Sunshine Coast Forest District

Inventory Plan

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1. INTRODUCTION

1.1 Background

The Provincial Vegetation Resources Inventory (VRI) or Provincial Inventory is an improved vegetation (forest) inventory process or toolbox for assessing the quantity and quality of British Columbia's timber and other vegetation resources. It addresses the concerns expressed by the Forest Resources Commission in its 1991 report, *The Future of our Forests*. These concerns included:

- lack of statements of precision of the inventory;
- inadequate information on non-timber vegetation resources;
- lack of reliable estimates of growth rates and stand specific volumes; and
- narrow focus on commercial timber volume and the timber harvesting landbase.

The VRI can be implemented at a number of levels depending on the business needs. It can be deployed over the entire province (one or more Forest District at a time), measuring all the timber and non-timber resources. The VRI can also be deployed over a Management Unit (TFL or TSA) or a small watershed within a District, measuring selected resources in specific portions of the landbase.

The Provincial Inventory consists of a system of protocols, models and databases that can be managed through a dispersed computing environment. The Provincial Inventory process can be used to meet today's needs for timber supply, long term planning, silviculture planning, defining sustainability, public information and credibility. The Provincial Inventory can also provide data for computer modeling and decision support systems to support a baseline biodiversity assessment and for research.

The Vegetation Resources Inventory is designed to determine:

- the amount of vegetation cover in the province;
- the location of vegetation resources in the province; and
- the changes in the amount and location of vegetation resource over time.

The principles guiding the implementation of the inventory are:

- to integrate provincial inventory activities (e.g. Management Inventories, Provincial Inventory, National Forest Inventory and Monitoring);
- to implement inventory projects to satisfy business requirements as defined in the inventory plans; and
- to maximize the usefulness of sample plots and minimize overall costs by implementing a cascading plot approach that ensures that information collection meets the VRI standards while meeting multiple goals.

Management Inventories include inventories conducted in Implementation Units[1], to fulfill specific forest management or business needs. Sampling error and sampling intensity are controlled for specific vegetation attributes (e.g., timber volume) to achieve specific inventory objectives. There are several types of Implementation Units in the province: Timber Supply Areas (TSAs), Tree Farm Licenses (TFLs), and other lands (parks, private lands, and other public lands). Within (or across) these Implementation Units there may be Management Inventories addressing specific issues such as Problem Forest Types, or other strata in a TSA (or groups of TSAs).

Management Inventories are typically timber emphasis inventories. Besides providing detailed polygon information for day-to-day forest management, they can also be used to increase precision of the Provincial Inventory. The TFL holders or the MoF Regions/Districts are responsible for the planning and implementation of these inventories. However, the Ministry of Forests Resources Inventory Branch requires the TFL holder(s), stakeholder(s), or District(s) to prepare an inventory business plan, which includes a sampling plan, for its approval. An inventory business plan defines the inventory needs, the information needed to meet the needs, and the methods for collecting the information. This business plan then drives the inventory project plans.

1.2   Objectives

This is a plan for implementing the Provincial Vegetation Resources Inventory and Management Inventory activities in the Sunshine Coast Forest District in the Vancouver Forest Region. This plan was developed through consultation with various stakeholders during April 1997 in the Sunshine Coast Forest District, including the Ministry of Forests, Branch, Region and District staff, and the Licensees' staff from Scott Paper, MacMillan Bloedel and International Forest Products, who identified inventory local needs and priorities. Management issues identified in the recent TSR in the TSA were also reviewed.

The purpose of the Inventory Plan is to:

1. define the Management Inventory objectives;

2. define the Provincial Inventory strategy for Sunshine Coast Forest District;

3. identify the inventory activities required to satisfy the objectives for both inventories; and

4. outline the implementation steps.

This plan is based on the consultant report, *Sunshine Coast Forest District Vegetation Resources Inventory Ground Sampling Plan,* prepared by J.S. Thrower & Associates. The report was prepared following the procedures outlined in the Ministry of Forests, Resources Inventory Branch procedures, *Vegetation Resources Inventory: Preparing a*

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[1] Implementation Units are a specified area of land such as a TSA, TFL, Innovative Forest Practices Agreement area, etc. For any Implementation Unit, there can be none to several Management Inventories based on stakeholder business needs.

sampling plan for ground sampling (March 1997). The report has been reviewed by stakeholders in the District and is attached to this Inventory Plan (see Appendix A).

2. BUSINESS CONSIDERATIONS

2.1 Forest Management Issues

Forest management issues were identified during the recent timber supply review (Table 1). An assessment of potential impacts of the VRI ground sampling on these management issues is also shown in this table.

Table 1. Forest management issues for the Sunshine Coast Forest District and potential impacts for VRI.

Issue[2]	Remarks
1. Biodiversity impacts on timber supply (landscape unit planning).	Phase II will provide overall District totals for coarse woody debris, stumps, potential wildlife trees, and plant lists for species diversity. The precision of these totals should be evaluated, by Natural Disturbance Types (NDTs), before being compared to the biodiversity guidelines. There is a risk that precise estimates will not be obtained for these attributes. The data set can be used to identify supplemental sampling needs.
2. Impacts of laminated root rot, hemlock dwarf mistletoe, Douglas-fir bark beetle, spruce leader weevil, etc. on volume.	Phase II plots will provide estimates of the incidence of root rot, etc. in the District, which can be used as a base for more detailed subsequent studies or research.
3. Assumed losses due to decay, waste, and breakage.	Stem analysis of trees for Net Volume Adjustment Factor (NVAF) sampling can be used to check decay relationships. Net factoring (fine tuned with the NVAF) is a vast improvement over the risk-group approach used in the past. The NVAF data cannot be used to check waste and breakage relationships.
4. Critical wildlife habitat (goat, grizzly, marbled murrelet).	This requires better polygon estimates and delineation (Phase I).
5. Site productivity estimates in second-growth stands.	Measurements from Phase II plots can be used to check existing site index estimates. However, these data will not address the issue of potential site index and productivity of stands. As well, they will not correct deficient site curves.
6. Terrain stability mapping and impacts.	Phase II data could be used by interpreters of terrain stability.

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[2] These issues were identified during the Stakeholders consultative meeting in Nanaimo, 25 April 1997. They are largely based on "The Forest Management Issues Identified through the AAC Determination Process" in the TSA and the TFLs (10, 39, and 43).

Issue[2]	Remarks
7. Estimates of timber inventory net volume, and identification of deciduous stands.	Check and improve District net volumes by removing overall possible bias and net volume adjustment. Statistical statements of accuracy for the overall inventory will be provided.
8. Operability assumptions or principles (options for harvesting on steep slopes and inaccessible slopes).	The Phase II adjustment will help provide more accurate volume estimates for polygons on steep slopes. However, this issue will probably require more intensive sampling to be satisfactorily addressed. The Phase II plot locations can be used to check current operability designations.
9. Aboriginal and heritage values.	Plant lists from Phase II plots will provide incidence data for medicinal plans and other botanical forest products, which can be used as a basis for additional sampling.
10. Low stocking regeneration levels (compliance with provincial standards).	The type and intensity of Phase II sampling is not appropriate to address this issue. This could be addressed through better Phase I estimates, special studies, and silviculture surveys.
11. Temporary AAC reductions in contentious areas.	Application of the Inventory

2.2   Inventory Issues

The most recent Timber Supply Review identified specific issues and information to improve the timber inventory. These inventory issues, which are related to management issues (Table 1), include:

- The state of the current inventories in the TSA and TFLs is in question because inventory audits have not been conducted in these units.

- Inaccurate individual polygon descriptions, especially in deciduous forest types, urban areas, and private lands.

- Site productivity of second growth stands and old-growth site index.

- Inaccurate loss factors.

- Impact of root rot.

- Identification of non-timber resources such as botanical forest products.

- Quantification of wildlife related attributes (e.g., crown closure).

- Provincial and district monitoring of the indicators of sustainable forest management, as defined by the Canadian Council of Forest Ministers (CCFM).[3] Monitoring would involve measuring changes and trends in some of these indicators, which include

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[3] Canadian Council of Forest Ministers. 1995. Defining sustainable forest management. A Canadian approach to criteria and indicators. Natural Resources Canada, Canadian Forest Service, Ottawa, Ontario. 22 pages.

percent and extent of area by forest type and age class, and mean annual increment by forest type and age class.

▪ Issues raised by the Forest Resources Commission's 1991 report, *The Future of Our Forests*, regarding the inadequacy of forest inventories in the province. These concerns included lack of statements of precision on the inventory, inadequate information on non-timber vegetation, and the narrow focus on commercial timber volume and the operable landbase.

3. INVENTORY PLAN

3.1 Provincial Inventory

3.1.1 Provincial Inventory Landbase

The landbase for the Sunshine Coast VRI is the Sunshine Coast Forest District. This includes the Timber Supply Area (TSA), TFLs, private land, and parks. The Sunshine Coast TSA is located along the southwest coast of British Columbia and covers approximately 1,598,000 ha. The TSA is within the Southern Pacific Ranges of the Coastal Mountains and extends from Howe Sound north to Bute Inlet, in the Vancouver Forest Region. Parts of TFLs 39, TFL 43, and all of TFL 10 are within the Sunshine Coast Forest District.

3.1.2 Objectives

3.1.2.1 Photo Interpretation

Photo interpretation work has been considered but is not recommended for the Sunshine Coast Provincial or Management Inventories.

3.1.2.2 Ground Sampling

The objective of VRI ground sampling in the Sunshine Coast Forest District is to provide overall totals and averages for timber and non-timber resources (such as botanical forest products) in the District. This objective addresses the immediate need to audit and improve the accuracy of the existing timber inventory in the District. It also provides the foundation for the sub-unit inventories, and provides initial conditions and locations for monitoring (measuring changes and trends of the indicators of sustainable forest management at the District and Provincial levels).

3.1.3 Sampling Plan

3.1.3.1 Sample Size

To achieve the inventory objectives as identified above, the sample sizes required to implement the Provincial Inventory are summarized in Table 2. In inventory, a sampling error standard is necessary to provide a basis for determining sample size. In the VRI, the

allowable sampling error standard is set at ±10% for volume estimation at the Unit/District level. This standard does not apply to other attributes in the inventory.

The number of samples required to achieve the standard is a function of the variation within the inventory unit, estimated by the coefficient of variation (CV%). The estimated CV in the Sunshine Coast Forest District used to estimate the total number of plots to achieve a sampling error of ±10% for net volume is 60%[4]. To achieve the VRI standard at a reasonable cost, two types of VRI plots will be used:

- full VRI samples, where the full suite of information (timber, coarse woody debris, range and ecology) is collected; and

- tree emphasis samples, where only tree information is collected.

The total number of full VRI samples (65) will be adequate to achieve a sampling error of ±15% in the treed landbase. Tree emphasis samples (TEP) (75) will then be used to reduce the sampling error in the treed landbase to ±10% to achieve the standard.

In the remaining non treed area of the unit, the number of full VRI samples established will be the ratio of the treed to remaining landbase, multiplied by the number of treed VRI samples required to achieve a sampling error of ±15% (65).

Implementing the two types of samples will ensure a minimum number of full VRI plots are established across the landscape to collect the full suite of VRI information. Establishing TEPs to boost the number of plots required to achieve the VRI standard will result in saved time and money.

To complete the Provincial Inventory, NVAF (net volume adjustment factor) and WPV (within polygon variation) sampling is required. The numbers of these types of samples are contained in Table 2.

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[4] The inventory audit CV was inflated by 25% to account for the possible differences between the CV estimates based on the VRI design (a tight 5-plot cluster) and based on the inventory audit (a well-distributed 9-plot cluster).

Table 2.   The estimated sample size required to implement the Provincial Inventory.

Ground Sampling Activity	Sampling Unit	VRI Samples	Tree Emphasis Samples	Sample Size
Provincial Inventory				
Vegetated Treed	Cluster	65	75	140
Other	Cluster	65	-	65
Net Volume Adjustment Factor	Tree	75		75
Within Polygon Variation	Polygon	30		30

3.1.3.2 Provincial Inventory Sampling

To achieve the Provincial Inventory objective, the sampling should be implemented in a two-step process. Step 1 is to install approximately 50 sample clusters in the first field season over the entire District. Step 2 is to install the remaining sample clusters in the second field season. The sampling locations will be selected systematically from the sorted list of potential sampling points. This list will include all polygons in the District and will be sorted by non-vegetated/vegetated and then land type, leading tree species, age, and site index. Sampling in the first year will provide experience to refine the process for the second field season, and information to calculate precisely the remaining number of samples required to meet the precision target of ±10% for total net volume in the treed portion of the District. An estimated total of 205 sample clusters will be assumed for planning, training, and other logistic considerations. Matching unavailable sampling sites with sub-sampling of sample clusters with difficult access will be anticipated and planned for, as these activities will increase inventory costs.

A two-step approach should also be used for implementing the other ground sampling activities that support the Provincial Inventory process: NVAF sampling and WPV sampling. NVAF provides a factor to adjust the net volume from the ground sampling (derived from the net factoring process and taper equations) to account for hidden decay and possible bias in taper equations. WPV information is used to express the total error of the inventory and to indicate accuracy of individual polygon estimates. A total of 75 sample trees for NVAF sampling (selected from 15 treed and 1 non-treed polygons) and 30 sample polygons for WPV sampling are required.

3.2   Management Inventory

3.2.1   Management Unit Landbase

Sub-units are separate populations created within the inventory unit (Forest District) to control sampling error and sampling intensity for specific attributes within these areas. Four sub-units were created within the Sunshine Coast Forest District to address the inventory issues raised by the stakeholders. These correspond to the management units in the District, and include the TSA, TFL 10, TFL 39 - Block 1, and TFL 43 - Homathko

Block. A sub-unit of only the treed polygons[5] in the District was created to improve the timber inventory in the operable land-base. Table 3 provides an approximation of the area to be assessed by the Provincial and Management Inventories.

Table 3. Area by Inventory Unit within the Sunshine Coast Forest District

Inventory Type	Inventory Unit	Area (ha)
Provincial Inventory	Forest District	1,598,000
Management Unit		
Sunshine Coast TSA	Treed Landbase	218,983
TFL 10	Treed Landbase	2,23,672
TFL 39 Block 1	Treed Landbase	72,000
TFL 43	Treed Landbase	2,090

3.2.2   Objectives

3.2.2.1 Photo Interpretation

Photo interpretation has not been identified as an immediate requirement for the Sunshine Coast Management Inventories.

3.2.2.2 Ground Sampling

The ground sampling objectives for the Management Inventories are to improve the accuracy of timber volume inventory in the "treed" portion of the landbase in the District. The number of samples will ensure at least $\pm 10\%$ sampling error (at the 95% probability level) for timber volume in the "operable landbase" in the District.

3.2.3   Sampling Plans

To achieve the objectives of the Management Inventories, Timber Emphasis Sampling will be required. The Timber Emphasis Sampling must meet the minimum sampling requirements as specified in *Implementation Strategy to Integrate Management, Provincial and National Inventories* (MoF, Resources Inventory Branch) The supplemental sampling will involve the installation of approximately:

- 250 sample clusters in the "treed" landbase of the Sunshine Coast TSA;
- 250 sample clusters in the "treed" landbase of the TFL 10;
- 50 sample clusters in the "treed" landbase of the TFL 43; and
- Sampling for the "treed" landbase of the TFL 39 Block 1 will be assessed after the Inventory Audit has been completed.

The implementation should proceed immediately in a manner similar to the Provincial Inventory Phase II sampling. The sampling will be spread over a period of 2 years, with

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[5] "Treed" is as defined in the BC Land Cover Classification Scheme.

unbiased interim results expected after the first season. Sampling in the first year will provide experience to refine the process for the second field season, and information to calculate precisely the remaining number of samples required to meet the precision target of ±10% for timber volume in the operable landbase.

NVAF sampling is not required for Management Inventories however it is strongly encouraged. Stakeholders should identify within their more detailed *Inventory Plans[6]* if NVAF sampling is to be conducted.

4.   IMPLEMENTATION STRATEGY

The ground samples that are established to meet the Management Unit objectives are compatible with the Provincial Inventory objectives providing that these dual purpose plots are identified prior to establishment. Therefore, Provincial Inventory plots will be identified prior to identifying the Management Unit ground sampling plots. These coincident plots will be used for both the Provincial and Management Inventories. Additional Management Inventory samples will be established to meet Management Inventory objectives. This integrated approach, that uses one set of samples to address multiple inventory needs, will result in minimum implementation costs.

There may be a need to enhance the coincident plots for non-timber attributes within the Management Units depending on the implementation strategy chosen. Additional Provincial Inventory ground samples will need to be established in the non-Management Inventory area in order to complete the Provincial Inventory for the Sunshine Coast Forest Districts.

The inventory outlined above will be completed to the Ministry of Forests minimum standards as outlined in *Implementation Strategy to Integrate Management, Provincial and National Inventories*.

4.1   Steps

There are several ways to complete the ground sampling in the two-step process stated above. It is hoped that stakeholders will complete all the required ground sampling in a timely manner. One possible scenario is as follows:

1. Install a large number of each Management Inventory sample clusters (e.g., 100) over the entire landbase measuring *only those* tree attributes related to timber volume and site index. Install the Provincial Inventory samples for plots that are designated "multi-purpose" and install tree emphasis plots for the others. This will provide the experience to refine the process for the second field season and will provide information to calculate the required number of remaining sample clusters.

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[6] Inventory Plans are required by stakeholders in order to proceed with their Management Inventories.

2. Install the remaining Management Inventory sample clusters in the second field season. (Note: the stakeholder may choose to install all ground samples in one field season).

4.1.2 Implementation Process

The implementation process will proceed based on available funding and can be implemented based on a number of scenarios. All implementation scenarios will a common process. One possible implementation process could proceed as follows:

1. Assemble all polygons within the District into one list; check to ensure no areas are missing or double counted.

2. Sort the polygon list according to the criteria: BC Land Cover Classification code, estimated leading tree species, age, and site index.

3. Select potential sampling points from the sorted list, as described in the Ministry of Forests, Resources Inventory Branch document *Vegetation Resources Inventory: Preparing a sampling plan for ground sampling*.

4. Stratify list to *vegetated treed* and *remaining area* (non-vegetated, vegetated non-treed).

5. Systematically select the Provincial Inventory samples by stratum.

6. Systematically select the polygons for the WPV sampling from the list of Provincial Inventory samples.

7. Systematically select the 16 NVAF sample points (15 treed and 1 non-treed whether or not volume is indicated) from the Provincial Inventory ground samples.

8. Stratify the District to determine the Provincial Inventory samples that meet Management Inventory objectives. Subtract this number of samples from the total required for each Management Inventory. Select the remaining number of Management Inventory samples.

9. For each Management Inventory, systematically select a batch of sampling points from the list of operable sampling points (80% of the sample size) and from the list of inoperable sampling points (20%).

10. Begin planning for field sampling.

11. Prepare a field sampling plan that includes sample cluster batches to ensure an unbiased sample is attained at the end of the first field season. Identify NVAF sample points and ensure they are field sampled early in the field season.

12. Locate and measure ground sample clusters.

13. Monitor quality assurance of field data and procedures during field sampling. Arrange for 'audit quality cruisers' to sample auxiliary plots of NVAF samples.

14. Compile the data in the fall and winter of the first year. This will include computing averages of timber volume, basal area, and regression of photo

estimated volume to ground sample volume and the associated standard error of the regression.

15. Prepare NVAF tree sampling matrix. Begin NVAF destructive sampling.

16. Prepare for the second step during the winter. This will include calculation of the CV based on the standard error of the regression. The remaining number of samples required to achieve the stated desired precision can then be accurately determined using standard procedures (see Appendix B).

17. Prepare the remaining samples.

18. Locate and measure remaining ground sample clusters in the second field season. Complete stem analysis of the NVAF sample trees. Complete the within polygon variation sampling.

19. Compile all data, do the statistical adjustments and load final inventory results into the provincial database.

4.2 Cost

4.2.1 Provincial Inventory

The Provincial Inventory costs, for planning purposes, are summarized in Table 4.

Table 4. Estimated costs required to complete the Provincial Inventory sample plan.

Ground Sampling Unit	Sample size	Unit Cost* ($)	Total Cost ($)
Provincial Inventory			
Sample Cluster (VRI)	130	2,500	325,000
Sample Cluster (tree only)	75	1,500	112,500
Net Volume Adjustment Factor – (tree)	75	500	37,500
Within Polygon Variation	30	1,500	45,000
Total			520,000

* The unit costs are based on experience gained from the Boston Bar Operational Trial.

A CV of 60% and the objective precision level of ±10% sampling error (at the 95% probability level) were used to estimate the required number of Provincial Inventory samples.

Sampling efficiency and cost effectiveness will be achieved by implementing the Provincial Inventory ground sampling in combination with the Management Unit sampling. Results of the VRI ground sampling can be evaluated to determine the additional sampling required to meet the specific objectives.

4.2.2   Management Inventory

The costs for completing the Management Inventory plan, including the incremental cost of establishing the Provincial Inventory ground samples, are identified in Table 5.

Table 5. Estimated costs required to complete the Management Inventory sample plan.

Ground Sampling Unit Management Unit	Sample size	Unit Cost ($)	Total Cost ($)
Sunshine Coast TSA	250	1,500	375,000
TFL 10	250	1,500	375,000
TFL 43	50	1,500	75,000
TFL 39 Block 1	Not Applicable*	1,500	0
Total			825,000

* Not Applicable until the Inventory Audit is completed.

A CV of 80% and the objective precision level of ±10% sampling error (at the 95% probability level) were used to estimate the required number of Management Inventory samples for the Sunshine Coast TSA and TFL 10. A CV of between 30% to 40% was used to estimate the required number of Management Inventory samples for the TFL 43 unit.

4.2.3   Combined Management and Provincial Inventories

Implemented separately, the total cost of the Provincial and Management Inventories would be approximately $1,345,000. Combining the inventory objectives through a common implementation strategy will realize a saving. Given the multiple Management Units within the Williams Lake TSA and their overlapping areas, it is difficult to estimate the magnitude of these savings. However, the savings on the Provincial Inventory samples would be approximately $210,000 based on implementing all of the vegetated treed VRI and tree emphasis samples in combination with the Management Unit plots.

Table 6 illustrates the cost for one possible implementation scenario where overlap occurs between one of the Management Units and the Provincial Inventory. The total cost could be higher or lower if the assumptions stated above are not valid. For example, an increase in the CV or a reduction in the desired precision level will result in an increase in the number of samples required to achieve the objectives. The relationship between the sampling error and sample size is illustrated in the contractor report (Appendix A).

Table 6.   Combined costs to complete the Management and Provincial Inventory sample plan.

Ground Sampling Unit	Sample size	Unit Cost ($)	Total Cost ($)
Management Unit			
Sunshine Coast TSA	250	1,500	375,000
TFL 10	250	1,500	375,000
TFL 43	50	1,500	75,000
TFL 39 Block 1	N/A*	1,500	0
Incremental Provincial Inventory Ground Samples			
Sample Cluster (upgrade to full VRI)	65*	1,000	65,000
Sample Cluster (tree only)	75*	0	0
Provincial Inventory (Remaining)			
Sample Cluster (VRI)	65	2,500	162,500
Sample Cluster (tree only)	0	1,500	0
Net Volume Adjustment Factor - Tree	75	500	37,500
Within Polygon Variation	30	1,500	45,000
Total			1,135,000

*Tree information component to be captured as part of the Management Unit sample

The total cost could be higher or lower if the assumptions stated above are not valid. For example, an increase in the CV or a reduction in the desired precision level will result in an increase in the number of samples required to achieve the objectives. The relationship between the sampling error and sample size is illustrated in the contractor report (Appendix A).

Depending on the implementation strategy, the savings will vary. The savings realized reflect the comparative overlaps of the Management Inventories. The numbers in Table 6 reflect one possible implementation scenario. Costs will change depending on the actual implementation scenario chosen.

4.3   Monitoring

The Ministry of Forests, Resources Inventory Branch is responsible for monitoring this Inventory Plan.

5.   APPROVAL/SIGNING

I have read and concur with the Sunshine Coast Forest District Inventory Plan, June 19, 1998. It is understood that this is an agreement-in-principle and does not commit the signatories to completing the inventory activities outlined within the plan. Modifications to this plan or more detailed plans need to be reviewed and approved by the signatories and then appended to this plan.

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District Manager   MacMillan Bloedel
Sunshine Coast Forest District

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Regional Manager   International Forest Products Ltd.
Vancouver Forest Region

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Director
Resources Inventory Branch

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Scott Paper

Sunshine Coast TSA Vegetation Resources Inventory
Strategic Inventory Plan

It is the intention of the proponent to implement the Sunshine Coast TSA Vegetation Resources Inventory Strategic Inventory Plan (VSIP) as described. Vegetation Resources Inventory Project Implementation Plans (VPIP), which build upon information provided in the VSIP, will be required to provide detailed project implementation information. As a key stakeholder in the inventory, Ministry of Forest and Range (MOFR) VRI staff will be consulted during the development of these plans.

I have reviewed the Sunshine Coast TSA VSIP. I will be advising Pricewaterhouse Coopers that the work proposed in this plan meets Vegetation Resources Inventory standards and MOFR business needs.

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Jon Vivian, R.P.F.   date
Manager,
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Appendix A

Sunshine Coast Forest District
Vegetation Resources Inventory
Ground Sampling Plan

Appendix B

Polygon Selection