported to MOE or resulting from inspection) # of inspections % Percent of compliance assessment activities identifying no non-compliance with air permits % of BAT upgrades # of facilities meeting BAT # of tickets issued to forest sector under OBSCR
3	Hold annual forum to share ideas and promote continuous improvement - hold these early enough to have impact on the same season <ul style="list-style-type: none"> 1) Burn Operators Forums 	Annual	Coordinate, finance, promo, participate

	2) Dust Operators Forums 3) Industrial Emissions forums		
4	Provision of Indicators on PM levels above, plus those listed in CAMP – i.e. a report on air quality advisory level days for each community in the airshed	Ad Hoc Annual	Meteorology
5	Review proposed new projects to identify opportunities to protect air quality	Ad Hoc	# of projects under review, status # of dispersion models available
6	Development and roll out, public consultation, promo: o OBSCR 1 and 2 o CAC when cycled o	Ad Hoc	# of tickets issued to forest sector # of education campaigns undertaken, brochures developed and distributed, in kind donations # of small licensees, cattlemen non permitted and permitted sources receiving literature
7	Approvals and public consultation: o Smoke Management Plans o Episode Management Plans	Annual	# developed, # signed off by MOE
8	Update micro emission inventory (MEI) – should not be more than 10 years old	Every 10 years 2014 2013?	Draft RFP Conduct MEI
9	Operation of 4 Ambient Stations and Mobile Monitoring Unit	Ongoing	Meteorology Audits, technical repairs, reporting, AQ advisories Air Quality Health Index – this currently does not work in our airshed # of additional monitoring stations installed and operational
10	Custom Venting Index Forecasting Service	Ad Hoc	Pay per Use, must be a permitted source? Burn Operators Timber Licensees
11	RAPP How many reporting annually, what percentage AQ? What are some relative stats? Responses? Response rate? Last audit – is the procedure working	Ongoing	Complaint investigation, compiling

Working in Partnership

Board and members always need to keep in mind opportunities for making air quality improvements. Working in partnership or in conjunction with other projects will save time and money. The following are only a few projects as noted in 2013/2014:

Land Resource Management:

Multiple Resource Value Assessment Reports (MRVA), Ministry of Forests, Lands and Natural Resource Operations have hired Derek Tripp of Tripp & Associates Consulting Ltd out of Vancouver to develop 'expanded' Multiple Resource Value Assessment Reports (MRVA). Wet'suwet'en territory is a specific focus area. MRVA intention is to report out on other human activities, not just forestry, and other monitoring data and frameworks. This project is a step towards a more standardized cumulative effects monitoring framework.

Adding On: Knowledge Management and Cumulative Effects, cosponsored by Skeena Knowledge Trust and the BV Research Centre – emerging opportunities to participate in a collaborative approach to compiling information about the Skeena watershed.

Social Planning:

Communities create quality of life and other indexes in BC in order to establish local indicators of healthy communities. Keeping abreast of these indicators as they apply to Air Quality is important for social license.

Official Community Planning:

Community Energy and Emissions Inventories are setting specific goals around the creation of high quality and vibrant local and natural environments. This is happening all over the airshed. In Burns Lake Indicator #7 is Local Air Quality: 2.5 over the 24-hour rolling average of 15 ug/m³ and they are using a Health Canada standard.

Bylaw Development and Enforcement is discussed in every council chamber see the report regarding effectiveness also by this author. Houston is particularly active in planning activities with a holistic vision that covers off community transportation, land use planning, zoning, idling and more.

Infrastructure Projects include biomass-heating projects, of which there are at least 3 feasibility studies currently underway and 2 projects initiated 1 in Telkwa and 1 in Burns Lake. Infrastructure projects for bands include new construction of community buildings including woodsheds, recycling depots and more.

Housing, Affordable Housing & Homelessness, Smithers Action Group Association and the Town of Smithers ordered a study from sparc.bc.ca consisting of a preliminary survey of housing availability in the region. If we lobby for housing surveys to include a couple questions on primary heating methods it would be helpful in determining the source of localized area emissions. Linking this information with data collected on age, ethnicity, income and # of occupants plus other stats would further help

us to determine where and what people are at risk of exposure and to whom do we target education or other outreach campaigns to improve health outcomes.

Lake Babine Nation is currently visiting every one of their homes in order to determine fire risks but they and other bands can provide estimates on homes using wood burning appliances as their primary source of heat and housing coordinators know what state these appliances are in.

Also modeling by the BC Centre for Disease Control shows trailer park hot spots during periods of peak PM2.5 levels. Just how many residents are there in our trailer parks? What health or developmental challenges do these residents have?

The Role of the Board

The tripartite structure of the board is unique and of great value. It means Directors are well informed when making decisions or going about life in their various circles but it also adds value and depth to the insight of the society. This has influence though quantitatively hard to measure. A huge success in the past and something that should be repeated was the recruitment drive led by Ben Wienstein. Recruiting members and directors should be on the radar of any agent of the society at all times!



Picture: AGM 2014

Considerations for recruitment:

The BVLD AMS can appoint Directors between AGM's. As Directors resign they generally nominate a replacement that is appointed at the next quarterly meeting. This is working at the moment!

In 2008 Ben made presentations to every municipal and regional council in the airshed. At each presentation members to the board were recruited. Only the Hazeltons have not had board representation since then, though

the web site currently has a posting for them to join. This strategy should be periodically repeated and also rolled out to Bands, villages and industry. In order to keep the society strong we need to keep up with recruitment.

Considerations or ongoing action items for the board:

- 1) advertising and event promotion should denote ongoing recruitment
- 2) the board needs to develop a piece delineating:
 - i) incentives to join as Directors vs. members
 - ii) lifetime membership
 - iii) free membership
 - iv) moderated and therefore 'safe' email
- 3) the board needs to continue to develop members into contributing volunteers by:
 - i) engaging in media, events or conferences that engage them
 - ii) soliciting certain skill sets and get to know members better list, chart or promote the skills of existing members
 - iii) offering mentorship
- 4) Sponsorship:
 - i) tiered memberships, time could memberships, corporate, NGO or other types of sponsorship could be a way to fundraise and keep a fixed cash flow for the society.
- 5) Leveraging municipal government relationships:
 - i) See the report on Effectiveness of bylaws and suggestions on how to develop this opportunity.

Successful Implementation Planning

What follows is a recommendation on how to implement the Community Action plan for Clean Air. This is only a start and further time needs investing into implementation planning. Lots more topics can be flushed out including specific project deliverables when it comes to outreach or education or audiovisuals or communication campaigns. It should be discussed among Directors and members and stakeholders. I recommend a committee structure approach and as such each committee should develop its own strategy with tasks, timelines and roles and responsibilities.

The following facets are over and above that of the Board of Directors. The board is an oversight body and controls the purse. As mentioned earlier it should focus its attention on meeting existing commitments and strategic planning.

Committee structure would be ideal. If there is only one coordinator to work or financing for only so many hours a week – the society should keep with its general goals as outlined above and forget trying to have liaisons with source emitters at all. Focus on each emission source and localized sources of emissions should be separate from general outreach. Building relationships with cattlemen, small licensees or First Nations take a lot of time to develop and focus should be one stove improvement or one less fire at a time.

Committee Structure:

Create a Coordinating Committee

This group has to build capacity to support stakeholder liaisons. This includes having tripartite structure and being available to mentor to provide context and background or history. Long-standing members have lots of experience to offer. This group is primarily responsible for supporting stakeholder liaisons in delineating emission projections, energy efficiencies, strategies in reducing emissions and monitoring including best available technology and more.

- ✓ Event coordination for members – tie in with either Clean Air Day, Forum or AGM involves invitation to guest speaker and conference type format
- ✓ Attendance at related conferences in cumulative effects, air quality and or something with large numbers of stakeholders like agricultural conferences, BC Farmers Market Association conference
- ✓ It liaisons by delegate with the other committees like the Treasury group and the Monitoring and Compliance group
- ✓ It liaisons by delegate with the outside agencies like Prov. government and health authorities committees
- ✓ It manages project resources like: the donation or purchase and branding of things like stove thermometers, moisture meters, fire tools, coal scuttles, shovels etc
- ✓ It reports to Directors quarterly on stakeholder liaisons including:
 - The number of stakeholders it supports and implementation plan particulars including a count and status of agreements or accomplishments
 - Providing a rolled up value of stakeholders contributing to implementation, both financially and in-kind with labour or other contributions
 - Compiling an accounting of budgeted and actual labour and expenditures for stakeholder liaisons or educators
 - Identifying and analyzing the strengths and weaknesses of the agreements and accomplishment in an effort to improve outcomes

Create a Communications Group

We want people to sign on as a member, volunteer, self calibrate and possibly modify their behaviours – these goals should dictate which strategy to employ when communicating. Note: Membership literacy is greater than the public's. Try targeting certain communications to kids or low literacy readers and develop graphical representations of material. This group should coordinate communication and logistical requirements by providing volunteers or paid professional services. The services of this group should be available to any member or executive. This committee should report to the Treasurer quarterly with a summary of services rendered and the values of in kind labour or other contributions. Ideally they would be able to offer:

- ✓ Managing the societies on line presence (Facebook, URL, wiki)
 1. Web content updates include:
 - o Website update one hour weekly
 - o Relevant global, regional headlines, event promos, reference material, graphics, pictures
 - o Ongoing member dialogue and responses or input

- o Index and repository of materials produced – newsletters, presentations etc
- 2. Enews: there are software packages that help coordinate on line news releases including content management, production and distribution on line
- 3. Facebook: in order to differentiate ourselves and keep relevant we need a campaign that utilizes faces (selfies or solicited) stylized by animation and tied to a comment on a behavior or reaction toward air quality. The animation will be cool and the owner of the face will distribute it.
 - o What do we want people to do as a result of Facebook?
- 4. Calls to Action: there are many on line petition applications that range from free to \$, there are survey options and news feeds.
- ✓ Communication of health messages: messages from outside agencies, news feeds or the society regarding air quality-related health impacts should be delivered to the public through various channels. Also we should expanding distribution lists for air quality advisory alerts, wildfire or open burning ban information, Burn Operator Burn Notifications
- ✓ Investigate the Air Quality Health Index – and why this does not work in our airshed – we need to push behaviour change in periods of poor air quality and this model is used elsewhere
- ✓ Production and Distribution of Members Newsletters, quarterly
 - Tasks:
 - o Write a feature article
 - o Solicit proofers and schedule proof party
 - o Make edits
 - o Produce and distribute on line and hard copy
- ✓ Print jobs, screening
- ✓ Writing services like proofing, draft press releases, translations, other
 - o Proofing should include checking the best rendering of images and logos, the inclusion of contact info. (www.cleanairplan.ca), document info. and donation forms where able
 - o There are many cards and flyers produced by various health and government agencies but when the general public was asked during outreach in 2014 there existed 5 favourite 1 pagers on air quality – each needs an update to a digital format to reflect current regulations, to present graphic representations of info. and to apply to low literacy levels.
 - i. Wood Stoves and Your Health, understanding the health effects of heating with wood – BC LUNG Association
 - ii. Steps to Max. Wood burning Efficiency - Lake Babine Nation Housing
 - iii. Guide to the Open Burning Smoke Control Regulation in the Skeena Region – MOE
 - iv. Health and Air Quality, What you need to know – BC Lung
 - v. BVLD Airshed Management Society, BVLD AMS
- ✓ Graphics or illustrations, animations, sound bytes - interviews

- o Aim for 1 new info graphic per quarter – to coordinate with newsletter
 - o Engage First Nation illustrators for both a cultural twist and imagery – children’s story tellers have a great way to present the story of air and the culture of heating with wood. Look up Tahlitan and Gitsxan artists and educators, also Warner Naziel, James Madam in Moricetown.
 - o Also see student or education guides – one developed in 2005 by BC Transit – Grade 5, A Teacher’s Guide to Clean Air
 - o CHOKED is a member group who has offered their images to us at no cost, these need to be dug up and reinvented
 - ✓ Technical support in the way of researching Google archived files, archived or developing regional and development maps or dispersion models
 - ✓ Archival services including the titling and index of all existing print materials, and newly developed management plans, newsletters, moisture meters or other resources.
- We also need:
- o updated sign out procedure for resources in town halls or libraries and signage for these materials
 - o to track agencies or people receiving which piece of literature (ideally), by which channel plus track subscribers to on line services
 - o more suggestions in the chart...

Description of Piece	Suggested Locations or Distribution
Organizational piece – low level literacy introducing PM, and the society, id website, promote board members and becoming a member	<ul style="list-style-type: none"> ✓ Postering band offices, mailboxes, community centres, public arts spaces, dashboards, bulletin boards, schools secretaries, etc. ✓ Branded stickers or resources
Organizational piece – high level literacy, id website, promote investment as partner, tiered or corporate funder, denotes benefits, promote board members, outreach campaigns	<ul style="list-style-type: none"> ✓ Business cards, flyers, branded stickers or resources, rack cards in tourist centres, MLA, MP and NHA or Health Centres ✓ Targeted mailing and delivery to development contractors, administration departments, fleet operators, burn operators, school boards and staff rooms, Ministry of Environment, Ministry of Forests, potential partners, business or industry proponents like Spectra Energy, BC Hydro, BC Lung, BC Transit, INAC, Environment Canada
AMSmemberNEWS – quarterly Solicit articles from specific stakeholders, members or directors or working groups of the society one quarter before release. Note: Membership literacy is greater than the public’s, graphics are lacking in our portfolio. Try targeting certain articles to	<ul style="list-style-type: none"> ✓ Distribution hard copies to various offices and libraries in the airshed also to members without email ✓ On line, Maintain a blog or log of feedback and responses – keep the dialogues going

kids or low literacy readers. Research extra items like: <ul style="list-style-type: none"> ✓ Relevant news links ✓ photos 	
4 info. graphics – quarterly each with different stats covering off aspects of health effects, source emissions, cancer and population trends, fire safety, environmental impacts and climate change	✓ Publish or roll out on line, in media, in newsletters or other print materials, distribute to other environmental groups like Skeena Wild, Friends of the Morice – and many more...

Appoint Stakeholder liaisons

This liaison would be responsible for managing the relationship with the stakeholder and reporting back to the coordinating committee monthly for comments and concerns. The goal is to produce certain key agreements dependent on the stakeholder. This involves informal sector focus groups, more formal forums, meetings and events (burn demos) with stakeholders, project management, providing communication material requests and ultimately producing a cosigned implementation plan or agreement if the stakeholder is industry.

Also ON the radar:

- ✓ Grant applications to fund work with stakeholders and meeting their requirements for funding
- ✓ Measured results and producing a progress report at regular intervals, the recommendation being every quarter
- ✓ Contingency plans for turnover within the organization
- ✓ Short term PM2.5 spikes: pollution episode management
- ✓ General outreach to stakeholders and public - promoting Best Management Practices, Custom Venting Forecasts, sign off on specific plans, participation in forums and so on – highlighting successes
- ✓ Accounting, value of partners contributing to implementation, both financially and in-kind with labour or other contributions, tracking participants at events, status and sign off's on agreements
- ✓ Localized source emissions, such as traffic and wood smoke have been implicated as sources of pollution *hot spots* and should be targeted by a single liaison. This person would tackle on hot spot at a time, making it a neighbourhood issue: assessing, engaging and performing outreach, training and support with print materials, communication campaigns and grass roots solutions. Once change is underway – they would sign on a **Localized source partner** –making it their known responsibility to keep it up!

Suggested Actions:

- ✓ Seniors and community lunches, lunch and learns, lecture series, open houses, door to door, office luncheons
- ✓ Display kits in libraries
- ✓ Museum research or other society partnerships, present at society meetings, cattlemen quarterlies- late Dec., March
- ✓ Target recipients of fire inspections
- ✓ Workshops for fleet operators

- ✓ Get info into strategic locations
- ✓ Approach welcome wagon or realtors about getting info. to new home owners
- ✓ Attend other community events, work with dedicated low income orgs., work with aboriginal health and culture organizations like Friendship Centres, Band housing and fire departments
- ✓ Toronto Dominion Friends of the Environment invites us to apply for funding of an education project although we need to apply with a charity # or under the administration of a government or First Nation Band

Project follow up would require:

1. Checking back - assign someone in each community to report out to the society on what they're doing. Report to us in newsletters, on line, in Directors meetings or at AGM
2. Having communities create and post annual scorecards, defining and tracking indicators of health and episodes of pollution would be great for follow up and evaluating success.
3. List the 3 most re-occurring questions from our interactions, does this decline year to year or thru the year?

OTHER evaluations of success include the number of community projects starting up as a result of our profile or discussions

Fundraising (Treasury)

Working with the approval of the Board this group is tasked with reporting quarterly but building organizational capacity by grant writing and proposing financing schemes. This group should also coordinate all financial applications, approval stamps, billing by subcommittee and administration of donor or grant \$.

Other proposals to fundraise include:

- ✓ Industrial Sponsored projects
- ✓ Community or Foundation/Trust Grants
- ✓ Provincial or Federal Grants or In Kind donations
- ✓ Other - Aboriginal Firefighters Association, Collaborative Centre for Aboriginal Health, INAC, Western Diversification Funding etc
- ✓ Regional District supported grant services
- ✓ Health Partnerships - First Nations Bands, Aboriginal Health Council, Aboriginal Health Care, Cancer Society, BC Lung
- ✓ Corporate or Tiered Membership Fees
- ✓ Product Sales
- ✓ Registered charity partnerships or status advantages

Breaking down the implementation and management plans to target specific pieces to specific funders will be a joint effort between committees. For instance the requirements for a \$2500.00 grant from the TD - Friends of the Environment would be:

- Specific plan and budgets for either an environmental education, energy conservation or a naturalization

- project, or endangered or wildlife protection project, or environmental research project
- They do not fund administration costs nor advocacy nor mileage nor meals, nor rent
- They do fund up to 50% of the human resource or coordinator fees to deliver the project, project supplies and small equipment purchases and other expenses

Moderating and Information technology support

The group or person is responsible for securing all internet platforms, on line posts, passwords, file size capacity or compatibility issues and operational requirements. This is volunteered at the moment but should be billed out similar to other groups. Also we could:

- ✓ research archived Google files to locate and update our links to relevant graphics and articles previously posted by our society or others
- ✓ Report on visits to the web site and most frequently accessed documents or articles

Monitoring and Compliance

This is essentially a Research Working Group tasked with data analysis. Having a member with legal or regulatory experience would also add value when framing or posting the outcomes of source emitters.

Measuring the qualitative results of a program is no easy thing so working with the liaison this group should help define methods available to evaluate the reduction particulate matter by source and stakeholder and combine efforts with other agencies doing this work. The committee should conduct an annual audit and should cover off:

- ✓ Dispersion model results
 - o in 2002 they were used to predict the impact of various management interventions on ambient air quality levels by MOE, we need more frequent availability of this service
 - o also created by the BC CDC in 2013 for Peak PM10 and PM2.5 concentrations due to emissions from woodstoves
- ✓ More monitoring, point and area
- ✓ Use source apportionment techniques aimed to estimate, or apportion, the contribution of different pollution sources to ambient concentrations within a given area - a scorecard by source and per stakeholder

Examples:

 - o non-combustion emissions discharged from cyclones and baghouses related to pneumatic conveyor systems
 - o compressor stations and other oil and gas piping (building, testing and operational stages considered)
 - o fugitive dust from log yards
- ✓ Support CHOKED and their mobile monitoring
- ✓ Coordinate and conduct lawsuits if required

While the AMS has set a general goal to meet ambient air quality targets at MOE monitoring stations in Smithers, Telkwa, Houston, Burns Lake, many stakeholders are developing general values for Air (also Water, Wildlife, Biodiversity – Landscape or Stand Level) with 2 or more indicators for each value. We are interested in acceptable thresholds or

ranges for indicators and data analysis showing the current state of indicators relative to thresholds and ranges. Are these targets relative – can they be standardized, how does this play into cumulative effects, what is a geographical representation? This group should report quarterly to the Board based on assessments of:

- ✓ PM2.5, hourly average, PM10, NOx, VOCs, ozone, others
- ✓ Criteria Air Contaminants Report, Provincial, five-year cycle
- ✓ National Pollutant Release Inventories, Environment Canada, summary reports available on a 2 year cycle
- ✓ Micro Emission Inventory
 - Tasks:
 - o BC MOE last did this in 2008, insider – Barry - get copy of RFP
 - o Rewrite and get board sign off on RFP
 - o Strike a Hiring sub committee to discuss contract requirements, determining posting dates, start and end date, wage
 - o Post on line and send to known qualifying applicants: such as Judi Krzyzanowski, among others
 - o Find the money or get the commitment of the MOE to partner and carry on bravely
- ✓ Produce an annual report or progress report every year and making note of exceptional activities
- ✓ Evaluate the progress made from year to year

Educators

Supported by the coordinating committee, this is the team that works by contract developing, coordinating and seeing delivered:

- ✓ Health education – mitigating the effects – probably 3 units need developing one for kids, one for adults – low literacy, one for adults – high literacy. Targets: schools, health units/associations, community associations and public venues
- ✓ Science education, particulate, gases, air pressure, weather and more
- ✓ Home heating: purchasing guides, efficiency comparisons, repair diagnosis, upgrade possibilities, Burn It Smart Workshops, Fire Safety, WETT certifications or training, woodshed design, material lists, chainsaw repair, sharpening
- ✓ Other eco education events and programs like Field trips: tree and species identification, living and in slash, hardwood, softwoods, traits/characteristics – potential to work with OW Natural Resources, Cultural Liaisons at FLNRO, cattlemen and local loggers, on the ground monitoring techniques
- ✓ Bylaw education campaigns – like mock ticketing, blitzing, flyering, also bylaw development and implementation

The Budget

The following is a first draft toward financing all this. Again this is an ideal model. Much can be done with little cash and less people so consider each expense carefully. The work in this plan can be cut and pasted between committees and sub contractors as well – it would probably be wise to

break some costs down further. More details can be provided upon request.

bvld ams Implementation Budget				
	Column A	Column B	Column C	Comments
EXPENDITURES (Round to nearest dollar)	Project Cost (Cash)	Amount of Project Cost That is In-Kind	Total Project Cost (Cash and In-Kind)	Explain How the Total Cost Amounts in Column A Were Derived. Attach Additional Paper If Needed.
Staff Costs				
Coordination	\$18,055	\$0	\$18,055	Coordination: General outreach, localized source emission targets: agricultural community, First Nations, quarterly minutes and agm prep., event support with materials, grant writing, planning (confirming donations), coordinating contrats (MEI), organization
Stakeholder Liaison	\$7,680	\$0	\$7,680	Liaison working 8 hours a week for 16 weeks with one source person. Possibly more than 1 stakeholder
Communications	\$3,000.00	\$0	\$3,000	production of 3 newsletters, on line communication email, biweekly web updates, liaison with professional media developers
Administration	\$2,806	\$1,000	\$3,806	MOE ad hoc PM reporting and meteorological related support, payables administration
Contract: MEI Inventory	\$30,000	\$1,400	\$31,400	MOE inventory consulting w/ delivery and monitoring.
Other (specify): education	\$3,900	\$0	\$3,900	beanie cap, certificate, explore tie in with a home school curriculum, public event
burntsmart education tr	\$4,000	\$150	\$4,150	For the agricultural community, For First Nations
moderating	\$4,600.00	\$200	\$4,800	IT support -security, emails, audio recordings, other archiving, Om cloud, wikis other
standardization/review	\$675.00	\$200	\$875	peer review of some materials developed
illustrations/graphics	\$5,400.00	\$900	\$6,300	illustrators and graphic artists, maps, modeling
translations	\$350.00	\$525.00	\$875	germn, french, philipino, urudo, chinese?!
Fees Sub-total:	\$80,466	\$4,375	\$84,841	
Direct Costs				
Travel	\$3,400	\$0	\$3,400	out of town conference fees and cost to bring into town one guest speaker
Accommodation and pe	\$913	\$0	\$913	attend Agric. Or other air conference - 2 nites, 2 ppl, 2 nites
Transportation	\$1,192.80	\$300.00	\$1,493	when speaker was on road trip and stayed for urban areas in airshed billed at gov. rate .71 (2 trips to each location) other travel billed out at flate rate
Equipment rental or pur	\$0	\$208	\$208	projector
Construction/building m	\$0	\$0	\$0	
Other (specify):	\$0	\$0	\$0	smithers chamber, airport x2 (assuming burns is similar), smithers chamber membership is 94 and means free racking, apr 2014
rack fees	\$175	\$0	\$175	
conference/exhibition fe	\$958.00	\$0.00	\$958	bx - exhibit (x) and membr fee, agric. Conference x, attend and membr fee, aboriginal?, cumulative effects, plus non profit sponsor BCFarmers Market Association
facilities	\$45.00	\$375	\$420	room bookings
irect Costs Sub-total:	\$6,683	\$883	\$7,566	
Communications				
Brochures or program notes	\$638	\$0	\$638	5 main pieces (print copies) different layout open burn, org., home heat, health, other, 1 version price: 100 - \$109.00, 250 - \$161.00, 500 - \$228.00
Pre-printing including design, layout	\$878	\$0	\$878	5 main pieces
Printing/copying	\$2,423	\$1,263	\$3,686	clean air plan print 10 @.69*73, 500 colour pages @.47c, 3 newsletters 6 pags each@.69 per page, 2000 postcards, 2000 brochures, posters, announcements (30*69)
Distribution	\$1,211	\$0	\$1,211	2000 tri fold, .74 per piece for direct mail, postcard .47 for up to 5000 mailouts
Racking print and rack f	\$250	\$0	\$250	Chambers, MLA, NHA, Ministries, Realtors, Municipalities, Tourista Info. Bureaus - Size: trim 3.89" w x 8.27" h, Inks: full bleed full colour both sides stock: 100# Gloss Cover C25 from: client's supplied file, properly constructed price: 500 for \$342
Web site design/product	\$2,602	\$800	\$3,402	members/donate/petition buttons, discussion or wiki, enews-subscribe/unsub, 2 hours quarterly for enews formatting
Marketing, publicity and	\$396	\$0	\$396	NorthWord, Radio - the peak
Other (specify): website	\$1,560	\$0	\$1,560	1 hour /week
resources	\$64,750	\$0	\$64,750	5000 branded magnetic stove thermometers at 12.95 each, otherwise use for prize and education project resource costs, hats, some small equipment or supplies (4200 estimated old wood stoves still burning in 2003, MOE)
food and beverage	\$756	\$0	\$756	4 catered events
enewsletter	\$33	\$0	\$33	\$7 per email and .02 cents per person (65 members)
petition functionality			\$0	
member sign up	\$70		\$70	Bachrach Communications Dec 16, 2013
webcam	\$2,989	\$500	\$3,489	host donation, setup, server fees, mast&box, programming
a/video presentation	\$1,000	\$0	\$1,000	prezi, movie format for off line presentations
nications Sub-total:	\$79,555	\$2,563	\$82,118	
Overhead				
Insurance			\$0	
Administration	\$264		\$264	WCB
Office supplies	\$325		\$325	
Rental of space			\$0	
Other (specify):			\$0	
Overhead Sub-total:	\$589	\$0	\$589	
TOTAL EACH COLUMN	\$167,293	\$7,821	\$175,114	

BVLD Airshed Management Society (BVLD AMS) Implementation Plan

bvlid ams Implementation Budget				
	Column A	Column B	Column C	Comments
EXPENDITURES (Round to nearest dollar)	Project Cost (Cash)	Amount of Project Cost That is In-Kind	Total Project Cost (Cash and In-Kind)	Explain How the Total Cost Amounts in Column A Were Derived. Attach Additional Paper If Needed.
Staff Costs				
Coordination	\$18,055	\$0	\$18,055	Coordination: General outreach, localized source emission targets: agricultural community, First Nations, quarterly minutes and agm prep., event support with materials, grant writing, planning (confirming donations), coordinating contratcs (MEI), organizat
Stakeholder Liaison	\$7,680	\$0	\$7,680	Liaison working 8 hours a week for 16 weeks with one source emisson, 1 possibly more than 1 stakeholder
Communications	\$3,000.00	\$0	\$3,000	Set up of media plan, collection and compiling of images, production of 3 newsletters, on line communication email, biweekly web updates, liaison with professional media dvelopers
Administration	\$2,806	\$1,000	\$3,806	academia consultation in graphic development and field trips, MOE ad hoc PM reporting and meteorological related support, payables administration
Contract: MEI Inventory	\$30,000	\$1,400	\$31,400	MOE in kind, consulting w/ deliverables
Other (specify): educato	\$3,900	\$0	\$3,900	Science Fair - the story of air, air pollution and monitoring, beanie cap, certificate, explore tie in with a home school curriculum, public event
burnitsmart education tr	\$4,000	\$150	\$4,150	For the agricultural community, For First Nations security, emails, audio recordings, other archiving, Om cloud, video review of some materials
moderating	\$4,600.00	\$200	\$4,800	developed
standardization/review	\$675.00	\$200	\$875	
illustrations/graphics	\$5,400.00	\$900	\$6,300	illustrators and graphic artists, maps, modeling
translations	\$350.00	\$525.00	\$875	germn, french, phillipino, urudo, chinese?!
Fees Sub-total:	\$80,466	\$4,375	\$84,841	
Direct Costs				
Travel	\$3,400	\$0	\$3,400	out of town conference fees and cost to bring into town one guest speaker
Accommodation and pe	\$913	\$0	\$913	attend Agric. Or other air conference - 2 nites, 2 ppl, 2 nites guest speaker accomodation in airshed
Transportation	\$1,192.80	\$300.00	\$1,493	km travel between Smithers and 4 major urban areas in airshed billed at gov. rate .71 (2 trips to each location) other travel billed out at flate rate
Equipment rental or pur	\$0	\$208	\$208	projector
Construction/building m	\$0	\$0	\$0	
Other (specify):	\$0	\$0	\$0	
rack fees	\$175	\$0	\$175	smithers chamber, airport x2 (assuming burns is similar), smithers chamber membership is 94 and means free racking, apr 2014
conference/exhibition fe	\$958.00	\$0.00	\$958	bx - exhibit (x) and membr fee, agric. Conference x, attend and membr fee, aboriginal?, cumulative effects, plus non profit sponsor BCFarmers Market Association
facilities	\$45.00	\$375	\$420	room bookings
irect Costs Sub-total:	\$6,683	\$883	\$7,566	
Communications				
Brochures or program notes	\$638	\$0	\$638	5 main pieces (print copies) different layout open burn, org., home heat, health, other, 1 version price: 100 - \$109.00, 250 - \$161.00, 500 - \$228.00

More Notes:

Conference Fees refer to the possibility of attending the following depending on cash flow and the board's direction:

Implementation Plan: A COMMUNITY ACTION PLAN for Clean Air

- ✓ attendance at the BV Exhibition with a booth
- ✓ having a conference tagged on to another event for members - bringing in a leader in the field both to motivate and educate members
- ✓ attendance at the BC Lung Association's State of the Air annual conference, Fraser Basin or Prince George Air conferences. BC Farmers Market Association also has an annual conference - this has good value in terms of provincial visibility and offers lots of opportunity to explore value added opportunities, there is also an agricultural conference for which I had literature and can't find at the moment - there are one or 2 big provincial ones with lots to do with us...
- ✓ explore woodlot conference schedules and/or BV Research Centre conferences, fees and workshops

Phases

Achieving all this will take time obviously. Agreement on priorities and the next immediate steps are dependent on the board and outcomes from applications for financing. What follows should be expanded it is only a brief suggestion:

Phase 1

- 1) Continue with consolidated commitments
- 2) Break Down the Suggestions:
 - a) Create a subcommittee to handle implementation and finance
 - i) Discuss funding applications and try to make deadlines
 - (1) RDBN - re application for Gaming Grant- outreach, education - August
 - (2) BVRC or RDBN - re application for Eco Action Community Funding - November
 - (3) Fraser Basin Council application for MEI - August
 - (4) TD Friends other Foundations, Community Forest - outreach, education or wildlife protection - periodic application dates
 - b) Continue Stakeholder Liaisons
 - i) Leveraging municipal relationships
 - ii) Monitoring industry, development projects and impacts
- 3) Begin Organizational Capacity Planning
 - a) Seek funding for this process thru grant apps. (again)
 - b) Discuss long term funding strategy
 - c) Discussion advocacy and escalation strategy
 - d) Connect with PG and discuss their funding success

Phase 2

- 1) Formalize subcommittees to handle implementation and finance
 - (a) Appoint and activate Educator(s) based on funding outcomes
 - (i) Target First Nations and train the trainer in home heating with wood
 - (b) Create Communications subcommittee
 - (i) Seek volunteers and appoint roles and responsibilities
 1. Cover off newsletter
 2. Consider planning members conference and forum
 3. Workshop the implementation plan
 4. Perform web updates as necessary

Implementation Plan:

A COMMUNITY ACTION PLAN for Clean Air

