

Issue ID#	S1
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>The VRI Compiler has been modified a few times and some code and messages are now obsolete. It is very complicated to tell what is useful and what is useless. Also, the compiler does not take advantage of all the most recent features. The VRI compiler SAS code should be revised to make it current and eliminate useless (and sometimes misleading) information</i>
Technical Lead	Alf Kivari
Priority Assessment	Moderate – no immediate impact to program but long term nuisance value
Reference Information	Confirm compiler version (2003) and request specifics on redundancies in messages and test database from Contact.
Resources required	Need to run compiler against test database and verify error code redundancies. Other databases may provide other issues and this should be investigated. Program code modification will require support from consultant. Revisions will be needed for the program version reference number and data dictionary documentation. Distribute updated compiler via contact list to compiler subscribers and post information on resolution to website.
Background	Programs impacted would be the VRI, NFI and CMI.
Benefit of Change	This would remove redundancy in the program
Resources Required	Up to one month contractor time required (approx. \$8000-10000).
RIB Recommendation	As noted above, these enhancements not critical to compiler operation and, due to budget constraints and other higher priorities, recommend deferring.
Client Comment	This issue is of a general nature and was not sent for client review
Final Resolution	This item will be deferred until such times as \$ become available.
Action	No immediate action

Issue ID#	S2
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>In the last year we found a few errors in the VRI compiler. It is possible that others have found errors as well. We need to improve communication so that everybody is using the most recent VRI compiler all the times. Maybe a web site where errors would be logged and monitored could be useful. Also the SAS files should have a date to indicate the version. For instance, instead of calling a file AGE_PRO.SAS, it should be called AGE_PRO_2002JUN27.SAS. That way it would be easy to keep track of the different versions.</i>
Technical Lead	Alf Kivari
Priority Assessment	Moderate - not critical to compiler operation.
Reference Information	VRI compiler version control; documentation; data dictionary.
Resources required	Minor contractor time to implement version control.
Background	Currently, changes to compiler algorithms (macros) are recorded by annotations in the macro files and, for some macros, in the compiler documents. The idea of adding version dates to macro file names is impractical to implement and manage due to the amount of computer code to modify and the fact that some macros are shared by other compilers. Compiler versions are not specific (e.g. – v2.1). A version based on the release date is considered.
Benefit of Change	Better version control.
Resources Required	Minor contractor time.
RIB Recommendation	Adding dates to macro file names not recommended as some macros shared by other compilers. Issue can be addressed by annotating macro files regarding changes and versioning compiler releases.
Client Comment	This issue is of a general nature and was not sent for client review
Final Resolution	Immediate updates to the compiler will not be implemented; however as updates are implemented users will be notified by list server notices. (the list server will be available May 04)
Action	No immediate action: AK to provide any compiler updates to the list server administrator.

Issue ID#	S3
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>Only standing live trees are measured on auxiliary plots. That means that fallen live trees should be given the same weight as dead trees. I</i>

	<i>believe they are given the same weight as live trees right now.</i>
Technical Lead	Alf Kivari
Priority Assessment	Moderate - has little impact on compiled results as very few trees involved.
Reference Information	Current compiler version and documentation.
Resources required	Contractor time to modify compiler approx 2 days (\$1000).
Background	Situation is as described by Contact above. It has existed since the first compiler version developed in 1996. The flaw has a very minor underestimating bias on compiled volumes – maybe in the order of .5% at the project level.
Benefit of Change	This would remove the small bias.
RIB Recommendation	Recommend implementation as soon as time and budget permits.
Client Comment:	Albert Nussbaum: The MoF FAB supports the RIB recommendation.
Final Resolution	Low budget item: Implement RIB recommendation.
Action	AK to complete.

Issue ID #	S 4
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>Right now only merchantable value and net value are being compiled. We should also compile net merchantable value.</i>
Technical Lead	Alf Kivari / Verne Sundstrom
Priority Assessment	Moderate
Reference Information	- Current version of VRI Ground Sample compiler - VRI Sample Data Compilation Process (Sept. 2002) - Data Dictionary for VRI and NFI Timber Data (Nov 2003)
Resources Required	- changes required to compilation program - documentation required in compilation document - documentation required in data dictionary document - as the log grades value table is 5 years old at this time it is suggested to update the table to 2004 values at the same time as the other changes are implemented. The process of calculating the provincial log values will need to be documented in the data dictionary. - Compilation program changes... \$1000 - Documentation\$250
Background	The current compilation program compiles the Merchantable value by species [value of whole stem volume less top and stump only] and also summarizes these values by cluster [for all species]. The Net value by individual tree is compiled but is not summarized either at the species or cluster level; therefore it is not currently used. The original intent of calculating the merchantable value was as a tool in the audit process. The merchantable value from the original cruise was compared to the

	merchantable value from the audit as one of the pass / fail criteria. The log values were derived from a value table created in 1999 and is intended to be a relative comparison only.
Benefit of Change	The net merchantable value per hectare [value of whole stem volume less stump and top, less cruiser called decay, less waste 2, less breakage] is commonly used in cruise compilation reports and generally represents the useable fibre within the forest. Many industrial clients are familiar with this value.
RIB Recommendation	Recommend proceeding with compilation of "Net Merchantable Value" along with revision of log value table to 2004 values. This change is not a high priority for the Ministry.
Client Comment	Albert Nussbaum: The MoF FAB supports the RIB recommendation... Gord Nigh: I looked over the change management issue and I thought the recommendations sounded very reasonable, and I don't have anything substantial to add.
Final Resolution	Implement RIB recommendation, as resources will allow. Contact proponent and explore partnership opportunity.
Action	AK to address.

Issue ID#	S5
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>Estimating diameter at broken top, or height if tree was not broken is complicated. Instead, using the volume equation ($V=aBA^b$), we can estimate the theoretical volume of the tree and estimate the height that would give us such a volume. Estimating the true volume of the tree is then easy.</i>
Technical Lead	Will Smith
Priority Assessment	Low.
Reference Information	SST meeting minutes, VRI ground sampling standards and procedures.
Background	This issue has been given to the Statistical Sampling Team within RIB to resolve. At present, either a projected height or a broken top diameter estimate is required by the sampler. An analysis of the NVAF sample tree data has found that there are no biases present in these estimates. In addition, there are few, if any, complaints from samplers.
Benefit of Change	None perceived.
Resources Required	Contractor time is required to make modifications to the VRI sample plot compiler. Staff time is required to design the necessary processes required to estimate the projected height from tree volume.
RIB Recommendation	Do not implement.
Client Comment	Gord Nigh: I looked over the change management issue and I thought the recommendations sounded very reasonable, and I don't have anything substantial to add.

Final Resolution	Business issues do not merit initiating this change. Do not implement.
Action	No action

Issue ID#	S6
Contact Info:	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstthrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>Volume compilation bias. Use of logarithmic transformation in the regression based approach creates a bias.</i>
Technical Lead	Alf Kivari/ Sam Otukol
Priority Assessment	Low
Reference Information	VRI compiler code.
Resources Required	Contractor time to eliminate bias, if it exists. Estimated cost \$5000.
Background	The VRI compiler uses a logarithmic transformation in developing tree volume prediction functions by species. This may lead to bias in predicted volumes when the log values are translated back to actual tree volume. A method developed by Baskerville was used to eliminate log transformation bias across an inventory unit. However, on a cluster by cluster basis, there may be small biases, which in most cases will be less than 1%.
Benefit of Change	Removal of bias in volume estimation... if it is proven to be substantial
RIB Recommendation	MSRM will investigate this issue further and correct any problems if they are significant
Client Comment	Albert Nussbaum: Forest Analysis Branch will defer decision on this issue to MSRM. The MoF relies on the expertise of MSRM to provide reliable volume estimates Gord Nigh: You might want to use nonlinear regression to avoid having to make the logarithmic transformation in the first place. I can offer some more advice when you get around to having a closer look at this issue.
Final Resolution	Business issues do not merit initiating this change. Do not implement.
Action	No action

Issue ID#	S7
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstthrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>PSYU is a character variable in the compiled ground data (SMY_C) but</i>

	<i>a numeric variable in the photo-interpretation data. This is inconsistent. PSYU should be a numeric variable in both the photo-interpretation and the compiled data.</i>
Technical Lead	Alf Kivari
Priority Assessment	Moderate - not critical to compiler operation.
Reference Information	VRI compiler; documentation; data dictionary.
Resources required	Minor contractor time.
Background	Previous compiler versions used PSYU to calculate net volumes. PSYU is no longer used in compilation and therefore doesn't need to be output to results files.
Benefit of Change	Eliminate problem stated above.
RIB Recommendation	Remove PSYU from compiled results files and reference in data dictionary.
Client Comments	This issue is of a general nature and was not sent for client review
Final Resolution	Implement RIB recommendation.
Action	AK to initiate.

Issue ID#	S8
Contact Information	Keith Tudor, MSRM
Issue Description	<i>The current VRI ground sample compiler data dictionary needs to be updated and posted on the web.</i>
Technical Lead	David Campbell
Priority Assessment	Moderate – no immediate impact to program but long term nuisance value
Reference Information	Obtain electronic version of data dictionary and use current VRI definitions to correct errors.
Resources Required	Program code modification will require support from consultant (Gitte C.). Distribute updated data dictionary to field experts (Verne Sundstrom,Lloyd Wilson,) and compiler expert (Alf Kivari) for review and post information on VRI website. Total cost \$660
Background	Data dictionary impacted would be the VRI..
Benefit of Change	This would allow for correct definitions
RIB Recommendation	Review and update completed in November 2003
Client Comments	This issue is of a general nature and was not sent for client review
Final Recommendation	Implement RIB recommendation
Action	Done / posted on web

Issue ID#	S9
Contact Information	Keith Tudor, MSRM
Issue Description	<i>Forest industry representatives have expressed a desire to see greater flexibility around the number of attributes that are to be collected within a VRI ground sampling inventory. MSRM should review the current “core” mandatory and optional attributes and present options for change to industry and government stakeholders.</i>
Technical Lead	Keith Tudor / David Campbell
Priority Assessment	High
Reference Information	VRI ground sample inventory standards and procedures; TIMVEG database
Background	<p>Staff from RIB developed a discussion paper outlining options for creating greater flexibility around the number of attributes that are to be collected in a VRI ground sample inventory. The discussion paper was posted on the RIB web site and was discussed with a group of forest industry representatives in the fall of 2003. (a copy of the proposal is attached)</p> <p>RIB received limited feedback from the industry on the proposal. (copy attached)</p> <p>In order for RIB to allow greater flexibility in the collection of VRI ground sample inventory attributes, substantial and expensive changes are required in the Oracle database systems.</p> <p>The impacts of industrial stakeholders “potentially” collecting less information must be considered by government clients.</p>
Benefit of Change	<p>The MSRM discussion paper suggested that greater attribute collection flexibility may reduce overall VRI ground sample inventory costs.</p> <p>The feedback received to date from the forest industry is that increased flexibility will not “substantially” reduce overall project costs. VRI ground sample inventory costs are driven by crew day costs. For the majority of forest conditions in BC, increased flexibility will not allow for more than one sample to be completed per day.</p>
Resources Required	<p>In order to provide greater flexibility in the collection of VRI ground sample inventory attributes the following activities are required:</p> <ul style="list-style-type: none"> - Remodelling of the Oracle data model. - Revising TIMVEG data collection software - Update the appropriate standards and procedures manuals - Revise appropriate compilation software and documentation.

RIB Recommendation	<p>Due to the high costs associated with making these changes and the limited MSRM funding available for fiscal 04, RIB recommends that any direct action be postponed until 05.</p> <p>The issue of providing greater attribute flexibility should also be considered within the context of providing greater flexibility in the sample design. These issues should be examined together. See issue A3 and S13.</p>
Client Comment	<p>Tom Niemann MoF: I suggest that the VRI concentrate on measuring fewer, basic attributes well, rather than more attributes poorly. The selection of ground plots and attributes should be consistent across the province and over time, enabling statistically valid assessment of changes (trends) on a province-wide basis. Measuring different attributes in different parts of the province, or different attributes in the same place at different times over the next 10-50 years, will make the information far less useful (or even useless) for State of the Forest Reporting (SOF).</p> <p>I understand that pest attributes have not been measured consistently in the VRI, and they are therefore good candidates for dropping, with the expectation that other surveys will better serve management needs regarding information on pest impacts. Similar comments probably apply to other attributes such as soil condition and biodiversity-related measures of snags, lichen, etc. If funding and general interest are in limited supply, a good timber inventory is preferable to an inventory that attempts to cover more attributes but fails to address any attributes (including timber) well.</p> <p>Albert Nussbaum: The MoF FAB supports the principle of collecting information that addresses users end needs. From a timber supply perspective, the mandatory and optional fields identified in the discussion paper should meet those strategic business needs. The MoF also recognizes the need to ensure resource information database systems provide the ability to report on the maximum number of resource attributes for other business outside of timber supply, and would encourage stakeholders to collect as many attributes as resources will allow.</p>
Final Resolution	Implement RIB recommendations
Action	The issues of greater inventory design flexibility should be addressed by Industry/Government Client groups under Governance: Don Gosnell and Jon Vivian.
Issue ID #	S 10
Contact Info	<p>Guillaume Therien of JS Thrower & Associates guillaume.therien@jsthrower.com Phone 604-739-9887 (Vancouver office)</p>

	Date: 2003-SEP-14
Issue Description	<i>When two contractors are doing the VRI data entry, it would be nice to have an easy way to combine both files into one. Right now, there is apparently no easy way to merge two VIDE files together.</i>
Technical Lead	Verne Sundstrom / Matt Makar
Priority Assessment	Moderate
Reference Information	- VIDE 2003 - TIMVEG 2003
Resources Required	None.
Background	<p>The Vegetation Inventory Data Entry program (VIDE) was created in 1997 in order to input VRI ground sample data from field cards into a digital format for input into the Ministry database. Subsequent to this the Ministry has developed handheld software (TIMVEG) and its associated PC data entry software to collect the field data electronically and perform validation. The Ministry was therefore supporting two data entry tools during this development stage. The Ministry will not be supporting two data entry tools in the future. The Ministry will only be supporting the TIMVEG program [this information has been communicated for the past two years to clients].</p> <p>In conversation with Laurence Bowdige he indicated that combining two VIDE files is currently possible. Please contact him for details as required.</p> <p>The TIMVEG program currently does not have a merge program. A “work around” where files are cut and pasted from separate files is currently being employed [contact Laurence Bowdige for details]. The development of a “merge” program for TIMVEG is being assessed at this time.</p>
Benefit of Change	No change required.
Resources Required	Not applicable.
Rib recommendation	No change required as file merging is possible with the current format. TIMVEG changes are under consideration.
Client comments	This issue is of a general nature and was not sent for client review
Final resolution	Implement RIB recommendation. VIDE is no longer supported. Files can be merged in TIMVEG.
Action	LB to provide instructions on how to merge files. Info to be posted on web server.

Issue ID #	S 11
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>There are empty columns on plot cards to enter extra information. Unfortunately, VIDE does not export this information, and the VRI</i>

	<i>compiler does not take them even if it did. Useful information is sometimes collected in these columns. It should be exported by VIDE and read by the SAS compiler.</i>
Technical Lead	Verne Sundstrom / Matt Makar
Priority Assessment	Moderate
Reference Information	- VIDE 2003 - TIMVEG 2003
Resources Required	None.
Background	<p>The Vegetation Inventory Data Entry program (VIDE) was created in 1997 in order to input VRI ground sample data from field cards into a digital format for input into the Ministry database. Subsequent to this the Ministry has developed handheld software (TIMVEG) and its associated PC data entry software to collect the field data electronically and perform validation. The Ministry was therefore supporting two data entry tools during this development stage. The Ministry will not be supporting two data entry tools in the future. The Ministry will only be supporting the TIMVEG program [this information has been communicated for the past two years to clients].</p> <p>A similar request using TIMVEG is under consideration.</p>
Benefit of Change	No change required.
Resources Required	Not applicable.
RIB Recommendation	No changes to the VIDE program are proposed as the program is no longer supported. The process to address this issue with the use of TIMVEG is under consideration.
Client comments	This issue is of a general nature and was not sent for client review
Final resolution	Implement RIB recommendation. The issue will be deferred until additional resources become available or partnerships with industry are developed to share these development costs.
Action	GJ: No immediate action.

Issue ID #	S 12
Contact Info	<p>Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14</p>
Issue Description	<p><i>Our field ops manager tells me that when he enters the sector for every tree in a blank column in VIDE. He can see the sector when he pulls back a file.</i></p> <p><i>The ASCII file I get doesn't seem to have sectors. That would mean the Export routine in VIDE might not know how to handle this blank column. I'm not sure either how SAS would handle it. I suspect we would have to write additional code. Not crucial for compilation but it would be nice to export the data and look at it.</i></p>
Technical Lead	Verne Sundstrom / Matt Makar
Priority Assessment	Low

Reference Information	- VIDE 2003 - TIMVEG 2003
Resources Required	None.
Background	<p>The Vegetation Inventory Data Entry program (VIDE) was created in 1997 in order to input VRI ground sample data from field cards into a digital format for input into the Ministry database. Subsequent to this the Ministry has developed handheld software (TIMVEG) and its associated PC data entry software to collect the field data electronically and perform validation. The Ministry was therefore supporting two data entry tools during this development stage. The Ministry will not be supporting two data entry tools in the future. The Ministry will only be supporting the TIMVEG program [this information has been communicated for the past two years to clients].</p> <p>The TIMVEG program records trees within sectors and the data is available to view. The compilation program currently does not have the sector information as an attribute.</p>
Benefit of Change	No change required.
Resources Required	Not applicable.
RIB Recommendation	No changes to the VIDE program are proposed as the program is no longer supported. The TIMVEG program currently allows the sector data to be viewed.
Client Comments	This issue is of a general nature and was not sent for client review
Final Resolution	Initiate RIB recommendation
Action	No action

Issue ID#	A3 & S13 (Same Issue)
Contact Info	Guillaume Therien
Issue Description	<p>Description: VRI ground sample design changes are needed to address diverse polygon conditions where more than one VRI sample cluster is required and WPV represents an unsuitable alternative.</p> <p><i>(Note, this description represents a major rewrite of the one originally submitted.)</i></p>
Technical Lead	Sam Otukol
Priority Assessment	High – several VRI sampling projects have already used WPV or a modified cluster in an attempt to better capture the variation within a polygon.
Reference Information	WPV and VRI ground sampling standards and procedures, Oracle database, TIMVEG data collection software, compilers
Background	JS Throver and Associates, in three VRI sampling projects (Adams Lk., Okanagan and TFL 15), have piloted a modified VRI cluster design in an attempt to increase sampling efficiencies with respect to volume/age and height attributes. The sampling inefficiencies that are produced by the regular plot cluster are due to highly variable stand conditions that can be found in dry belt fir, Interior cedar-hemlock and spruce-balsam stands. The sample sizes required to obtain the desired sample error

	<p>became overly large because of the high variation around the differences between the phase 2 and 1 volumes. WPV was not found to an acceptable alternative due to the high sampling costs and inflexible design.</p> <p>RIB recognizes that the current VRI ground sample plot design may be inefficient for certain forest conditions and supports, in principle, the development of more flexible sampling designs. The cost to VRI data systems to support these changes is substantial.</p>
Benefit of Change	Increased sample design flexibility may lower VRI sampling costs.
Resources Required	<p>Resources are required to design, test and analyze alternative sampling designs. MSRM should seek partnerships with industry and attempt to pilot new designs in 04/05.</p> <p>If the new designs are proven effective additional resources are required to modify: ground sampling standards and procedures documents, data capture systems and compiler software. The costs associated with remodelling the Oracle database and data capture systems are substantial.</p>
RIB Recommendation	RIB recommends that testing of alternative designs should be undertaken in 04. Field testing could potentially occur in a training area in the southern interior.
Client Comment	<p>Albert Nussbaum: MoF FAB agrees with RIB that additional studies should be undertaken to determine if changes to the VRI sample design will increase sampling efficiency. We recognize that the systems costs associated with making these changes may be substantial; however, the existing database system should not be the limiting factor to allowing for the most efficient sampling design.</p> <p>Gord Nigh: I looked over the change management issue and I thought the recommendations sounded very reasonable, and I don't have anything substantial to add.</p>
Final Resolution	Implement RIB recommendation and in addition develop partnerships with industry to further test alternative/more flexible sample designs and attribute collection standards for VRI and monitoring.
Action:	The Statistical Support Team within RIB should develop a series of field sampling design and minimum attribute trials that could be undertaken during the summer of 04. The trials should suggest non-Oracle minimum attribute data collection standards / processes. The preliminary designs/options should be reviewed by industry partners.

Issue ID#	S14
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com

	Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>CMI/NFI – Measure top height in NE quadrant rather than at the plot centre using a 5.64m radius plot. Instead of choosing the top height tree in a 5.64-m plot (which requires extra measurement), we should choose the top height tree from the first quadrant (which is always delimited anyway). This would simplify the field work</i>
Technical Lead	Sam Otukol and Rob Drummond
Priority Assessment	Low
Reference Information	CMI/NFI sampling standards and procedures
Background	The current standard requires the collection of the top height tree information within the 5.64m radius plot. This methodology was developed in order to be consistent within VRI and SIBEC standards.
Benefit of Change	The use of existing tree tagging sectors in the selection of top height trees may potentially reduce field time and lower project costs.
Resources required	No change, no cost
RIB Recommendation	There is no need for change on this issue at the moment
Client Comment	Tamara Brierley / CFS: Currently, the NFI guidelines have not implemented the measurement of top height using this procedure. Gord Nigh / MoF: I looked over the change management issue and I thought the recommendations sounded very reasonable, and I don't have anything substantial to add.
Final Resolution	The issue of the number of site trees to select is being evaluated by the RIB Statistical Support team.(SST)
Action	The SST team to develop a set of draft site height sampling protocols to evaluate during the summer of 04.

Issue ID #	S 15
Contact Info	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	Right now, only one type of Change Monitoring Inventory (CMI) plot is defined in the standards (coded M). CMI should accommodate the same plot measurement variations as the VRI. For instance, we could have a timber-emphasis monitoring plot. [Note - There are two Plot types currently available, “M” for management unit monitoring and “F” for Provincial Change Monitoring (National Forest Inventory samples)]
Technical Lead	Verne Sundstrom / Matt Makar
Priority Assessment	Low
Reference Information	National Forest Inventory for British Columbia, 2003
Resources Required	None.
Background	Procedures for Monitoring in British Columbia were first developed in 2002 for provincial monitoring. These procedures have since evolved from this early stage to collecting data primarily for BC’s contribution

	<p>to Canada's National Forest Inventory. Clients have been using portions of these procedures for monitoring projects on managed forest lands. As the procedures have evolved for the National Inventory they have become further and further from the needs of management unit clients.</p> <p>Management at MSRM have determined that management unit monitoring is not within the mandate of MSRM. These localized monitoring studies are not considered "corporate" by MSRM; hence we don't require the data; as they are for the company's internal use. Not all data collected by industry is corporate, hence, required to be on our warehouse. The reports and resulting data go to FORREX.</p>
Benefit of Change	NA.
RIB Recommendation	Management Unit monitoring data is not corporate to the Ministry's needs therefore the development of separate monitoring types is the responsibility of the proponent.
Client Comment	<p>Tom Niemann: State of the Forest (SOF) reporting should include reliable trend information such as can be derived from a province-wide sampling system of permanent plots. The NFI's F plots fit this description, but at just 300 plots will probably have limited use in spotting trends for provincial SOF reporting. The M plots for individual management units may provide a greater number of plots, but would have to be consistently arrayed across much of the province to be of value for SOF reporting. Furthermore, if the M plot data are not made available to government, they will clearly be of no use to SOF reporting. Under such circumstances, I would agree with the RIB Recommendation, i.e., proponents should choose and develop at their own expense whatever plot design and data collection serves their purposes. This is, however, a "lowest common denominator" argument that does not serve to promote sustainable forest management, when what is clearly more desirable is to overcome various hurdles and ensure that M plots do become common and support industry and government information needs, including for SOF reporting. Note related comments under S16.</p> <p>Albert Nussbaum: MoF FAB strongly supports management unit monitoring of forest conditions. We recommend that the MSRM completes the development of monitoring standards and data support infrastructure systems</p>
Final Resolution	RIB recognizes the increasing interest that management unit monitoring has garnered in BC, and as such will work with industry and develop increased flexibility around current standards.
Action	MSRM supports the current business model where MU monitoring plans are sent to PwC for funding approval, MSRM for standards and Forests for business review. DG/JV to address with industry/client working groups.

Issue ID #	S 16
Contact Info	Kavanagh, Joe [JKavanagh@mail.canfor.ca] PO Box 9000, Prince George B.C. V2L 4W2 phone: 250-962-3337 fax: 250-962-3217 email: jkavanagh@mail.canfor.ca
Issue Description	<i>Issue 1. Management Unit Monitoring - This should be rephrased as Monitoring and appropriate sustainable forest management attributes should be identified to monitor over time and only those ones which are important should be collected. This would potentially entail deleting some attributes currently collected, while adding others.</i> <i>Issue 2. Some current PSPs are not being utilized in the TIPSYP or VDYP curves and may still be on a list to have information collected. Those not being utilized should be dropped and any new plots established be based on SFM monitoring principles.</i>
Technical Lead	Verne Sundstrom / Matt Makar / Bob Macdonald
Priority Assessment	Low / High.
Reference Information	1. National Forest Inventory for British Columbia, 2003 2. PSP program is a purposeful sample design used to calibrate growth and yield models. Monitoring programs will not have the breadth of information to fully calibrate models. Ranking priority for PSP's is generated by the Forest Productivity Council sampling matrix and its header database reporting software.
Resources Required	Issue 1 = None Issue 2 = Low as ranking exists.
Background	Issue 1; Procedures for Monitoring in British Columbia were first developed in 2002 for provincial monitoring. These procedures have since evolved from this early stage to collecting data primarily for BC's contribution to Canada's National Forest Inventory. Clients have been using portions of these procedures for monitoring projects on managed forest lands. As the procedures have evolved for the National Inventory they have become further and further from the needs of management unit clients. Management at MSRM have determined that management unit monitoring is not within the mandate of MSRM. These localized monitoring studies are not considered "corporate" by MSRM; hence we don't require the data; as they are for the company's internal use. Not all data collected by industry is corporate, hence, required to be on our warehouse. The reports and resulting data go to FORREX. Issue 2; See above.
Benefit of Change	NA.
RIB Recommendation	Issue 1. Management Unit monitoring data is not corporate to the Ministry's needs therefore the development of separate monitoring types and the specific attributes to collect are the responsibility of the proponent. Issue 2. See above.

<p>Client Comment</p>	<p>Tom Niemann: MoF State of the Forest Reporting: Issue 1: If management unit monitoring developed by unit managers is reasonably consistent across a large portion of the province, as may occur with the development of "core" indicators of sustainable forest management by a project currently under consideration, and if the unit managers choose to make their data available to government to satisfy FRPA forest stewardship plan and other requirements, then government should accept and store the data, and use it where suitable for, among other things, SOF reporting. This will depend on several components: agreement on the "core" indicators, widespread acceptance of them, widespread measurement of them, and a well-defined and well-supported data-sharing agreement between industry and government. Failure to achieve these components and the use of "core" indicators will result in widespread, unnecessary costs of duplicated efforts (direct costs to industry and government), and result in inconsistent, less well-informed management decisions on key resource management issues (potentially substantial indirect costs to individual companies, government and society).</p> <p>Issue 2: Discontinuing the monitoring of unused PSPs and reallocating this monitoring effort to new plots for monitoring indicators of sustainable forest management is appealing, in principle. A more sound allocation principle would be to rank the relative importance of all PSPs (done), and furthermore rank them in relation to other plots for SFM indicators (not done). Another issue is to make sure that low-ranking PSPs are not "dropped" for the wrong reasons, e.g., if they are not used in TIPSY or VDYP do they still serve a purpose for other uses such as analysis of pest impacts and treatment effects?</p> <p>Albert Nussbaum:</p> <ol style="list-style-type: none"> 1) MoF FAB strongly supports management unit monitoring of forest conditions. We recommend that the MSRM completes the development of monitoring standards and data support infrastructure systems. 2) We recommend a balanced and rationalized approach to the continued strategic maintenance of the PSP program. We recognize that in some units, limited resources may restrict the scope of the monitoring program. <p>Graham Hawkins: RIB Governance: Management Unit Monitoring should be closed off as it appears that the direction is that this information is up to the proponent</p>
<p>Final Resolution</p>	<p>RIB recognizes the increasing interest that management unit monitoring has garnered in BC, and as such is eager to work industry and develop increased flexibility around current standards.</p>
<p>Action</p>	<p>MSRM supports the current business model where MU monitoring plans are sent to PwC for funding approval, MSRM for standards</p>

	and Forests for business review. DG/JV to address with industry/client working groups.
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Issue ID #	S 17
Contact Info	Barry Elliott Box 1329 Burns Lake, BC V0J 1E0 phone: (250) 695-6752 email: barry@elliottforestry.com
Issue Description	<i>The surface substrate tally definitions [Note - for the National Forest Inventory] need to be tightened up. For example, I had a sample that had a small amount of mineral soil, then some organic on top of buried wood, which did not fit well into any of the definitions.</i>
Technical Lead	Verne Sundstrom / Dave Campbell
Priority Assessment	Moderate.
Reference Information	National Forest Inventory for British Columbia, 2003
Background	The surface substrate data collection was started in 2002 and further refined in 2003. The definitions were developed to fit most natural forest conditions that will be encountered. In some instances where there is ongoing or active disturbance (such as wind throw soil mixing or logging activity) the surface materials can be a mixture of conditions. The crew should select the most appropriate (best fit) class to describe the surface substrate. An alternate solution could be the creation of a new class of surface substrate defined as “disturbed soil, wood and humus composite”.
Benefit of Change	Clarification of surface substrate classification should produce more consistent answers.
Resources Required	<ul style="list-style-type: none"> - changes to field procedures document (minimum procedural changes) - changes to field data collection card
RIB Recommendation	Add some clarification in the sampling procedures to select the “best fit” category when disturbed sites are encountered. Review the process with field crews during the training sessions.
Client Comment	Tamara Brierley CFS / NFI: definitions will be modified and expanded to include anomalous conditions like squirrel caches, mixed soil conditions etc. Clarification of definitions has been requested by other jurisdictions with respect to the quantity of buried wood that should be present in order to be classified under that category. We can work together to revise and implement these new definitions.
Final Resolution	RIB requires further direction on this issue from the CFS.
Action	LB to contact Tamara and seek clarification on this issue.

Issue ID #	S 18
Contact Info	Barry Elliott Box 1329 Burns Lake, BC V0J 1E0

	phone: (250) 695-6752 email: barry@elliottforestry.com
Issue Description	<i>Improvements could be made to the soil/humus labels. Much of the info seems redundant or insignificant. In general there's too much packed onto the label and not enough room to write on it.</i>
Technical Lead	Verne Sundstrom / Dave Campbell
Priority Assessment	High.
Reference Information	National Forest Inventory for British Columbia, 2003
Background	The soils / humus sample label was developed by the Canadian Forestry Service for data collection across Canada. This label is not unique to BC. The sampling crews from 2003 have been contacted for suggested revisions and the suggestions will be forwarded to the Canadian Forestry Service as suggested changes. This label is not currently contained in our sampling procedures document.
Benefit of Change	Potentially less confusion on the completion of the label.
Resources Required	<ul style="list-style-type: none"> - addition of completed soil / humus label to procedures document is required (cost \$200) - correspondence with past sampling crews in progress
RIB Recommendation	RIB will collect comments from field crews and forward to CFS for suggested changes. Final label to be inserted in field sampling procedures.
Client Comment	Tamara Brierley CFS / NFI changes have been suggested by Barry Elliot and Ann Harris (CFS soils lab supervisor). A new label template has been created and was emailed to Verne, and the BC contractors. This new template can be added, along with instructions for how to complete it to the VRI manual.
Final Resolution	Implement RIB recommendation
Action	Done

Issue ID #	S 19
Contact Info	Barry Elliott Box 1329 Burns Lake, BC V0J 1E0 phone: (250) 695-6752 email: barry@elliottforestry.com
Issue Description	<i>On the issue of soil bulk density, in my opinion, there are too many samples (soils, humus, and fine woody debris) and gear (glass beads, flask) to pack in the bush. While possible, it is unrealistic for a productive field day.</i>
Technical Lead	Verne Sundstrom / Dave Campbell
Priority Assessment	Moderate.
Reference Information	National Forest Inventory for British Columbia, 2003
Background	In 2003 the National Forest Inventory began the collection of forest floor and soil bulk density samples. The initial sampling procedures in 2002 collected 4 forest floor samples and 3 bulk density soil samples (within one pit). The scientists at CFS indicated that more bulk density samples were required so the number requested for 2003 sampling was

	increased to 7 soil samples. Here is the CFS justification statement “The sampling of soil from one soil pit was deemed an inadequate sample for accurately determining the variation in soil C content by depth. The previous one-pit sample would be equivalent to measuring just one tree in a plot and assuming all other trees in the plot are the same size. For this reason, multiple soil samples at multiple depths are being collected.”
Benefit of Change	NA.
Resources Required	Review with the CFS the soil sample results
RIB Recommendation	No change at this time. Data results should be reviewed by CFS after more samples are received to determine if a change is required. These samples are collecting basic research data and as such are not normally completed in one field day.
Client Comments	Tamara Brierley CFS / NFI : the users of this data have indicated that the number of samples cannot be compromised. Doing so would decrease the value associated with subsequent analysis of the data.
Final Resolution	Maintain current standards
Action	No action

Issue ID#	S20
Contact Info	Jeff Kerley
Issue Description	<i>Drop the Region and Compartment requirement for NVAF data collection. These attributes are not commonly used and as a result are difficult to obtain. Two differing options are suggested: <u>Option 1:</u> Consider removing the requirement and modifying the data collection software, or <u>Option 2:</u> provide a central accessible contact in MSRM that can supply these attributes.</i>
Technical Lead	Will Smith
Priority Assessment	Moderate
Reference Information	Oracle database, NVAF Standards and Procedures, DVHand volume and decay data collection software, Map overlay/ INVADMIN Tile.
Resources Required	<u>Option 1:</u> Removal of region and compartment would require contractors to reengineer the corporate database and the data collection software. <u>Option 2:</u> Staff would be required to determine region and compartment and provide to proponents.
Background	The region and compartment attributes are not required for VRI NVAF purposes and represent a holdover from the pre VRI era where all inventory samples were uniquely identified by their region, compartment and sample number. Since NVAF sample trees have a dual use for taper and loss factors in addition to NVAF, these unique identifiers are determined to be necessary. On average, each year there are approximately 75 NVAF ground samples requiring a region and compartment. Region and compartment was carried on map level 23 and is now carried in the INVADMIN tile in the LRDW.

Benefit of Change	Efficiencies for proponents and increased consistency in the determination of region and compartment.
Resources Required	Minimal staff time is required to determine and then provide region and compartment information. Some staff and contractor time is needed to determine most efficient means to determine region and compartment from readily available VRI sample location information. Some additional contractor time build the system to allow for MSRM staff to determine region and compartment (most of which appears to be in already in place).
RIB Recommendation	Option 2 of designating MSRM (Will Smith, Gary Johansen or Pat Charpentier) staff to provide region and compartment attributes as a post sampling exercise.
Client comments	This issue is of a general nature and was not sent for client review
Final Resolution	Implement RIB recommendation
Action	Will Smith to work with Pat Charpentier to provide data. KT to update list server of new contact. (list server to be made available May 04)

Issue ID#	S21
Contact Info	Will Smith, MSRM
Issue Description	<i>Change the VRI compiler to allow for NVAF to be applied at the tree level. The current level of application is the sample level which supports a low level of NVAF stratification criteria such as species and sample groupings. By going to the tree level, NVAF stratification criteria can be increase to include groupings based on tree attributes such as volume, dbh, form, and decay class.</i>
Technical Lead	Will Smith
Priority Assessment	Moderate
Reference Information	VRI sample plot compiler and the NVAF Standards and Procedures.
Resources Required	Contractor time to alter the VRI sample plot compiler. Staff time to alter the NVAF Standards and Procedures document.
Background	There is evidence that the errors in tree volume predictions can be better explained by tree level criteria such as tree size, age, form or pathological groupings. At present, such stratification criteria cannot be used because there is no way to adjust individual tree volumes in the VRI sample plot compiler.
Benefit of Change	Would increase the flexibility of the NVAF adjustment.
Resources Required	One to two weeks of SAS coding by a contractor. One day of staff time to change the NVAF Standards and Procedures.
RIB Recommendation	Change compiler to allow for tree level NVAF adjustment. Costly change may exceed resources at this time
Client Comment	Albert Nussbaum: Forest Analysis Branch will defer decision on this issue to MSRM. The MoF relies on the expertise of MSRM to provide reliable volume estimates
Final Resolution	This change will have little impact on business and should be deferred due to limitations in funding.

Action	No immediate action.
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Issue ID #	S 22 (some cross linkage to P3)
Contact Info	Alex Inselberg 123 Glenmary Road, Enderby, B.C. V0E 1V3 Tel: (250) 838-2141 Fax: (250) 838-9515 aei@junction.net
Issue Description	<p><i>I have several items you may or may not be aware of for Chapter 7. Plants, Soils and Old Growth in the Ground Sampling Procedures:</i></p> <p>Issue 1. <i>Land Cover Classification codes in condensed form (Table 7.4). What to do with Level V "L5" when IPC falls within something like a recent clear cut? For example, the 10 m radius plot has 15% herb-layer coverage, perhaps 7% low shrub (Vaccinium) coverage, and 1% tree coverage (small, in low shrub layer). Level I = V (vegetated) Level II = N (Non-Treed) - has 1% tree cover Level III = U (Upland) Level IV = HE (Herb) - had about 15% herb-layer coverage Level V = "???" - can only choose from "V" (vegetated) codes DE, OP, SP or CL; but none of these applies if tree cover is <10% (see Level II selection above).</i></p> <p><i>What is the Solution? Should we modify the Level V "SP Sparse" definition to account for Non-Treed (Level II) scenarios where tree cover is <10%, but the site is still vegetated. Perhaps "SP" should read "Sparse Tree, shrub or herb cover <26%".</i></p> <p>Issue 2. <i>Land Cover Classification codes in condensed form (Table 7.4) Level V "OP" currently reads "Open Tree, shrub or herb cover 26-60%, or bryoids = 50%". Why do we have "or bryoids = 50%"? What purpose does this serve? Remove it?</i></p> <p>Issue 3. <i>Land Cover Classification codes in condensed form (Table 7.4) Level I "V" Vegetated = 5% of the site. Should be \geq 5% (greater than or equal to), right?</i></p> <p>Issue 4. <i>Is there a problem with 3-character soil layer codes in TIMVEG? Re. EP or ED card attribute #22 "Horizon". Apparently TIMVEG doesn't accept certain 3-character codes (e.g. Aeg, Bfg, Aej).</i></p>
Technical Lead	Dave Campbell / Verne Sundstrom
Priority Assessment	High.
Reference Information	National Forest Inventory for British Columbia, 2003

Background	Table 4.7 is a condensed version of the BC Land Cover Classification Schema. Several minor errors have been detected in the condensed version. The correct values are being cross referenced with the field guide and original document.
Benefit of Change	Will lessen confusion on applying the correct land cover classification.
Resources Required	RIB staff to review: <ul style="list-style-type: none"> - For issues 1 – 3 -review table 4.7 and field guides for correctness and consistency in procedures manual - For issue 4 - review with handheld contractor the input of soil layer codes.
RIB Recommendation	Issue 1. - Review Land Cover Classification coding and correct table 7.4. Issue 2. – Discuss with hand held data capture consultant
Client Comment	Tamara Brierley CFS / NFI : further investigation into this issue is required.
Final Resolution	Implement RIB recommendation. (Field guides will be updated and noted on the RIB's list server web site; changes to handheld data capture will be initiated as resources will allow.
Action	DC to lead this issue.

Issue ID #	S 23
Contact Info	Verne Sundstrom, MSRM Kamloops Service Centre
Issue Description	<i>The following attributes are identified as attributes of interest for the National Forest Inventory and are not collected in the current CMI ground sampling process in full (or in part) [see September 24, 2002 version of NFI - Appendix V]</i> <ol style="list-style-type: none"> 1. <i>Plot disturbance</i> 2. <i>Plot origin</i> 3. <i>Plot Treatment</i> 4. <i>Azimuth and distance to all large trees</i> 5. <i>Bark Thickness on site trees</i> 6. <i>Tree Variety</i> 7. <i>Small tree definition is not consistent between procedures</i> 8. <i>Shrub / herb variety</i> <i>Soil drainage class</i>
Technical Lead	Verne Sundstrom / Matt Makar
Priority Assessment	High
Reference Information	National Forest Inventory for British Columbia, 2003 NFI Design Document, Appendix V – Ground Plot Attribute Standard
Background	The sampling guidelines and ground plot attribute standards for the National Forest Inventory are evolving. The standard for NFI sampling in BC is also evolving. A number of attributes are currently not collected by our procedures or are slightly different in their application. We have done a preliminary assessment of these differences and given this to the CFS. A more detailed analysis of the attributes needs to be completed in this coming year.

	<p>The attributes identified above do not represent a major difference in the primary data collected.</p> <p>The re-measurement phase of the NFI samples is projected to commence in 2005. This would be an appropriate time to ensure all attributes are collected to mutually agreeable standard</p>
Benefit of Change	All required NFI attributes will be collected to a mutually agreed standard.
Resources Required	RIB staff and CFS involvement in a review of the Appendix V attributes. (Probably 2 months of staff time is required in order to make an assessment of the differences and resolve).
RIB Recommendation	Staff resources and contracting expertise is required in order to implement a review in 2004.
Client Comment	Tamara Brierley CFS / NFI : This is definitely a high priority item. Attributes that are not reported will affect the compilation and estimation of volume, biomass and Carbon.
Final Resolution	Implement RIB recommendation
Action	LB to prioritize items for evaluation and identify how the attributes are collected.

Issue ID #	S 24
Contact Info	Change Management suggestion from 2002 as suggested by CFS.
Issue Description	<i>Modify sampling layout for Range transect and CWD transect to an "X" design with IPC at the centre of each transect to potentially sample nearer to the area of interest.</i>
Technical Lead	Dave Campbell / Matt Makar
Priority Assessment	High.
Reference Information	National Forest Inventory for British Columbia, 2003 NFI Design Document, Appendix V – Ground Plot Attribute Standard
Background	See background for issue S – 23 The re-measurement phase of the NFI samples is projected to commence in 2005. This would be an appropriate time to ensure all attributes are collected to mutually agreeable standard.
Benefit of Change	National Forest Inventory for British Columbia, 2003 NFI Design Document, Appendix V – Ground Plot Attribute Standard
Resources Required	Resources and costs associated with issue S 23 item.
RIB Recommendation	Staff resources and contracting expertise required to implement a review in 2004.
Client Comment	Tamara Brierley CFS / NFI ; all other jurisdictions that have implemented NFI protocol are using the "X" design with two 30-m transects. Having BC implement this design would ensure consistency throughout the country.
Final Resolution	Implement RIB recommendations

Action	RIB Statistical Sampling Team to report.
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Issue ID#	S25 and S27
Proponent of issue	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14
Issue Description	<i>Additional site tree measurements. In some cases VRI sample location less than 3 trees are obtained from ground measurement.</i>
Technical Lead	Sam Otukol/ Rob Drummond
Priority Assessment	High
Reference Information	VRI ground sampling procedures.
Resources Required	Pilot testing of new procedures.
Background	<p>Quite often, during VRI site tree data collection, unsuitable site trees are encountered. As a consequence, the field crew may return with data from fewer than 3 trees. Past experience shows that in such situations, the site tree data is inadequate for analysis. There is a need to collect more site tree data.</p> <p>This issue was reviewed by the RIB Statistical Sampling Team and was identified as issue requiring attention. Rob Drummond has been assigned the task of developing an approach for collecting data on additions site trees.</p> <p>If resources allow, MSRM may begin testing alternative methodologies in the summer of 04. No change to the current VRI standard in the 2004 field season.</p>
Benefit of Change	More reliable data for adjusting height and age and site index.
RIB Recommendation	Develop alternative sampling methodologies and if resources allow test in 04..
Client Comment	<p>Albert Nussbaum: MoF FAB agree with consultant and MSRM and recommend field trails are undertaken to address this issue.</p> <p>Gord Nigh: I looked over the change management issue and I thought the recommendations sounded very reasonable, and I don't have anything substantial to add</p>
Final Resolution	Implement RIB recommendations
Action	RIB Statistical Sampling Team to provide draft alternative sampling methodology for testing in the summer of 04.

Issue ID#	S26
Proponent of issue	Guillaume Therien of JS Thrower & Associates guillaume.therien@jstrower.com Phone 604-739-9887 (Vancouver office) Date: 2003-SEP-14

Issue Description	<i>In some instances, in management unit monitoring plots and National Forest Inventory plots the fixed radius plot for tree measurements, and/or the line transects for woody debris and range measurements extend out of the polygon of interest. Is it necessary to delineate and calculate the area being sampled that falls within and conversely outside of the polygon of interest?</i>
Technical Lead	Sam Otukol / Verne Sundstrom
Priority Assessment	High
Reference Information	NFI/CMI ground sampling procedures.
Background	<p>Partial plots are being encountered on National Forest Inventory as well as on Management Unit inventory sampling</p> <p>NFI – portions of the fixed radius plots have fallen in water, ocean or non productive shrub polygons which are not part of the sampling framework. Two and potentially three samples have been encountered within the past three field seasons. In the National Forest inventory the line transect samples can extend beyond the boundary of the polygon of interest. It is unclear how many line transects may have been impacted.</p> <p>CMI – this was identified as an issue on two monitoring projects and the crews have been instructed to map the plot areas within the polygon of interest. The monitoring samples are being established in post harvest regenerated stands. Several samples occurred very close to the polygon boundary and overlapped into mature forest or non-productive shrub polygons. Line transect sampling is not being conducted on these samples but could be on other projects. There is currently a “bounce back” methodology that can be employed on these samples.</p> <p>There has been discussion on compiling these samples but no resolution to date.</p> <p>This issue was reviewed by the RIB Statistical Sampling Team and was identified as an issue of concern. Verne Sundstrom is currently developing the procedures for mapping partial plots. He will report to the VRI steering committee when the procedures are complete.</p>
Benefit of Change	More accurate ground sample data for CMI/NFI
Resources Required	Staff time to develop procedures for mapping the plots. Cost of altering the compiler – estimated at \$2000, and modifying data entry tools estimated at an additional \$2000
RIB Recommendation	RIB is currently investigating two methods to address this issue and alternatives are undergoing peer review. Revisions to existing systems should be completed if resources are available.
Client Comment	Tamara Brierley CFS / NFI : the NFI recommendation is to record the area of the plot or length of transect where data is not being recorded. This is key to accurately compiling volume, biomass and Carbon estimates for each plot. This bounce-back method was investigated but not promoted as a reasonable solution.
Final Resolution	Implement RIB recommendation

Action	RIB Statistical Sampling Team to review and provide recommendations / field testing options for 04.
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Issue ID #	S 28
Contact Info	Change Management suggestion from 2002.
Issue Description	<i>: Location of reference tree tag number on field cards Reference: VRI and CMI ground sampling Change Reference: GSDE1 (2000) and GSDE 2 (2000) Ensure that the next version of the grounds sampling field cards has the reference tree tag number on the same field form as the reference tree details</i>
Technical Lead	Verne Sundstrom / Matt Makar
Priority Assessment	Low.
Reference Information	VRI Ground Sampling field cards VRI Ground Sampling procedures NFI Ground Sampling procedures
Resources Required	<ul style="list-style-type: none"> - input design changes to forms contractor - make changes to ground sampling procedures
Background	The field forms were developed with the two “tag numbers” being collected located on two field forms. The crews have suggested having both attributes on the same form to avoid confusion. The TIMVEG handheld program has already implemented this change when it was developed.
Benefit of Change	All similar data will be collected on one portion of the field form.
Resources Required	<ul style="list-style-type: none"> - field card changes \$200 - manual changes \$200
RIB Recommendation	Ensure that the next version of the grounds sampling field cards has the reference tree tag number on the same field form as the reference tree details
Client Comments	This issue is of a general nature and was not sent for client review
Final Resolution	Implement RIB recommendation
Action	GJ to evaluate and provide costs associated with updating cards and any costs with TIMVEG. If funding is available support changes.

Issue ID #	S 29
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Contact Info	Change Management suggestion form 2002
Issue Description	<i>Issue: Standards for plant cover values</i> Reference: VRI and CMI ground sampling standards Change Reference: GS 7 (2000) A review of audit versus original plot data for the determination of plant cover values is required to determine if the existing standards are appropriate. The current plant cover standards do not appear to be achievable in all cases. In the longer term, a multiple measurement study may be required
Technical Lead	Dave Campbell / Matt Makar
Priority Assessment	Moderate
Reference Information	VRI Ground Sampling Standards NFI Ground Sampling Standards
Background	The current ground sampling standards were developed in cooperation with clients, samplers and technical staff. It is proposed to compare the audit results against the original ecological field data to see how consistently these standards are being met.
Benefit of Change	Will provide quantifiable data to support field standards.
Resources Required	<ul style="list-style-type: none"> - review of original versus audit ecological data - review of current standards with clients and staff - Estimated cost \$5,000
RIB Recommendation	This item is of low priority to Ministry with the limited resource dollars available. Continue to collect and store field audit data until such time as a study can be accomplished.
Client Comment	<p>Del Meidinger MoF Research: This is an important issue but if resources are not available, I can understand that it cannot be done. Comparing audit data to field data is useful information, but as indicated, a multiple measurement study would likely be most useful. In the interim, a 'guide to visual estimation of plant species cover' would be helpful, perhaps with an accompanying set of guidelines. This is something I have been planning to do for some time ...</p> <p>Dave Clark MSRM RIB : I concur. With reduced resources, better to put efforts into developing aids to improve estimation of cover, than to lower the current tolerances in the absence of audit data</p>
Final Resolution	Implement RIB recommendation
Action	No immediate action

Issue ID#	S30
Contact Info	(Carry over from CM 2002)
Issue Description	<i>Issue: Recording the number of occurrences of a loss indicator on a specific tree</i> Reference: VRI and CMI ground sampling procedures Change Reference: GS 9 (2000) The current process for recording the frequency of a loss indicator on a tree is to count the number of specific occurrences. In some instances there could be 30 to 50 occurrences around a tree bole. Once the number of occurrences reaches a minimum number could the field crew record a code as "m" for multiple occurrences? Would there be any impact on the data analysis? This

	<i>change could save some time</i>
Technical Lead	Verne Sundstrom, Alf Kivari
Priority Assessment	Moderate
Reference Information	TIMVEG, field manual, VRI compiler; documentation.
Resources required	Compiler - Minor contractor time. ; TIMVEG?; database? Documentation – minor.
Background	This item was forwarded to the Operations Group for further review. The issue is to be addressed in the 2002 calendar year. Verne and Bob to review the status of this item. The potential impact upon the NVAF program was the only concern identified. Will Smith indicated this was not a concern to NVAF so recommend implementation of this change when practical in database
Benefit of Change	Increase sampling efficiency
Resources Required	Compiler, database, Minor contractor time.
RIB Recommendation	Change value to alpha in TIMVEG, database, and compiler source data; record an 'M' where loss indicators exceed 9.
Client Comments	This issue is of a general nature and was not sent for client review
Final Resolution	Implement RIB recommendation
Action	GJ to evaluate TIMVEG, Database and compiler modification costs. Implement change if resources available.

Issue ID#	S31
Contact Info	Will Smith, MSRM
Issue Description	<i>Ensure NVAF QA of the destructive sampling is done within a few weeks of the sampling. NVAF sample trees can rapidly weather to the point that a QA will be unable to determine if the work was done to standard. Weathering will cause wood to expand or contract and can obliterate any marks made by the samplers. Decay can continue to advance through the wood. This is particularly true for audits of trees completed the previous year.</i>
Technical Lead	Will Smith
Priority Assessment	High
Reference Information	NVAF Standards and Procedures.
Resources Required	Staff time to alter the NVAF Standards and Procedures document.
Background	This item reflects the need to make an official standard of a past unwritten policy of auditing the sampling immediately after completion. A long delay, particularly a winter season, between the sampling and the QA can lead misinterpretation of the quality of the sampling. This is due to the combined affects of weathering and the continued advancement of decay in the sample tree which can create large differences between the original and audited conditions of the sample tree. These differences could lead to a failure of work that was done to standard or could pass substandard work. In addition, if the QA did find the work to be substandard, it would be difficult, if not impossible, to bring the remaining work back up to standard. In most cases, QA should be done within 4 weeks of sampling. In all cases, a winter season between the sampling and the QA would constitute too much lapsed time.
Benefit of Change	Would ensure a fair and consistent approach for QA and would allow for the opportunity to readily fix substandard work.
Resources Required	Minimal staff time to change the NVAF Standards and Procedures.
RIB Recommendation	Ensure QA is done shortly after the sampling: Proceed with revisions to NVAF standards and procedures.
Client Comments	This issue is of a general nature and was not sent for client review
Final Resolution	Implement RIB recommendations
Action	WS to implement

Issue ID#	S32
Contact Information	Keith Tudor, MSRM
Issue Description	<i>Examples of contract templates (e.g. RFP's, Schedule A's) are not currently on the web. They were pulled because they were out of date. There is a risk that contracts may be signed that do not reference the correct standards, in which case data may be received that will not load to the LRDW. Contact centre staff have suggested that these documents should be update and placed on the web</i>
Technical Lead	Matt Makar
Priority Assessment	High
Reference Information	Base upon existing contract documents
Resources Required	Some staff time to re-write documents
Background	Programs impacted would be the VRI.
Benefit of Change	Helps ensure that standards are met for future contracts
Resources Required	None
RIB Recommendation	Proceed with making documents available on internet website : Example contracts to be put on web at this address- http://srmwww.gov.bc.ca/tib/vri/vri/vri_contract_template.htm . RFP's will not be posted as it was felt that this type of sampling should generally be a tender now, and proponents will have their own generic tender templates that can be attached to the example contracts. Phase II example contract is now on line . NVAF example contract will be posted on this site as soon as it is available. The GPS collection manual for VRI has also been updated and is on the following site. http://srmwww.gov.bc.ca/tib/vri/vri/vri_standards.htm#gps
Client Comments	This issue is of a general nature and was not sent for client review
Final Resolution	Implement RIB recommendation
Action	Completed. KT to check if docs posted.