



PROJECT SUMMARY

Morice & Lakes IFPA projects are exploring ways to enhance forest productivity through a better understanding of factors affecting productivity, through intensive silviculture treatments, by increasing the area of productive forest land, and by improving site productivity estimates.

Strategic Recommendations for a Growth and Yield Program for the Morice & Lakes IFPA Area

Ecosystem
Management

Forest Productivity

Public Involvement

Adaptive
Management

Introduction

Forest licensees in the Morice and Lakes Timber Supply Areas have initiated several growth and yield projects in the area since being awarded IFPAs by the Ministry of Forests in 1999. These projects have focused on developing information for future use in timber supply analysis and scenario planning, and support for silviculture decisions relating to treatments and rehabilitation of low productivity stands. Growth and yield is an important part of the IFPA program, thus the Morice & Lakes IFPA holders initiated a strategic planning process to help ensure the appropriate growth and yield information is included in the overall program.

Project Goals and Objectives

The goal of this project¹ was to provide strategic recommendations to IFPA holders for growth and yield program components to support IFPA goals. The three main goals of this report were to:

1. Present growth and yield program recommendations for consideration by the IFPA holders.
2. Emphasize the importance of the current mountain pine beetle outbreak and demonstrate how a growth and yield program can help address some

of the very important mid-term issues that will likely result from this infestation.

3. Discuss the strategic role of growth and yield in the larger framework of overall forest management to provide IFPA members a reference for how growth and yield can be used to achieve strategic IFPA goals.

Methods

We developed the recommendations in this report using a gap-focused approach to strategic planning. The process included reviewing IFPA goals, the current situation in the IFPA area, and suggesting how different growth and yield program components could provide the tools and systems to meet our interpretation of IFPA needs. This planning process must be revisited as the current operating environment, anticipated future conditions, and possibly even IFPA goals change. Thus, the recommendations in this report are only the first of many steps that must be revisited over time. With the anticipated change in BC forest policy, it is reasonable to expect that this report and subsequent strategic and operational plans should be revisited frequently in this time of rapid change.

Morice & Lakes IFPA Project Summary

In this report we complete the first three of six key steps in strategic planning for the growth and yield program:

1. Assess the current situation in the IFPA area as it related to the development and use of growth and yield information.
2. Develop goals and objectives for the IFPA growth and yield program.
3. Develop strategic recommendations for the growth and yield program.

The remaining three steps to be completed by the IFPA holders are:

4. Review these recommendations and select those to include in a strategic plan.
5. Develop operational plans that reflect the strategic plan.
6. Implement and monitor these plans, at least annually.

Situation Analysis

The most important factor to consider in developing the IFPA growth and yield program is the impact of the current catastrophic outbreak of mountain pine beetle. There are other factors to consider such as the current state of growth and yield information and pending changes to the regulatory environment; however, the pine beetle infestation will impact virtually every aspect of forest management in the area for at least a decade. The extensive mortality from beetle attack in older pine stands could worsen the age class imbalance in the forests of the IFPA area, which in turn would result in a serious mid-term timber supply shortage. This potential mid-term timber supply shortage could disrupt the forest industry and economy in the Burns Lake and Houston areas. The growth and yield program can provide tools to help minimize the impacts of this potential timber shortfall and the associated negative economic impacts.

Growth & Yield Program Goals and Objectives

The IFPA has preliminary goals and objectives for the overall program but none specifically for the growth and yield program. Thus, we suggest that the goal of the IFPA growth and yield program is to:

Develop growth and yield data, information, tools, and systems to support strategic planning and decisions in the IFPA area for timber supply analysis and scenario planning, silviculture planning, harvesting planning, and habitat modeling.

From this overall goal, we suggest the following three strategic objectives for the IFPA growth and yield program. The IFPA holders must first accept these objectives then develop performance indicators to measure the progress in achieving them. These objectives are to:

1. Support the immediate needs of beetle management for salvage and rehabilitation of beetle-killed stands, to minimize the potential negative mid-term impacts on wood supply and habitat.

2. Help alleviate the potential mid-term wood supply shortage by developing silviculture regimes to: i) increase the volume and value of managed stands; ii) reduce the time needed to reach a merchantable tree size; and iii) address wildlife habitat and watershed issues that may arise from the large areas of beetle-killed trees.
3. Support the scenario planning process by providing information to help examine the potential impacts of different forest management options on a range of forest values.

Growth & Yield Program Recommendations

The main part of the project final report includes 31 recommendations for the growth and yield program components presented in broad categories (Table 1). Each recommendation is described and includes a brief discussion of the strategic impact, priority, and approximate cost. The IFPA holders must now decide which components are strategically important and which they will fund. To assist in this process, we provide the following ideas to IFPA holders for the next steps in implementing this process:

1. Review the recommendations in the final report.
2. Set priorities for the overall direction of the growth and yield program.
3. Select projects and activities for the IFPA growth and yield program.
4. Combine projects with the Vanderhoof IFPA where possible.
5. Develop an annual and five-year operating plan.
6. Consider a workshop in the early summer to discuss growth and yield issues.

Contacts & Acknowledgements

J.S. Thrower & Associates Ltd. (JST) prepared this report for the Morice & Lakes IFPA holders. The JST team was Jim Thrower, *PhD, RPF*, Gord Lester, *BScF, RPF*, and Ian Cameron, *MF, RPF*. The IFPA project leader was Larry McCulloch, *RPF* (Laing & McCulloch Forest Management Services). Forest Renewal BC funded this project through the IFPA pilot program.

References

J.S. Thrower and Associates Ltd. 2002. Strategic recommendations for a growth and yield program for the Morice & Lakes IFPA area. Contract report to the Technical Advisory Committee of the Morice & Lakes IFPA. January 31, 2002. 33 pp.

Table I. Summary of recommendations, priority, and relative cost.

Recommendations	Priority & Strategic Impact	Relative Cost
Program Infrastructure		
1. Establish a formal growth and yield program	High	Low
2. Set priorities for the growth and yield program	High	Low
3. Complete the strategic planning process	High	Low
Data Capture & Management		
4. Centralize growth and yield data	Medium	Low
5. Consider centralized management of all IFPA data	Medium	Medium
6. Spatially reference all plot data	Medium	Low
7. Document existing growth and yield installations in the IFPA area	Medium	Low
Inventory Support & Interface		
8. Update the forest cover inventory for beetle attack	High	High
9. Complete an inventory needs analysis	High	Low
10. Implement a growth and yield monitoring program	High	High
11. Complete the PFT project currently underway	Medium	Medium
12. Assess the need for a log-profile prediction model	Medium	Low
Silviculture Support & Interface		
13. Develop economic guides for silviculture	High	Medium
14. Forecast future log quality	Medium	Medium
15. Complete a needs analysis for experimental trials	Medium	Low
16. Modify silviculture surveys to provide growth and yield data	Medium	Low
Site Productivity		
17. Complete ecosystem mapping in both TSAs	High	Medium
18. Use Site Index Adjustment (SIA) for forest level application	High	Medium
19. Complete SIBEC sampling for stand level application	Medium	Low
20. Refine site index conversion equations	Low	Low
Yield Projection		
21. Develop beetle kill (shelf life) volume curves	High	Medium
22. Develop an ingress model for beetle-killed stands	High	Medium
23. Develop an ingress model for post-harvest regenerated stands	High	Medium
24. Investigate stand breakup	Medium	Medium
25. Complete a model and yield projection needs analysis	Medium	Low
Habitat Modeling		
26. Define environmental indicators and key forest attributes	Medium	Low
27. Assess current and future conditions for key indicators	Medium	Low
28. Develop site specific stand and tree structure models	Medium	High
29. Modify management scenarios	Medium	Low
Related Issues		
30. Implement an aspatial timber supply model	High	Medium
31. Develop a strategic harvest planning model	High	Medium

We believe the impact of the mountain pine beetle is the most important consideration for the IFPA—which will also drive the growth and yield program.

Notes:

For More Information... **Morice & Lakes**
 **IFPA**

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