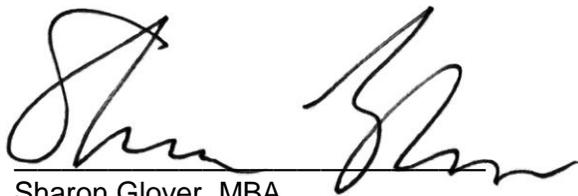


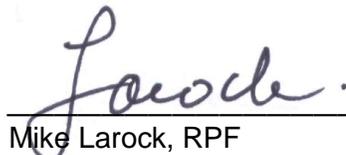
Mid-Term Timber Supply Advocacy Report

November 7, 2011
(Amended Jan 24, 2012)

Association of BC Forest Professionals
Ensuring BC's Forests Are in Good Hands.



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Amendment to the Mid-Term Timber Supply Advocacy Report (January 24, 2012)

New information has been brought to our attention regarding the identification of values in the original advocacy report. Specifically, when viewed with a tourism lens, the issue of VQO's can look quite different. Tourism associated with BC's forestlands and forest resources makes a significant contribution to local economies and the overall provincial economy. Nature based tourism generates \$1.6 billion for BC and is a major driver of BC's \$13 billion tourism industry.

The ABCFP is concerned that references to specific values in the advocacy report may weaken the impact of key points in the report by suggesting that the ABCFP endorses a preferred choice. For example, Recommendation # 6, which states that Visual Quality should be a focus for trade-off, might suggest that the ABCFP has a preferred choice, when in fact, such a decision needs to be discussed by the government agency, their partners and the communities. The advocacy of the ABCFP is that this stewardship discussion needs to occur, soon.

The Advocacy Report also says that the association and its members are valuable knowledge advocates and support the needed public discussion regarding the forest ecosystems of BC and in particular the mid-term timber supply following MPB.

It is in this context that we change the recommendation in our report to focus on the primary point drawn from what we have heard from our members and experts regarding compromise and non-timber forest management objectives:

6. Difficult trade-offs exist when considering the right balance following MPB forest damage. Increasing or reducing one value at the expense of other values requires informed discussion and debate.

The amendment notice is provided to the Chief Forester and forest professionals as a revision to our advocacy report of November 7, 2011.

Executive Summary

After learning that the Chief Forester was conducting a series of analyses of the mid-term timber supply in the post-mountain pine beetle era, the Association of BC Forest Professionals (ABC FP) wanted to provide some meaningful input to assist him in his work. As we have members on the ground in the affected areas of the province, we opted to ask them for their best advice and their observations of being at ground zero. As a result, the ABC FP asked members to contribute to an advocacy initiative regarding the mid-term timber supply analysis.

Our approach was threefold. We presented the general membership with three scenarios and asked for them to both answer specific questions and provide general feedback. ABC FP staff travelled to some of the affected communities and met with stakeholders to get their perspectives. Finally, we used a consultant to conduct in-depth interviews with a select number of individuals we deemed to be 'experts' on the situation because they have specific knowledge and live and/or work in the affected areas of the province.

After weighing all the advice we were given, we came up with recommendations for the Chief Forester to consider and the important themes for which our members should advocate. These recommendations include:

- Consult local communities and take into account their sustainability.
- Use principles of sustainable forest management to find the appropriate balance.
- When it comes to changing non-timber forest management objectives and constraints – a one-size-fits-all approach is not effective.
- Apply analysis rigor before changing non-timber forest management objectives and constraints as these changes will affect more than just the areas damaged by MPB.
- Continue to use higher level plans because they are still relevant and valuable.
- Difficult trade-offs exist. Increasing or reducing one value at the expense of other values requires informed discussion and debate.
- Ensure that the terms of any cost-benefit analysis is long term and wide ranging.
- Ensure that specific expectations are clear so forest professionals know what the expected outcome on the ground is.
- Establish economic incentives for the forest industry to harvest the dead wood
- Develop strategies for the appropriate use of green wood.
- Develop partial cutting incentives for harvest innovation in mixed stands that protect live trees and secondary structure in an MPB-affected forest.
- Offer greater incentives for the forest industry to focus on long-term forest resource management and innovation.
- Provide technical resources for proper forest management implementation at the operational level.
- Improve the management of young stands.
- Invest in updating all forest inventories in the MPB affected forest.
- Invest in a broad range of establishment and intensive silviculture techniques.
- Government must include the long-term perspective in land-use decision making.

Introduction

The Association of BC Forest Professionals (ABC FP) is responsible for regulating British Columbia's forest professionals and the practice of professional forestry. Today, we are the largest professional forestry association in Canada and the first to include forest technologists. The goal of all forest professionals is to manage BC's forests for the long term. This means that ABCFP members practise professional forestry with the goal to balance ecological, economic, social and cultural values in order to maintain healthy forests and healthy communities.

It is our duty to serve and protect the public interest in forested land, forest ecosystems and forest resources by advocating for and upholding principles of forest stewardship. Our mandate flows from the *Foresters Act*. We ensure that the province's forest professionals are competent, ethical and accountable to the association by administering and enforcing the *Foresters Act*. We set and enforce admission requirements, codes of conduct and standards of practice for our members.

We are committed to protecting the interests of present and future generations of British Columbians by advancing the stewardship of BC's forests. We and our members are recognized locally and nationally as knowledgeable, trusted and accountable sources of information and expertise on the sustainable management of forest resources and for whom the public interest is paramount.

The recent mountain pine beetle (MPB) epidemic has already damaged an estimated 17.5 million hectares (ha) of forests in BC and has affected the ability of these forests to provide the products and features upon which British Columbians depend.

Our members are on the ground and around the planning table when it comes to dealing with issues caused by the mountain pine beetle. While the provincial government's work on the mid-term timber supply¹ is focused on areas of the province that have been hardest hit by the mountain pine beetle, it is a concern that affects the entire province. It is important to consider what impact changing the management objectives or constraints in one area will have on another area.

The Issue

At the 2010 meeting of the Union of British Columbia Municipalities (UBCM), a resolution was passed, which stated:

Whereas since 2004 the constraints on the interior forest districts have increased to where they now negatively impact the timber supply, resulting in a shortage of fiber supply threatening the loss of jobs, which would be devastating to the local economies;

And whereas before the full effect of the mountain pine beetle was understood, constraints on the forest, in particular visual quality objectives and wildlife tree patches, were applied having a negative impact on local mills' longevity and operations in their traditional areas;

¹ The mid-term timber supply is a term that refers to that portion of the timber inventory that would be available for harvest within the middle of the normal management cycle. In the interior of BC that period is normally a 30 to 70 year time frame.

Therefore be it resolved that the UBCM request that the Minister of Forests insures that there is a comprehensive cost benefit analysis completed along with a cumulative impact assessment on the current impacts of established constraints, in particular the constraints of visual quality objectives and wildlife tree patches.

In response to this request, the Chief Forester is carrying out several area-specific analyses to determine whether it is possible to increase the mid-term timber supply in mountain pine beetle-affected areas by changing management practices. Some of the management practices being examined include harvesting marginally economic forest types and encouraging new flexibility and innovation to meet non-timber forest management objectives. Non-timber forest management objectives in the UBCM resolution refers to constraints, such as visual quality and wildlife tree patches, on timber supply and in this report is more broadly interpreted to be any value that reduces the available timber supply. The purpose of this report is to contribute to the Chief Forester's analyses and provide ABCFP members with some of the more important facts to be incorporated in their advocacy discussions within their communities.

How we approached the issue

The ABCFP recognized that our members have a great deal of professional and community based knowledge centered on their experience working in pine beetle-killed stands. Forest professionals live, work and interact with people in affected communities, local and provincial governments and industry enabling them to contribute a great deal of on-the-ground knowledge. As a result, the ABCFP asked members to contribute to the mid-term timber supply conversation in three ways.

1. ABCFP members were consulted using three scenarios patterned after the Chief Forester's article in the **BC Forest Professional** magazine in three consecutive issues of the e-newsletter **The Increment**. (See appendix 1.)
2. ABCFP staff travelled to several communities and discussed with members how the impacts of the MPB have affected their work and lives.
3. Individuals (most were ABCFP members) who were deemed to be 'experts' on the subject due to their location, experience and work history, were interviewed by J. Perry Resource Communications, on behalf of the ABCFP.

What we heard about the scope of the problem

British Columbia has been experiencing a forest health epidemic in the form of mountain pine beetle that has caused widespread mortality of pine, the BC Interior's most abundant commercial tree species.² The province's total inventory of merchantable mature lodgepole pine was estimated to be 1.35 billion cubic metres in 1999.³

There is no satisfactory treatment of a large MPB epidemic. In order for MPB to be killed naturally in large quantities, a period of extremely cold weather in the fall (-20C) or -40C in the winter is needed.⁴

² Mountain Pine Beetle Action Plan 2006-2011: Sustainable Forests, Sustainable Communities, Province of BC, page 2.

³ Provincial-Level Projection of the Current Mountain Pine Beetle Outbreak: Update of the infestation projection based on the 2010 Provincial Aerial Overview of Forest Health and the BCMPB model (year 8), Adrian Walton, BC Forest Service, June 22, 2011, pg. 10.

⁴ Op. Cit. Mountain Pine Beetle Action Plan 2006-2011. Pg. 3.

Many communities in BC have been affected by the epidemic. The impact depends on the affected portion of the local Timber Harvesting Land Base⁵ (THLB) and the dependence of the community for jobs in timber processing facilities. Communities within the Vanderhoof Forest District, the Quesnel Timber Supply Area (TSA), the Lakes TSA, Williams Lake TSA, 100 Mile House TSA, Morice TSA, Prince George Forest District, and Fort St. James Forest District all have between 50 and 81% of forest in their THLB killed by MPB. It is now projected that by the time the current infestation has subsided, "MPB will have killed approximately 61% of the merchantable pine volume on the THLB at the start of the current outbreak."⁶

This dead pine volume is approximately 831 million cubic metres, a number that represents more than ten years of the provincial allowable annual cut.

The MPB epidemic and the economic, social and environmental impacts that it has caused are complex because of the number and interconnection of variables. There are a variety of affected resource values; gaps in information such as understory forest inventory; stressed economies of resource-based communities; and fewer resource jobs to name a few of these variables. To complicate issues further, there are changing conditions over time that make the issues difficult to discuss and complicated to plan for.

In addition to MPB, other forest health agents are affecting the forests of the BC Interior, including pine rusts, spruce budworm, spruce beetle, root disease, fir beetle and tussock moth. These agents have the potential to affect the future or mid-term timber supply and they make it more difficult to manage pine through intensive forest management. It is also possible that a second population wave of MPB could affect pine forests where trees have grown into a vulnerable size to attack in the short to mid-term.

There are also serious worker and public safety concerns with leaving forests of dead trees standing. Stands of dead trees are dangerous to walk through. Over time these dead trees become more dangerous with increased instability and breakage of tops, branches and stems occurring at any time.

Fire safety is another issue and concern for Interior communities. Fire hazard and fire behaviour vary depending on circumstances such as prevailing winds, age of the forest fuel, proximity of ladder fuels, etc. As a result the community and professional opinions are split over whether it is safer for communities to leave the trees standing – or whether all the trees should be harvested. The complexity of the problem has led to tree and stand management instead of forest management.

The human costs of such large areas of dead forests are complicated. There are many mills between 100 Mile House and Fort St. James that all want to run at full capacity. There are also pellet and bioenergy plants that need wood fibre. During the early stages of the MPB epidemic it was decided that in order to make as much use out of the pine as possible, the AACs (allowable

⁵ Timber Harvesting Land Base is land that is considered available for harvest after taking into account economic, environmental, social and cultural considerations. Timber Supply and the Mountain Pine Beetle Infestation in BC. Ministry of Forests, Forest Analysis Branch. October 2003.

⁶ Ibid. Page 12.

annual cuts) of existing tenures needed to be uplifted⁷ and new tenures issued. This provided for processing facilities to expand to capture the increase. However there is now a higher capacity demand than before the MPB uplifts. Many salvage cutblocks were allowed to be larger than usual to more closely mimic the historic natural disturbance regime. However, tree retention and other factors were to be addressed, including:

- Increased protection for riparian areas;
- Maintenance of non-pine species for biodiversity, seed source and future harvest opportunities;
- Protection of sensitive soils;
- Increased maintenance of stand structure from either live or dead trees – with intact forest floor; and
- Allowing for cutblock design that more closely mimics natural disturbance.⁸

Now, AACs are beginning to decrease, and much of the pine that was economic to harvest under current market conditions has been harvested. Lumber mills and other wood fibre operations are faced with difficult decisions regarding timber supply. To these stakeholders and partners relaxing constraints on timber supply that is closer to towns seems like a viable part of the strategy for dealing with the MPB problem.

The stewardship costs of the MPB epidemic are becoming apparent, such as the amount of green wood (wood not killed by the beetle) included in the salvage harvest and the size of clear cuts on the landscape.

Large clear cuts can produce undesirable changes in the ecological function of the forest, including snow melt and stream flow. The Ministry of Forests, Lands, and Natural Resource Operations notes that a reduction in forest canopy can result in:

- Increased water flowing from hill slopes;
- Earlier onset of spring snowmelt;
- Increased spring and total annual stream flow volumes;
- Changes in summer and fall flows;
- More rapid stream flow response to storms, and
- Increased water table.⁹

The magnitude and duration of hydrologic change will depend on many variables. Prompt re-vegetation and reforestation may reduce the duration of hydrologic change.

There is plenty of information on MPB and a good source to review is the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) mountain pine beetle webpage.

Throughout the consultation process ABCFP members provided a comprehensive list of information sources such as timber supply reviews, Type 2 silviculture analyses, research reports, key individuals, and improved inventories of all resources. Some provided websites, reports and names of other people to consult. These include:

⁷ Uplift: A temporary increase in the allowable annual cut for an area in order to harvest potential losses to the mountain pine beetle infestation.

⁸ Forest Stewardship for Mountain Pine Beetle Salvage, Ministry of Forests, Lands and Natural Resource

⁹ Hydrologic sensitivity of watersheds to MPB infestation in the BC Interior, FLNRO.

- Publications such as timber supply reviews, higher level plans, information from the Chief Forester's technical working group with scenarios for different constraint relaxations, pilot projects, forest management plans, Forest Practices Board reports such as *Cumulative Effects: From Assessment Towards Management* Special Report, Mar 2011, articles like *Striving for sustainability and resilience in the face of unprecedented change: The case of the mountain pine beetle outbreak in British Columbia*¹⁰ and many other papers and discussion reports from the University of Northern BC and the Ministry of Forests, Lands and Natural Resource Operations website.
- Individuals such as professionals who specialize in various aspects of the ecological and social sciences, members' views through the ABCFP's **Increment** e-newsletter, researchers, field-based professionals, university professors, and the local public.

The quantity of information that is available from ABCFP members demonstrates that forest professionals are well positioned to be knowledge advocates for the forest resource and the MPB issues facing the local communities.

Specific advice based on the three information-gathering methods is presented below.

Advice from members

In general, the majority of members who provided us with feedback want to ensure that government is taking a very long-term perspective of forest health and stewardship. Our members think in terms of forest maturation cycles of 60 to 100 years. They do not support making short-term tradeoffs now that would jeopardize non-timber forest management objectives or the mid-term timber supply if not supported by scientific research and consultation with the public.

Association members are sensitive to the very real challenges of having communities that rely on timber extraction for large portions of their local economy. In fact, our members live in these communities and have ideas that would stimulate jobs in forestry, such as an increased focus on local silviculture treatment strategies, timber harvest opportunities and non-timber forest products and values.

The general membership feedback

The ABCFP presented three scenarios to its members to comment on¹¹ and these scenarios included numerous questions. The bulleted points are member comments.

Members felt that the existing higher-level plans were still relevant due to their long-term view and that the original reasons for the forest management constraints still apply. They commented that in their view, changing management requirements would not prevent mill closures. Rather it will just postpone the inevitable fall down in timber supply. There was a concern that consequences of such forest management decisions would be worse than the benefits derived from an increase in today's timber supply. Harvesting a wildlife tree patch or old growth

¹⁰ Burton, P.J. 2010. Striving for sustainability and resilience in the face of unprecedented change: The case of the mountain pine beetle outbreak in British Columbia. *Sustainability*. 2(8):2403-2423.

¹¹ See Appendix 1 for details of each scenario.

management area now would make it extremely difficult to recreate them in the future. The long-term planning for such forest management objectives is an essential part of the solution.

When asked about Visual Quality Objectives (VQOs) versus other values some members commented that reducing VQOs made the most sense compared to reducing protection for other values. Their rationale is that the visual objective is the only human-centric objective set by government and therefore should naturally be the first to be sacrificed for a timber supply use. However, other members commented that in their view, the multi-billion dollar tourism industry in the province should be a major factor of consideration, and furthermore, that there would not be significant amounts of timber supply gained if VQOs were relaxed. In addition, members raised the caution that other resource values are often combined with VQOs within an area and that values such as tourist sensitive viewscapes might be negatively affected by a loss of visual quality.

When asked what the public, as owners of the resource, should consider in making decisions around changing objectives, members pointed out that a gain to one group may be a loss to others and a theme that kept coming up was broad public input must be sought on these issues before decisions are reached on changes to forest management strategies. Public consultation in areas of high sensitivity is required to prevent undesirable outcomes.

Our second scenario focused on whether licensees should be encouraged to log in areas of the province which are marginally economic to harvest. Members were asked their opinion on whether they thought licensees should be encouraged to harvest without the obligation to replant the harvest areas. (This provocative point is again one of sacrifice. In order for the tenure holder to enter marginally economic situations containing higher risk and uncertainty, there has to be some counter opportunity for a business to reduce the risk other than goodwill. Therefore, the scenario included no cost for forest re-establishment and the potential for partial cutting opportunity in marginally economic types.) Members commented that decisions made by the land owner should be based on ethical stewardship and science, and not solely short-term economics. Some members felt that the public needs to be involved in these decisions or forest professionals may not be seen as acting in the public's best interest. Others felt that the land owner should provide incentives for any activity that enables timber in the mid-term age classes to mature faster.

- Current silviculture requirements make harvesting some forest types and distances uneconomical. Consider other alternatives such as restoration (as is used in Arizona and New Mexico).
- Considering the mountain pine beetle infestation and the associated economic impacts to communities in the central Interior, a review of the 'balance' between social/economic needs and conservation is warranted.

In our third scenario, members were asked about a situation where no objectives were changed, and non-timber forest management objectives were not sacrificed. The community would be left to weather the storm and look to the province (as the public owner) for assistance. Specifically, they were asked if the local public's interest was greater than that of the provincial public. Many members responded that local communities should have a greater say in what happens in and around their communities. Because ABCFP members are used to short-term and longer terms planning, they can see that changing management objectives today may have a significant effect on the forest resource values, future communities and the mid- and long-term timber supply. They recognize that this long-term view will result in some short-term challenges but feel it is necessary in order to preserve the future forest and its ecosystems.

- The solution to today's problem shouldn't come at the expense of the environment.
- Changing management requirements will not prevent mill closures.
- Focus on a redistribution of employment to forest improvement.
- Should we sacrifice long-term plans for short-term gain – not all mills will survive.
- Logging set-aside areas just postpones the inevitable (mill closures).
- Need long-term plan not short-term gain.
- Look at all of the options and consider better investments before relieving constraints.

The community based member feedback

We visited one forest TSA where a 500 hectare clearcut has been approved for harvest. Within this clearcut, the stands are pine leading however there is also at least 30% green spruce. The goal for management appears to be to identify a component of green non-pine timber, then increase the size of the clearcut or cutting authority until the necessary percentage of timber type with leading dead pine is achieved. While this method is effective at capturing as much dead pine as possible within an economic margin, it is also a method that pays little concern to the mid-term timber supply.

One idea that was forwarded by several members was to increase the stumpage price of the green wood based on the percentage of the species profile that it occupies in the cutting authority. In other words, the value of the live wood is not lowered by the value of the dead wood component. There would be less incentive to search for stands that maximize the green wood component. One consequence of this change is that we can likely harvest less dead pine; however, it also prolongs, and increases, the amount of protected secondary structure. Members talked about the broad and specific planning initiatives of the past and the requirement for similar programs in the future. There were a variety of opinions about how to use or re-visit the information.

- LRMPs are still relevant and may be more so due to their long-term view.
- Timber supply review is rigorous and the balance was made for a reason.
- Revisiting the past balance established in plans is absolutely critical for values, whether higher or lower after the MPB epidemic. Maybe environmental values are already compromised, but don't assume that it is all adequate. We do not know and more information is required.
- Need updated inventories on post MPB forest condition to do this.
- We need to develop a vision for how these future forests should look in 30 to 50 years.
- A review of existing resource management objectives for other forest values and their implications to timber supply is warranted; those objectives should be reviewed periodically to assess their relevancy; they should be open to scrutiny.

Advice from experts

The experts that we consulted included provincial government, industry and consulting staff with expertise in practice areas such as planning, inventory, harvesting, biodiversity, fisheries, silviculture to name a few. Below is a summary of the most prominent themes that appeared in feedback from our survey with experts. In this exercise, the first question our experts were asked was to list specific strategies to mitigate the mid-term timber supply fall-down and to consider what the provincial government, industry and communities and others could do. The titles below represent the theme as best possible; the description statements attempt to point to

the direction of the subject; and the bulleted comments represent some of the different perspectives and important points that kept surfacing in the responses.

1. Protect the supply of mature green wood

Members strongly agree that one of the keys to protecting the mid-term timber supply is to exclusively harvest the dead pine and delay harvesting any green wood until it is absolutely necessary. This is consistent with the recent actions and past guidance of the Chief Forester.

- Encourage harvesting of dead pine for as long as possible to maintain the mid-term reserve, and avoid non-pine stands for as long as possible. Licensees tied to a lower level of pine in their licence have little incentive to harvest dead pine first.
- Focus harvesting on low mid-term valued economic stands while identifying and avoiding areas with high economic mid-term value until the mid-term.
- Expect natural regeneration in identified areas that provide a reasonable establishment time line with no establishment costs.
- Consider partial cutting incentives to encourage harvest innovation in mixed stands that would enable the harvest of dead pine while protecting live trees and secondary structure.

2. Protect and manage the understory of beetle-killed stands

Secondary stand structure refers to mature trees, saplings and seedlings that have remained alive in pine stands following MPB infestation. Research suggests that retaining the dead components of the over-story (mature dead trees) will not prevent the understory seedlings and saplings from accelerating their growth in response to increased availability of nutrients, moisture and light. And in some instances the 20-30% dead overstory will benefit the secondary structure. Current information suggests that preserving dead pine stands that contain adequate amounts of secondary structure will help to mitigate the decrease in mid-term timber supply.¹²

Much of the mid-term timber supply is currently growing under the canopy of dead pine. It is essential that we improve our knowledge of the extent and condition of the understory within beetle-killed stands so we can protect and manage it well.

- Protect the understory. Some have said that other silvicultural systems must be used more often than simply clearcutting.
- Change secondary structure rules from at least 4 m tall understory to 2 m tall to protect those stands. Only harvest old and mature, protect younger mid-term from harvest.

Applying any of these strategies requires an up-to-date inventory assessment of the forest values affected by MPB.

3. Increase funding for silviculture and the establishment of new forests

Spend money on a variety of silviculture techniques that will move toward the forest inventory attributes of a more resilient¹³ forest and help to reduce the impact of a shrinking mid-term timber supply.

¹² AAC Rationale for Lakes TSA, July 2011, page 15

¹³ Resilience: the capacity of an ecosystem to absorb a spectrum of shocks and still retain and further develop the same structure, functioning and feedbacks. Principles of Ecosystem Stewardship. Chapin, Kofinas and Folke. Springer Science. 2009. Pg9.

- Improved silviculture techniques and strategies can improve the quality and quantity of future timber supplies.
- Find what species can be planted now on what sites for harvest within the mid-term – need more knowledge and better management.
- Form a collaborative effort between government and industry to enable the best stewardship but in the most cost-effective ways.
- Increased silviculture activities could mean a better job market in communities.
- Ensure stocking in plantations use A class seed with good genetic gain and manage stand densities to targets that maximize the productivity of the land base.
- Raise standards of expectation for silviculture practices, e.g. area-based management and improved silviculture with better monitoring of stand development.
- Modify stocking standards to include more mixed species management, including healthy deciduous species.
- Look at sites to determine whether natural regeneration will occur and how successful it will be. Don't spend money on sites where regeneration will happen naturally.

4. Improve management of young stands targeted for mid-term timber supply

Every tree for the mid-term timber supply is already in the ground and growing. Therefore, it is essential that we start to care for these trees today.

- Develop a resilient forest strategy that includes an action plan of stand interventions that reduce the susceptibility of future forests to MPB and protects sapling development in current dead pine leading stands.
- Fertilize targeted stands 30 years of age and older, or close to rotation for beginning harvest in 2020. Treatments can increase growth by about 15 m³/ha per application. However, producing a visible rise in timber supply requires a lot of fertilization – do we have the budgets and political will and the required methods to select candidate stands?
- Protect the current growing stock from fire, pests and disease.
- Increase investment in the mid-term timber supply. Silviculture is the main opportunity, particularly the 30-40 year age class. Make strategic investments that recognize cost/benefit but on a longer time scale than the normal return on investment (ROI). Evaluate risks, including future MPB outbreaks and other forest health factors. Think bigger, e.g., for site productivity the expected return based on total potential area. The ROI should also include the cost back to the facility that will process the wood.

5. Offer incentives to forest resource-based businesses to focus on the long term

- The government should provide incentives for any activity (fertilizing, pruning, spacing, planting, site prep, irrigation, genetics) that enables timber in the mid-term age classes to mature faster.
- Investigate and pursue alternative strategies such as committing MPB affected forests to carbon sequestration. The basic idea presented by members is to invite third-party investment in the rehabilitation of MPB affected forests that are currently not economical to harvest using standard forestry practice because they are too far away from manufacturing centres. The third party would receive carbon credits for the new forest that will grow over the next 80 years.

6. Communities need to have a say in the mid-term timber supply process

It is clear from our members and experts that the communities located in the areas most affected by mountain pine beetle should have a say in the changes to forest management

objectives. While lifting restrictions will help keep jobs in the mills today, the long-term viability of the community will be better served by ensuring the availability of the mid-term timber supply.

- Lifting all constraints will make it worse for some communities, e.g., tourism businesses. The balancing act for communities is to weigh the importance of timber for local mills in the short term compared with how people value local non-timber assets. Communities may decide that they can most easily forfeit visual value but not if there will be significant conflicts with recreation and other uses.
- Communities need a say in the mid-term timber supply decision. Elected officials and community leaders in particular, need education on the options and the impacts of the various options, as do all community members.
- Government's role is to help communities, whether there is an influx or drain of industry. There is a need for balance, which government must recognize.
- Economic diversification is important for small communities.
 - Diversify – especially towards tourism.
 - Charge for different uses (non-timber uses).
- Communities will benefit from an 'education' or 'hospital' forest to show the public the flow of revenue from forestry to benefits they use.

7. Finding an acceptable balance

The decisions about what to do for communities and stakeholders have a lot to do with the balance of values and estimations regarding the threshold conditions for the various values. The members and experts provided comments about what the government should do with respect to the balance of values.

- The key to balance is the three pillars of sustainable forest management – healthy ecosystems, economies and societies. This includes meeting current needs without compromising future needs and managing forests for forest resiliency.
- Know the risks through a formal risk assessment for all values. Use risk tools. Also need to know the benefits and the needs behind obtaining the benefits. To protect jobs, how much help is needed? In summary, a balance needs both sides of the equation.
- Environmental constraints must be held above a minimum level to ensure ecological integrity. Social constraints on the land base have the most potential to help increase the timber supply.
- Viewscapes have changed after the beetle epidemic and a balanced perspective should consider the Visual Quality Objectives for a geographic area. Despite being a social decision, many sensitive visual areas overlap with several other resource objectives. VQOs have an opportunity cost and could be recalibrated for benefit and exchanged on the land base or be temporally managed for future visual benefit (might include a timber harvest).
- Re-examine the resource values and constraining features on the timber supply. Many of these were imposed when there was a high timber supply. We can tinker with some constraints, however about half of OGMA's (old growth management areas) serve multiple purposes.
- Encourage government to bring in legislation and policy to expand usage, i.e., change the way we're harvesting the landbase. Need a smoother way to access volume; innovative players cannot break into new markets. Do not harvest unsustainably to maintain artificially high harvest levels that will prove unsustainable over the long term. Sustainability is the first principle with no negative impacts on the environment.

- Communities will have it hard enough, so invest for the mid-term timber supply and other values. However, if necessary, consider and implement what else could be done for a better overall return.
- Need a more economically responsive model through a public management body that is independent from processing. Land manager sells by size, quality and available volume, then could increase price of non-pine and then no monopoly and “replication instead of innovation.” BC has low value-added and low jobs per cubic metre harvested.
- Government should make policy more flexible as a starting point, first around non-environmental values, such as VQOs. Integrate other values as best as possible, e.g. fire interface to increase efficiency in management and meeting objectives.
- Maintain the THLB, and look at yields and productivity.
- Need spatial analysis of Higher Level Plan objectives. Weight impacts for other resource values.
- Re-align harvesting priorities among licensees to balance the availability in some TSAs. This would put available dead wood up for sale to avoid green wood. Highly contentious and few are aware of.
- Consider the shelf life of beetle-killed pine based on site.
- We need environmental sustainability but not economic stagnation. Provide basic protection for water, soil, rare and endangered species as the anchors. The rest is a temporary adjustment.
- “There is no healthy economy without a healthy environment.”

Conclusion

The interviews, responses to scenarios and meetings with practitioners have given the ABCFP a clearer picture of the key concerns and recommendations of our members. As the forest profession we are well-situated and enabled to support improved stewardship and sustainability of BC forests.

Often forest professionals are asked for advice and the enquiring parties expect a single solution to their problem. And often it is our task to advise that there is not a single solution but a complement of strategies that will work towards the best solution. This is the case with what seems to be an impossible situation resulting from the MPB epidemic.

Most of those consulted believe that the ABCFP has an important role in leadership for stewardship and resource sustainability. The association and its members should serve as knowledge advocates and support the needed public discussion regarding the forest ecosystems of BC and in particular the mid-term timber supply.

It is in this context that we provide the following recommendations drawn from what we have heard from our members and experts:

1. Consult the local communities affected by MPB more broadly, incorporate the experience of members of the ABCFP, and make decisions that take into account the sustainability of the communities as well as the spinoff effects on the entire province.
2. Use principles of sustainable forest management to find the appropriate balance for industry, government and communities.
3. Regarding the various analyses to change non-timber forest management objectives and constraints, a one-size-fits-all approach is not in the interest of the communities or the forest at large. Community by community, area by area solutions are necessary.

4. Changing non-timber forest management objectives and constraints will affect more than just the areas damaged by MPB. Ensure the broad implications of these changes are provided the same rigor with which they were originally established.
5. Higher level plans are still relevant and valuable due to their long-term view and the original reasons for non-timber forest management constraints still apply.
6. Difficult trade-offs exist when considering the right balance following MPB forest damage. Increasing or reducing one value at the expense of other values requires informed discussion and debate.
7. Ensure that the terms of any cost-benefit analysis be from a perspective that is long term and wide ranging.
8. Ensure that specific expectations developed by the Chief Forester and others are clear so forest professionals know what the expected outcome on the ground is. Advice that uses vague statements about a percent reduction in some values will force decision makers to default to short-term economics.
9. Establish greater economic incentives for the forest industry to harvest the dead wood.
10. Develop strategies for the appropriate use of forests of green wood not affected by MPB.
11. Develop partial cutting incentives for harvest innovation in mixed stands that protect live trees and secondary structure in a MPB-affected forest.
12. Offer greater incentives for the forest industry to focus on long-term forest resource management and innovation.
13. Provide technical resources for proper forest management implementation at the operational level. This is different than prescribing the details of what to do in the forest operationally and focuses on supporting good forest management tools such as inventory, research and the technology transfer of information to forest professionals who direct the implementation activities.
14. Improve the management of young stands because every tree for the mid-term timber supply is already in the ground and growing.
15. Invest in updating all forest inventories in the MPB affected forest.
16. Invest in a broad range of establishment and intensive silviculture techniques to enable forests to mature earlier and keep forest worker expertise within the community.
17. Government must include the long-term perspective in land use decision making and not solely base it on short-term economics.

Additionally, once decisions or strategies for communities and others are complete, the Ministry of Forests, Lands and Natural Resource Operations must provide clear direction regarding the expected outcomes so that forest professionals can get on with the job of managing the forest resources.

For the sake of the communities involved and for the sake of the future forests, we need to ask ourselves in our management of forest resources, “Are we managing forests or just making rules to harvest dead trees?”

Finally, we have a challenging future but if BC is wise and acts now, the collective pain will be reduced and the province’s future in forestry will be bright. This clearly requires improved understanding and support for our valuable public forest resource—as soon as possible.

Appendix 1

The Three Scenarios

These are the three scenarios that were presented to the ABCFP members in **The Increment** e-newsletter.

Mid-Term Timber Supply Scenario 1: We Want Your Professional Opinion

The Union of BC Municipalities passed a resolution in 2010 asking the Minister of Forests, Mines and Lands to undertake a cost/benefit analysis of management constraints that limit timber supply in areas affected by pine beetle.

In response to this, MFLNRO is undertaking an analysis providing information on how changes in management practices could increase mid-term timber supply availability in MPB-affected areas.

The ABCFP would like to provide MFLNRO with ideas generated by our members for its analysis. Please review the following scenario and send your comments and responses to Mike Larock, RPF, director of professional practice and forest stewardship, at mlarock@abcfp.ca. **The deadline for responses is September 15th.**

Scenario:

A forest area includes a dominant lodgepole pine inventory and in the last decade it has been devastated by mountain pine beetle (MPB) infestation. The forest has provided logs to three local sawmills, jobs for two communities and supported a wide variety of other forest values for many years. Now there is talk of a significant reduction in the merchantable forest types as result of MPB mortality and a corresponding reduction in wood supply to the local mills over the next 30 years. The local communities and businesses are quite concerned that this reduction in the mid-term timber supply would dramatically affect the health and viability of their community. In addition, the land use plan for this area that was previously worked on by communities and public of the region, is now less relevant because of the insect damage to the forest.

For the last few years, companies have been harvesting dead trees and stands within the provincial forest for milling opportunities and communities have been attempting to improve their safety within their surrounding forest areas for recreation and reduced fire hazard.

The community leaders have approached the local forest companies and Forests, Lands and Natural Resource Operations to reduce the economic impact on communities by harvesting forest areas that were previously identified to deliver non-timber forest values. In particular, the community leaders have suggested that the objectives for visual quality, wildlife tree retention and old growth management areas are areas for potential alteration (e.g. visual VQO drop from PR to MM or biodiversity from 7% to 3% or allow harvesting within old growth areas). Naturally, the communities are interested in having the least impact on those non-timber forest values while striving for the strongest economic gain.

Questions:

1. What is your professional perspective on the alternatives being suggested?
2. What are the important points that the public owner should consider in making these choices?
3. a) Are there other ways to help rural communities recognize the economic benefit from the forests?

b) Do you have suggestions on any type of forest management strategy that will assist in offsetting the mid-term timber supply fall down?

Mid-Term Timber Supply Scenario Part 2: We Want Your Professional Opinion

The Union of BC Municipalities passed a resolution in 2010 asking the then Minister of Forests, Mines and Lands to undertake a cost/benefit analysis of management constraints that limit timber supply in areas affected by pine beetle. In response to this, MFLNRO is undertaking an analysis providing information on how changes in management practices could increase mid-term timber supply availability in MPB-affected areas.

The ABCFP would like to provide MFLNRO with ideas generated by our members for its analysis. Please review the following scenario and send your comments and responses to Amanda Brittain, ABC, director of communications. The deadline for responses is September 30th.

Scenario:

A particular landscape in the Interior of the province occupies low- to mid-elevations within the Interior Douglas-fir ecosystem (IDF.) This area is largely comprised of uneven-aged stands of fir on marginally productive sites that interface with grassland ecosystems and private ranchland. The ponderosa pine and lodgepole pine have been heavily impacted by the mountain pine beetle in recent years resulting in reduced stand volume and a higher loading of coarse woody debris. Other forest health agents such as root disease, fir beetle and tussock moth have been active in this area as well. As a result of these factors and previous stand entries (selective harvesting), drought and negative climatic effects, the existing forest cover is under significant pressure. The combination of these issues makes the site marginal for any harvest opportunity and creates additional risk of failure for subsequent silviculture activities. Existing forest tenure holders in this area continue to avoid operating in these stands.

Due to ongoing mortality from pine beetle and other forest health agents within the timber supply area (TSA), there is significant negative pressure on the future timber supply. Several large sawmills in the region are forecasting reduced shifting or possible closure in the next few years due to wood supply shortages. The forest licensees in the TSA (with replaceable and non-replaceable licenses) began discussions with the province to examine any and all opportunities for continued access to fibre. The discussion arrived at the conclusion that these marginal stands of dry-belt fir should be examined further but would require different incentives in order to become economically viable. Two different proposals are reviewed in light of these challenges:

A. The ministry could relieve or minimize reforestation and silviculture costs for any licensees willing to harvest in these stand conditions. This reduced expenditure would reduce the liability to the license holder and provide greater economic security to facilitate entry into these stands.

B. Selective harvesting prescriptions would be considered and silviculture costs would be waived, provided that groups of understory regeneration would be protected. Each stand would have to be surveyed in advance in order to determine its current stocking level and suitability for this alternative strategy.

The point is made that these dry-belt, transitional forests are constantly in flux with the grassland ecosystem and that reforestation is therefore unnecessary. The proponents of the idea feel that natural regeneration in these areas would be more successful and reduce unwarranted costs or risks to planted stock.

Questions:

1. What is your professional opinion on the suggested incentives to harvest these stands?
2. What are the critical considerations for working through this kind of decision process and how does the public interest factor into that?
3. Do you have suggestions on any other type of forest management proposal that will assist in offsetting the mid-term timber supply fall down?

Mid-Term Timber Supply Scenario Part 3: We Want Your Professional Opinion

The Union of BC Municipalities passed a resolution in 2010 asking the Minister of Forests, Mines and Lands to undertake a cost/benefit analysis of management constraints that limit timber supply in areas affected by pine beetle. In response to this, MFLNRO is undertaking an analysis providing information on how changes in management practices could increase mid-term timber supply availability in MPB-affected areas.

The ABCFP would like to provide MFLNRO with ideas generated by our members for its analysis. Please review the following scenario and send your comments and responses to Amanda Brittain, director of communications. The deadline for responses is October 15th.

Scenario:

A Timber Supply Area (TSA) in the Interior of the province has been heavily impacted by mountain pine beetle over the past decade. An uplift to the AAC was implemented for a number of years to allow additional salvage and recovery of dead and dying pine. It was also clear that a reduction in the AAC would follow, once the affected pine had been harvested. The pine-dominated forests that were targeted for harvest during the AAC uplift period are close to several communities and sawmills. The majority of these forest areas are now in a regenerating condition. The communities have approached the government and requested that increased timber be made available closer to town. The forest profiles of immediate interest are also where multiple resource values have been recognized through land use planning processes. After a review, forest professionals working for government and for various tenure holders have jointly responded to the communities with the message that there is no further development potential close to town without compromising the stewardship of the forest resources. They point out that the balancing process regarding forest resource values was previously completed and the inherent social and environmental values of these areas were identified and protected. They go on to explain that the uplifts have been completed and that 'good forest stewardship' infers the ongoing protection of those forest profiles; however, other merchantable stands of timber exist in more remote locations and the business community needs to adjust and explore the potential of these opportunities.

Questions:

1. Is the local public's interest greater than that of the provincial public?
2. If the communities are willing to see an increased environmental risk associated with increased harvest, what advice does the profession provide to the member who is asked to take increased professional risk regarding the principles of stewardship?
3. Is this an appropriate message for the local public?
4. Looking back on this scenario in 30-50 years' time, what might practitioners say that we should have done differently?
5. What could the forest professionals advise the community regarding different strategies for business. For example, large scale government investment in forest improvements (such as fertilization and thinning) or the management, sale and business development of Non-Timber Forest Products.