

**2013
2014**

Forest Analysis & Inventory Branch Business Plan

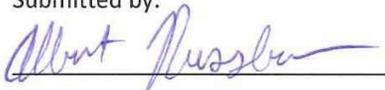


FOREST ANALYSIS AND INVENTORY BRANCH

BUSINESS PLAN

Fiscal Year 2013 – 2014

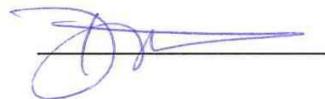
Submitted by:



Albert, Nussbaum, Director
Forest Analysis and Inventory Branch

Date *May 1st 2013*

Approved by



Diane Nicholls, Executive Director
Resource Stewardship Division

Date *May 1, 2013*

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1.0 Context

1.1 Director's Note — Albert Nussbaum

The Branch's core areas of business, Inventory and Analysis, will remain vital to the Ministry's success this coming year as highlighted in the Ministry Service Plan for Fiscal 13/14. The plan makes specific reference to the need for high quality information with particular emphasis on the need for Forest Inventory. In addition, the Plan highlights many initiatives that already have or will require significant participation of our analytical and/or research staff.

So once again it looks like the coming year will be a very busy one for both Inventory and Analysis programs within the Branch. The Inventory Program developed an ambitious 10-year plan to update the Province's Forest Inventories this past year. This plan was well received by government and has been resourced for fiscal 2013/14, including the addition of staff, despite the provinces continued fiscal limitations. A new integrated ground sampling approach will be field tested this year along with the continued development of new inventory data collection and analysis techniques. The young stand monitoring data collected last year will be analysed and made available to inform management decisions. The Analysis Section has an ambitious Timber Supply Review (TSR) Program in the works for fiscal 2013/14 including the re-determination of Allowable Annual Cuts (AAC) in heavily impacted Mountain Pine Beetle Management Units. In addition the section will support a broad range of government and stakeholder decision making including those related to Mid-term Timber Supply and placement of new area-based tenures. Cumulative Effects, Carbon and Wildlife modelling will continue to be a focus and Branch research staff will continue to carry out research and provide a broad level of expertise to address both Branch and Ministry wide challenges.

This past year the Branch has demonstrated the broad capacity of staff to address information and analysis questions that go well beyond those we traditionally addressed. Some new areas we worked in include the compilation and analysis of wildlife survey, snow pillow, First Nations Revenue Sharing and cumulative effects data. The application of staff skills to broader Ministry challenges will continue in fiscal 13/14 as highlighted in this Business Plan along with projects to foster integration and collaboration across the Division and sector. One initiative in which FAIB will make significant contributions this coming year is the review of the role of chief forester. This project will explore how the role of chief forester might evolve to reflect the one land manager model. It will address the question, "Should the chief forester's role be expanded to include a wider array of statutory decisions captured within the Ministry's mandate"? A strong theme this coming year will be integration of data across the Division and Ministry. In response, one project will focus on looking across the Division for opportunities to integrate and collaborate with regard to data collection and management.

Some other key projects that are included in this plan include the full integration of all disturbances into the Vegetation Resource Inventory (VRI), delivering on the first year of commitments outlined in the 10-Year Inventory Plan, modelling multiple forest values concurrently to support integrated decision making, incorporating wildlife habitat modelling in TSR along with supporting improvements in the data handling and analysis capabilities within Water Management/Stewardship and Wildlife Management Branches.

In conclusion, I look forward to an interesting year full of new opportunities to demonstrate the capabilities of our Branch staff to address a broad array of challenges facing the sector. We will continue to seek new innovative and integrated approaches to address critical business needs with limited resources. With the continued dedication and persistence of staff, we will again provide significant benefit to the Natural Resource Sector and public as a whole this coming year. I look forward to it with anticipation.



Albert Nussbaum
Director
Forest Analysis and Inventory Branch

1.1 Vision and Mission Statement

Government of British Columbia

Vision: To be a prosperous and just province, whose citizens achieve their potential and have confidence in the future.

Ministry of Forests, Lands and Natural Resource Operations

Vision: Economic prosperity and environmental sustainability.

Forest Analysis and Inventory Branch

Vision: Proudly providing strategic knowledge at its best.

Mission: Working together to inform decisions daily.

Forest Inventory Section

Vision: To be the definitive authority on forest inventory.

Mission: To produce reliable forest inventories and stand growth models so that natural resource management in BC is informed by credible information on forest condition.

Forest Analysis Section

Vision: We are strategic, systems-level, critical thinkers who proactively engage in problem solving and decision making in the natural resource sector.

Mission: Our team provides information to support excellence in problem-solving and decision making.

Values

- Courage, Teamwork, Passion, Service, Curiosity, and Accountability

1.2 Forests, Lands and Natural Resource Operations (FLNR) Goals

Overall, the Ministry is focused on:

- integrating policy with operational land management, enabling us to effectively and sustainably manage British Columbia's (BC) land base for a variety of uses;
- promoting economic development and excellent public service to communities across British Columbia;
- ensuring environmental standards are upheld and environmental sustainability is achieved with resource use activities in British Columbia; and
- increasing the efficiency of public service delivery to meet the budget and demographic challenges facing government.

ADM Resource Stewardship Priorities

The key functions of the Division and Branches ensure that the Division provides leadership in resource management and in the specific areas of its mandate. All the key divisional functions are important for managing the resources sustainably and for protecting public safety. Related to the division's key functions, in fiscal year 2013/14 the ADM's are as follows:

ADMs Office

- Through collaboration and integration of activities at every level of the organization, fostering the stewardship mandate of the Ministry.
- Provide leadership to the Provincial Stewardship Leadership Team.
- Development and implementation of Cumulative Effects Assessment and Management Framework with MoE and implementation of Natural Resource Sector Research and Science Delivery Strategy.

Fish, Wildlife and Habitat Branch

- Foster the sustainable use of fish and wildlife through stock assessment and inventory; harvest reporting and analysis, and science-based management.
- Species at risk recovery implementation and bringing into force *Wildlife Act* amendments.
- Stakeholder and client service, including the administration of authorizations for Fish and Wildlife and participation in the Open Data Initiative by making available hunter harvest data.

Resource Practices Branch

- Alignment of FREP within a coordinated and integrated natural resource sector monitoring and reporting program including the Cumulative Effects Assessment and Monitoring Framework.
- Evaluation of the FRPA policy and oversight frameworks including the development of regulatory and/or policy solutions where necessary.
- Continuous improvement of LBIS planning and delivery including critical analysis of natural resource sector investment opportunities.

Resource Management Objectives Branch

- Cumulative Effects Assessment and Management Framework development and implementation.
- Implementation of Government Actions Regulation (GAR) and Environmental Protection and Management Regulations for each of the *Forest and Range Practices Act* and the *Oil and Gas Activities Act*.
- Completion of marine plans under the Marine Planning Partnership of the North Pacific Coast and develop a resource management objectives framework for the NRS.

Tree Improvement Branch

- Produce and manage tree seed for use by all provincial reforestation programs.
- Implement climate-based seed transfer standards.
- Deliver on all components of Forest Genetic Program including Research.

Water Management Branch

- Development of *Water Sustainability Act* with MoE.
- Ensure compliance by dam owners with new regulations including completion of required Dam Safety Reviews.
- Review and redesign of small utility rate application process.

Water Stewardship Branch

- Provide support and provincial oversight to the delivery of water programs in regions.
- Development of *Water Sustainability Act* with MoE and support for water authorization backlog reduction.
- Coordination of the flood hazard response model implementation.

1.3 ADM Priorities for FAIB

- Collect, maintain and enhance Forest Inventory information in high priority/risk areas as per the 10-year plan.
- Provide data and analysis to support government/public decision making related to the Mid-term Timber Supply challenge including providing support for the review of Land and Resource Management Plans and identification of potential harvesting opportunities not yet utilized.
- Support the Chief/Deputy Chief Foresters in setting Allowable Annual Cuts as defined by the *Forest Act*.
- Support the cumulative effects project and the establishment of First Nation's tenures.
- Look for opportunities to improve the collection, management and integration of data and systems within stewardship division.
- Monitor harvest activity in sensitive mature timber profiles and monitor whether young stands are meeting growth expectation.
- Provide Research and Biometric consulting services to the broader Ministry as required to address existing high and emerging issues.
- Continually look for way to make our programs more efficient and effective.

2.0 Strategic Framework

2.1 Government Business Planning Framework

This plan is strategically linked to multiple plans and documents throughout all levels of government. The following plans have been considered when developing this plan.

#	Name of Plan
1	Transformation Plan
2	Stewardship Framework
3	Workforce Plan
4	MFLNRO Service Plan 2013/14-2015/16
5	ADM and ED Resource Stewardship Division Priorities 13/14
6	Resource Stewardship Division Workplan 13/14
7	12/13 Forest Analysis and Inventory Branch Business Plan

2.2 Purpose of Forests, Lands and Natural Resource Operations (FLNR)

The Ministry of Forests, Lands and Natural Resource Operations (FLNR) delivers integrated natural resource management services for British Columbians. With a long-term vision of economic prosperity and environmental sustainability, it is the main agency responsible for establishing the policy and conditions for access to and use of the province's forest, land and natural resources. The Ministry integrates policy with operational resource management, aligning and streamlining operations in delivering services to enable effective stewardship and sustainable management of BC's land base for a variety of uses.

2.3 Resource Stewardship Division Overview

The Resource Stewardship Division is made up of six branches that cover a diverse range of responsibilities, performance measures, Government commitments and core functions.

Division Mandate

Resource Stewardship Division

Resource Stewardship Division leads the development, and continuous improvement of laws, policies and practices regarding sustainable resource management. Division's responsibilities include strategic leadership in water use planning and regulation, policy and operation leadership for dam and dike safety, river forecasting, drought response, water utility regulation, marine planning and support for terrestrial resource planning. The division is responsible for the establishment of resource management objectives, developing integrated resource management strategies, determining sustainable rates of timber harvest, improving the quality and growth of trees, as well as monitoring and evaluating forest health, forest inventory, and the effectiveness of our forest management framework in fostering sustainably managed resources.

Branch Functions

Detailed Functions

Resource Practices Branch

The Resources Practices Branch key functions include:

1. Overseeing the development, implementation, and continuous improvement of forest stewardship laws, policies and practices.
2. Monitoring and evaluating the effectiveness (FREP) of the 'results based' framework under the *Forest and Range Practices Act*.

3. Developing an annually updated Land Base Investment Strategy consistent with government and ministry priorities for forest management.
4. Conducting silviculture and forest ecology research in support of land base investments, sustainable forest management and science based policy and practices.
5. Coordinating provincial programs for the detection and treatment of major pest outbreaks including direct delivery of Gypsy Moth eradication.
6. FLNR primary point of contact with the Forest Practices Board and other government and non-government organizations regarding forest management.

Forest Analysis and Inventory Branch

The Forest Analysis and Inventory Branch key functions include:

1. Collecting and maintaining current forest inventories for the province.
2. Monitoring the growth of stands and providing models to predict stand development and future yield.
3. Providing information and analysis to support policy development, strategic and statutory decision making for the natural resource sector.
4. Providing analytical support services including data collection and strategic analysis for the natural resource sector.
5. Lead Resource Stewardship Division in the integration of data systems to support Resource Stewardship.

Tree Improvement Branch

The Tree Improvement Branch key functions include:

1. Overseeing the Land Base Investment Strategy Tree Improvement Program and the Forest Genetics Council of BC.
2. *Forest and Range Practices Act* seed use regulations - Developing and administering Chief Forester's Standards, seed planning, information systems and data (e.g. SPAR).
3. Forest Genetics Research - tree breeding, provenance testing, assisted migration, conservation, Cowichan Lake and Kalamalka Research Stations.
4. Managing the six provincial seed orchards which produce 55% of the improved tree seed supply; the orchards are managed on cost recovery basis.
5. Tree Seed Centre - cone and seed processing, registration and storage of all seed used for Crown land reforestation.

Resource Management Objectives

Resource Management Objectives Branch key functions include:

1. Developing and supporting the establishment and maintenance of resource management objectives to guide or direct resource management decision making.
2. Leading marine planning along the BC Coast.
3. Supporting terrestrial planning throughout the province.
4. Providing technical and professional support for land-use objectives, strategic land use designations (*Environment and Land Use Act*) and related legal orders.
5. Monitoring, maintaining and supporting key data sets for marine and terrestrial planning.
6. Supporting EBM implementation.

Water Management Branch

Water Resource Management Branch key functions include:

1. The Comptroller of Water Rights office, which provides oversight, strategic operations and management of the provincial Water Allocation Program which contributes more than \$350 M in annual water rentals to the province.
2. Leading the provincial Dam Safety Program which in co-operation with the regional division staff, provides regulation, management and oversight of 1900 dams in the province.
3. The Provincial Inspector of Dikes and staff from the Flood Mitigation Program, work with regional operations to minimize flood damage in BC.
4. Through the River Forecast Centre, staff provide flood, drought and run-off forecasting for the province.
5. The Water Utility Program regulates private water utilities in BC for public health and safety as well as financial viability.
6. The Provincial Water Use Planning Program, in co-operation with BC Hydro have developed and implemented water use plans for the majority of BC Hydro dams which aim to better balance competing water interests.
7. Through participation in the BC-Alberta bilateral negotiations, the International Joint Commission and the Columbia River Treaty, staff manage provincial water interests outside of the provincial borders.

Water Stewardship Branch

Water Stewardship Branch key functions include:

1. Supporting and ensuring provincial consistency in delivery of water programs in regions.
2. Providing interagency leadership, representation, and strategic and operational direction on water stewardship matters, including legislation and policy development.
3. Coordinating provincial drought planning and response.

2.4 FAIB Overview and Strategic Focus

2.4.1 Branch Strategic Focus

The Branch will continue to focus on core business delivery in 13/14 which includes the collection of forest inventory information, carrying out strategic analysis to inform Natural Resource Sector decisions and completing research activities to support these and other sector priorities. In addition, we will continue to identify and action project and programs changes that foster efficiency, integration and collaboration across the sector such as participating in the cumulative effects project and supporting the review of land use plans. Addressing questions related to Mid-term Timber Supply will continue to be a major area of activity and the management team will continue to put an emphasis on maintaining staff engagement, a culture of innovation and continuous learning, and succession planning.

2.4.2 Forest Inventory Section Overview and Key Initiatives

The inventory section:

- i) collects, manages, and makes available forest inventory information for British Columbia; and
- ii) develops and makes available stand growth and yield models.

These two components, stand growth models and forest inventory information, are essential to modern forest management. The inventory section is the dominant provider (and in many cases the sole provider) of these tools and data sets in BC.

The section currently comprises 30 staff located in Victoria, Nanaimo, Nelson, Kamloops, and Campbell River. The planned 13/14 operating budget (LBI, base, and research funding) is about \$7.5 million. Most section activities are funded by the Land Based Investment Strategy (LBIS) and thus focussed on the LBIS priorities.

The section work plan (see 3.2) identifies the main projects/activities that will be undertaken by the section in 13/14. In addition to ensuring that the activities of the Inventory Section are consistent with the guidance outlined in this document (including the ADM priorities and the areas of strategic focus outlined by the Director), in 2013/14 there are six areas to which the Inventory Section will pay special attention.

- i) **Inventory Strategic Plan:** In February 2013 the ministry released a forest inventory strategic plan. We must ensure that our activities align with the plan, that we execute the strategies outlined in the plan, and that we achieve the targets specified in the plan. In 13/14, we will continue to focus our inventory resources in two areas – MPB-affected management units and special coastal situations (EBM areas and Haida Gwaii).
- ii) **Stakeholder engagement:** Ongoing dialogue is essential with those who use, or have interests affected by, our information and products. In 13/14, we will continue our efforts to communicate with stakeholders, understand their needs and interests, and use this information to shape our programs. In 13/14 we will convene stakeholder dialogue sessions, circulate draft plans for review, distribute our e-mail newsletter, publicly report program accomplishments, and ensure that our project leaders communicate with local stakeholders. In addition, we will improve our process to obtain input from senior managers in ministry regional operations.
- iii) **Improve IT:** Forest inventory and modelling are highly dependent on Information Technology (IT) and components of our IT infrastructure are out-dated, inadequate, and must be improved. In 13/14, we will strive to improve select components of our IT infrastructure, including migrating VRIMS to Arc10.
- iv) **Innovate:** Innovation in inventory, monitoring, and modelling is required to provide answers to new management questions, capitalize on advances in technology, and ease resource limitations. In 13/14 we will continue to innovate in many areas of work, including developing experience with LiDAR-based inventory, enhancing LVI, and evolving the ground sampling program to improve its utility for growth estimation and change monitoring.

- v) **Accessibility:** To maximize the benefit derived from our programs, we must strive to make inventory and modelling data and products accessible to users. In 13/14 we will undertake a number of projects that make inventory and modelling data and products more accessible to users including releasing a version of TASS III with expanded capabilities, releasing a second-generation province-wide site index GIS layer, and releasing several reports that provide summaries and analyses of various ground sample data sets.
- vi) **Collaboration:** One Resource Stewardship Division goal is to increase collaboration on resource data collection, management, and analysis. In 13/14 we will contribute to this goal in many ways, including working with ministry ecologists on site productivity mapping and estimation, engaging forest health specialists to improve inventory plot observations, co-ordinating managed and natural stand growth plot work with Resource Practices Branch staff, and sharing our expertise with staff in other programs such as FREP SDM and FFT.

An ambitious program of work is planned for 13/14. Risks to successfully completing this work, and achieving the objectives of the inventory section, are outlined in Section 4.0 of this plan.

2.4.3 Forest Analysis Section Overview and Key Initiatives

In 2011, we agreed that timber supply review will remain a core deliverable for us and we reaffirmed that we are capable, and have a desire, to contribute significantly to the ministry's goal of integrated decision-making. To this end, we modified our vision statement (page 6) and developed a strategic plan to work towards our vision. Last year we reviewed the plan, and with a few tweaks, agreed that it meets our needs. In this business plan we describe what we will do this year to continue implementing our strategic plan.

The analysis section:

- i) provides information and analysis to support problem solving, statutory decision making and policy development for the ministry and its clients;
- ii) provides data management, research and statistical services to support strategic analyses for the natural resource sector.

Research, data and analysis represent key components for informed decision making. These decision support services enable managers to enlarge the decision space and ultimately make better decisions. The analysis section in FAIB is widely regarded as the authority on forest analysis in BC.

The section comprises 29 staff located in Victoria, Nanaimo, Kamloops and Prince George. The planned 13/14 operating budget is \$160,000.

The section's work plan (see Section 3.3) identifies the main projects/activities that will be undertaken by the section in 13/14. In addition to completing timber supply reviews and AAC determinations for priority management units, special attention will be paid this year to:

- i) Grow the section's forest estate modelling capability to model for multiple forest values (timber, carbon, etc.) simultaneously.
- ii) Fulfill commitments made in BC's Forest Stewardship [Climate] Adaptation Plan.
- iii) Provide data and analysis to support cumulative effects projects underway in Merritt, BC.
- iv) Improve our capability to support/provide habitat supply analysis.
- v) Support commitments made in government's response to the Special Committee on Timber Supply.
- vi) Provide analyses to support the First Nations revenue sharing agreement.
- vii) Carry out information gathering and analyses to support integrated decision making and collaboration across the Division and broader sector.

Risks to successfully completing this work, and achieving the objectives of the analysis section, are outlined in Section 4.0 of this plan.

2.4.4 Operations Section Overview and Key Initiatives

The operations section provides support for the branch, division, ministry and provincial initiatives in:

- i) Budget and contract management.
- ii) All aspects of human resources.

These key elements are essential for the branch to run efficiently and effectively to meet goals and targets as outlined in this business plan. The primary responsibility for the operations section revolves around our most important asset, which is our people. Staff engagement at all levels is fundamental to our success. This includes adequate tools to do the job, training and development, succession planning and knowledge transfer, and empowerment.

The section work plan (see Section 3.4) identifies the main projects/activities that will be undertaken by the section in 13/14. In addition, the following two key initiatives will receive special focus in the operations section in 13/14:

- i) Contract process and procedures – evaluation of our current practices to determine what is working well, and what we can improve on. Also a focus on building contractor capacity where possible.
- ii) Semi-annual supervisors meetings – follow-up sessions stemming from supervisors training courses and workshops. Select theme topics such as staff engagement and empowerment for group discussion. This is pivotal to continue to grow leaders and winning teams.

Risks to successfully completing this work, and achieving the objectives of the operations section, are outlined in Section 4.0 of this plan

3.0 2012/2013 Forest Analysis and Inventory Branch Work Plan– by section

This work plan shows each Branch section’s high level activities that are in alignment with the Ministry’s priorities. The following tables outline what the specific tasks related to each activity are and how each section plans on completing them.

3.1 Director’s Office

Activity	Task for this Planning Year	What Does Success Look Like?
Provide vision and strategic direction for Branch business	<ul style="list-style-type: none"> Ensure Branch Business Plan for fiscal 13/14 is well aligned with ministry vision and priorities and reflects activities to foster the vision of “One Land Manager”. Contribute fully to the development of Division and Ministry Planning documents in a timely manner. 	<ul style="list-style-type: none"> Staff are aware of and find plans useful in defining Branch direction and how their work can contribute.
Business planning completed in a timely fashion	<ul style="list-style-type: none"> Complete the Business Plan for fiscal 13/14 that realistically reflects resources. Review progress on Branch core functions and Business Response projects at Management Team Meetings. 	<ul style="list-style-type: none"> Branch Business Plan signed-off by May 2013.
Provide leadership to Branch management team	<ul style="list-style-type: none"> Hold FAIB Management Team meeting every two weeks with a meaningful agenda. 	<ul style="list-style-type: none"> Feedback from team members indicate they find the meetings very useful in keeping the Branch on track and focused on “must do” activities.
Communicate frequently with staff	<ul style="list-style-type: none"> Monthly all staff meetings. Monday morning stand-ups with each section. Regular meetings with Team Leaders. Communicate the Chief Forester’s and Executive updates. 	<ul style="list-style-type: none"> Feedback from staff indicates they are getting useful information in a timely manner.
More collaboration with other program leads within the Natural Resource Sector	<ul style="list-style-type: none"> Develop five key mutually beneficial relationships that hold opportunity for strategic cooperation, collaboration and foster integration. 	<ul style="list-style-type: none"> Complete several collaborative projects with Natural Resource Sector stakeholders we have not worked with in the past.
Review role of the Chief Forester	<ul style="list-style-type: none"> Participate in the process to evaluate how the role of the Chief Forester might evolve to reflect a more integrated decision making model consistent with the vision for the Ministry. 	<ul style="list-style-type: none"> Participate in the development of a thought piece on how the role of the Chief Forester might evolve to reflect a more integrated decision making model to ADMs.

Efficient branch administration	<ul style="list-style-type: none"> Respond to correspondence in a timely fashion and office administration procedures being followed. 	<ul style="list-style-type: none"> Ministers Response Letters (MRLs) addressed within two weeks, admin/office procedures being followed as per binder.
Foster branch innovation	<ul style="list-style-type: none"> Ensure each business area has five-year strategy in place and has identified several initiatives to prepare for it. 	<ul style="list-style-type: none"> Successful completion of the key initiatives identified to prepare for the future.
Maintain and encourage staff engagement	<ul style="list-style-type: none"> Carry out the actions outlined in the Branch Engagement Plan. 	<ul style="list-style-type: none"> Engagement maintained above 70 points for 2013. (No survey in 2012).
Make records management more efficient	<ul style="list-style-type: none"> Continue with TRIM implementation and training. 	<ul style="list-style-type: none"> Admin staff working with Contract Qualified Receivers to ensure information is being filed in TRIM for all contracts.
Ensure staff understand what work they need/ are expected to do this fiscal	<ul style="list-style-type: none"> Staff have meaningful Performance Plans in place that help guide and prioritize their workload. 	<ul style="list-style-type: none"> Staff are fully accountable for work commitments and supervisors are kept fully advised of any deviations from these commitments by staff.
Employee development	<ul style="list-style-type: none"> Use the Performance Planning process to identify staff development needs and desires that supervisors can endorse and seek support for. 	<ul style="list-style-type: none"> Learning objectives and performance measures in Performance Plans met, budget permitting.
Succession planning	<ul style="list-style-type: none"> Identify critical positions which may be vacated by those leaving on retirement and have transition strategies in place. 	<ul style="list-style-type: none"> Smooth transition. Recruitment and knowledge transfer completed successfully.

3.2 Forest Inventory Section

Activity	Task for this Planning Year	What Does Success Look Like?
Administration of the Forest Inventory and GY Program	<ul style="list-style-type: none"> Plan and manage the inventory and GY program, including program planning, budgeting, progress monitoring and reporting, and stakeholder engagement and communication. 	<ul style="list-style-type: none"> Planned activities align with the ministry's Forest Inventory Strategic Plan, LBIS objectives and other guiding documents. Major projects have project plans and periodic progress reporting. Planned activities are completed on time and on budget. Stakeholders are provided with opportunities for input into the program and program achievements are communicated publicly.
Air photo and satellite imagery acquisition	<ul style="list-style-type: none"> Acquire air photos for Morice and Quesnel TSAs through GeoBC. Acquire Landsat satellite imagery for the province. Provide Forestry Canada with new photos when available for NFI photo-plot locations. 	<ul style="list-style-type: none"> Photo acquisition agreement with GeoBC is well planned and closely monitored. All air photos and other deliverables are received on time and as per specifications. 2013 air photos (and associated products) are posted to image warehouse by March, 2014. Landsat images acquired, processed, and posted to server by February, 2014. New air photos provided to Forestry Canada when available for NFI photo-plot locations.
Photo Interpretation (VRI Phase I)	<ul style="list-style-type: none"> Initiate, continue, or complete photo-interpretation projects in eight management units (100 Mile House, Haida Gwaii, Mid Coast, Kamloops, Lakes, and Morice TSAs, Vanderhoof District, and TFL 35). Prepare Quesnel and Morice implementation plans. 	<ul style="list-style-type: none"> Photo interpretation projects completed in Mid Coast, 100 Mile House, and Haida Gwaii TSAs, and TFL 35. Photo interpretation projects continue in Kamloops TSA. Photo interpretation projects are initiated in Lakes TSA and Vanderhoof District. Implementation plans for Quesnel and Morice are prepared.

<p>VRI Ground Sampling (CMI/YSM and VRI phase 2)</p>	<ul style="list-style-type: none"> • Co-ordinate the 13/14 ground sampling program. • Complete ground sampling projects in Williams Lake, Quesnel, and Merritt TSAs. • Load sample data to VGIS database. • Prepare project report with sample plan, implementation discussion, and data summaries. • Develop ground sampling implementation plans for 14/15. 	<ul style="list-style-type: none"> • Sampling is well co-ordinated and all components are completed on time. • Ground sampling completed in Williams Lake, Merritt and Quesnel TSAs. • Sample data loaded to VGIS database. • Project report completed. • Ground sampling plans for 14/15 completed.
<p>NVAF Sampling and Tree Volume</p>	<ul style="list-style-type: none"> • Develop 2013/14 provincial NVAF work plan. • Collect approx. 140 NVAF samples in three high priority areas (Morice, Robson Valley and various coastal locations). • Calculate new NVAFs and use them to adjust ground sample volumes. • Update compiler taper equation and recompile VRI ground samples. • Train successor in NVAF selection, compilation and analysis processes, V&D databases, the taper equation, etc. 	<ul style="list-style-type: none"> • 2013/14 provincial NVAF work plan produced. • NVAF sample data collected from the high priority areas. • New NVAFs calculated and applied. • Revised taper equation implemented in the compiler and VRI ground sample data recompiled. • Capability in section maintained through the training of successor and production of a primer describing the processes used to produce NVAFs.
<p>Inventory and Monitoring Analysis</p>	<ul style="list-style-type: none"> • Co-ordinate inventory and monitoring analyses. • Complete inventory and monitoring analysis for two management units (Kootenay Lake and Morice TSAs). • Initiate inventory and monitoring analyses for Merritt, Williams Lake and Quesnel TSAs. 	<ul style="list-style-type: none"> • Inventory and monitoring analysis work is well co-ordinated. • Analysis reports completed and posted for data collected in 2012 (Morice and Kootenay Lake TSAs). • Analyses initiated for data collected in 2013 (Merritt, Williams Lake, and Quesnel).

Site Productivity	<ul style="list-style-type: none"> • Develop the 2013/14 site productivity work plan. • Update the provincial site index GIS layer. • Complete or update two PEMs (Arrow and Merritt). • Conduct SIBEC sampling in Cranbrook, Merritt, and Arrow • Initiate project to develop growth intercept and height-age models, and collect SIBEC data, for Engelmann spruce. • Produce site productivity atlas. 	<ul style="list-style-type: none"> • Work plan for 2013-14 developed. • Province-wide site index GIS layer updated by July 2013. • Two PEMs completed/updated. • SIBEC sampling in three areas completed. • Data collection for Engelmann spruce project completed. • Site productivity atlas completed.
Monitoring	<ul style="list-style-type: none"> • Review data and analysis reports with stakeholders. • Refine data collection, compilation, analysis, and reporting. • [For data collection see VRI ground sampling]. 	<ul style="list-style-type: none"> • Data and analysis reports reviewed with stakeholders. • Refinements made to data collection, analysis, and reporting.
PSP	<ul style="list-style-type: none"> • Reconnaissance of 50 PSPs. • Re-measurement of 85 PSPs. • Train new PSP measurement contractors. • Develop 2013/14 PSP annual work plan. 	<ul style="list-style-type: none"> • Reconnaissance of 50 PSPs completed. • Re-measurement of 85 PSPs completed. • Two training sessions conducted for PSP measurement contractors. • 2013/14 PSP annual work plan developed.
Landscape Vegetation Inventory (LVI)	<ul style="list-style-type: none"> • Complete LVI inventory of western Williams Lake TSA. • Improve LVI inventory of western Quesnel. • Complete LVI ground sampling in Quesnel and Williams Lake TSAs. • Complete accuracy assessment of LVI in Quesnel and western Williams Lake. • Complete photo-interpretation sample and data analysis in Prince George TSA. • Modify and finalize the LVI standards and procedures. 	<ul style="list-style-type: none"> • LVI-based inventory completed for western Williams Lake TSA. • Improved LVI-based inventory completed for western Quesnel. • Ground data collection completed. • Accuracy assessment completed. • Photo-interpretation sample and data analysis in Prince George TSA completed. • LVI standards and procedures revised.

Special analyses, data provision, and products for clients	<ul style="list-style-type: none"> • Provide custom analysis to guide LBIS investments. • Provide 2013 remote sensing tile for the province and harvest change detection. • Provide ground-sample data on request. 	<ul style="list-style-type: none"> • Custom analyses and expert assistance provided to LBIS as requested. • Complete harvest change detection mapping by March 2014. • Ground sample data provided to clients on request.
Support the Forest and Fibre Working Group	<ul style="list-style-type: none"> • Participate in a Fibre Based Management Unit Pilot providing inventory support. 	<ul style="list-style-type: none"> • Assist in the development of a LiDAR acquisition strategy for the Province. • Explore supplementation of the existing inventory information with readily available data (e.g. Cruise Plots, PSPs, etc.).
Biometrics	<ul style="list-style-type: none"> • Develop solutions for projecting attributes for MPB-damaged stands. • Release new version of VDYP7. • Complete implementation of tree-list generation for all TSAs in BC. • Implement Phase I basal area and trees per hectare estimation methodology standard across the province. • Update biomass estimation equations for all BECs and species. 	<ul style="list-style-type: none"> • Solutions developed. • New version of VDYP7 released with new biomass estimation, new output formats, and new output attributes. • Tree-list available for every vegetated treed polygon in the province. • Phase I basal area and trees per hectare are estimated more consistently and with better accuracy than in the past when photo interpreter did it subjectively. • Updated biomass equations produced.
Stand development modelling research	<ul style="list-style-type: none"> • First public release of TASS III. • Add western redcedar to TASS III and release a second version. • Enhance FanŞier lumber recovery function. • Enhance TIPSy RESULTS data input capability. • Remeasure and maintain key GY research installations. • Improve ability to use TASS and TIPSy to project growth of inventory polygons. 	<ul style="list-style-type: none"> • First public release of TASS III by June 2013. • Second version of TASS III released that includes western redcedar by March 2014. • Lumber recovery function in FanŞier enhanced. • Capability for RESULTS data input to TIPSy enhanced. • Key research installations maintained, remeasured, and utilized in stand growth model improvement. • Ability to use TASS and TIPSy to project growth of inventory polygons improved.

Inventory update, VRIMS maintenance, and projection	<ul style="list-style-type: none"> • Integrate harvest depletion openings. • Integrate new VRI re-inventoried mapsheets. • Manage the 2013 projection. • Produce statistics that characterize the status of the inventory and inventory update process. • Undertake essential VRIMS maintenance including migration to Arc 10. • Develop and execute a plan to identify and integrate missing depletions. 	<ul style="list-style-type: none"> • 80% of depletion openings received August 1, 2012 to July 31, 2013 are integrated prior to the 2013 projection. • 100% of new VRI mapsheets received August 1, 2012 to July 31, 2013 are integrated prior to the 2013 projection. • 2013 projection completed and delivered to the BCGW by January 2014. • Statistics produced that characterize the status of the inventory and inventory update process. • Essential VRIMS maintenance completed including migration to Arc 10. • Plan developed and missing depletions integrated.
Innovation and improvement initiatives	<ul style="list-style-type: none"> • Improve components of IT infrastructure. • Participate in one LiDAR project. • Produce ground sample data summaries. • Initiate external expert reviews of some program areas. 	<ul style="list-style-type: none"> • Select components of IT infrastructure improved. • Ability improved for using LiDAR in inventory. • Summaries of ground sample data produced. • External expert reviews completed for some program areas.
Performance Plans	<ul style="list-style-type: none"> • Ensure that all section members have a Performance Plan that aligns with the branch business plan and that quarterly reviews are conducted. 	<ul style="list-style-type: none"> • All Performance Plans in place. • All commitments in business plan assigned in EPDPs. • All quarterly reviews conducted on time.

3.3 Forest Analysis Section

Activity	Task for this Planning Year	What Does Success Look Like?
AAC Determinations for TFLs and TSAs	<ul style="list-style-type: none"> Release 12 AAC determinations and stay current on Part 13 AAC reductions. 	<ul style="list-style-type: none"> Release 12 AAC determinations within legislated time frame including Cassiar, Boundary, Bulkley, Dawson Creek, Mackenzie, Morice, Strathcona, Williams Lake, 100 Mile House, and Robson Valley TSAs as well as TFL 30 and TFL 39.
Support efforts to mitigate economic consequences of the MPB on rural communities	<ul style="list-style-type: none"> Analyses to support strategies to mitigate economic impacts to communities in the Lakes, Quesnel, Williams Lake and 100 Mile House TSAs. 	<ul style="list-style-type: none"> Timely analyses prepared for decision-makers working in Burns Lake and the Cariboo Region.
First Nations Consultations	<ul style="list-style-type: none"> Integrate First Nations consultation for TSR with other FN consultation processes within the FLNR/Government. 	<ul style="list-style-type: none"> Subject experts consult with First Nations in a more constructive manner.
Carbon Modelling	<ul style="list-style-type: none"> Incorporate projection of ecosystem carbon in TSR. 	<ul style="list-style-type: none"> All TSRs include a projection of total ecosystem carbon.
Support the implementation of First Nations Woodland tenures and Community Forest Agreements	<ul style="list-style-type: none"> Provide information and analysis to support granting of these tenures. 	<ul style="list-style-type: none"> FNWLs and CFAs are signed in a timely manner.
Habitat Supply Modelling	<ul style="list-style-type: none"> Work with Ministry of Environment and Management Objectives Branch to develop/implement a system to model habitat supply as part of TSR. 	<ul style="list-style-type: none"> Habitat supply is modelled and accounted for in TSR.
Inventory Depletion/Projection	<ul style="list-style-type: none"> Deplete inventories for disturbance and project the provincial forest inventory to reflect annual growth. 	<ul style="list-style-type: none"> Inventory depleted, projected to current year and posted to the Data Warehouse January 2014.
Inventory Data Management	<ul style="list-style-type: none"> Maintain and enhance the provincial inventory database on an ongoing basis; continuous improvement of forest inventory information. 	<ul style="list-style-type: none"> Database enhanced to meet client requests; improved functionality for easy access; new data loaded in a timely fashion.

Inventory Integration	<ul style="list-style-type: none"> Participation on Provincial Geomatics Leadership Team, Natural Resource Sector Initiatives Working Group (NRSIWG), Vegetation Inventory Advisory Council (VIAC) Sub-Committees, Forest Health Technical Advisory Team, and RESULTS Project Steering Committee. 	<ul style="list-style-type: none"> Integration of inventory in cross-ministry programs.
Data Acquisition	<ul style="list-style-type: none"> Integrate TFLs, Parks and Private Land in the inventory to provide a seamless coverage for internal use. 	<ul style="list-style-type: none"> Integration of inventory information from TFLs, parks and private lands for provincial reporting and statistics.
Performance Plans/Training	<ul style="list-style-type: none"> Support staff development plans identified during the Performance Planning Process. 	<ul style="list-style-type: none"> Learning objectives and performance measures in Performance Plans met, budget permitting.
Special Projects	<ul style="list-style-type: none"> Carry out analysis to support government decision-making with a special emphasis on initiative that lead to integrated decision making. 	<ul style="list-style-type: none"> Complete 12 analyses to support decision making in fiscal 13/14.
Cumulative effects analysis	<ul style="list-style-type: none"> Using Merritt TSA as an example, investigate how to portray values of interest and indicators of those values. 	<ul style="list-style-type: none"> A method for portraying values and indicators is developed.
Provincial Spruce Beetle Monitoring	<ul style="list-style-type: none"> Complete project with Tim Ebata to assess the extent of spruce bark beetle in BC. 	<ul style="list-style-type: none"> Preliminary information on extent of spruce bark beetle is provided.
Provincial MPB spread modelling	<ul style="list-style-type: none"> Wrap-up annual update of MPB activities in BC. 	<ul style="list-style-type: none"> A final report for 2013 is provided.
Analytical and statistical support	<ul style="list-style-type: none"> Provide analytical and statistical support to FAIB and FLNR staff. 	<ul style="list-style-type: none"> Analytical and statistical support provided to happy customers.
Modelling of multiple forest values for integrated decision making	<ul style="list-style-type: none"> Use Patchworks to model goals for timber, carbon and water values. 	<ul style="list-style-type: none"> Draft results for a test area are provided.
Climate Research	<ul style="list-style-type: none"> Correlate climate and growth of white spruce for plots on Northern BC. 	<ul style="list-style-type: none"> Report showing correlation is published.
Growth and Yield Modelling	<ul style="list-style-type: none"> Develop height-age and growth intercept models for Englemann spruce 	<ul style="list-style-type: none"> Report of models developed is published.
Develop approaches to incorporate climate change aspects in timber supply	<ul style="list-style-type: none"> Brainstorm how to adapt TSR to reflect climate change – increased disturbance; growth and yield. 	<ul style="list-style-type: none"> Start to incorporate the expectation of increased disturbance in TSR.

Analysis to assist in setting adaptation priorities	<ul style="list-style-type: none"> • Develop models of potential impacts of climate change on stand establishment, development and mortality. 	<ul style="list-style-type: none"> • Initiate work across disciplines to develop such models.
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3.4 Branch Operations Section

Activity	Task for this Planning Year	What Does Success Look Like?
Budget	<ul style="list-style-type: none"> • Budget analysis and projections. 	<ul style="list-style-type: none"> • FYE expenditures one percent of January projection. • EAs follow policies and procedures defined by Government, Executive and Corporate Services.
Contract Management	<ul style="list-style-type: none"> • Working with industry/recipients, consultants, academia, and First Nations to manage Inventory contracts. 	<ul style="list-style-type: none"> • Ensure contracting practices we are following meet our operational needs to successfully deliver on our program goals. • Consultation with staff and policy folks to ensure we follow core policy and procedures and Government standards and specifications required for managing contracts for the program. • Initiate new process for helping to build contractors capacity for Inventory work. • Establish correct legal process for transferring funds as required.
Systems	<ul style="list-style-type: none"> • Sustain and enhance IT infrastructure to meet branch requirements. • Software/hardware evaluation. • Monthly computer clean-up. • U3 – if/when it proceeds. 	<ul style="list-style-type: none"> • Maintain regular dialogue with IMB and WTS to ensure requirements are understood and being considered. • Ensure that staff have adequate equipment and software to complete assigned tasks. • FAIB continues to strive to keep costs to a minimum in support of corporate initiative.
Performance Reporting	<ul style="list-style-type: none"> • Branch Performance Measures. 	<ul style="list-style-type: none"> • Monitor quarter/monthly as required to ensure branch meets targets identified in business response.

Work Environment	<ul style="list-style-type: none"> Review current floor plans and modify as required to meet business needs, and ensure furniture/equipment is safe for use by staff. 	<ul style="list-style-type: none"> Ensure staff have a safe, adequate space and furniture to complete assigned tasks.
Human Resources	<ul style="list-style-type: none"> Maintaining Staff Performance. 	<ul style="list-style-type: none"> Have meaningful work. Clear direction is provided. Enthusiastic, engaged, motivated staff. They are easily able to see themselves in our business plan and can link this to tasks assigned in their EPDPs.
Training Requirements	<ul style="list-style-type: none"> Training needs assessment for all branch staff. 	<ul style="list-style-type: none"> Building capacity for succession planning, mentoring, knowledge exchange and developmental opportunities.
Performance Plans /Training	<ul style="list-style-type: none"> Training needs assessment for all branch staff Support staff development through EPDPs. 	<ul style="list-style-type: none"> Learning objectives and performance measures in Performance Plans met, budget permitting.
Succession Planning	<ul style="list-style-type: none"> Identify critical positions which may be vacated by those leaving on retirement. 	<ul style="list-style-type: none"> Smooth transition. Recruitment and knowledge transfer completed successfully.
Hiring	<ul style="list-style-type: none"> Mentoring staff on process for hiring and Chairing panels. 	<ul style="list-style-type: none"> Successful knowledge transfer. Successfully hire new staff.
Collaboration within the Resource Stewardship Division	<ul style="list-style-type: none"> Provide staff assistance to other Branches within the Division. 	<ul style="list-style-type: none"> Staffing pressures within the Division are mitigated by finding internal capacity to offset workload.

4.0 Forest Analysis and Inventory Challenges to Achieve Success

The resources allocated to the Branch do not always allow complete delivery of the mandate nor allow all identified risks to be fully mitigated. It is important to all members of the Branch that these risks and pressures be acknowledged and considered, particularly as new expectations are added to staff workloads. The following table is intended to capture these challenges:

- Change in Government—There is a possibility that a change in government or renewal in mandate for the existing government could lead to a change in direction for some of the projects committed to in this Business Plan. While no whole-scale program shifts are contemplated, the management team will flag any direction changes to those staff affected as early as possible and revised work assignments will be provided.
- Operations support of Branch programs – The Branch relies on assistance from Operations Division to support the Timber Supply Review program, identify emerging stewardship issues and help prioritize inventory activities. When core business is being held-up by the inability to get others to contribute, bring it to the attention of Branch Management Team so they can seek a solution with the assistance of Executive if necessary.
- Budget – There will be some uncertainty around the size of the budget and how the budget is allocated in light of the pending election. Budget risk will again be managed this year through careful program planning, tracking of expenditures and risk managing projects that must be started early in the fiscal year.
- Staff levels – The number of branch staff has declined in recent years with workforce adjustment and restrictions on filling vacated positions. Low staff levels pose a challenge to program capacity and continuity in many work areas. Risks from low staffing levels are being addressed through the limited hiring, contracting certain tasks, careful program planning and priority setting, optimal matching of staff to projects, and cross-training. When opportunities arise through the ministry’s Managed Staffing Strategy, the branch will continue seek permission to fill key vacancies.
- Workload – The change in inventory delivery model, the elimination of the licensee delivery of Timber Supply Review for some management units and new tasks arising from evolving ministry priorities will continue to make managing workload a challenge. These are being managed by priority setting, Performance Plans and innovative approaches to business. Some existing duties may need to cease.
- IT restrictions – Over the last few years, expenditures on IT have been tightly constrained. The work of the branch is heavily dependent on IT. IT restrictions pose risk to continuity of programs and hamper efforts to improve efficiency. To address IT risk, the branch will continue to direct available funding where appropriate to IT and put forward business cases to IMG for IT spending at every opportunity. In addition, the Director will champion the branch’s IT needs at senior levels.
- U3 – Computer refresh does not happen – The coming refresh, if it proceeds, could create a lot of work for some staff members. If however the refresh is delayed yet another year, the impact on staff will be significant due to our aging computers being to slow/inadequate to meet our computing needs. To manage this risk, the management team will meet with senior IMB/FLNR staff to press our case for adequate computer hardware to meet out demanding computer needs.

5.0 Appendices

5.1 Performance Measures for 2013-2014

By placing these performance measures in the business plan FAIB is committing to achieving each one of the targets.

Performance Measure	2013/2014 Target	2012/2013 Actuals
Percent of tasks in the section work plans successfully completed (see Section 3.0) 1. Director's Office; 2. Forest Inventory Section; 3. Forest Analysis Section; 4. Branch Operations Section.	100%	1. 9/10 2. 52/63 3. 20/23 4. 8/8
Number of key initiatives successfully undertaken (see Section 2.5) 1. Forest Inventory Section; 2. Forest Analysis Section; 3. Branch Operations Section.	7/7 4/4 2/2	1. 7/7 2. 5/5 3. 2/2
Number of ADM/Chief Forester priorities substantively addressed (see Section 1.2)	15/15	6/7 in inventory 4/5 in analysis
Percent of TSA and TFL for which the current AAC was determined within the legal time frame.	100%*	92%
Non-TSR Related projects.	12/12	15/12
Percent of staff with completed EPDPs and training plans.	100%	100%

* Note: Mid-term timber supply information and analysis needs could impact TSR as it is considered a higher priority in some cases.

Proposed Budget Allocation

Funding Allocation	Amount (\$)
Salaries	5,785,466.00
Operating	800,000.00
LBIS	7,500,000.00
Research	150,000.00
Canadian Forest Service*	85,000.00
Total	14,320,466.00

*Subject to Funding

5.2 FAIB Staff Engagement Plan

In order to be successful, staff engagement at all levels is critical. To strive for engagement the following actions will be taken:

- 1) Provide as much information as soon as possible to staff so they are better able to withstand the uncertain times the Ministry is facing over the next few months due to the pending election.
- 2) Provide updates to staff from Resource Stewardship Division Management Team, Assistant Deputy Minister, Executive Director and Executive Meetings at monthly all staff meetings.
- 3) Have the Executive attend Branch functions when possible to maintain a personal connection with staff. Get frequent direction from Executive, especially ADM/Executive Director Resource Stewardship. What's on their minds; where do we need to go? Ask staff what they would like to hear about from the Executive.
- 4) Foster Branch spirit through ongoing Branch functions such as potlucks, nutrition breaks, skating, curling, baseball, BBQs, etc.
- 5) Ensure staff are recognized for significant accomplishments in a manner consistent with the employee's wishes.
- 6) Continue to develop Branch supervisors as they are the most immediate and important day-to-day link between the staff and the organization.
- 7) Continue to emphasize use of Performance Plans as both a workload management and staff development tool.
- 8) Assign priorities to all tasks assigned. Ensure roles and responsibilities are clearly articulated and adjust as circumstances dictate (ensure "100% communication" is practiced when assigning all work related tasks and capitalize on team work to complete projects).
- 9) Review Vision Mission and Values of the Branch with staff once during the year to ensure it is still relevant or determine if it requires revision.
- 10) Our organization, being the best. The Corporate HR Plan. Find out if this is something that can assist us with tools required for the job, staffing, etc. <https://gww.gov.bc.ca/org/hr-plan>
- 11) Strive to provide staff with the tools they need to do their jobs well (e.g., software, hardware, equipment, and technology).
- 12) Match jobs to staff's interest. Work with staff on their strengths, provide development opportunities and be mindful of succession planning.