British Columbia Visibility Coordinating Committee

Action Plan Priorities Workshop

Summary Report
May 1, 2010

Submitted to:
BC Visibility Coordinating Committee
Steve Sakiyama
Ministry of Healthy Living and Sport
4-2, 1515 Blanshard Street,
Victoria, British Columbia, Canada
V8W 3C8

Submitted by:
Context Ltd.
202 – 1260 Hamilton Street
Vancouver BC
V6B 2S8

Table of Contents

The BCVCC acknowledges the contribution of all participating organizations to the workshop and to our vision of visibility protection and improvement. The Fraser Valley Regional District in particular is acknowledged for its funding support for the workshop, with additional support provided by Environment Canada and the BC Lung Association.

1. Introduction

The BC Visibility Coordinating Committee (BCVCC) is an inter-agency group comprised of representatives from Metro Vancouver, Fraser Valley Regional District, Ministry of Healthy Living and Sport, Ministry of Environment and Environment Canada. The Committee has also been assisted by the US Environmental Protection Agency and the United States Western Regional Air Partnership. The Committee provides a forum for facilitating and coordinating visibility management initiatives in BC, including supporting local air shed planning, guiding scientific studies and providing direction to reduce the impact of air pollution on visibility.

Beginning in 2008, following an assessment and review of options for visibility management, the Committee began work on a framework to guide actions to improve visibility in the province. The framework includes a vision statement, principles by which the Committee will operate, and the steps that are used to develop and implement management plans. At the same time, the Committee implemented work programs in three theme areas – science, policy and communications – to establish a baseline of information and knowledge about visibility and management practices in BC, and to identify opportunities for stakeholder engagement.

The framework and the results of research and planning in the three theme areas set the stage for the workshop on April 13, 2010 to identify an action plan to guide the work of the BCVCC over the next year. The action plan builds on the foundation of current research and knowledge and will enable the BCVCC to achieve its vision. This report presents the results of the April 13, 2010 workshop. It includes a summary of the process and the input provided by participants on the actions required to improve visibility in BC.

2. BCVCC Workshop Structure

The April 13, 2010 workshop was designed and facilitated by the BCVCC Steering Committee and Context Ltd. The full day session was held at the SFU Downtown Campus. The agenda is presented in Appendix 1, and includes the following topics:

- Identification of workshop objectives and participant expectations
- Review of the Visibility Management Framework
- Review of work completed by the three theme groups – Science, Policy and Communications
- Update on the Lower Mainland Pilot
- Assessment of challenges and opportunities for moving forward
- Identification of priority actions
- Development of implementation requirements for priority actions

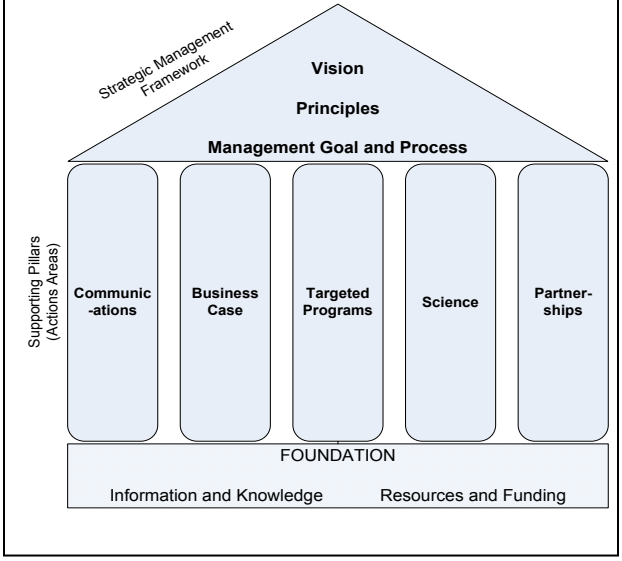
Steve Sakiyama provided opening remarks and set the stage for the discussion. John Forsdick from Context Ltd. reviewed the workshop objectives and format, and led the group through participant introductions and the identification of anticipated meeting outcomes.

The workshop began with a presentation on the Visibility Management Framework. Participants were then divided into smaller work groups to provide feedback on the Framework vision, principles and components, and to comment on the draft ‘goal’ proposed for visibility management in B.C. In the afternoon session, following discussion of work completed by the three theme groups, participants were again put into groups to identify challenges, opportunities and priorities that would enable them to achieve the vision (outlined in the management framework). Priorities from four subgroups were combined into six common themes, and each theme explored to identify the work that needs to be done, who needs to be involved, the role of stakeholders and the public, and the potential challenges and risks.

The development of the action plan was compared to building a structure (Figure 1). If the foundation of the structure represents the knowledge base (i.e., science, policy and communications) and the resources (i.e., people and funding), then the top of the structure holds the strategic vision, principles and components. The pillars that rest on the foundation and support the top structure represent the action areas, that is, the work that needs to be done to support the vision, which is externally focused. The Committee needed to determine whether to continue building the foundation (i.e., more studies on science, policy etc.) or to use the knowledge currently available to build towards the vision, which focuses on visibility benefits for all British Columbians.

The end result of this discussion was a strong shift to new actions to achieve the vision, with the recognition that ongoing work is required to maintain a foundation of good science, policy and communications.

Figure 1



3. Desired Outcomes from the Planning Session

At the start of the session, participants were asked what they would like to achieve from the workshop. The desired outcomes are consolidated under three main themes, and emphasize the importance of both understanding the results of work completed to date, but also identifying how this work can help to achieve improvements in visibility through applied management practices.

1. *Developing an Action Plan*
   - Moving forward with management practices
   - Adopting and testing the index
   - Moving from the science to policy and management
   - Understanding how the pieces fit together
   - Developing an action plan to move forward
2. *Addressing Public Expectations*
   - Building on public interest and to expand the program into the Okanagan
   - Defining a path forward to address public expectations – what are we doing about poor visibility?
   - Building on community awareness and interest to move the agenda forward
3. *Learning Opportunities*
   - Learning more about the priorities and the work done to date
   - Understanding how the index can be used
   - Understanding of monitoring
   - Getting an update on the science
   - Learning about the impacts of visibility
   - Identify linkage between visibility measurement, policy, visibility targets and climate change
   - Get updates from the workgroups

Participant expectations were revisited at the conclusion of the workshop to determine if they had been met.

4. Visibility Management Framework

As a starting point to the discussion, participants were asked to review and provide comments on the Visibility Management Framework. The framework consists of four main elements: the Vision, Principles, Process Components and Goal. The framework is fundamental to visibility management planning. It clearly defines what is to be achieved through the coordinated actions of Committee agencies participating in the process. While the framework applies more directly to the Lower Mainland Pilot and for communicating the overall intent of the Coordinating Committee's work, it also serves as a template for other jurisdictions to develop their own visibility management plans.

The framework has been generally adopted by the agencies (in particular Metro Vancouver), although a specific goal for Metro Vancouver has not been developed. It was suggested that the framework fits well for the Lower Fraser Valley, but needs to be able to be applied more broadly, including addressing urban visibility. Other regions are also considering visibility protection and improvement, and the framework could be valuable in providing a template for plans in other jurisdictions.

Participants were divided into four work groups to review the elements of the Framework. The results of these discussions are outlined below.

4.1. Vision

All committee members expressed support for the vision, which had been developed with Committee members at a previous workshop. Considerations for any future revisions to the statement included addressing the urban as well as the natural environment, and including economic growth in addition to health and enjoyment.

4.2. Principles

The principles were generally endorsed, but with additional suggestions:

- Prioritize visibility goals (reference to the low-hanging fruits)
- Exclude 'low hanging fruit' (identified by more than one group)
- Consider innovation and adaptation rather than flexible
- Rather than flexible, consider adaptable to local situations
- Incorporate the economic impacts
- Consider collaborative rather than multi agency
- Promote health benefit and minimize health risk (link between health and visibility)
- Consider 'linked to air pollution-related health risk'
- Consider continuous improvement concept (identified by more than one group)
- Consider adding 'linking science and perception' or 'public perception balanced with science'

4.3. Components

Input on the proposed components of the framework included:

- Need for identifying current state/gaps in the components
- Need to manage expectation and engagement of stakeholder involvement; what is the expectation for involvement?
- Linkage to air pollution health risks
- Linkage between public perception and science

4.4. Visibility Goal (Framework)

The goal can include a quantitative measure (physics of visibility impairment): light extinction, back scatter, calculated deciviews, or reconstructed extinction, and/or a qualitative measure based on perception metrics. For the latter, public feedback on visibility conditions depicted in an image is used to help define what is or is not acceptable. Combined, the qualitative and quantitative measures can define the details on the form the goal. Comments on the proposed goal included:

- The quantitative metric needs to be finalized, particularly for the lower mainland pilot, which can be used as a template for other jurisdictions.
- Need to establish baseline data required to set goals.
- Additional stakeholder consultations are required to finalize a qualitative metric. This, in turn, needs to be calibrated with a quantitative metric to arrive at an index that can be used for public communications.
- Identifying status of different components (science/ monitoring/ index, etc).
- Establish timeline for achieving specific goals.
- Need to consider the specific number of days in each category. Limit the number of poor visibility days, and increase the number of fair, good and excellent days while improving visibility on all days.
- Need to be understandable by the public.
- Need to consider efforts to maintain the good/excellent category so that there is no opportunity for relapse at the higher end that offsets improvements at the lower end.
- The goal could also apply to wilderness areas, although it was recognized that parks and tourism support would be required.

The goal ultimately needs to be achievable in order to be credible with decision- makers and the public.

5. Update on the BCVCC Work Program

Following the visibility management framework discussion, the Committee workgroups reported on their activities in three areas: science, policy and communications. Questions and comments on the presentations for each area are outlined below. The focus, however, is how information from all three areas can be integrated to provide a platform for actions to improve visibility.

5.1. Science Presentation

Roxanne Vingarzan reviewed the work on visibility monitoring, and the corresponding impact of particulate matter on visibility in the Lower Fraser Valley. Seasonal and diurnal patterns were reviewed. Although visibility has improved in the Lower Fraser Valley over the past 40+ years, on an annual basis visibility is considered to be impaired an average of 33% of the time and unacceptable 10% of the time. Comments on the science monitoring and analysis included:

- Based on CMAQ modeling, the MV 2015 emission reduction plan may not yield detectable improvement in visibility
- There is a need to identify new targets necessary for achieving noticeable visibility improvements
- Suggestion in analyzing impacts on visibility from ozone episodes in summer
- A need for correspondence between ozone advisory and visibility index
- Possible impacts from climate change policy
    - Potential impacts on policy/management of air quality visibility
    - Rerun CMAQ to incorporate effects of climate change policy

5.2. Policy Presentation

Markus Kellerhals provided an update on the work of the Policy Group. This included a discussion about the development of the visibility index and the correlation between qualitative and quantitative indices. The results of perception studies in the Lower Fraser Valley were reviewed, and recommendations outlined for reporting and ongoing measurement of visibility reducing emissions.

Participant comments on the Policy Group report included:

- Need for coherence between visibility and AQHI index
- Concerns with wide spread of % of acceptance on good/fair categories
- Health benefits not taken into account
- Potential need for more 'excellent' condition data
- Need for modifying existing visibility index
    - Potentially moving the excellent threshold higher and ensuring that there is no backsliding, while improvements are made at the lower end of the index.
- New perception studies may be needed; however these will require funding although studies may be done in-house.
- Goal of the visibility index?
    - Develop metric used to translate visibility measurements to human perception
    - Used to set visibility goals and targets
    - Not just used to track visibility, but a communication tool
    - Define message along with index. One recommendation was to have a media release on the efforts of improving and protecting visibility. Input from the Communications Group is required for this.

5.3. Communications Presentation

Laurie Bates-Frymal outlined the work of the communications group. Research has identified that there is stakeholder support for good visibility, and that this leads to a strong connection with good air quality. A communications plan has been developed, and a website launch and press release are pending the approvals from program partners. It was noted that visibility is the single most important indicator of air quality with the public and can be used to advance the visibility agenda. Participant comments included:

- A press release from individual agencies is required
- Need for public focus work group (action required)
    - Information needed to engage public to change individual behaviours
- Need for setting visibility targets that can be easily understood by the public
    - Need to prioritize, specify and simplify
- Clear Air BC website (http://www.clearairbc.ca) (proposed to be launched in June 2010)
    - Media release to be issued at the same time
    - Info on visibility
        - What the public can do to improve visibility
        - Science
        - Health
        - Shows pictures of current visibility (no visibility index)
        - What things are currently being done to improve visibility
- Potential need to link visibility impacts and health advisory
    - Visibility advisory may be needed

- Public expectation
    - Government is expected to take action
    - Management of public expectation is needed
- Establish link between emission reduction, implementation, and communication to effectively motivate individual actions

5.4. LFV Visibility Pilot Project

Steve Sakiyama outlined the status of the pilot project, which has already started in an informal way. . Key points included:

- The pilot is viewed as a test site for the boarder visibility protection framework
- Design and implementation requires input from other agencies (information on website)
    - Press release
    - Time concern
- There is a need for evaluation built into the pilot? (perhaps a priority action)
- A project plan is required to outline the work that needs to be done and to prioritize actions required to address the challenges and opportunities.

6. Action Plan Priorities

Action plan priorities are focused on the work that needs to be done to develop and implement the lower mainland pilot project. The identification of priorities began with a discussion about the challenges and opportunities for visibility management based on the research and work completed in each of the three theme areas. Based on the challenges and opportunities, priority action areas were identified by each subgroup. The results of these discussions were merged to identify seven common areas for further analysis for implementation.

Action plan priorities focus on the implementation of the Lower Fraser Valley pilot project. It was agreed that many of the priorities can be applied to other parts of the province, but the initial focus should be on implementing the pilot. While seven priorities were identified, two priorities focus on finalizing the management framework. In addition, the project plan for the pilot project, while important, is a planning tool that will be addressed separately by Metro Vancouver. This leaves four action areas to support the framework. At the end of the session, it was suggested by the facilitator that a fifth area – partnerships – be considered a strategic priority. Partnerships are important to establish and implement a consistent and effective approach to visibility management, and to engage communities to have a role in improving visibility.

The main priority areas include:

1. *Finalize the Visibility Management Framework*

   Finalizing the framework includes incorporating changes suggested by the Committee to the principles, components and process for goal formulation. The Committee generally agreed that the Vision statement should stay intact, but that the framework needs to be finalized to enable the Committee to clearly communicate its purpose, and to enable the framework to be applied to other jurisdictions.

   The framework will be considered as a tool and template that other jurisdictions can use in developing visibility management plans. The framework also needs to be ‘packaged’ for communication and presentation to the public and key stakeholders.

2. *Finalize the Visibility Management Goal*

   The visibility management goal needs to be finalized, including completing, testing and documenting the index. This includes additional work on perception studies, calibrating perception with data, and developing an index that can be used by the public and for communication purposes.

3. *Lower Mainland Pilot Project Plan*

   A project plan is required for the Pilot project. The project plan will outline the scope of pilot, the objectives, timeframe, the work program and the resources required for implementation. It was agreed that the project plan will be developed by Metro Vancouver, and will include the action plan priorities from the April 13 work session.

4. *Business Case (Rationale) for Visibility Management*

   Participants agreed that a strong rationale for visibility management is required, and one which can be clearly communicated to the public and decision makers. The rationale needs to address the impact of poor visibility on health, the economy, culture, quality of life and tourism. Where possible, the cost of poor visibility needs to be identified and addressed in terms of health and financial impacts. This information will be used to help motivate decision makers, the public and key stakeholders to take action.

5. *Communications*

   The public is interested in visibility and associates poor visibility with poor air quality and its corresponding impacts on health, the environment and the economy. The Committee has developed a website and some collateral materials that could be launched in June to coincide with Clean Air Day. Additional work is required to have a comprehensive communications program that incorporates the interests of all partners.

6. *Continued Modeling and Science*

   Additional modeling work is required to explore the impact of climate action plan initiatives, ECA and ICAP poultry cull on improving visibility. The modeling work is essential to help determine the emission reduction measures that can be most effective in improving visibility.

7. *Targeted Programs*

   The report on Science identified relatively few benefits for visibility management from existing emission reduction programs. Additional work is required to identify programs that can be effective in improving visibility. Once identified, the Committee can work with jurisdictions to implement programs and to promote specific actions being taken for improving visibility to decision makers and the public.

8. *Partnerships*

   Partnerships among members of the BCVCC, with NGOs, other governments and communities must be developed and maintained. Among BCVCC members, strong partnerships promote a consistent, coordinated and effective approach to visibility management practices. The establishment of the Committee, interagency working groups and contributions of resources are demonstrations of successful partnerships. Similarly, the Committee must work closely with NGOs such as BC Lung to promote air quality and to engage the broader communities in actions that improve visibility.

7. Implementation Action Plans

For each priority area, participants were asked to provide the following information:

1. What is the purpose or objective of this action?
2. Who needs to be involved in developing and implementing the action?
3. What is the timeframe for implementation
4. What are the main work program requirements?
5. What challenges or risks need to be considered?

Action plans were not developed for the Lower Mainland Pilot project plan or partnerships. The Lower Mainland pilot project plan will be developed by Metro Vancouver, in consultation with the BCVCC

members, and partnerships will continue to be a cornerstone in how the Committee operates. The requirements for science and targeted programs were also merged into one plan template.

Action plan requirements identified by participants for each of the remaining five priority areas are summarized in the following sections.

7.1. Visibility Management Framework

The Visibility Framework identifies the strategic intent of the BCVCC; that is, what the BCVCC ultimately aspires to achieve. While significant work has been done on the framework, it needs to be finalized and used for communicating the role of the Committee, and to provide a basis for actions to improve visibility. Once finalized, the framework and goal will be published in a format best suited for communication.

Objective	Finalize the Visibility Management Framework to reflect consensus on the principles and goal statements. The Framework will be used to communicate the role of the BCVCC, and to provide a basis for actions.
Who Needs to be Involved	MV, FVRD, HLS, (MOE)
Key Stakeholders	BCVCC members and key decisions makers within member organizations. Other jurisdictions who may model visibility management plans based on the work of the BCVCC.
Timeline	By June 30, 2010
Key Action Steps	• One volunteer to incorporate changes from the workshop discussion. • Proposed changes will be circulated to a small, interagency team to review and discuss. • The vision statement will stay intact for now. • The framework needs to be packaged in a readable, user friendly format. • The framework should not include a specific goal but should include the importance of developing a goal in implementing the framework. • Finalizing the framework should include consideration of when it should be shared and promoted with stakeholders. • The framework should be posted on the Clear Air BC website.
Challenges and Risks to Address	Lack of buy-in or support for the framework and the direction of the BCVCC, once described, by decision makers. A poorly packaged framework could make it difficult for people to clearly understand the purpose of the BCVCC, and the actions being undertaken to improve visibility.

7.2. Visibility Management Goal

A visibility management goal is essential to help define the desired outcome of actions, to focus the work program and to communicate to the public and stakeholders about what will be achieved by reducing emissions that impact visibility. The goal is based on the index, which in turn is informed by the perception studies. The following five steps lead to the development of the goal.

Step 1: Development of the Index

Objective	Finalize an index based on public perception that is ready to be used for reporting/goal setting and management.
Who Needs to be Involved	Create an index development team with representatives from at minimum MV, HLS, and EC.
Key Stakeholders	Other BCVCC agencies should be invited to join if they are available.
Timeline	By July 2010
Key Action Steps	• Sort out technical issues such as period of applicability (time of day, time of year, meteorological criteria, etc) (a fuller list of technical issues that need to be addressed in index is included as part of the Policy WG report. • Identify science gaps with index. • Discuss and refine index breakpoints and categories. • Compare index and categorical frequency to other cities and locations.

Step 2: Internal Test of the Index

Objective	Make the index values and associated images available to the BCVCC members on a semi real time basis.
Who Needs to be Involved	By index development team (might need some IT support to automate process).
Timeline	Ideally so we are ready to begin in July 2010 (may be ambitious).
Key Action Steps	• Could be via automated daily email or internal web page. • Goal is to increase comfort level of BCVCC with index prior to going public.

Step 3: Test Index with stakeholders and public

Objective	Refine and confirm that the index works and is meaningful to the public.
Who Needs to be Involved	Led by index development team.
Key Stakeholders	Other BCVCC agencies should be invited to join if interested.
Timeline	Depends on outcome of internal piloting. Needs to occur at a point where changes could still be made.
Key Action	Design and implement a series of focus groups to test public reaction.

Steps	Conduct a stakeholder session to get buy in (link to Communication strategy).

Step 4 – Updated perception study

Objective	Redo the mid 1990s perception study with a wider range of atmospheric conditions (if possible) and using a greater number of pictures. Perceptions on acceptable levels of visibility degradation may have changed since the 1990s as the average conditions have become cleaner. Also a larger number of images would add higher confidence to the index.
Who Needs to be Involved	This effort should be led by the index development team mentioned under that item.
Timeline	Sufficient high resolution pictures should be archived by fall 2010 to allow this to start then. Picture selection, surveying and collating results suggest a completion date of spring 2011.

Key Action Steps	• If funds are available, the Committee could contract out the perception survey. A lower budget alternative would be to survey groups of volunteers from organizations involved with BCVCC. Use these results to update index for summer 2011.
	• Implement website feedback on images.
	  ○ This would be a system that enables people to rate images on the website.
	  ○ This would generate a database of ratings of people's perception of images.
	  ○ It might also generate interest in the visibility program.
	The website feedback was generally described as a nice to have while the updated perception surveys were rated essential by some participants.

Step 5: Setting a Goal

Objective	Work towards developing a quantitative goal (i.e. specifying improvement frequencies) using a categorical index and based on moving days into better categories. Should use the qualitative goal (reduce poor, increase excellent) in the meantime.
Who Needs to be Involved	EC, MV, HLS - Modeling and Emissions. EC, MV - additional baseline data. All BCVCC – setting a quantitative goal.
Timeline	Modeling and Emissions (over next year). Additional baseline data (over next year). Setting Goal – begin Spring 2011.
Key Action Steps	BCVCC to consider additional info in 2011 in setting a quantitative goal. Specifics: • Additional scattering data is required to determine current categorical frequency. • Complete modeling to determine achievable visibility improvements.

	• Determine when to involve stakeholders in goal development? (E.g., Agriculture, First Nations, Tourism and Film Commission were mentioned). • Ultimately post on Clear Air BC website.

7.3. Communications Program

Communications is a priority to inform and engage stakeholders and the public on visibility management. Research has identified that stakeholders strongly connect good visibility to good air quality, a clean environment and improved health and well-being. However, many are unsure of how to differentiate between poor visibility due to natural factors (fog, clouds) and poor visibility caused by air pollution. Furthermore, there are challenges with understanding the relationship between visibility and health concerns. Stakeholders also draw a connection between visibility and government action, suggesting that there is an expectation that governments are taking steps to improve visibility. If the BCVCC initiates a communications program (e.g., website, media release etc.), the Committee and its partners must be able to address public expectations that actions are being taken to improve visibility.

Visibility is an important indicator of air quality for the public, and addressing visibility through emission reductions can help advance the priority for improving air quality. In order to do this, a visibility index and targets that are meaningful to the public are required. This requires the development of a cross-agency visibility management program, including a visibility metric for the LFV that is adaptable to other BC locations. In order to motivate behaviour change, the public also needs to know the benefits and costs of a visibility management program, including the co-benefits of improved health, environment and the economy.

Communications Program Action Plan

Objective	Establish and implement a communications program to inform, educate and engage the public, decision makers and key stakeholders on taking action to improve visibility.
Who Needs to be Involved	All organizations represented on the Coordinating Committee need to be involved in the development and approval of communication materials, including the website, media release and other community outreach activities. The Communication Working Group will take the lead and continue to provide a coordinating function to ensure that input and approvals are received. Program partners including all organizations represented on the BCVCC, BC Lung, and YVR, Fraser Basin Council, BC Tourism and Agriculture need to be informed and involved well in advance of any public release of information.
Key Stakeholders	• General public (residents) – inform about visibility, raise support for government action, inspire them to take personal action • Politicians -- inform about visibility, raise support and resources for government • Stakeholders – inform about visibility, raise support for government action, inspire them to take corporate/sector-based action
Timeline	Update the current Communications Strategy – April/May 2010 Website and media release content sign-off – May 2010 Clear Air BC website launch – June 2010 Clean Air Day Ongoing communications – as opportunities are presented
Key Action Steps	• Develop business case (focus on economics, co-benefits, sustainability) in order to be able to communicate the value of improved visibility and to motivate people to

	action.
	• Develop key messages and strategy for engaging each audience (see objectives above)
	  ○ Validators (e.g., tourism, real estate, First Nations, airport)
	  ○ Residents:
	  ▪ Use community-based social marketing to encourage resident action
	  ▪ Leverage networks of existing partnerships (BC Lung, Fraser Basin Council, Sea-to-Sky Air Quality Coordinating Committee)
	• Work with program partners to leverage communication opportunities (e.g., BC Lung).
	• Develop a communication implementation plan for the next 12 months that links communications with milestones in the Lower Fraser Valley Pilot Project. The program should include collateral materials, participation in community events, establishing partnerships, for example, with the weather reporters to highlight the visibility index for the public in weather forecasts, and presentations to community groups, particularly where visibility management plans are being developed.
	• Launch the website and announce the visibility pilot program publicly through a media release and coordination among agencies and partners.
	• Implement an evaluation/feedback mechanism

Challenges and Risks	The public may not understand what visibility means, unless there is an index or means of relating poor visibility to health and the economy. Visibility issue may easily get lost in the clutter of daily messages that people are asked to hear. Public expectations for improved visibility may not be met due to an absence of meaningful emission reduction programs.

7.4. Business Case Action Plan

A business case or strong rationale for improved visibility that is linked to health, economy and the environment is required to help build support for emission reduction measures.

Objective	Establish a supportive business case for taking action to improve visibility, based on benefits to health, environment and the economy. The business case provides vital information to engage decision-makers and the public to take action and to invest in programs that improve visibility.
Who Needs to be Involved	All organizations represented on the Coordinating Committee need to be consulted and involved in the development and approval of the business plan. The results will be used by all of the partners.
Key Stakeholders	• Key decision makers and politicians -- inform about the value of investing in initiatives that improve visibility. • Stakeholders and supporters – to build support for emission reductions that improve visibility. • Longer term - general public – raise support for government action, and to inspire them to take personal action.
Timeline	The business plan may take up to 6 months to develop. Cost/benefit analysis of program implementation and emission reductions may take 2 years to complete, and is based on the pilot.
Key Action Steps	It was suggested that the need for building a business case is not as great in the Lower Fraser Valley. Emphasis on co-benefits may be enough to proceed with a pilot. And then the pilot may establish a much more compelling rationale to expand the program elsewhere. Key actions included: • Define which pollutants and their magnitude of impact on visibility based on the model. • Establish terms of reference for a high level business case to identify the health, economic, spiritual and environmental benefits associated with improved visibility. • Implement the business case development through a consultant study. • Link the results to the communications program. • Link the results to promote the rationale for emission reductions that improve visibility.
Challenges and Risks	Lack of funding to develop the business case. Business case development becomes too micro in its analysis, rather than providing a broader perspective of the benefits and costs of improved visibility.

7.5. Continued Modelling and Science, and Targeted Emission Reductions

The report on Science identified relatively few benefits for visibility management from existing emission reduction programs. Additional work is required to identify programs that can be effective in improving visibility. Once identified, the Committee can work with jurisdictions to implement programs and to promote specific actions being taken for improving visibility to decision makers and the public.

Objectives	Additional modeling work is required to explore the impact of climate action plan initiatives, and the ECA and ICAP poultry cull on improving visibility. The modeling work is essential to help determine the emission reduction measures that can be most effective in improving visibility.
Who Needs to be Involved	Science Workgroup already formed, sufficient for this work • MV – inventory, timing of control implementation • EC – modeling • Coordinate with BC HLS and MoE as required
Timeline	• Within 1 year – analysis with ECA and poultry cull • 1 to 2 years – model 2010, scenarios from Emissions above

Key Action Steps	• Science Workgroup writes detailed 2-year work plan, describing "How", identifying funding and time required
	• Link with other resource providers
	• Upgrade LFV VOC EI for multiple air planning purposes – Ozone, PM, Visibility
	• EI analysis by MV, including improved VOC speciation
	• Develop future scenarios
	  ○ With ECA, CAP, CARA
	  ○ Air quality effects from climate change mitigation / adaptation strategies
	  ○ Climate change mitigation / adaptation strategies' effects on air quality
	• Prepare "Significant Findings Report"
	• Evaluation results to Communications Workgroup

Challenges and Risks	• Need to get buy-in for this work from management at individual agencies • Funding requirements to continue with research and modeling. • Risk to Pilot if no quantitative analyses and data available on control measures to improve visibility • Capacity to complete necessary work within EC • Choices about waiting for 2010 EI updates versus using 2005 data now

8. Summary and Next Steps

The workshop focused on the development of an implementation plan for future work on visibility management, based on the work completed to date in the areas of science, policy and communications. This work provides a foundation for advancing visibility management to achieve the vision, principles and goals identified in the strategic framework.

Priorities in six broad, inter-related areas were identified and the approach to work in each area highlighted in this report. While the general approach to work in each area is outlined above, the BCVCC will develop a more detailed action plan complete with resource and funding requirements to implement the action items. The most immediate priorities are to complete the visibility management framework, and to implement aspects of the communications program, in particular the launch of the website. These will require input and approval of the program partners.

Appendix I – Agenda

The agenda has been updated to reflect the changes to the discussion format that occurred during the workshop.

BC Visibility Coordinating Committee
BC Air Quality and Visibility Workshop

Tuesday, April 13, 2010
8:00 am – 3:30 pm
SFU Harbour Centre, Room 2250
515 West Hastings Street, Vancouver

Meeting Objectives:

To advance visibility protection by:

- Sharing knowledge gained to date through the work of the BCVCC;
- Establishing a visibility management framework for British Columbia;
- Identifying actions that need to be taken to further visibility management.

Agenda:

TOPIC	TIME
Refreshments	**8:00 – 8:30 a.m.**
1. Opening Remarks – Steven Sakiyama	8:30 – 8:40 a.m.
2. Workshop Objectives and Agenda – John Forsdick	8:40 – 8:50 a.m.
3. Visibility Framework For British Columbia – Steve Sakiyama • Framework overview • Questions and discussion	8:50 – 9:25 a.m.
4. Visibility Management Framework – Small Group Discussions • Does the Framework fit with your air quality management planning – why or why not? • Is the Goal for visibility management the right one?	9:25 – 10:30 a.m.
Break	**10:30 – 10:50 a.m.**
5. BCVCC Work Program • Science • Policy • Communications • Lower Mainland Pilot	10:50 – 12:00 p.m.
Lunch	**12:00 – 12:50 p.m.**
6. Introduction to Afternoon Agenda	12:50 – 1:00 p.m.
7. Visibility Management Priorities Going Forward – Small Group Discussions • What are the challenges, opportunities and priority areas for further work on visibility management? What gaps need to be addressed either in the work that is currently being done, or new work that is	1:00 – 1:40 p.m.

required?	
8. Visibility Management Action Plan • For priority areas, identify: 1. What specific work needs to be done? 2. What organizations and agencies need to be involved? 3. What role do the public and key stakeholders have? 4. What are the challenges/risks? • Review of priority actions	1:40 – 2:50 p.m. (Three work groups with two Action Priorities each will explore the questions. 25 minutes is assigned to the first session, and 15 minutes for each of the next two discussions.)
Break	**2:50 – 3:00**
9. Action Plan Priorities and Implementation – Plenary Review	3:00 – 3:20 p.m.
10. Next Steps and Adjourn – Steve Sakiyama	3:20 – 3:30 p.m.

Appendix II – Challenges and Opportunities Going Forward

Central themes around Challenges included:

- Communication with the public and stakeholders to create interest and build knowledge while managing public expectations
- Management/lack of resources, both money and manpower
- Re-tune the proposed visibility index (not derived from a full range of visibilities)

Central themes around Opportunities included:

- Emphasizing potential co-benefits and linkages (air quality, local economic health, climate change)
- Use Visibility to support and strengthen existing programs, including air quality programs
- Build political and public support, for example, through education

The specific Challenges and Opportunities drafted by each group are listed below:

Group One (Blue) Challenges:

- Public communication
- Sector versus whole Lower Fraser Valley
- Manage public expectation
- Timeline for targets
- Tracking progress
- Linking to personal impacts – behaviour change needed
- Natural influences on visibility (distinguish between anthro)
- Visibility and index (retune)

Group One (Blue) Opportunities:

- Learning about our management goals and programs
- Drive progress toward better quality
- Link air quality and local economic health
- Address visible manifestations of Air Quality
- Performance measure
- New emission reduction program targeted at visibility
- Health benefits – deliver visibility message
- Use visibility to strengthen existing air quality communication programs.

Group Two (Green) Challenges:

- Improving visibility (more commitment is needed)
- Communicating the need for visibility management to public and stakeholders

- Is visibility important enough on its own
- Lack of interest and knowledge from other stakeholders
- Do not want to re-invent the wheel
- Resourcing and monitoring the right things

Group Two (Green) Opportunities:

- Run more scenarios (to improve visibility)
- Emphasize co-benefits
- Build political and public support
- Engage champions from business (airport, tourism, real estate)
- Support and enhance other existing programs
- Build an existing network

Group Three Challenges:

- Marketing as a subjective measure for communicating the visibility index
- Proposed index is not derived from a full range of visibilities; it should be re-done. If the break points are too high it will be harder to sell to policy makers
- Missing modeling data for certain scenarios e.g. ECA, CARA
- Resource allocations

Group Three Opportunities:

- Tie CC actions to visibility
- ECA and CARA reductions

Group Four Challenges:

- Science – the link between perception and air quality values
- Conflicts between AQHI, visibility index and AQ advisories
- Integrating the visibility plan into AGM plans and GHG plans
- Improve AQHI by increasing sensitivity to PM2.5
- Cost-benefit analysis of visibility improvement
- Manage expectations for visibility management elsewhere
- Identified that money and people are in short supply

Group Four Opportunities:

- Test the interest of the public in visibility
- Demonstrate the link between Air Quality and Visibility
- Educate the public and politicians on Visibility and Air Quality
- Incorporating Visibility into provincial and federal standards and objectives
- Define time horizons for visibility management and other AQ and GHG management
- Ignite interest in AQ

- Ignite interest in research into Visibility
- Improve welfare, aesthetics, tourism and economics
- Test visibility metrics
- Develop new communication strategies

Priority Actions Identified in Subgroups

Central themes for priority actions included:

- Creation of a stakeholder engagement strategy to increase buy-in
- Improve/implement the communications strategy for the Visibility program
- Update the perception studies
- Test, implement and document the visibility index

Group 1 - Blue	**Group 2 - Green**
• Communication strategy for public roll out of the visibility website and program (next year?) • Stakeholder engagement strategy • Pilot project work plan • Visibility index (complete and document and test) • Update the perception study • Articulate the link between visibility, PM/health/economic benefit, and direct visibility link to health.	• Enhancing and continuing to monitor visibility so that we can report on existing conditions and progress. • BCVCC to commit to the visibility goal and develop a mechanism for evaluation of progress. • Engage other stakeholders to improve buy-in from politicians and public • Finalize and implement communications strategy. • Determine emission reductions needed to make a difference and develop an action plan.
Group 3	**Group 4**
• Finalize the LFV metric/index categories (the new perception study) • More modeling showing potential for visibility improvement based on planned emission reduction scenarios • Communications strategy • Policy makers • Public • Business case - $ benefits and health benefits	• Improve communications package • Update the perception studies • Test and implement the visibility index • Define management goals • Integrate the visibility plan into the AQ and GHG plan