

**THE ALBERTA MOUNTAIN PINE BEETLE
ADVISORY COMMITTEE**

**RECOMMENDATIONS
FOR
COMMUNITY SUSTAINABILITY**
September, 2007



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The Alberta Mountain Pine Beetle Advisory Committee

Recommendations for Community Sustainability July 2007

1. Introduction

The Mountain Pine Beetle (MPB) poses a serious threat to Alberta's forests and to the industries and communities that rely on a healthy fibre supply to sustain regional economies. Assertive actions are required to minimize the impact of beetle infestations and to manage government and community responses to the social, environmental and economic consequences. Strategies to address the threat are likely to affect many groups and stakeholders. To address these concerns the Minister of Sustainable Resource Development has established a Community Sustainability Working Group (CSWG) (Appendix 1) through the Mountain Pine Beetle Advisory Committee (MPBAC). This report summarizes the work of the CSWG as reviewed and validated by the MPBAC.

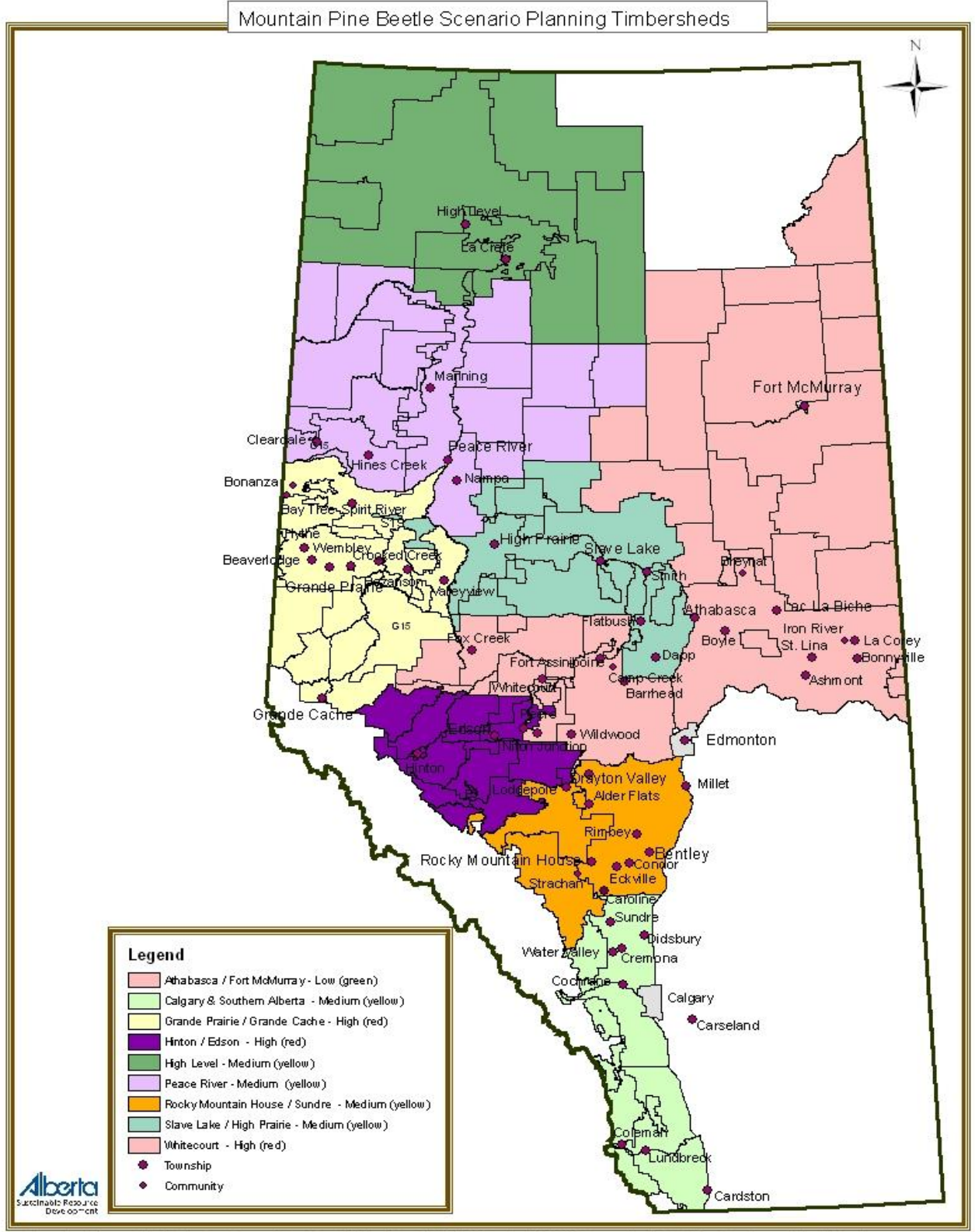
2. The Community Context

The MPB is a serious provincial issue that will directly and indirectly affect the health and long term sustainability of Alberta based communities. Many rural communities are dependent on the forest industry, the products they generate and their long term sustainability. The MPB poses a serious risk to individual companies, the industry and to the communities that rely on them. An infestation is inevitable and strong and decisive action must be taken immediately to position all parties to respond in the most favorable way.

Alberta's forests are of incredible value and that asset must be managed accordingly. Alberta must learn from the BC experience and act early and decisively. BC estimates that its pine dominated forest estate is a \$240 billion asset and each pine dominated hectare has an asset value of approximately \$40,000. The cost of rehabilitation is estimated at \$2,000/hectare. Asset management is clearly required.

Forestry is important in Alberta and is one of Alberta's four pillars of economic diversification. There are 50 communities in Alberta where forestry is a primary economic driver and twelve of those communities are forestry dependent (Figure 1). The industry employs 54,000 Albertans and an additional 15,000 are in the service sector. Annual direct revenues approximate \$5.5 Billion and provincial revenues are approximately \$470 million (personal and property taxes and stumpage). The industry and the communities they support, run the risk of being seriously impacted by the MPB.

Figure 1 – Communities and Timbersheds



The MPB crisis demands a serious look at issues challenging community sustainability. Positioning communities so they are resilient and adaptable to significant change, no matter what the threat may be, is the road communities are determined to travel. The MPB is here to stay and will run its course. It will have a profound impact. It is expected that it will take a heavy toll on fibre supplies and the industries that depend on them. Clearly, it is in the community's best interest to anticipate a worst case scenario and plan accordingly. Relying on cold weather is a risky business.

The communities prefer to leave nothing to chance. While it is possible that the MPB may not reach infestation levels, the BC experience strongly suggests that preparation for the worst is the most prudent form of action. Consequently, the communities have adopted an approach of "Hope for the best and plan for the worst". Communities have every intention of being proactive and being as prepared as possible.

The challenge for the communities is to determine when and how to respond to this threat. Responding to these concerns requires an assessment of the exposure that communities have and how vulnerable they may be. Clearly, the results vary by community but this level of assessment and analysis is important in determining risk on a regional basis. Strategies for adaptation will then need to be determined. Knowledgeable and prepared communities will be able to capitalize on opportunities as they emerge.

It is absolutely necessary to create an environment that encourages investment and diversity. Provincial and community leadership must ensure communities are well equipped to make necessary adjustments. Resources must be used in the best way possible to assist communities in making necessary adaptations. It is imperative that we act quickly and plan accordingly.

3. Process Overview

The mandate of the CSWG is to make recommendations through the MPB Advisory Committee to the Minister of Sustainable Resource Development on how to enable adaptation and position communities for long term sustainability.

It is important to note that this report is prepared from the perspective of the community and what the community needs to do to respond responsibly and strengthen resiliency and adaptability. CSWG members are not predicting outcomes, nor are they forecasting infestation levels, fibre availability or community impacts. Rather, they have assessed what the impact **might be** if an infestation occurs and how they should best respond under those circumstances. Their choice is to be proactive as the investment of time and energy will be well served with or without an infestation. Never the less, the BC experience strongly suggests that a worst case scenario is the best planning approach.

The CSWG predicated its work on a set of informed assumptions because outcomes arising from the MPB outbreak are uncertain and difficult to predict. It is assumed that:

- a. The mountain pine beetle cannot be controlled but it can be slowed.
- b. The outbreak will have a significant social , economic and environmental effect on communities
- c. It is best for all involved to plan on a worst case scenario.
- d. While impacts will be significant mitigation can moderate their affect.

- e. Communities will not be able to make necessary adaptations on their own. Communities, industry and government(s) must immediately begin to cooperatively work together.
- f. It is anticipated the outbreak will last at least 10 years and surge harvesting could occur for as long as 20 years.
- g. In the long term, the forest will return to a healthy state and communities will continue to access and use it in responsible ways.

The CSWG met five times to learn more about the beetle challenge and dynamics, review research findings, review risk assessments and then to develop recommendations. Extensive research was conducted to review published material and to consolidate findings. In addition, a vulnerability assessment process was designed and conducted on communities and timber sheds to determine relative community risk. All background information and assessments were instrumental in assisting the CSWG in formulating its recommendations.

4. Research Findings

The CSWG conducted an extensive review of published research and heard presentations from a variety of experts. The working group has determined that the following findings are material to the discussion of MPB challenges and for the determination of recommendations:

a. Market

Market conditions for the forest industry are very poor and have not yet bottomed out. US housing starts are significantly down and offshore imports into the US are rising. Lumber and oriented strand board capacity significantly exceeds demand, putting further downward pressure on prices. While a weak Canadian dollar is helpful, it continues to strengthen and has recently risen over the 90 cent mark and is predicted by some to exceed a dollar in the near future.

The challenges the industry is currently facing are not part of the normal product cycle. Market conditions suggest that fundamental changes to the industry may be in order. Under current conditions smaller sawmills, chemi-thermo-mechanical pulp mills and older oriented strand board mills are likely at risk. If the MPB challenge necessitates higher levels of harvest there may be few markets for increased production. Over supply will continue to drive down prices.

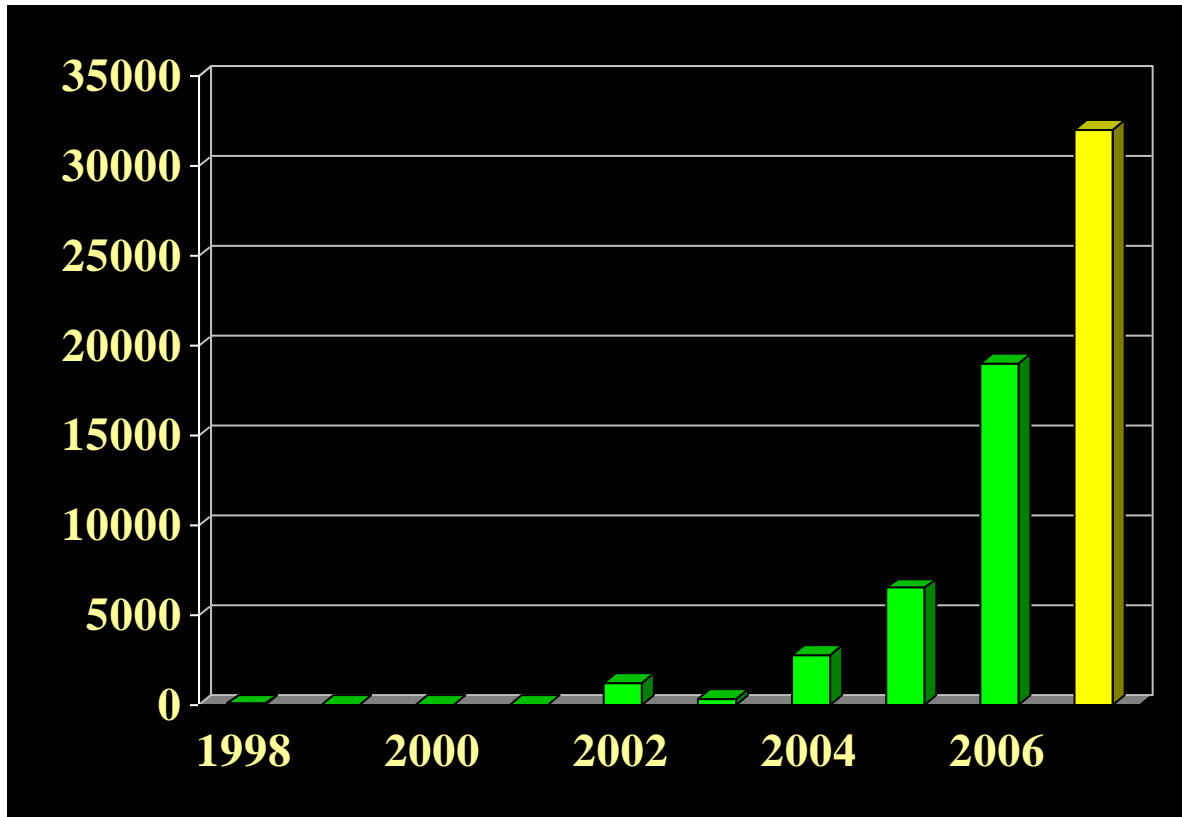
While these circumstances are factual there are some positive longer term signals. US housing starts are expected to climb back up to 2.2 million in 2009. Lumber production will decline over the next ten years in the BC interior and there is an opportunity for Alberta to seize on this. Pulp and paper has recently shown some positive signals in part due to 23 Canadian closures of old inefficient mills predominately in eastern Canada. The export of Russian logs into Asia has been curtailed providing Canadian access to one of the world's strongest markets. Supply is slowly coming into balance with demands as older less efficient mills go out of production. Alberta mills are well positioned to adapt as they have some of the most modern and efficient technology available in North America.

b. The Situation

The current infestation is more significant than originally expected, currently estimated to be > 3 million trees under attack (Figure 2). The infestation is largely in the northern portion of the East Slopes and Grand Prairie region but has the potential to spread significantly. The extent of the current infestation will be better known this summer when infested trees die and turn red.

Future risk is strongly influenced by beetle mortality and current estimates suggest mortality was significant in the north (80% in the Peace Country and 60% in more southern areas). However, this level of mortality is not significant enough to contain population growth. Furthermore, BC expects at least another three years of high beetle populations which could migrate into Alberta again as they did last year.

Figure 2 - Number of Infected Trees



* scale is multiples of 100

A 35 – 50% decline in lumber production is predicted for the BC Interior between 2010 and 2014. This decline is expected to be long term (30+years). The reduction in BC is predicted to be offset by an increase in Alberta lumber production. In BC the infestation occurred faster than anyone anticipated. The probability of “controlling” the infestation is low. A cold winter is the best control but that cannot be predicted or relied upon. There is no scientific evidence that control measures have been successful in anything other than slowing down the rate of infestation.

c. Urgency

British Columbia underestimated how quickly the infestation grew and over estimated how long dead wood could be utilized. Alberta must act quickly and decisively to determine how to manage the forest, access the wood and capitalize on the excess biomass that will come available.

d. Current Management Actions

The current GOA management strategy is a combination of the Healthy Pine Strategy and direct control methods. The Healthy Pine Strategy (harvest 75% of over mature pine in 20 years within the working forest) will work in Alberta if the beetle does not reach infestation levels. This strategy should be employed throughout the pine forests of Alberta. It is designed to predictably change the age class structure of Alberta's pine forests aiming to achieve a mosaic of age classes compatible with other resource values such as water, wildlife and biodiversity. In areas where the pine strategy can be employed current mill capacity can handle the volumes generated by the accelerated harvest. Unfortunately, this strategy is probably twenty years to late for many areas and is not viable where infestations have occurred.

GOA control methods consist of two primary strategies. Level 1 control consists of identifying and removing single trees that have been attacked. Level 2 consists of whole stand removal where infestations levels are higher and more pervasive. The Grande Prairie area already has 3 – 4 million infected trees. This is well beyond the capacity of level 1 (single tree removal) strategies. Even though the healthy pine strategy may not meet all immediate beetle control requirements, every year it is implemented is value gained by reducing the inventory of susceptible forest. In fact, accelerated implementation can achieve maximum value while carefully managing other resource values like water, wildlife and biodiversity.

For analysis purposes the forest has been segregated into timber sheds with associated communities (see Figure 1). SRD is conducting a detailed scenario analyses based on various levels of beetle infestation and the potential impact it may cause in 5, 10 or 20 years for all timber sheds. These analyses are likely to take up to a year to complete. Impacts on the AAC from the healthy pine strategy or a MPB infestation are highlighted in Appendix 2.

A well thought out management structure is in place to respond to the MPB. Because the Government of Alberta (GOA) is treating the MPB as an emergency, the management structure established to address the MPB crisis is modeled after fire control structures.

e. Fibre Availability

Depending on location and structure of the forest, a worst case MPB outbreak could result in long-term reductions in annual allowable cut of pine from as little as 20% and as much as 80%+ where the worst case is defined as 100% mortality. Currently there is approximately 50% mortality in BC forests and some units are as high as 90%. In the latter case it took 12 – 14 years to reach 90% mortality. In Alberta it is anticipated that this will occur much faster because the infestation is a combination of endemic beetle populations plus large flights from BC. This is an important time period when the healthy pine strategy can reduce inventory of susceptible pine.

Under a worse case scenario, up to 17.84 million m³ of pine (11M sawmill plus 6.84M pulp mill) can be harvested annually and processed at existing mills (SRD analysis). This is more than twice the current harvest levels for pine. Significant biomass, well beyond the forest industries capacity to process it, will also be available. Approximately 300 million m³ of additional biomass could become available over a 20 year period. Appendix 3 illustrates these findings.

f. Business Capacity

Existing manufacturing facilities in Alberta have some additional capacity but if the infestation gets worse there will be significant excess fibre available (up to 300 million m³). Given that significant fibre increases are expected it will be necessary to integrate salvage timber into

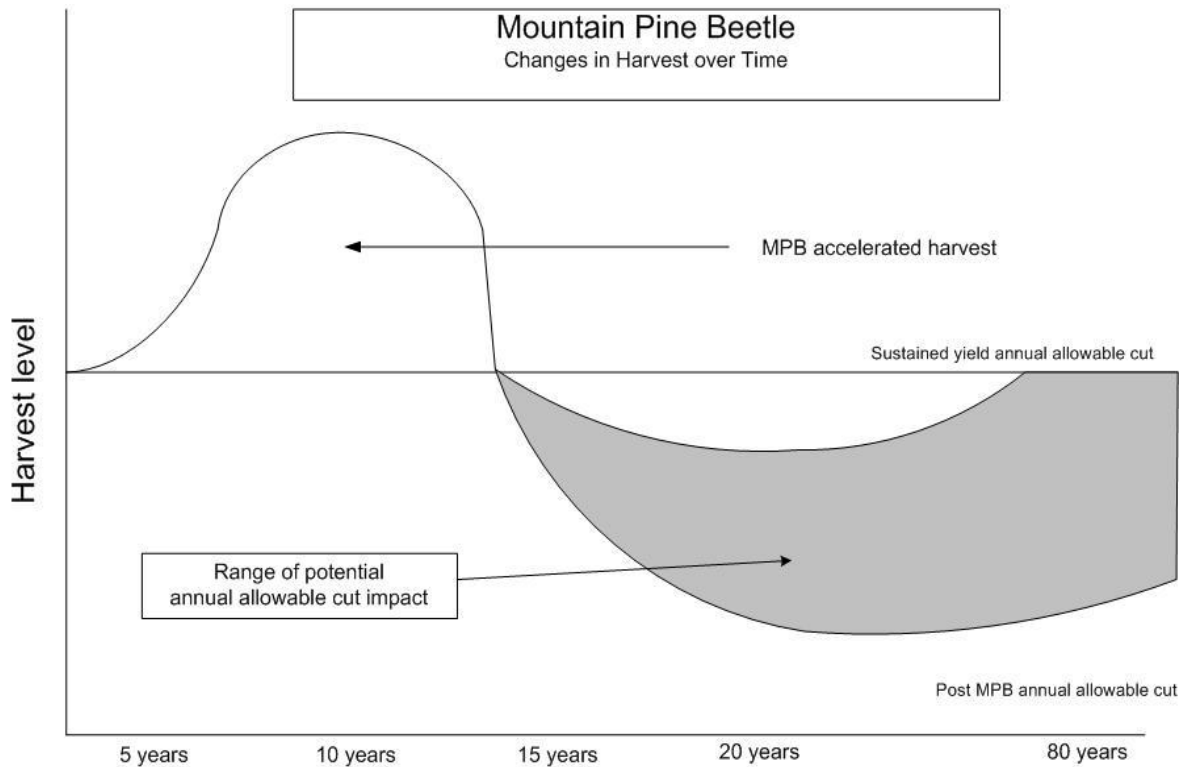
established manufacturing facilities and to establish new markets and opportunities for fibre use that is well in excess of current or enhanced mill capacity. A worst case scenario will generate enormous volumes of biomass that cannot be consumed by the existing mill infrastructure.

While volume will become available, it may not be economic to access it either for existing facilities or for new biomass opportunities.

g. Harvesting Activity

MPB control strategies will result in significant “surge cuts” that will generate short term spikes in fibre volume available. These will be followed by longer term declines in annual allowable cut that could have a material effect on the viability of forest manufacturing facilities. In the short term (15 years or less) the available timber supply will be characterized by increases from the baseline annual allowable cut in order to capture value from the standing dead timber. In the long term, reductions in the annual allowable cut are expected resulting from the MPB mortality and the lag time needed to regenerate the forest.

During the surge period harvesting could more than double. If no infestation occurs the Healthy Pine Strategy will result in modest impacts to the annual allowable cut. Under a worse case infestation scenario the post surge period annual allowable cut is expected to decline from 20 to 80% depending on location and forest condition. Figure 3 illustrates the anticipated MPB harvest pattern. The healthy pine strategy is one way to assist in mitigating these outcomes. There are a number of forest management practices that could be employed to help off-set future annual allowable cut losses including enhanced forest management, growth and yield programs and reforestation standards.



The shelf life of standing dead timber for lumber production is still very uncertain but is anticipated to be 2 – 5 years, well below the original estimates of 5 – 15 years. The use of standing dead timber for other products is estimated to be 5 – 15 years. Utility of dead wood varies by region, moisture regime, tree size and form. The wood lasts longer on high and dry sites while it may be of no use after 3 years on low and moist sites. MPB wood degrades over time as it dries and the grade quality of lumber produced declines as well. New mill technology is helping to extend the useable life of this resource as well. Lumber can be made from dead wood for longer than 5 years but it is driven by the cost of production in relation to the declining value of the product.

The MPB infestation also poses additional fire risk due to increased fuel loading and abundant dry dead trees. MPB fire risk is highest for the first 2-3 years after the tree dies and the needles turn red and fall off. This risk declines for approximately 8 – 10 years and then increases again when trees start to fall down. This is another good reason to optimize harvesting.

h. The State of Research

Most existing research is BC based and focused on the beetle itself and the impacts on fibre supply and the forest. There is very little relevant Alberta based research.

Considerable data/information exists from Statistics Canada and some other Alberta based sources regarding demographics and socio-economic information. However, the economic information required to make meaningful inferences/conclusions about potential risk is not readily available. Very little of it is bundled as forestry based information and it is exceedingly difficult to draw this information out from existing sources. As an example forestry is usually embedded in the broader category of manufacturing.

Impacts of the MPB are not necessarily only related to fibre production. It will/could affect tourism, and other natural and ecological attributes. The impacts on forest resources and ecology associated with beetle control are largely unknown. It is expected that there will be some impact on habitat, hydrological function and fire probability.

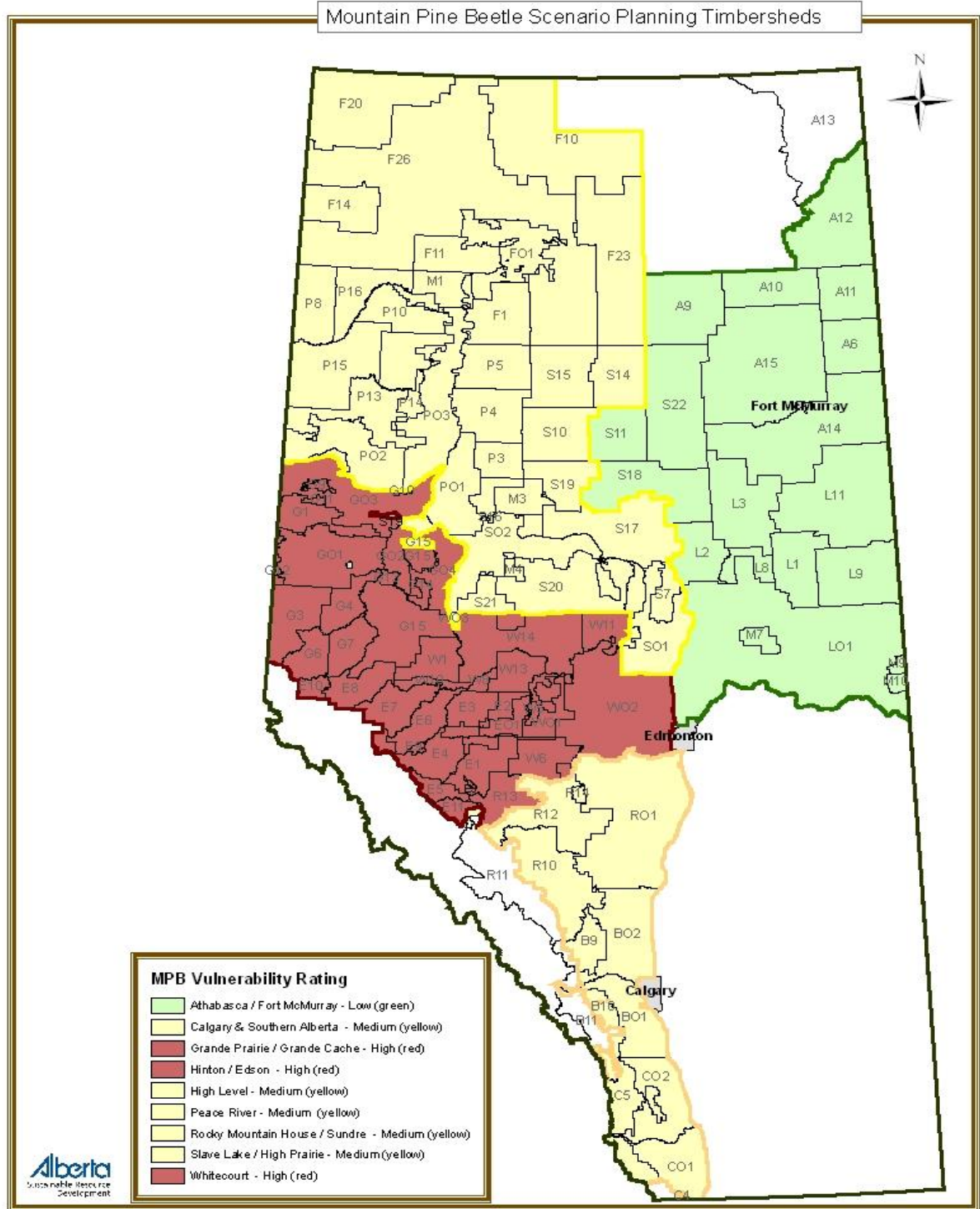
i. Community Vulnerability Assessment

Vulnerability is a function of the degree of exposure and the adaptive capacity of the community. With regard to exposure, affects on communities vary depending on the proportion of cut that is pine based, its relative susceptibility, the age class structure of the forest and the anticipated impact on susceptible pine. It is projected that impacts could be as small as 20% and as large as 80% + on the available annual allowable cut.

An assessment of community vulnerability was conducted for all of Alberta's timber sheds based on a list of predetermined criteria (e.g. percentage of pine, existing facilities, employment dependence etc.) Figure 4 illustrates regional variation in vulnerability and identifies timber sheds as highly vulnerable (red), medium vulnerability (yellow) and low vulnerability (green). These assessments were made by identifying all operators, their dependence on pine, presence of MPB, identification of all communities, their total population, forest sector employment, contribution to local tax bases and other pertinent factors. Based on a qualitative analysis conducted by Price Waterhouse Coopers, at this time the highest risk forests and communities are Grande Prairie, Grande Cache, Hinton, Edson and Whitecourt (Appendix 4). These findings suggest these communities should be looking at transitioning to more diversified economies.

There is concern that that natural gas and conventional oil supplies could diminish over the next twenty years coinciding with the MPB impact. A convergence of declining supplies of renewable and non-renewable resources would pose additional challenges to communities. Any declines in the energy sector will need to be off-set by other emerging economies.

Figure 4 – Community Vulnerability Ratings



j. Community Implications

The short term “surge impacts” will reflect a relative boom to the regional economies as forest sector activity increases to handle the volume of available timber. This increased activity will cycle throughout the economy providing spin off benefits to other sectors such as the service sector and retail trade. The “boom period” is likely to last 10 to 15 years followed by a significant downfall.

The longer term economic implications of the MPB infestation are negative as the available timber supply is expected to fall below long term annual allowable cuts. In other words, economies will not return to a business as usual state once the wood runs out or is no longer commercially marketable. In this context there needs to be industry and community recognition that things will change and it may have a material affect on types of employment and earned income (i.e. tourism) expected.

Greater community understanding is believed to lower risk as heightened awareness is linked to positive actions. The communities are not as well informed as they should/could be. Very little work has been done that focuses on community impact and responses. It is anticipated that a “surge economy” will lead to heightened social issues (substance abuse etc.). Transitional support must be provided to assist communities in determining their own future. There is also an expectation that communities will lead their own renaissance and find a way to put differences aside and work together.

Communities must feel that the forest is being managed properly, infected trees are being removed and the fibre is being put to good use. Community messaging must reflect community sustainability as a priority consideration. It is also understood that there will be environmental impacts affecting water, wildlife and other forms of biodiversity. The communities are prepared to make short term value shifts to capitalize on the available fibre supply and optimize the economic contribution that can be realized. Sustaining the economy of communities is a very important objective.

While some communities are quite well diversified, the forest sector is still a dominating economic force in many communities. The surge cutting period offers some opportunities but the energy sector will be a significant competitor in a tight labor market. In the longer term, it cannot be assumed that the energy sector will absorb potential employment losses. Communities must act now to plan their transition and build the required tools to facilitate change.

Some opportunities are emerging. Initiatives to engage all ministries of government are underway. The Government has clearly signaled its interest in establishing and stimulating bio-economy activities. Significant resources are available to stimulate and facilitate advancements in the emerging bio-economy but the programs primarily target the agriculture sector.

k. Risk to other Values

The impact of the MPB on other resource values needs to be an explicit consideration. Other values are impacted in the short term as well as in the long term with respect to other land uses. Clearly, the impact of an infestation is felt well beyond the forest sector. Managing risk for a variety of land uses is necessary.

In the short term, the MPB will affect natural and ecological attributes. It is expected that there will be some impact on habitat, hydrological function and fire probability. Infestation areas may overlap with species at risk such as Woodland Caribou and Grizzly Bear. MPB will have an affect on hydrological function and careful planning will need to occur to ensure headwater areas are wisely managed. The impacts on forest resources and ecology associated with beetle control are largely unknown and additional research will be required.

It is recognized that longer term impacts will affect other land uses. Dead fall from an infected forest will have negative affects on established trail systems, grazing allotments and the maintenance of fences as an example. Deadfall is likely to be a serious issue for companies responsible for transmission lines and the associated risk of fire. MPB will also affect tourism but its impacts on that industry are largely unknown at this time. These are serious challenges that need careful consideration and thoughtful planning.

l. Public Policy

The BC government was slow to respond and eventually shifted perspective from one where the problem can be controlled to adapting to the inevitable crisis. Alberta should learn from and apply this lesson in developing its own management strategies, including early engagement of the communities.

The Alberta Government has now acknowledged MPB as a forest health emergency and \$50 Million will be made available through emergency funding to conduct control work. Some government programming exists to support regional/community development but it was not designed to respond to the MPB issue. In addition, the Federal Government has signaled that they will be providing some financial support to Alberta.

The MPB issue will challenge our existing public policy structure for forest management. Normal sustainability approaches like sustained yield management are not likely valid. Access to available fibre will need to be enabled to ensure that business, communities and Albertans receive as much value as possible from the resource.

m. BC Field trip

The geographic extent of the beetle infestation is enormous and the amount of red and grey timber staggering. BC has the same pine age class problem Alberta does (too many old trees). With respect to fibre supply, it is important to have near, medium and long term perspectives. It was evident from the field trip that there was considerable “unused biomass in an unusable state”, a condition Alberta wants to avoid.

It was clear that the community had taken many matters into their own hands and was driving political and policy performance at a regional scale. All assets have been engaged to find solutions including legislation, policy, tenure and funding. To help counter the “bust” the communities believe it is important to have the “boom” be the best it can be. Inter-jurisdictional cooperation at the federal, provincial and local levels is also critical to management success. It was equally evident that strong community leadership is a necessary ingredient and dynamic individuals are necessary to help drive performance.

Watershed management is an uncertainty and a growing concern. There is not enough knowledge to understand the full extent of the impact and additional research is required. Recent research suggests that dead stands have 50 percent of the hydrologic function that live stands do. Leaving stands with good under story vegetation may be one way to assist in watershed management.

It was also evident that managing all values was an important element of an appropriate mitigation strategy. BC has the benefit of completed land use plans which are the instruments for making broad scale value judgments and trade-offs. Alberta would benefit from good land use planning. In addition, other management challenges such as blow down, blocking of hiking trails, damage to fences all have an impact on other values and also need to be managed.

n. Grande Prairie Field Trip

The Government has conducted some mortality surveys and has concluded that there was good beetle survival in the southern foothills. We should expect to see an increase in infected trees in that region this year. In the north, there was higher mortality. We should expect the number of infected trees to be similar to last year. Slave Lake appears to be the eastern edge of the current beetle spread.

Regional forest companies are working with Government to adjust their harvest plans to address MPB challenges. A determination of “most susceptible stands” has been completed and forest companies will be targeting harvest of those stands. In addition, areas that are considered valuable for Woodland Caribou will be avoided, at least for the next ten years. OSB producers normally use hardwood for production but have the capacity to transition to a pine/aspen blend should excess fibre become available.

The MPB Municipal Grant Program has worked well. The program exists to address MPB challenges on private land and is supported by sixteen municipalities. Primary funding is provided by the provincial government. Surveys are conducted to determine where beetle attacks have occurred and direct control measures are then used to address infected trees/stands where permission has been granted by the land owner. The program has matured nicely and the costs of per/tree removal are expected to decline by as much as \$5 to approximately \$15. The program enjoys broad support.

Findings Summary

There is much to be learned from the experience of BC and the research conducted to date. In summary, the primary findings are:

- a. The MPB infestation cannot be controlled but may be slowed down.
- b. Alberta has an over abundance of mature pine, the primary beetle food source
- c. Alberta must anticipate a complete infestation and plan accordingly
- d. The MPB challenge must be addressed at the landscape level.
- e. There is about a ten year period available to implement a transition to a post beetle economy.
- f. Alberta will experience short term “surge” benefits as harvesting is doubled, followed by significant longer term declines in traditional harvesting and processing
- g. Significant volumes of biomass will become available
- h. All values must be considered in determining management actions
- i. There will be environmental impacts that will need to be managed
- j. The risks are very high and doing nothing is not an option
- k. Inter-jurisdictional cooperation is a necessity
- l. Communications/knowledge sharing is critically important
- m. The time to plan and act is now

5. Policy Direction

The CSWG spent considerable time discussing the direction that policy and programming should take to enable the most prudent management response to the MPB challenges. They concluded that performance should be driven by a clear articulation of community vision, a set of principles and some fundamental shifts in thinking and practice.

a. The Vision

Vision is a compelling statement of a desired future state. In the context of the MPB, the CSWG discussed their vision for sustainable communities:

In 2025, our communities are healthy, sustainable, resilient, adaptable and successful at balancing social, economic and environmental needs. The forest is healthy and well managed, aesthetics and water quality are maintained and a wide range of forest based ecological services are sustained. The community has adapted exceptionally well and the structure of the economy has shifted to become more diverse. The communities are enjoying the quality of life they desire including stable jobs, good wages, a wide range of services, social support systems and recreational opportunities.

b. Principles

Principles are fundamental decisions that form the foundation for establishing acceptable strategies and actions. The principles recommended by the CSWG are:

- i. The existing primary forest industry is the platform for other value added opportunities and should be maintained and supported in their efforts to respond/adapt.
- ii. There should be no direct cash subsidization to sustain existing operations. Existing international agreements will be respected (i.e. Softwood Lumber Agreement).
- iii. Biomass is an incremental opportunity and should be pursued in a way that does not jeopardize existing industry. Incentives to stimulate research, adaptation and the development of new or different industries and industries that use biomass should be developed and made available. Existing forest management tenure holders should be eligible.
- iv. Additional/unused fibre should go to the highest economic use. Fibre use and job creation should be optimized.
- v. Investors are expected to stimulate and drive growth and capitalize on the opportunities the MPB may present.
- vi. Public policy adjustments must be made wherever necessary to ensure full utilization and maximum derived benefit.
- vii. Sustainable forest management principles should be applied. All resource values should be considered in developing a balanced approach to accessing MPB wood.
- viii. Adaptive management must be employed to ensure timely and responsive management changes based on achieved performance.
- ix. The Government should demonstrate strong and clear political leadership and be prepared to make tough choices that are in the best interests of all Albertans.
- x. Financial and human resources should go to where they are needed most. Not all communities will be impacted the same and resource demands should reflect this reality.

- xi. The GOA must lead, stimulate and facilitate opportunities that are only possible when considered at the provincial level (e.g. bio-products, non-dimensional lumber).
- xii. Industry, government and the community must cooperate in developing mitigation strategies and assisting community adaptations.
- xiii. Community solutions must be built on and developed by a knowledge-based community. Each community is unique and will have its own solutions.

c. Strategic Shifts – Transformational Change

The CSWG was very conscious of the fact that the MPB circumstances will require significant shifts from our current way of thinking to address these difficult challenges. Government, industry and communities need to be prepared to change the rules to ensure adaptation is enabled. The major shifts envisioned are:

| From | → | To |
|---------------------------------|----------|-------------------------------------|
| Strengthening Industry | | |
| Sustained Yield | → | Healthy Pine Strategy |
| Current forest policy | → | Rationalized forest policy |
| Commodity focused | → | Broader and new product range |
| Waste | → | Wealth |
| Strengthening Community | | |
| No MPB planning | → | Planned and deliberate MPB strategy |
| Sector based economy | → | Diversified economy |
| Centralized provincial services | → | Distributed regional services |

With regard to strengthening industry, it is in the community’s best interest to support and help sustain current forestry operations. Communities support the development of the healthy pine strategy as it assists in managing the infestation while returning the forest to a more natural age class distribution. Communities are prepared to assist in ensuring maximum value is derived from the MPB killed wood. Surge harvesting is appropriate. Changes to public policy should be made to ensure optimal utilization. Industry is encouraged and supported in broadening its existing and new product offering. Industry must make the investment in converting waste into wealth as biomass availability will present many opportunities. In the context of harvest maximization all resource values must be considered and impacts on biodiversity, watersheds and wildlife values appropriately mitigated.

With regard to strengthening the community, it is in the community’s best interest to position itself to be as adaptable as possible. Communities are committed to becoming more self reliant by planning for and supporting economic diversification. Knowledge based planning supported by timely decision making will be community driven and designed to enhance resiliency. Government can support this move by making a deliberate choice to invest more in forest based communities, enabling residents to access more services and encouraging them to continue to reside there. Economic and social infrastructure must be located in the communities.

The communities also understand that there will be environmental impacts and short term value shifts are acceptable under the circumstances. Trade-offs will be required and some

sacrifices made to ensure the community economies can be sustained and resources are not wasted. The environmental risk of doing nothing is equal to the risk of action. In the absence of use, there is risk of fire, property loss and watershed impacts. Maximizing the use of available is an important economic objective that will put pressure on some other values. The impacts on other values must be monitored and appropriate mitigation steps taken.

Collectively, the vision, principles and strategic shifts provide important direction to enhance the ability of business, government and communities to adapt to the MPB crisis and enhance community resilient.

6. Recommendations

In the context of the vision, principles and strategic shifts, the CSWG identified three broad recommendation areas supported with more specific actions required.

6.1 Community Sustainability

It is recommended that the Federal and Provincial governments work with communities to determine their sustainability and make necessary adaptations to enhance and improve their resilience.

a. Community Planning

- i. The development of individual knowledge based community plans needs to be mandated and co-funded by the Government of Alberta.
 - Planning funds made available must be on a priority basis for communities in the timber sheds where the highest vulnerability exists (see risk assessment).
 - The plans should be lead and developed by knowledgeable community based leaders and be completed by July 2009.
 - The availability of specialized expertise (i.e. planning, modeling etc.) is essential to assist communities in their deliberations.
 - The economic, social, cultural and environmental dimensions must all be considered and appropriately balanced to assure sustainability.
- ii. Comprehensive planning for community sustainability must address the whole economy and not just responses to the MPB.
 - Forestry, energy, agriculture, tourism, health, post secondary education, government services, the service sector, social services and other aspects should be addressed in a comprehensive fashion from the perspective of enhancing sustainability.
- iii. New community sustainability engagement processes need to be developed to provide community members the ability to drive community growth and development from a public interest perspective.
 - All parties involved in community economies will be required to participate, share plans, be transparent and commit to community sustainability strategies.
- iv. A best practices compendium of community transition techniques and practices must be developed immediately (using existing published resources) and made

available to all communities as resource material in support of planning and transition strategies.

- v. A detailed MPB infestation scenario analysis needs to be completed by SRD (January 2008) and the results widely shared with communities to validate community risk, set priorities and assist in the planning process.
- vi. The GOA should coordinate the overall planning process and clearly articulate planning expectations (i.e. template and guidelines) to ensure responses are meaningful and easily combined on a regional basis. A predetermined framework for assessment is essential for enabling integration and must establish clear metrics for performance.
- vii. The GOA must assume responsibility for integrating the plans developed by communities/municipalities and address relevant cross jurisdictional issues and opportunities.
- viii. The GOA must lead in identifying provincial opportunities (e.g. biomass availability) arising out of the MPB crisis and lead in the marketing and attraction of additional investment.
 - Communities that have the necessary infrastructure to support major development should be targeted. Opportunities must not be diluted by trying to satisfy everyone.
- ix. The GOA must make a deliberate decision to support broad scale multi faceted investment in forest based communities to assist in achieving sustainability.
 - Every effort must be made to locate infrastructure and services in regional communities. For example, investment in academic and training institutions and other social infrastructure should be made within the communities rather than centralized in major urban centers.

b. Research and Development

- i. The Government and industry should continue investment in research conducted to take full advantage of available fibre resulting from the MPB.
 - In support of current operations, research to investigate enhanced recovery and improved efficiency of MPB wood for conventional commodity production should be enhanced.
 - Development of economically viable bio-economy projects utilizing existing knowledge and technology must be accelerated with a view to identifying commercial opportunities within the year. There is considerable off the shelf technology that can be utilized today.
- ii. The Government and industry should continue investment in research conducted to ensure continued responsible management of the forest
 - The potential impacts of the MPB need to be assessed from a tourism perspective particularly as it relates to areas such as Canmore and other communities that are tourism dependent. A study should be commissioned to assess potential impacts and mitigation strategies.
 - Research must be initiated to determine the ecological effects of the MPB and accelerated harvesting practices and if necessary, new measures be put in place to ensure impacts on water quality, quantity and affects on biodiversity are minimized.

- MPB management must be integrated with the Water for Life strategy to ensure that water goals are properly delivered.
- iii. All MPB research initiatives and pilot projects should be located in and directed by MPB based communities. Researchers and research institutions should be accountable to the community for meaningful and timely results.

c. Fibre Utilization

- i. The Government should ensure that as much fibre as possible is made available for conventional or new uses
- ii. All surplus forest bio-mass should be made available and allocated to the use with the greatest return. Existing operations should have the right of first refusal.
- iii. Unless otherwise necessary, the existing forest industry infrastructure should be used to make unused biomass available. The existing industry should not be expected to subsidize the development of other industries.
- iv. The Government should manage accordingly to maximize mid-term fibre supplies and minimize fall down.
- v. The GOA should encourage cooperation amongst tenure holders in addressing MPB fibre management and wood flow. Industry cooperation is preferred but should it not occur, the GOA should consider taking affirmative action to ensure the public interest is served.
- vi. The GOA should proceed as quickly as possible to develop land use plans in priority areas of Alberta affected by the MPB. The land use plans must address value choices and achieve the necessary environmental, economic and social balance.
- vii. The GOA needs to develop a provincial biomass strategy to address and clarify policy issues regarding biomass use. The strategy should be developed in a consultative manner with input from affected stakeholders and should be completed by the spring of 2008.
- viii. The GOA must lead the evaluation and determination of regional fibre opportunities. To ensure the best use of the resource, investment proposals will need to be solicited through a structured RFP or Expression of Interest process following the completion of the biomass strategy. This process should be initiated as soon as possible after completion of the strategy.

6.2 Resources and Incentives

It is recommended that the Government(s) investigate, develop and implement incentives designed to achieve community sustainability objectives.

- ix. The GOA must act with urgency, establish a single source of consolidated funding that is dedicated to assisting communities and make this funding available immediately.
- x. The Federal Government should provide substantial assistance to advance community sustainability. Alberta should continue to aggressively lobby to ensure Alberta's interests are well represented and understood.
- xi. An MPB cross ministry initiative, supported by the Premier and the Minister of SRD, should be immediately established, integrated into the Government's business plan and human and financial resources made available through all relevant departments to enable necessary assistance.

- xii. The government should use positive incentives (tax breaks, accelerated capital cost allowance, X\$/bdt of biomass consumed etc.) to stimulate investments. Incentives need to be geographically applied to pre-determined “investment zones” where significant excess fibre will become available.
- xiii. The GOA must confirm and communicate that forest biomass is a fundamental component of Alberta’s biomass incentive program and appropriate resources dedicated or made available to it. GOA should strive to encourage utilization of incremental biomass by providing appropriate incentives.
- xiv. The government should use regulatory instruments where required to achieve desired objectives. Industry should be instructed to use all fibre or have it re-allocated to other users.
- xv. GOA should encourage maximum use of heat generated from power generation. Heat should not be wasted or vented.
- xvi. Long term financial resources should be made available to assist communities in achieving the desired transition. An independent arms-length funding board should be established to administer the funds and make funding allocation decisions based on pre-determined criteria established by the Government.

6.3 Communications

It is recommended that the Government continue to enhance its communications to ensure communities are knowledgeable about MPB circumstances and that expectations are properly managed.

- i. A clear policy on MPB management must be prepared by the GOA and broadly communicated. The intentions of the Government must be explicit to ensure there is no wasted effort and expectations are clear.
- ii. Communications with stakeholders and communities should be improved to enhance understanding and awareness of the issues, consequences and choices available to Albertans respecting the MPB issue. Hard copy, website and video material should be current and easily available.
- iii. The GOA should advise and assist other provinces in preparing for an MPB infestation and in establishing a Healthy Pine Strategy and other preventative measures. Communities throughout the Boreal Forest will be beneficiaries.
- iv. An MPB community liaison position must be established to provide timely advice and access to information. SRD professional staff need to be made available to conduct frequent visits to communities to provide essential knowledge and to ensure communities are current on the issues, opportunities and programs.
- v. Enhanced communications with political entities must occur. An all party, non-partisan cooperative approach must be applied to serve the interests of communities. Community based politicians have a responsibility to ensure that members of the Legislative Assembly are properly informed about the risks, options and community needs.
- vi. A community communications strategy and key messaging framework needs to be developed and made available to assist communities by August 2007. The communities have a responsibility to communicate with members of their constituencies about the risk, the values, the options, the choices and the overall direction of the plan being developed. Communities need to be able to speak to Albertans about what is being done and why. Primary messages could be:
 - Alberta has an over abundance of mature pine, the primary beetle food source.

- The MPB challenge must be addressed at the landscape level.
- Inter-jurisdictional cooperation is critically important.
- We will apply many valuable lessons from British Columbia
- Management actions will be balanced, taking into account other resources values.
- Management actions will help fire proof the forest, protect lives and property and will assist in the natural regeneration of the forest, returning the forest to a more natural state.
- Responsibly addressing this challenge now will provide critical time for communities to develop and implement transition strategies and will assist in preventing a sudden decline in community based employment.

7. Implementation

Making the necessary adjustments is a long term commitment. A deliberate and thoughtfully planned out approach is expected to deliver the best results. However, we must act now and begin planning for transition as soon as reasonably possible. Planning for the worst case scenario is the best approach and no time should be wasted in implementing new directions chosen through the planning process.

An implementation plan is required to ensure the smooth and efficient delivery of approved recommendations. Three distinct periods are envisioned starting with Period 1- planning and policy development, Period 2 – coping with the boom and initiating implementation and Period 3 – addressing the fibre fall down. Only the first period should be considered at this time.

While the MPB situation is considered a crisis there is sufficient time available to plan and make necessary adjustments. **Consequently, focused attention should be placed on Period 1 - a three year planning period beginning in 2008.** During this period the communities should lead and conclude the planning process and Government should complete biomass policy and incentive development. The conclusion of this work coupled with the state of MPB infestation in the future will determine how Period 2 should be responded to.

More specifically Period 1 activity requires action by the Government of Alberta and by the communities. Specific implementation actions required are:

- i. Establish a cross ministry initiative and put SRD human resources in place to assist communities. (GOA – spring 2008)
- ii. Develop the planning/model template for community planning and make resources available to the communities to facilitate planning requirements. (GOA – Winter 2007)
- iii. Initiate and complete community/regional plans within the three year period (Community – 2009/10)
- iv. Develop and implement necessary communications material/processes to ensure communities are well informed and expectations are clear. (GOA/Community – spring 2008)
- v. Complete the biomass policy, establish incentives to encourage forest biomass utilization and initiate the marketing of biomass availability (assuming excess is available). (GOA – 2009)

Community planning should be initiated on a regional basis with a “hub community” identified within the region. The four priority areas identified in the vulnerability assessment that should be acted on in Period 1 include Grande Prairie, Hinton, Whitecourt and Southern West Alberta (Crows Nest/Canmore). The communities should determine the “regional footprint” of the planning process and what specific communities should participate. Resources should be made available on a grant basis to conduct the necessary planning work. SRD personnel should be available as resources to assist the participating communities.

A budget of \$5 Million should be made available over the three year period to be directed to the four planning initiatives. It should be noted that each of the BC based regional MPB planning initiatives have been spending a minimum of \$800,000/year and as much as \$1,200,000 to conduct their individual planning efforts. These have been underway for the last three years.

Each community should be required to contribute at least 10% of the planning costs (cash or in-kind). Consequently, the GOA is asked to contribute \$4.5 Million or \$1.5 Million per year. It is expected that each region will require up to \$375,000 per year to conduct the required planning. Costs will include planning, data acquisition and analysis, community engagement process implementation, communications material development, third party engagement, travel and hosting and other related costs.

8. Conclusion

The MPB crisis poses a serious challenge to government, industry and communities. The infestation is a difficult situation to manage and it is not likely that the beetle can be controlled. Consequently, it is necessary to assess the situation carefully, determine the options available and act now if all parties are going to make the necessary adjustments required. Waiting to act is not a viable option.

Alberta’s forest based communities run a serious risk of significant consequences if they choose to do nothing. Sufficient time exists to properly plan for and execute strategies designed to improve community sustainability and resilience. The impacts of the MPB infestation can be mitigated but communities cannot do it on their own. Industry, communities and government must act cooperatively to manage the risks and maximize the opportunities.

APPENDIX 1

Mountain Pine Beetle Advisory Committee Community Sustainability Working Group

Membership

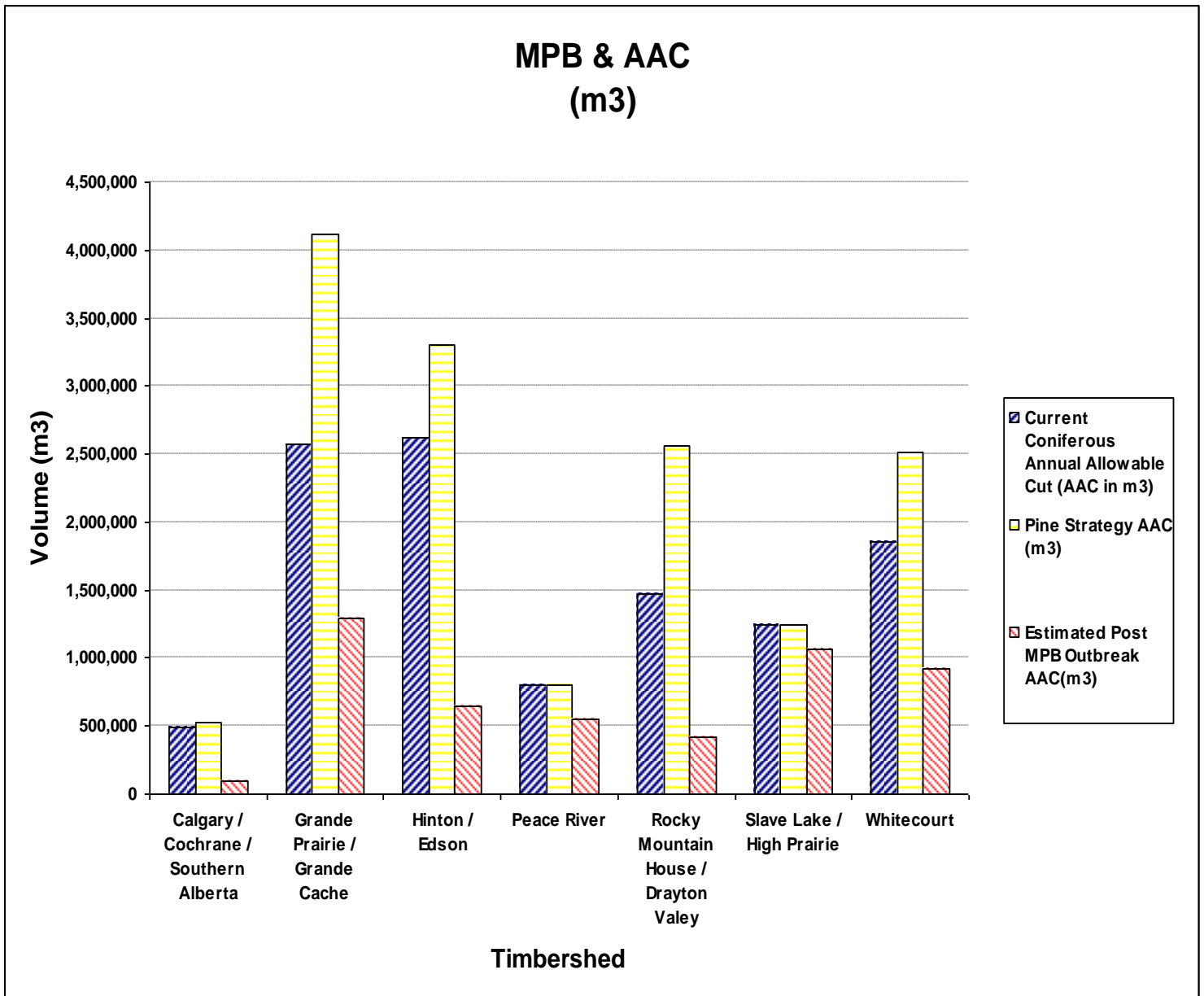
1. His Worship, Ron Casey – Mayor of Canmore
2. His Worship, Trevor Thain - Mayor of Whitecourt
3. Phillip Rowland – Public Member
4. Ross Risvold – Public Member
5. Cliff Henderson – ADM, Forestry Division (SRD)
6. Doug Sklar – Ex. Director, Forest Management Division

Committee Support

7. Teresa Stokes – MPB support (SRD)
8. Bob Clark – Consultant
9. Kirk Andries – Consultant – Project Management

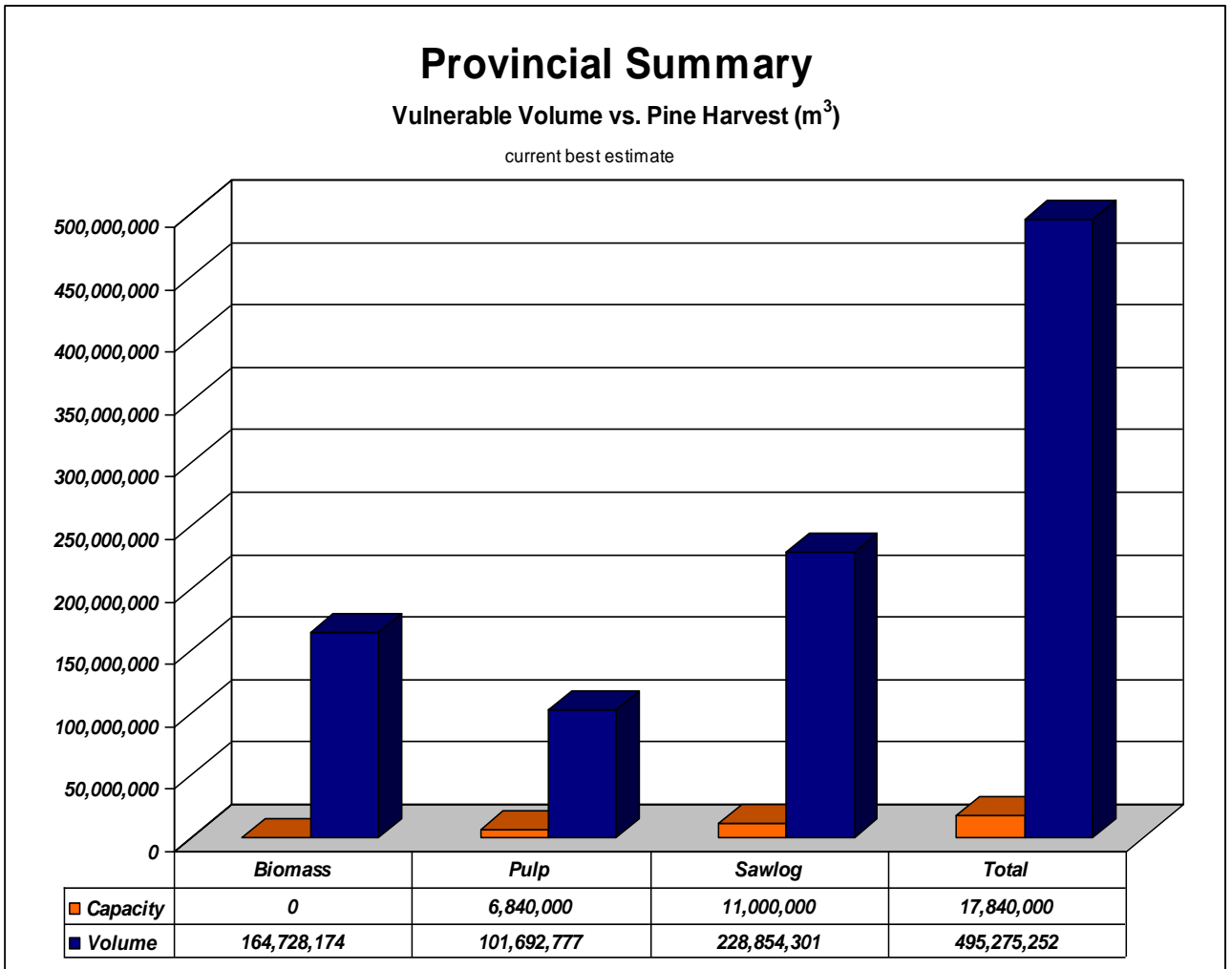
APPENDIX 2

Current AAC, Healthy Pine Strategy AAC and Possible Post Infestation AAC



APPENDIX 3

Provincial Summary of Annual Volume Harvested from the Healthy Pine Strategy and Cumulative Biomass Volume Available over a Twenty Year Period



APPENDIX 4

Timber Shed Vulnerability Rankings

| Economic Impact Region Summary | Rating (<10,000) |
|---------------------------------------|--------------------------------|
| Athabasca / Fort McMurray | Low |
| Southern Alberta | Medium |
| Drayton Valley | Medium |
| Grande Prairie / Grande Cache* | High |
| Hinton / Edson | High |
| Peace River / High Level / La Crete | Medium |
| Slave Lake / High Prairie | Medium |
| Whitecourt | High |

* Entire region is considered at high risk because Grande Prairie dominates the regional population.