

## **EAST >> NRS Field Guide, Version 3.1: Changes from NEFG, Version 3.0 << EAST**

The following document highlights the changes from the *Northeast Field Guide v3.0* to the *Northern Research Station Field Guide v3.1*. The v3.1 field guide must be referenced for complete variable description and procedures of all changes and added regional text that affect data collections procedures in the new northern region. When reviewing the printed field guide, please take note of the following:

- If text is highlighted gray or the variable name is highlighted gray, then the information is regional text that has been added to the national text.
- Text in gray highlighted boxes indicates a NRS Note that may be a change for either NE or NC.

[The above information is referenced on page 2 of the *NRS Field Guide, v3.1: NRS Note to User*.]

### **0.0 INTRODUCTION**

0.2 PLOT INTEGRITY, page 13 – A regional bullet added concerning the toppling of dead trees and saplings as a prohibited practice.

### **1.0 PLOT LEVEL DATA**

1.0.1N CYCLE, page 17 – This is a new regional variable that will be downloaded or provided as part of the plot identification record.

1.7+N SAMPLE KIND, page 21 – Former NE regional code 7 is no longer in use. This former sample kind has been collapsed into the regional code 6.

1.12 HORIZONTAL DISTANCE TO IMPROVED ROAD, page 23 – Regional text added for private driveways within accessible forest land.

1.15.1N CRUISER and 1.15.2N TALLIER, page 24 – This regional variable is now a 4-digit code. All former NE data collectors will use a “5” prefix (e.g., 5023).

The following former NE regional PLOT LEVEL variables are no longer applicable.

- PANEL
- TERRAIN POSITION
- GPS LOCATION

### **2.0 CONDITION CLASS**

2.2 CONDITION CLASS STATUS DEFINITIONS, page 34 – Regional text added concerning the stocking requirements for mowed or intensively grazed pasture or range land. In order to qualify as accessible forest land, stocking must be at least 10% by trees  $\geq$  1.0 inch DBH.

2.4 DELINEATING CONDITION CLASSES, FIGURES 6N, 6.1N, 6.2N, page 38 and 39 – These are new regional figures illustrate the “jumping” of a developed nonforest strip or noncensus water that are less than 120 feet in width. In FIGURE 6N a forest parcel must be at least 30 feet wide and 120 feet in length if separated from “qualifying” accessible forest land by a nonforest strip. In FIGURE 6.1N and 6.2N, forest strips can be combined to meet the minimum width and acreage for qualifying forest land.

2.5.2 OWNER GROUP, page 47 – Regionally ownership data is required only for those plots where subplot 1’s plot center is identified as OWNER GROUP = 40.

2.5.7 OWNER CLASS code 41, page 51 – Code 41, corporate, also includes private educational institutions.

2.5.17 TREATMENT, page 55 – Noncommercial thinning has been regionally added to code 50.

2.5.22.1N STAND HISTORY, page 55 – This regional variable is required only when TREATMENT = 10. This variable will serve as a descriptor of the “cutting” treatment.

2.5.23.1N PRODUCTIVITY STATUS, page 57 – This is a new regional variable describing whether or not a forest condition is “productive” or “unproductive” forest land. Note: Previously this status was identified as part of the NE regional forest land use codes. These forest land use codes are no longer applicable and delineation of a forest condition is based only on the 6 national delineation variables.

2.5.24+N PRESENT NONFOREST LAND USE, page 58 – This national variable will be utilized to describe the first CONDITION CLASS STATUS 2 nonforest land use delineated on a plot. NRS has also added codes to this national variable to describe a maintained wildlife opening, windbreak/shelterbelt, recreation, mining/wasteland, wetland and beach nonforest land uses. Note: Previous NE regional nonforest land use codes are no longer applicable.

2.5.24.1N NONFOREST TREES, page 61 – New regional variable to describe the presence or absence of trees on the nonforest condition.

The following former NE regional CONDITION variables are no longer applicable.

- REGIONAL LAND USE CLASS
- TIMBER MANAGEMENT CLASS
- STOCKING CLASS

### **3.0 SUBPLOT INFORMATION**

3.0 NRS Notes, page 63 – Regional text added describing how to handle a subplot where subplot center cannot be occupied; and text added concerning the monumentation of remeasurement subplots.

3.8 SNOW/WATER DEPTH, page 66 – Regional text concerning the removal of snow on a microplot and how it can compromise the integrity of the microplot seedling tally.

The following former NE regional and national SUBPLOT variables are no longer applicable.

- SLOPE CORRECTION
- SUBPLOT CONDITION LIST

### **4.0 BOUNDARY REFERENCES**

4.0 NRS Note, page 67 – This note is a reminder that boundaries are required between CONDITION CLASSES 1, 2, 3, 4 and/or 5. Boundaries are not required between multiple nonforest land use classes as described in PRESENT NONFOREST LAND USE.

4.2.3 BOUNDARY CHANGE, page 69 – Regional text added for when it is appropriate to change previous boundary data. If current azimuths are within 10 degrees of the previous azimuths and no physical change has taken place, record the previous azimuth data and BOUNDARY CHANGE = 0.

4.2.9N PERCENT AREA, page 71 – This is a new regional variable that is calculated by the regional PDR program.

## 5.0 TREE AND SAPLING DATA

5.0, page 74 – National and regional text describing remeasurement of a forked tree that should have been tallied as one stem or a forked tree that should have been tallied as two stems. These rules and corresponding PRESENT TREE STATUS and RECONCILE codes should be applied. Note: The NE regional variable TREE HISTORY is no longer applicable. In addition regional text has been added as what should be done when a subplot is not correctly installed or cannot be located from the previous cycle.

5.4 AZIMUTH, page 76 – All trees on the subplot and all saplings on the microplot require a unique azimuth due to the regional PDR application.

5.5 HORIZONTAL DISTANCE, page 78 – A tree that was tallied as “in” and now has a current distance of 24.2 or less will remain “in” as tally trees. A tree that was tallied as “out” and now has a distance of 23.8 or more will remain “out” unless it is considered ingrowth. Similar logic is applied to saplings on the microplot.

5.9 DIAMETER, page 85 – Regional text regarding the use of scribes has been added. A remeasurement tree that has been scribed in the past should not be scribed again. In lieu of scribing, paint should be applied to the old scribe mark. On wilderness areas, a tally tree located requires only a nail at ground level. A reference tree to the subplot center requires both a nail and tag.

5.9.2 DIAMETER AT BREAST HEIGHT, page 92 – Special DBH situation 13 has been regionally added for procedures for “trees growing on objects.”

5.9.4 DIAMETER AT ROOT COLLAR, page 92 – National variables and procedures for recording DRC has been added. NRS recognizes one species, Rocky Mountain Juniper, for DRC measurement. This species is found in the western states of the northern region (KS, NE, ND and SD) and therefore is not applicable in the eastern part of the region.

5.12.1N TREE CLASS, page 96 – This regional variable has been revised and will determine additional regional variables to be collected for sawtimber-size trees. The definition of growing stock, rough cull and rotten cull has not been changed from previous NE regional definitions. The classification of dead trees is now categorized as either salvable or nonsalvable. The distinction between these two classes is the percentage of ROTTEN/MISSING CUBIC FOOT CULL present. Text and flowcharts have been added to assist in the classification process. Live poletimber-size trees will utilize the “two-inch” rule to project TREE CLASS.

5.12.2N TREE GRADE, page 99 – This regional variable is only required for a sawtimber-size tree classified as growing stock. The species grading tables have been revised. All trees require a 12 foot grading section within the 1<sup>st</sup> 16 feet to receive a corresponding species grade of 1, 2, 3 or 4. *The laminated NE tree grade cards can still be used with modification as shown in Appendix E.* Grade 5 represents a tree, classified as growing stock, that has a merchantable upper 12 foot log present or two merchantable noncontiguous 8 foot logs present within the sawlog length.

5.12.3N SAWLOG LENGTH, page 101 – This NRS-EAST regional variable is only required for a sawtimber-size tree classified as growing stock or salvable dead. All lengths now terminate at a 9-in top DOB for hardwoods and a 7-in top DOB for softwoods regardless of merchantability. If a fork is encountered, follow the fork that may yield the most merchantable volume.

5.12.4N % ROUGH BOARD-FOOT CULL and 5.12.5N % ROTTEN/MISSING BOARD-FOOT CULL, page 101 and 102 – These NRS-EAST regional variables are only required for a sawtimber-size tree classified as growing stock or salvable dead. Note: The previous regional variable that indicated “soundness” is no longer applicable. Board-foot rough cull includes forks, 1/3 or more diameter limbs, excessive sweep or crook, sections less than 8 feet in length below a “rough” stopper, 8 foot or longer sections that do not

meet minimum grading specifications. Board-foot rotten cull includes rot/missing wood, cankers, metal and sections less than 8 feet in length that are below a “rot” stopper.

5.12.6N BOLE LENGTH, page 103 – All lengths now terminate at 4-in top DOB for all species regardless of merchantability. If a fork is encountered, follow the fork that may yield the most merchantable volume.

5.25 % ROUGH CUBIC-FOOT CULL and 5.13 % ROTTEN/MISSING CUBIC-FOOT CULL, page 103 and 104 – These are national variables that are required for all live trees. For standing dead trees, the assessment of rough and rotten cull is required when TREE CLASS = 5. Note: The previous regional variable that indicated “soundness” is no longer applicable. Cubic-foot rough cull includes forks, 1/3 or more diameter limbs, excessive sweep or crook, and sections less than 4 feet in length below a “rough” stopper. Cubic-foot rotten cull includes rot/missing wood, cankers, metal and sections less than 4 feet in length that are below a “rot” stopper.

5.20.7N DAMAGE AGENTS STANDARD, page 110 – This is new regional variable to describe damage causal agents. If present, 2 agents can be recorded for a tree.

5.24 LENGTH TO DIAMETER MEASUREMENT POINT, page 112 – This national variable will be applied when the diameter measurement point is not marked and the diameter is not taken at 4.5 feet.

5.27 TREE NOTES, page 113 – The regional PDR program allows up to 80 character note per tree. The former NE 3-digit codes are no longer applicable.

5.31N FOREST TO NONFOREST VARIABLES, page 113 – This regional variable shows a listing of required variables for a tree/sapling previously tallied on accessible forest land and now located in a nonforest condition.

The following former NE regional or national TREE AND SAPLING variables or codes are no longer applicable.

- RECONCILE code 0
- TREE HISTORY
- TREE CONDITION
- TREE GRADE code 0
- LENGTH METHOD codes 5 and 6
- BOARD-FOOT SOUNDNESS
- CUBIC-FOOT SOUNDESS
- MERCHANTABILITY CLASS
- PREVIOUS TREE / MERCHANTABILITY CLASS
- PREVIOUS REGIONAL LAND USE CLASS

## **6.0 SEEDLING DATA**

6.4 SEEDLING COUNT, page 115 – Regional text describing the procedures for excessive snow on the microplot. Excavating snow from the microplot is not a valid procedure since this may compromise the integrity of the microplot by exposing seedling to extreme temperatures and animal browsing that may lead to mortality.

## **7.0 SITE TREE INFORMATION**

7.1 SITE TREE SELECTION, page 117 – Regional text added for when site tree data are required for a remeasurement plot.

7.2.ON TREE RECORD NUMBER, page 117 – This is a new regional variable to uniquely number a site tree for use during the next cycle.

7.2.2 SPECIES, page 118 – A regional species table has been placed in this section as well as the National Appendix 4 showing allowable trees for site index coring.

7.2.7+N SUBPLOT NUMBER, 7.2.8+N AZIMUTH and 7.2.9+N HORIZONTAL DISTANCE, page 119 and 120 – These national variables are now required to reference site index trees.

### **National Appendices**

All national appendices have been modified for the new northern region.

### **Regional Appendices**

Appendix A, Plot Establishment and/or Relocation Procedures – This regional appendix has been revised for the new northern region and much of the documentation are former NC procedures. Some of the former NE practices are no longer warranted. This includes SP witness trees and course to sample location line trees unless warranted. This reduction of procedures is a result of more reliable GPS receivers and plot coordinates. Crews must still provide enough information so a plot can be located without the aid of GPS. This appendix also includes procedures for NONFOREST QA/QC PLOTS, SUBPLOT REFERENCE TREES and GPS STARTING POINT VARIABLES.

Appendix B, Ownership Data Collection Procedures – These procedures will vary depending on the state, however, protocols have been written to obtain permission from private landowners when initial contact (in person or by telephone) is not obtained. These protocols are applied when permission is obtained by letter. All private ownership data (when OWNER GROUP = 40) is entered into the regional PDR program. Required ownership variables are:

- OWNER FIRST NAME
- OWNER LAST NAME
- OWNER STREET
- OWNER CITY
- OWNER STATE
- OWNER ZIP
- PHONE
- OWNER REQUESTS INFORMATION

The entry format for the preceding electronic ownership variables is indicated beginning on page 208.

Appendix C, Additional Northern Data Collection Procedures – This appendix describes other regional procedures not fully described in Sections 0.0 to 7.0.

Appendix D, State/Species Specific Data Collection Variables and Procedures – This is a new regional appendix that shows added variables and procedures for the state of Maine, Minnesota, Ohio and Pennsylvania.

Appendix E, Tables and Charts – New to this appendix are the revised tree grade tables, expanded log surface hardwood tree grading defects, sweep and crook deduction tables,

Appendix F, Tree Class Illustrations – A new appendix illustrating TREE CLASS examples.

Appendix G, GPS User's Guide – Revised for v3.1.

Appendix H, Tally Items Guides, Sheets and Prompts – Tally sheet format will be new for the east. The plot cover page will now have all the plot identification and SP location information for ease of scanning

and faxing. A regional PDR Hot Key listing has been added. A PDR PROMPT INDEX has also been added for quick look-up on the back page of the guide.

### **Regional Supplements**

INVASIVE PLANTS PROTOCOLS data will be collected on a sub-sample of plots during the P3 window. These supplemental instructions will be provided prior to INVASIVE PLANTS PROTOCOL training and data collection.