

Forest Analysis and Inventory Branch Inventory Plan for Major Projects: 2012/13

January 9, 2012

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This document provides a brief outline of the proposed major inventory projects that will be undertaken by the Forest Analysis and Inventory Branch (FAIB) Forest Inventory Section in 2012/13. It is being distributed at this time to provide those interested in forest inventory projects in British Columbia with an understanding of how various activities are determined, and serve as a base for further discussions. The final list of projects for 2012/13 will be determined following discussions with various partners and stakeholders in January 2012.

This 2012/13 annual work plan takes direction from broader Provincial plans (such as the annual Branch business plan). At a level below this plan, specific components (such as NVAF, Growth and Yield and monitoring programs) have their own more detailed annual plans. In addition, all major projects are guided by detailed project plans. Smaller projects, routine activities, and certain specialty areas (such as stand modelling research), that are critical components of the Inventory Section, are outside the scope of this document.

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Background

The Forest Analysis and Inventory Branch (FAIB) Inventory Program is responsible for the acquisition, management, and reporting of forest inventory information. Inventory activities and products include not only traditional photo interpreted inventories, but spatial inventories derived from satellite imagery, various ground and photo sample inventory information, and young stand monitoring. Due to the significant costs and extended timelines associated with acquiring and processing inventory information, the demands placed on inventory information and the dynamic nature of much of the Provinces forests, planning for future inventory activities is an ongoing and iterative process.

Currently the funding source for inventory activities is the Land Based Investment (LBI) Program. Priority activities and areas identified in the LBI Strategy include, for the interior, those significantly impacted by mountain pine beetle (MPB) and for the coast, those for which ecosystem based management (EBM) is mandated and significantly influences where these funds are directed. For the 2011/12 fiscal year, \$5.71 m was allocated to the FAIB to complete forest inventories and site productivity sampling, of which approximately \$4.55m is being spent on inventory activities. Initial planning for the 2012/13 fiscal year is based on an estimated total budget of \$6m, of which over \$5m will be spent on inventory activities. In most cases, inventory projects in this plan are undertaken through contracts administered by inventory program staff.

How are Inventory Activities and Priorities Determined?

Although there are many contributing factors, a limited number of broader criteria are used to determine where existing inventory information is very outdated, incomplete, not to acceptable standards, or represents the greatest risk to decision makers. Determining where, when, and which specific inventory activities are employed is based on how important inventory information is to communities and industry, how current (or how rapidly change is occurring in the forest due to MPB, fire, growth, etc), and other costs/benefits or known inventory concerns.

Resource Management and Planning Risks

In determining how important a given inventory is to communities, industry, and decision making, a number of key factors are considered, including:

- Amount/distribution of Timber Harvesting Land Base in a management unit

- How significant a contributor the management unit provides to the Province's Allowable Annual Cut (AAC)
- Whether the current harvest in a management unit meets or exceeds the AAC
- The proportion of young/second-growth forest stands within the management unit
- Timing of various planning processes, such as the Timber Supply Review
- Other potential risks associated with not conducting inventory activities in this management unit at this time and/or consideration of whether making an investment now in a new inventory makes good business sense

Inventory Currency Risks

The rate of change occurring on the landbase due to MPB, regeneration of young stands, fire, and harvest may impact the useful lifespan for an inventory. A relatively newer inventory experiencing rapid change may fail to reflect current conditions. Older inventories in units experiencing very little change may reflect current conditions for many years.

Inventory Quality Risks

Although quality assurance is conducted throughout the classification of new photo estimated inventories, unbiased ground sampling and sample data analyses (inventory audit) following completion of a new inventory is conducted to determine how accurate the inventory is. Where an audit indicates a concern or users believe the inventory fails to reasonably represent what's found on the ground, options for further review or improvement to the inventory are considered.

Timing and Expected Inventory Lifespan

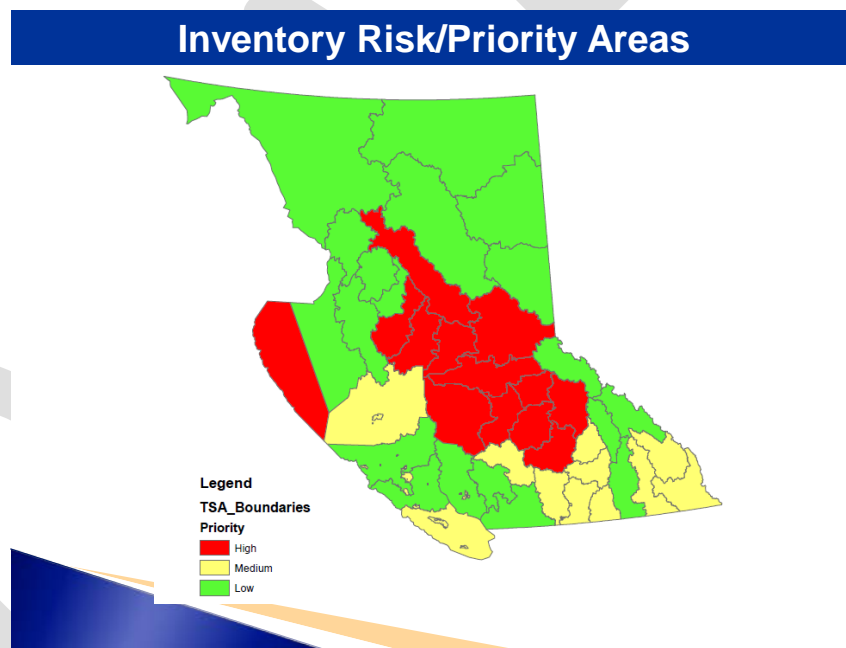
Depending on the inventory activity(s) determined to be the most appropriate for a given unit, identifying when it would be most appropriate to initiate a project must also be considered. For example:

- Photo interpreted inventories are expensive and planning for photo acquisition must be done well before photo acquisition. Photos are only acquired when forest conditions are such that traditional inventory activities are appropriate (e.g. needles have dropped from dead PI and there is sufficient information visible to photo interpret).
- Satellite image-based spatial inventory information may provide interim information (including estimates of deal PI) for significantly less money than a photo interpreted inventory and therefore be an appropriate option when a standard photo interpreted inventory may not be. Products such as these may also eventually replace standard inventories in areas that present lower risk.

- Sampling to determine amounts of live/dead PI and understory information will provide shorter term information earlier in the MPB cycle where required.

In addition to the considerations above, a key input into decisions about when to focus new inventory activities is the collective knowledge and experience of the inventory practitioners within FAIB and the greater inventory community. Although a small group, there is a vast amount of knowledge held by these individuals arising from decades of doing inventory work, developing/refining Standards and Procedures, evaluating different methodologies and approaches, and working with government staff, licensees, consultants and users of inventory maps and data.

The key map below identifies priority areas for inventory activities by management unit:



For discussion purposes, an early DRAFT of the 2012/13 Major Project plan is attached. It is important to note that the prioritization of management units for inventory activities and the identification of appropriate inventory activities for a given unit are evaluated on an ongoing basis and the final project determination for the 2012/13 fiscal year will be made in the early months of 2012.

2012/13 DRAFT Inventory Section Budget Plan For Major Projects

Project name	Project Description	Comments
Forest Inventory and Monitoring Section Support	minor projects, Section contracts, admin, reserve	
Mid Coast TSA Photo Interpretation	Photo Interpretation and Photo Interpretation QA	Potential to complete new inventory for Mid Coast TSA, including TFL 25 blocks in both the Mid Coast and North Coast FDs in 2012/13
Haida Gwaii TSA Photo Interpretation	Photo Interpretation and Photo Interpretation QA	To include all park and TFL lands. Planned completion in 2013/14
100 Mile House TSA Photo Interpretation	Photo Interpretation and Photo Interpretation QA	Potential to complete new inventory in 2012/13
TFL 14 Photo Interpretation	Photo Interpretation and Photo Interpretation QA	Planned completion 2012/13
TFL 23 Photo Interpretation	Photo Interpretation and Photo Interpretation QA	Potential to complete in 2012/13
Kamloops TSA (north) Photo Interpretation	Photo Interpretation and Photo Interpretation QA	Initiating multi-year project in 2012/13
Kamloops TSA (south) Photo Interpretation	Photo Interpretation and Photo Interpretation QA	Initiating multi-year project in 2012/13
Pacific TSA 44 Photo Interpretation	Photo Interpretation Plan, Photo Interpretation, and Photo Interpretation QA	Completion in 2012/13 - Blocks 21, 22, 23 and a portion of TSA/B 39, 39B, 39C
Williams Lake (west) Landscape Vegetation Inventory	Derive Spatial Inventory using Satellite Imagery and Sample Data	Planned completion 2012/13
Lakes TSA Image Acquisition	Air photo acquisition and image processing	Photo interpretation to begin 2013/14
Kootenay Lake TSA Sampling	Mature Stand Audit & Young Stand Monitoring Sampling	Initiate in 2012/13, potential to complete in one year
Morice TSA Sampling	Mature Stand Audit & Young Stand Monitoring Sampling	Initiate in 2012/13, potential to complete in one year
Inventory Analyses	Analysis of Inventory Ground Sample Data	Complete analyses of completed inventory ground sampling projects
PSP Program	Data maintenance, harvest referrals, plot maintenance and re-measurement	Program deliverables specified in 2012/13 PSP annual work plan
NVAF Program	Completion of various regional NVAFs	Program deliverables specified in 2012/13 NVAF annual work plan
Site Productivity	Provincial Site Index GIS Layer, SIBEC and PEM Sampling	Program deliverables specified in 2012/13 Site Prod annual work plan
Stand Modelling Research		Program deliverables specified in 2012/13 Research annual work plan
Remote Sensing Unit Projects		Minor projects, contract support
Statistical Analysis Unit Projects		Minor projects, contract support
2012 Inventory Projection	Projection of Forest Inventory Data to 2012	
VRIMS Maintenance (includes layer 9 and LVI validation changes)	Develop Validation Procedures for Level D and LVI Data	Update inventory database to include new MPB-specific data
Fire Update Pilot	Update Inventory Information using High Resolution Satellite Imagery	
Information Technology	Critical Systems Maintenance	

For more information, please contact:

Gary Johansen,
Forest Inventory, Forest Analysis and Inventory Branch
Ph: 250-56-0633
Email: Gary.Johansen@gov.bc.ca

Additional Information:

<http://www.for.gov.bc.ca/hts/vri/index.html>
<http://www.for.gov.bc.ca/hcp/fia/landbase/>

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