

# **Timber Growth and Value Program**

## **Eligible Research Topics 2006/07**

September 2005

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NOTE : The 2006/07 Call for Proposals is focused on a subset of the program themes and topics. Please refer to the *Timber Growth and Value Program Research Strategy 2006-2016* for the complete set of themes and topics.

## Table of Contents

<b>Introduction .....</b>	<b>1</b>
MPB-Related Research.....	1
<b>Research Topics and Priorities for 2006/07.....</b>	<b>2</b>
<b>1.0 Basic research on tree growth and stand development.....</b>	<b>2</b>
1.1 Complex stands (including partial cutting, variable retention) .....	2
1.3 Old stands .....	2
<b>2.0 Design and analysis of silvicultural systems.....</b>	<b>3</b>
2.1 Complex stands (including partial cutting, variable retention) .....	3
<b>3.0 Growth and yield modeling/predictions.....</b>	<b>3</b>
<b>4.0 Timber losses to environmental and biotic factors (wind, drought, insects, disease, animals, fire).....</b>	<b>3</b>
4.2 Estimating stand-level losses (other than MPB) .....	3
4.3 Mitigating losses .....	3
<b>6.0 Marketable resources other than timber.....</b>	<b>4</b>
6.1 Collect, synthesize, and assess existing knowledge; and identify critical knowledge gaps .....	4
<b>7.0 Climate change.....</b>	<b>4</b>

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## **Timber Growth and Value Program— Eligible Research Topics 2006/07**

### **Introduction**

The research topics and priorities described in this document are those eligible for funding under the Timber Growth and Value funding category of the Forest Investment Account Forest Science Program (FIA-FSP) in 2006/07. For simplicity of presentation, this document includes only the research topics and priorities eligible for funding in 2006/07. The ten-year research strategy of the Timber Growth and Value Program Advisory Committee (TPAC), *Timber Growth and Value PAC Research Strategy 2006-2016*, includes the complete list of research topics and provides context for understanding this year's priorities. It is available from the PricewaterhouseCoopers website ([www.bcfsp.com](http://www.bcfsp.com)) with other information related to the Call for Proposals.

Research related to high-priority mountain pine beetle (MPB) issues is funded separately; see the section below on submitting proposals for MPB research. Proposals for regular and MPB research must be submitted using the appropriate proposal templates, which are available on the PricewaterhouseCoopers website. Note that proposals submitted for regular FSP funding will not be disqualified if incidentally relevant to MPB. Some topics may be eligible for funding under either the regular FSP or MPB funding, depending on whether the focus of the research is MPB.

The research topics and priorities described in this document are those eligible for research funding under the 2006/07 Call for Proposals. Proponents interested in funding for long-term research installation (LTRI) infrastructure should refer to the ten-year strategies of the Timber and Sustainability Programs, which identify long-term research priorities.

Note that no priority ranking is implied by the numbering of research topics.

This year the TPAC's determination of research priorities was more detailed than in 2004/05. As previously, research topics are organized by theme, but this year priorities within research topics are specified individually and by geographic region. The regions used are those of the Ministry of Forests and Range: Coast (C), Northern Interior (NI), and Southern Interior (SI). A map showing these regions is available at:

<http://www.for.gov.bc.ca/mof/maps/regdis/>

### **MPB-Related Research**

Research related to MPB is funded through the \$100 million provided by the Government of Canada to the Province to help mitigate impacts of the mountain pine beetle infestation, and must be administered separately from the regular FIA-FSP. Research topics and priorities eligible only for MPB funding are listed in the MPB priorities document: *Mountain Pine Beetle Research – Eligible Research Topics 2006/07*.

## Research Topics and Priorities for 2006/07

This list of research priorities is a compilation and synthesis of input provided by the Timber Growth and Value Program Advisory Committee (TPAC) at the request of the FIA Forest Science Program Forest Science Board (FSB). It serves as reference material to support the Forest Science Program Call for Proposals in September 2005. Proponents interested in funding for long-term research installation (LTRI) infrastructure should refer to the ten-year strategies of the Sustainability and Timber Programs.

The research topics and priorities eligible for funding in 2006/07 are a subset of those identified in the TPAC's ten-year strategy. This narrowing of focus was felt necessary by the FSB to ensure that the scarce funds of the FIA-FSP are used efficiently and effectively.

### Theme 1.0 Basic research on tree growth and stand development

#### Description

Improve the understanding of basic biological processes such as competition for light, nutrients and moisture, and the resulting allocation of carbon that regulates tree growth and stand development. This information is needed to improve operational models and decision-support tools.

#### 1.1 Complex stands (including partial cutting, variable retention)

Complex stands include multiple species, stands with structural diversity, and mixed stands of conifers and hardwoods. Areas of research eligible for funding in 2006/07 include:

Research priorities for topic 1.1		C	NI	SI
a	Microclimate effects related to tree and stand growth in multi-storied stands	✓	✓	✓
b	Natural regeneration	✓		
c	Mortality			✓

#### 1.3 Old stands

Old stands include those being retained for non-timber purposes, or that remain in inventory for long periods due to the age structure of a management unit. Areas of research eligible for funding in 2006/07 include:

Research priorities for topic 1.3		C	NI	SI
a	Mortality	✓	✓	✓

Note: Successional processes and natural disturbance regimes are topics covered under the Sustainability Program.

**Theme 2.0 Design and analysis of silvicultural systems**

Description

Comparing silvicultural systems and management regimes at the stand, landscape and forest levels to maximize timber volume and value while providing specific non-timber values of interest.

2.1 Complex stands (including partial cutting, variable retention)

Development and monitoring of silvicultural systems for complex stands (multi-species, structurally complex) at multiple scales (stand, landscape, forest). Areas of research eligible for funding in 2006/07 include:

Research priorities for topic 2.1		C	NI	SI
a	The relationship between residual stand structure and understory recruitment and development; evaluation of the results of partial cuts and the effects on stand establishment, early growth and yield and response to management practices.	✓		✓
b	Development and monitoring of the impact of various stand treatment regimes on regeneration.	✓		✓

**Theme 3.0 Growth and yield modeling/predictions**

Growth and yield modeling proposals are not being accepted in this call for proposals. The GY modeling program is being developed in a separate business planning process. For more information, contact the FSB Secretariat ([jtanz@cortex.ca](mailto:jtanz@cortex.ca)).

**Theme 4.0 Timber losses to environmental and biotic factors (wind, drought, insects, disease, animals, fire)**

Description

Finding methods to predict and mitigate timber losses due to environmental factors. Note that this theme does not include growth and yield modeling, which is being treated under the growth and yield modeling business planning process described above under Theme 3.0.

4.2 Estimating stand-level losses (other than MPB)

Research under this topic may involve the use of growth and yield models, but should not be mainly about growth and yield model development. Areas of research eligible for funding in 2006/07 include:

Research priorities for topic 4.2		C	NI	SI
a	Spruce bark beetle		✓	✓

4.3 Mitigating losses

Strategies and management practices that mitigate losses at an appropriate operational scale and in a cost effective manner. This topic spans areas from silvicultural practices to resistance

research and tree breeding, and deals with losses from factors such as root rots, pine rusts, pine mistletoe, windthrow, and drought. Research under this topic may involve the use of growth and yield models, but should not be mainly about growth and yield model development. Areas of research eligible for funding in 2006/07 include:

Research priorities for topic 4.3		C	NI	SI
a	Fire			✓

**Theme 6.0 Marketable resources other than timber**

Description

Effects of silvicultural systems on non-timber forest products, and the values derived from non-timber forest products, primarily including wild edibles and floral greens.

6.1 Collect, synthesize, and assess existing knowledge; and identify critical knowledge gaps

Summarize current data and information, and develop standardized information collection systems that will increase the value of non-timber forest products to forest land managers, to non-timber forest products practitioners, and regulators. Understanding the resource and its current use represents the first crucial step toward active management. Improve foresters' awareness of the importance of non-timber floral and food resources such as salal, mosses, ferns, mushrooms, etc. Areas of research eligible for funding in 2006/07 include:

Research priorities for topic 6.1		C	NI	SI
a	Non-timber forest products (NTPF)		✓	✓

**Theme 7.0 Climate change**

The linkage of carbon accounting models to existing G&Y models. Methodology must tie-in with Canadian Forest Service carbon accounting models. Areas of research eligible for funding in 2006/07 include:

Research priorities		C	NI	SI
a	Forest health	✓	✓	✓