

Issue ID	Decision
<b>National Forest Inventory</b>	
<p><b>National Forest Inventory 1:</b> A number of projects have been collecting small trees on plot sizes other than the standard 2.50m radius plot. More projects seem to be interested in a larger small tree plot, possibly due to the loss of the overstory from MPB. Consider implementing other plot radii for the small tree plot.</p>	<p>Change mgmt group recommends allowing plot sizes of 3.99m, 5.64m in addition to the existing 2.50m plot on a project basis. This item applies to phase 2 ground sampling as well as NFI.</p>
<p><b>National Forest Inventory 2: This is a carry over from 05/06:</b> The NFI QA evaluation of pass / fail should be based on a points system similar to the VRI system.</p>	<p>Background - At the time that Quality Assurance was starting to be done by third parties, it was directed that QA should be based on a points system rather than compiled values so that contractor QA crews could determine more easily in the field whether a sample has passed or failed. NFI was to follow the same procedures.</p> <p>Timber attribute QA was modified, but ecological attributes have not. Currently the CFS is working on NFI re-measurement protocols, so the change mgmt group recommends deferring further modifications until re-measurement protocols and national standards are in place.</p>
<p><b>National Forest Inventory 3:</b> Cards need to be modified to match procedures that have been in place for a number of years. (eg plot disturbance).</p> <p>This may not be a change mgmt item</p> <p>priority: Low</p>	<p>Not necessarily a change management item, but recognized by the group as an issue. After the new data entry software is developed it may be appropriate to phase out the use of cards altogether as has been done with the GY and NVAF programs.</p> <p>No Action required.</p>
<b>Ground Sampling</b>	

<p><b>Ground Sampling 1:</b> Bark windows were originally intended to obtain some baseline information on bark thickness, and not intended to be collected in perpetuity. There should be enough data available to determine if bark windows are no longer necessary.</p>	<p>Bark windows are currently only used to correct for partial age counts such as physiological age, Rotten cores, and Can't Reach Center codes. The Change management group recommends that bark windows are optional for all other age codes.</p>
<p><b>Ground Sampling 2:</b> Modify procedures so that Aux plots that are replaced are replaced in order. There is a potential for bias when enhancing new species under the current procedures.</p>	<p>Change mgmt group has provided manual clarifications</p>
<p><b>Ground Sampling 3/11:</b> This item has two components: 1). Use Interior log grades to grade trees in VRI ground samples, and 2) scale NVAF sample trees using the Interior log grades. Pacific Inland Resources (West Fraser) in Smithers has submitted this item and is requesting this work be done in the Bulkley TSA RI in 2008/09. Licensees in the Revelstoke TSA have also expressed interest that this work be done in their VRI. The use of Interior log grades for VRI ground samples was submitted to the change management process in 2007/08 and was not approved. The reasons for rejection were: Interior log grades do not have a value to the inventory due to their instability (Revenue branch are considering major changes) and their broad non-descriptive nature.</p>	<p>Interior log grades are not recommended for use in VRI ground samples for the same reasons that they were rejected in the 2007/08 change management cycle. The scaling of NVAF sample trees using VRI log grades should be considered for testing for the purposes of verifying the standing estimates of log grade and calculating an adjustment of log grades. Scaling costs are high due to the addition of a third person to the NVAF sampling crew at a cost of about \$300 - \$400 per day.</p> <p>Decision 1: do not change from Alpha to Interior Log Grades Decision 2: recommend scaling test using Alpha grades</p>
<p><b>Ground Sampling 4:</b> Make mandatory, in the quality assurance procedures, the requirement for submission of QA reports to the respective MFR inventory representatives concurrently with the completion of the QA reports.</p>	<p>Mandatory submission of forms to regions.</p>

<p><b>Ground Sampling 5:</b> Section 4.8 Pg. 71 - Suitability of Age and Height: Provide additional clarification on tree suitability in regard to suppression as too many intermediates with excessive early suppression are being classified as co-doms.</p>	<p>The group determined that this is a training issue, in that the crew may be incorrectly determining whether a tree is codom or dominant. This will be brought up at the "VRI Refresh" session which is scheduled for early April.</p>
<p><b>Ground Sampling 6/15:</b> Under current procedures, we have not been acquiring as many site trees as required for business purposes. Allow the use of 'P' (proxy) site trees where no suitable site trees are present. Use a tested and reviewed procedure where the closest suitable site tree to plot center within 25 m is selected.</p>	<p>The issue of lack of site trees may have been mitigated through a procedure change last year where 4 auxiliary plots will always be established. In the Invermere sampling approximately 85% of the samples had 3 or more leading species site trees. This compares to approximately 52% of the clusters having 3 or more site trees in 2007 samples that used the old procedure. Change mgmt recommends deferring this item until next year when more samples have been field collected, and further analysis be performed on those samples to see if the number of leading species trees now meets business needs.</p>
<p><b>Ground Sampling 7:</b> Allow for the VRI ground sample cluster to be expanded by an additional 12 plots, 9 count and 3 measure, to be better capture variability in stocking in highly variable polygons found in Interior dry belt and other stand types.</p>	<p>Analysis of test data is underway but will not be completed until next year.</p>
<p><b>Ground Sampling 8:</b> Tally of dead standing in aux plots. We tally these trees because we recognize potential timber value in these trees. Why not only tally sawlog grade or better and exclude tallying the low value dead standing.</p>	<p>There is hesitation to use a "cultural definition" in determining <i>what</i> is collected in the inventory. A number of options were examined. This is a problem mainly on the coast where large stumps are present. There is only one project that is currently underway on the coast using the new procedures. The group recommends examining the results of this project once it is completed to determine the impacts. This could have potential when <u>answering the Biomass question.</u></p>

<p><b>Ground Sampling 9:</b> Consider deleting the % Class 1 from the CWD measurements. It is very hard to assess and there is such a range of values that the measurement has no reliability.</p>	<p>John Parminter (Research Ecologist, Research Branch) recommends dropping "% decay class 1" and it's associated attribute "class other" due to concerns that no other CWD sampling methodology includes this sort of attribute and that no one is using the data. He states that decay classes are done on the entire piece, not at a point on the transect. The change mgmt group recommends making these two attributes optional. Note: this is deferred till the VIAC attribute review is completed. Need to determine what comes out of that review.</p>
<p><b>Ground Sampling 10:</b> Submission of QA summary reports - minimum submission requirements needs to be developed. Reports are being submitted with insufficient supporting data.</p>	<p>Two items arose out of this issue, the need for a template for QA submission, and that the existing QA point standards unfairly penalized the field crew as more trees were checked (a sample was more likely to fail as more trees were checked). The point standards were revised, as well as a suggested template for QA report submission was developed.</p>
<p><b>Ground Sampling 11: This is a carry over from 06/07:</b> Phase 2 re-measurement protocols need to be developed.</p>	<p>A report was commissioned last year to look at re-measurement (monitoring) issues. A monitoring team needs be set up to deal with these issues.</p>
<p><b>Ground Sampling 12: This is a carry over from 06/07:</b> Tree distance will become in the future an important ground attribute. Right now, tree distance is only collected at IPC. It should be collected at all points. This is the "critical height sampling" issue.</p>	<p>This item is intended to help implement monitoring on phase 2 plots. A monitoring team needs to be set up to examine this issue. This could be done with a variance of standards.</p>

<p><b>Ground Sampling 13: This is a carry over from 06/07:</b>          Modify the site tree selection procedures to allow for the selection of dead and live trees in stands with large amounts of MPB mortality. Age and height information should be captured for the new dead tree layer. Site tree criteria for the remaining live tree layer may be modified to meet information needs.</p>	<p>A methodology has been developed to help clarify how/where it's appropriate to collect dead site trees. There are a number of items still outstanding such as how the data should be analyzed. It may be that further data fields or procedure modifications are required (IE A live/dead field for site trees, and how to adjust correctly when the remaining stand is "suppressed"). How could we do adjustments, i.e., dead trees to adjust live trees. SIBEC might be good enough. This is why we are deferring. <u>Defer to next year.</u></p>
<p><b>Ground Sampling 14: This is a carry over from 06/07:</b>          Replace the auxiliary plots that are dropped due to being outside the polygon. Replace these plots by establishing new plots within the polygon.</p>	<p>Procedures were modified last year, as well as TIMVEG. Oracle needs to be modified.</p>
<p><b>Ground Sampling 15: This is a carry over from 05/06:</b>          Change the log length associated with the VRI ground sample net factor rule for conk.</p>	<p>Deferred as analysis of test data is underway.</p>
<p><b>Net Volume Adjustment Factor</b></p>	
<p><b>NVAF 1:</b>          Allow for NVAF stratification to be based on tree level characteristics such as the presence or absence of decay or conk and blind conk. Tree level stratification should improve the NVAF correction by reducing stratum variability. For instance, the Kalum NVAF for hemlock is 0.951, but if stratified at the tree level by estimates of sound wood loss, the NVAF values would be 0.975, 0.808 and 1.21 for trees with no visible decay, trees with some visible decay and trees with conk or blind conk respectively. Consequently, in this case, a move to a tree based NVAF would result in increased precision. To use a tree based NVAF, the VRI sample compiler would have to be modified.</p>	<p>Modification of the VRI sample compiler to allow for tree based NVAFS. This will require some contract resources to modify the compiler and will require FAIB staff to test changes to the compiler. The work can be done over the course of 08/09.</p> <p>Change in standard for field season 2008.</p>

<p><b>NVAF 2:</b>  NVAF cross sectional area standards may be too tight when dealing with wood that has dried and shrunk in the period between sampling and the quality assurance inspection. Currently they are 8cm<sup>2</sup> for "regular" circumferences, and 20cm<sup>2</sup> for "irregular" circumferences, or collapsed pieces.</p>	<p>Do not modify the standard for sampling, instead provide clarification for the QA process in terms of: excessive shrinkage due to drying or swelling due to rain or snow can be dealt with by a close inspection of the log rather than the disk.</p>
<p><b>NVAF 3:</b>  Sample enhancements are now being conducted simultaneously along with the sample establishment, it is possible that none of the enhanced samples will be audited in the random sample selection process.  All NVAF enhanced samples must be grouped into unique QA batches to ensure that a proportional number of NVAF enhanced samples are selected for QA.</p>	<p>The NVAF ground samples must be recognized as a stratum for QA and 10% of all NVAF ground samples must be audited.</p>
<p><b>NVAF 4:</b> As an additional NVAF sample tree measurement, capture the non-merchantable sound wood determined using standard scaling procedures. Merchantable wood can then be calculated and the difference between the estimates of net close utilization volume and 'actual' merchantable volume can be calculated to provide sensitivities for use in timber supply analysis. Testing of this new measurement was successfully carried out in the Lakes and Merritt NVAFs and the costs of the extra measurement were minimal to nonexistent.</p>	<p>Implement the new procedure as a standard process for NVAF sampling.</p>

<p><b>NVAF 5:</b> If units have already had destructive sampling, and are being re NVAF sampled, the phase 2 samples that have already been partially destructively sampled be used again if the trees fall within the matrix.</p>	<p>This is monitoring issue because of the destructive nature of NVAF sampling precludes future use of the samples auxiliary plots and therefore constrains the possibility of future monitoring on some of the VRI ground samples. Because monitoring design is still in its infancy, an interim approach has been recommended to minimize the destruction of VRI ground samples by encouraging proponents to reuse samples with NVAF sampling. Destructive sampling has to be factored in within the Monitoring design if we are installing a VRI with the intent to remeasure.</p>
<p><b>NVAF 6 This is a carry over from 06/07:</b> The interior forest industry is exploring the option of moving towards a Call Grade / Net Factor system. One of the key issues involved is the lack of consistent NVAF data throughout the interior. Support from the inventory program is further collecting this information or supporting the collection of this data within the planning process will again further support the inventory and revenue businesses.</p>	<p><b>No action is required.</b> This represents an appeal by Revenue Branch to foster NVAF sampling to meet their anticipated needs for appraisal cruising. Because NVAF sampling has benefited from an increase in the minimum sample size and is presently proceeding at a good rate across the province, the interests of Revenue Branch are being partially met.</p>
<p><b>Photo Interpretation</b></p>	
<p><b>Photo Interpretation 1:</b> VRI Phase 1 deliverable standards need to be updated to reflect Forest Inventory Update requirements for silviculture openings, Free to Grow coding and VRIMS personal geodatabase format for final submissions.</p>	<p>Wording will be added to the current photo interpretation VPIP guidelines to clarify the requirements for incorporation of RESULTS / silviculture / opening information through VRIMS into the VRI database.</p>

<p><b>Photo Interpretation 2:</b> Make a provision in the current VRI to allow it to address dead or partially dead stands beyond a description of the number of snags per hectare.</p>	<p>The VIAC core attributes technical working group (TWG) is reviewing the attributes to be collected in the VRI program. The Quesnel photo interpretation pilot may identify potential resolution to this issue including the development of a modified database, development of a non-corporate database, etc. The forest inventory program will continue looking at this over the 08/09 year.</p>
<p><b>Photo Interpretation 3:</b> Adopt the use of a QA batch system for the delineation and attribution phase of the photo interpretation process, similar to that of the ground sampling QA process which would generate an Auditor's Mapsheet List. The Auditor's Mapsheet List should include all mapsheets in each project and indicate pass or fail for every batch and the phase of the interpretation process selected to QA.</p>	<p>A process for a polygon delineation / attribute estimation batch review system (including a table to track deliverables) was developed and circulated to the photo interpretation community. The limited feedback that was received was incorporated into the final version of this process.</p>
<p><b>Photo Interpretation 4: This is a carry over from 06/07:</b> We have to investigate the usefulness of interpreting basal area. Can VDYP7 do it more consistently than the interpreters? VDYP7 is very sensitive to changes in BA.</p>	<p>An existing photo scale test project is being undertaken by FAIB and the results of this test may provide guidance on this issue. Further work may be required in 2008 to address the findings from this project based on recommendations contained within the project report. Analysis is planned for fiscal 08/09.</p>
<p><b>Photo Interpretation 5: This is a carry over from 06/07:</b> How should we address places like the Cassiar for a new inventory. Due to its size, to carry-out an inventory to conventional VRI standards would be costly and time consuming (it is not feasible.) For the vast amount of area (non THLB) a VRI standard phase 1 inventory may not be required.</p>	<p>A VIAC technical working group (TWG) will be formed in the spring of 2008 that, in coordination with the core attributes TWG, will look at addressing this issue. This is in progress and no changes are anticipated for the 2008/09 fiscal year.</p>

<p><b>Photo Interpretation 6: This is a carry over from 05/06:</b> For stand structure classification, there has been no adequate way to systematically and consistently account for the variety of stand structures. The Cumulative Distribution Approach would rectify this.</p>	<p>The Quesnel photo interpretation pilot may identify potential resolution to this issue. This may include development of a modified database, development of a non-corporate database, etc. At this point there has been no decision to implement this process in upcoming photo interpretation projects. The decision is that the VRI Program will not implement.</p>
<p><b>Photo Interpretation 7: This is a carry over from 05/06:</b> A gap in the classification exists where a polygon may be vegetated with trees but the crown closure is less than 10%. Polygons with these attributes do not fit in to the current BC Land Cover Classification Scheme.</p>	<p>This is a known problem which will require manual revisions, database modifications, etc. Modifications to procedures, standards, database, etc. to address this issue should be considered in conjunction with the larger change issue regarding core attributes. In the short term, wording has been incorporated into the opening information submission guidelines (see PI 1) to help reduce the number of errors encountered in the photo interpretation data.</p>