What's New in Silviculture Surveys – 2020

The 2020 version of the Silviculture Surveys Procedures Manual has been posted to the Silviculture Surveys website hosted by MoFLNRORD. In addition, silviculture survey field cards have been modified and are now posted online to accompany the procedures manual. Printed waterproof field cards can be ordered from the Distribution Centre Victoria website. Revisions to field cards are detailed in Section 2 below.

Survey procedures have not changed significantly in 2020, but improvements in some areas have been made, as detailed below in Section 1. Minor typographical errors, grammatical errors, and wording have not been detailed in this document.

Section 1: Silviculture Surveys Manual Changes 2020

Section 2: Field Card Revisions: FS657, FS658, FS659, FS660, FS1138A

1. Silviculture Surveys Manual Changes 2020:

a. General Formatting

Best Practices and *Revised/Misunderstood* content boxes are highlighted with colored text for easy reference:

> Concepts believed to be "best practices" but not necessarily required by legislation have been highlighted using purple text in a box like this.

> Recently revised subjects and commonly misunderstood issues have been highlighted using blue text in a box like this.

b. Basal Area Requirements

Throughout the manual, consistent language is used to articulate best practice requirements to collect Basal Area (m2/ha) where otherwise it may have been considered optional. This is particularly important in stands >5m2/ha residual dispersed basal area as well as multi-storied surveys in the IDF subzones and within woodlots.

c. Precision Standards……..……page 11

Additional legislative references to FPPR 86(6) have been added to support the precision standards found in the *RESULTS Information Submission Specifications-licensee submissions*. Regardless of survey method i.e. systematic grid survey versus aerial reconnaissance, data quality standards remain the same. This just serves as a reminder to consider the allowable error limits when collecting your data. If you have any questions about this, contact your contract administrator for clarification of precision standards.

d. Forest Health

i. Best Management Practices for **identification of pine rusts**…….….pages 89 & 284

When it appears evident that a particular forest health factor is a serious problem in an opening, the survey should be scheduled for a time when the factor is most apparent and easily seen. ***To accurately identify pine rusts in young stands, a recommended best management practice would be to align survey timing with annual sporulation periods: between May and July each year.***

ii. Updated free growing damage criteria for **Elytroderma** infected pine…….. page 285

Tree being assessed as UNACCEPTABLE if:

Any defoliation, stunting, or red-brown discolouration in the top 1/3rd of the live crown due to Elytroderma in the IDFdk3, IDFdk4, SBPSmk or SBPSxc biogeoclimatic subzones.

e. Repression Density Decision Key (RDDK)…….……...….page 34

For Forests for Tomorrow (FFT) funded juvenile spacing activities, the surveys manual now recognizes a new updated process to collect information related to high density stands eligible for FFT funding. The Repression Density Decision Key relies on a survey standard that is different than the current manual. Countable conifers have been re-defined as 'dominant and co-dominant' tree counts; survey sample plot sizes have been reduced; methods for assessing site index have been re-prioritized. The details of the surveys changes can be found in the updated survey activity standard for repressed stands on the FFT website under Timber Supply Mitigation.

f. Revision of Layer 1 broadleaf species as 'non-competitive'……..……page 31

"Layer 1 (≥ 12.5 dbh) Broadleaf Species will be considered non-competitive when using the quadrant method for assessing Free Growing Conifers, if the collective layer one, total broadleaf species in the plot must be ***< 8 m2 Basal Area*** *(Rationale: 8 m2 is the threshold BA used by Comeau and Cortini in the Mixedwood Well Growing standards developed for the Aspen and Sw mixtures)".*

The requirement of 6% crown closure has been removed from the clause above.

g. Clarification of *Allowable Broadleaf* counts following brushing treatments……page 32

"*While numerous birch stems will often originate from one stump, aspen is more likely to sucker from below the ground or at the root collar (see Figure 4c). Table 1a shows the relationship between the actual number of birch, aspen, cottonwood or red alder stems originating from a cut stump and the related number of countable broadleaf trees used during a free growing assessment. For birch, aspen, cottonwood and red alder that originate from below the ground level, all stems greater than the median height of the potentially free growing trees will be tallied as countable stems.*

Note: This principle applies only to the determination of a free growing tree. It is not used in the assessment of total trees".

h. Stand Development Monitoring (SDM) Damage Criteria

The SDM Damage Criteria used within the FREP Monitoring protocols has been removed from the surveys manual. The Young Stand Monitoring (YSM) Damage Criteria has been adopted in place of the SDM Damage Criteria previously found in Appendix 10a of the older manual versions.

i. Appendix 12 revisions……..……page 294

Technology in Silviculture Surveys has been added as Appendix 12 to discuss Unmanned Aerial Vehicles and use of Lidar imagery in silviculture surveys. Continual improvements are being made to the technology, the affordability, and the algorithms and models that are being developed to assist forest practitioners in sophisticated inventory data collection.

j. Appendix 15 addition……..…page 328

The Forest and Range Practices Act and the Regulatory Framework (additional details) have been moved into Appendix 15 from the main body of the manual.

2. Field Card Revisions: FS657, FS658, FS659, FS660, FS1138A:

Silviculture Survey Field Cards have been revised to a minor extent, to optimize space and remove older fields that have been infrequently used. Some notable changes include:

- FS 657 (General Site Information)
  - Removal of field 14: Air Photo No. Used**;**
  - Removal of field 84: Accommodation
- FS658 (Silviculture Survey Plot Card)
  - Re-formatted to optimize space
- FS659 (Silviculture Survey Summary)
  - Removal of field 153: On-Site Cost/ha;
  - Removal of field 154: Funding Source;
  - Removal of field 195: % Total Trees Affected;
  - Removal of field 196: % Conifers Affected
- FS660 (Silviculture Survey Reference)
  - Updated content to align with the surveys manual
- FS1138A (Confidence Limits)
  - Updated and re-formatted for ease of use

Resource Practices Branch continues to review the current free growing framework and the broader objectives that silviculture surveys are designed to meet. We are reviewing the data we collect and the decisions this information is intended to support as we strive to improve forest management in B.C.

If you have any comments, questions or suggestions, or if you'd simply like to be on the surveys email distribution list, please contact me at greg.jorgenson@gov.bc.ca

Happy surveying in 2020!