

Changes from the Phase 2 Field Guide version 5.1 to version 6.0

These change pages are intended to highlight significant changes to the field guide and do not contain all of the details or minor changes.

- Introduction. Field Guide Layout. Made the following changes:

Old text	New text
0 General Description	0 General Description
1 Plot	1 Plot Level Data
2 Condition	2 Condition Class
3 Subplot	3 Subplot Information
4 Boundary	4 Boundary References
5 Tree Measurements	5 Tree Measurements and Sapling Data
6 Seedling	6 Seedling Data
7 Site Tree	7 Site Tree Information
8 Phase 2 Vegetation Profile (core optional)	8 Phase 2 (P2) Vegetation Profile (core optional)
9 Invasive Plants	9 Invasive Plants
	10 Down Woody Materials

- 0.0 General Description. Paragraph 5, Defined NIMS (the National Information Management System). Also Figure 1. Figure 1 was replaced by a plot diagram including the annular ring.
- 0.1.5RM. Deleted the sentences “If the RP is suitable for the current inventory, and visible on the new photograph, it may be re-used.” and “A tree that is re-used as an RP must be re-tagged if necessary.”
- 0.1.5.2RM RP Found But Not Useable. Deleted this item.
- 0.1.5.3RM LACK OF SUITABLE RP. Added this item.
- 0.1.5.4RM Plot Center Incorrectly Placed or Not Found. Changed text at the end of paragraph two from “ In past inventories, some fixed-radius plots were “shifted” away from nonforest land, moving the entire sample plot into accessible forest land.” to “ In past inventories, some fixed-radius plots were “shifted” away from non-woodland conditions (includes nonforest, non-sampled, timberland conditions, etc.), moving the entire sample plot into accessible, woodland forest land. Every “shifted” woodland plot is considered biased and needs to be replaced.”
- 0.2 Plot Integrity. Copied the following paragraph (as it appears in chapter 9) to the end of the section: “Note: Avoid becoming part of the problem! There is a risk that field crews walking into plot locations could pick up seeds along roadsides or other patches of invasive plants and spread them through the forest and on to the plot. Be aware of the vegetation you are traveling through and consider stopping and removing seeds from boots and clothing before entering uninvaded lands, particularly remote areas that are rarely visited.”
- 1.3 PLOT NUMBER. Changed *When collected* from “SAMPLE KIND=1 or SAMPLE KIND=2” to “All plots”.
- 1.6 NONFOREST PLOT STATUS. Changed *When collected* from “When PLOT STATUS = 2 and NONFOREST SAMPLING STATUS = 0 or 1” to “When PLOT STATUS = 2 and NONFOREST SAMPLING STATUS = 1”. Also changed the first sentence from “Record the code that describes the sampling status of the other-than-forest plot, i.e., PLOT STATUS = 2.” to “Record the code that describes the plot status of the nonforest plot, i.e., PLOT STATUS = 2.”
- 1.8 NONFOREST POT NONSAMPLED REASON. Changed description from “For entire plots that cannot be sampled, record one of the following reasons.” to “For entire nonforest plots that cannot be sampled, record one of the following reasons.”
- 1.9 SUBPLOTS EXAMINED. Changed *When collected* from “When PLOT STATUS = 2 or 3” to “All plots”.

- 1.12 FIELD GUIDE VERSION. Changed *Values* from “4.0” to “6.0”.
- 1.15 HORIZONTAL DISTANCE TO IMPROVED ROAD. Changed *When collected* from “All plots with either one accessible forest land condition class (PLOT STATUS = 1) or one accessible nonforest land condition class when nonforest is being sampled (PLOT STATUS = 2 and NONFOREST SAMPLING STATUS = 1 and NONFOREST PLOT STATUS =1)” to “All plots with either one accessible forest land condition class (PLOT STATUS = 1) or one accessible nonforest land condition class when nonforest is field-measured (PLOT STATUS = 2 and NONFOREST SAMPLING STATUS = 1 and NONFOREST PLOT STATUS =1)”.
- 1.16 WATER ON PLOT. Changed *When collected* from “All plots with either at least one accessible forest land condition class (PLOT STATUS = 1) or one accessible nonforest land condition class when nonforest is being sampled (PLOT STATUS = 2 and NONFOREST SAMPLING STATUS = 1 and NONFOREST PLOT STATUS = 1)” to “All plots with either at least one accessible forest land condition class (PLOT STATUS = 1) or one accessible nonforest land condition class when nonforest is field-measured (PLOT STATUS = 2 and NONFOREST SAMPLING STATUS = 1 and NONFOREST PLOT STATUS = 1)”. Also deleted “CONDITION CLASS” from code 0.
- 1.18.5**RM** PLOT PHOTOS TAKEN. Added this new variable.
- 1.19.2 Collected Readings. Deleted all references to 180 readings from this section.
- 1.19.8.2 LATITUDE MINUTES. Corrected *Values* from “1 – 59” to “0 – 59”.
- 1.19.9.2 LONGITUDE MINUTES. Corrected *Values* from “1 – 59” to “0 – 59”.
- 1.19.18 NUMBER OF READINGS. Deleted the sentence “Collect at least 180 readings if possible.” Also added “**RM** For GPS units (Garmin GPSmap 62s) that give a Sample Confidence percentage and not a number of readings, record 180 if the Sample Confidence reaches 100%. If the unit does not reach 100%, record the percentage of 180 readings (e.g. if the sample confidence reaches 50%, record 90).”
- 2.1.1 Step 1: Delineate the plot area by CONDITION CLASS STATUS. Added this sentence to the description “ Additionally, nonforest land is sampled in some areas of special interest.”
- 2.1.2 Step 2: Further subdivide Accessible Forest Land by 6 delineation variables. Moved last paragraph from 2.1.1 to the end of this section. Updated the section number in the Note and the section number in the last paragraph.
- 2.1.3 Step 3. When inventorying Nonforest Land, delineate accessible Nonforest Land by 3 delineation variables. Added this step to accommodate nonforest land.
- 2.2 Condition Class Status Definitions. Added the text for the new forest land definition. Replaced part of the text under #1 Accessible Forest Land and retained the name ‘accessible forest land’ rather than changing the name to ‘forest land’. Replaced the old text with the new text under #2 Nonforest Land.
- 2.2.1**RM**. PERCENT CROWN COVER CALCULATION. Deleted this since these procedures are described in 2.5.25 CANOPY COVER SAMPLE METHOD – Percent Canopy Cover Calculation for Acre Method.
- 2.3.1 Forest Land. Deleted 2.5.12 PRIVATE OWNER INDUSTRIAL STATUS because this variable is no longer in the field guide.
- 2.3.2 Nonforest Land. Added this subsection to match accommodate nonforest land.
- 2.4 Delineating Condition Classes Differing in Condition Class Status. Deleted old figure 6 from version 5.1. Also, in step 5, changed the sentence from “Nonsampled conditions within accessible forest land are delineated, regardless of size, as a separate condition” to “Nonsampled conditions are delineated as a separate condition class regardless of size.”
- 2.4.3 CONDITION NONSAMPLED REASON. Added code 05, 06, 07, 08, and 09.

- 2.4.5 NONFOREST CONDITION NONSAMPLED REASON. In the *When collected*, corrected the variable “NONFOREST CONDITION STATUS” to “NONFOREST CONDITION CLASS STATUS.”
- 2.5 Delineating Condition Classes Within Accessible Forest Land. Changed the final sentence in the first paragraph from ““Stands” are defined by plurality of stocking for all live trees that are not overtopped.” to ““Stands” are defined by plurality of stocking for all live trees, saplings, and seedlings that are not overtopped.” This is needed to accommodate new definition of forest land. Also, in step 3, the third sentence in the example was changed from “Between subplot 1 and 2 is a transition zone; the number of trees present goes from none to what clearly represents at least 10-percent tree stocking.” To “Between subplot 1 and 2 is a transition zone; the number of trees present goes from none to what clearly represents forest land.” Also “in step 4, the first line of the Note was changed from “When the width of forest adjacent to a stream is between 120.0 feet and 150.0 feet and the width of the riparian forest is at least 30.0 feet wide, the rules for identifying the non-riparian forest (at least 30.0 feet but less than 120.0 feet) need to be modified.” to “When the width of forest adjacent to a body of water or water course is between 120.0 feet and 150.0 feet and the width of the riparian forest is at least 30.0 feet wide, the rules for identifying the non-riparian forest (at least 30.0 feet but less than 120.0 feet) need to be modified.” Also, under #3 in the first sentence, changed “fixed radii plots” to “fixed-radius subplots, and in the second sentence, changed “two fixed-radius plots” to “two fixed-radius subplots”.
- 2.5.1 RESERVED STATUS. Added clarification to the text. Made an additional change to the new text – added “preserve” to the list of “park, wilderness, wild river, reserve”. Also, clarified the *When collected CORE OPTIONAL* from “All accessible forest land condition classes (CONDITION CLASS = 1) and nonforest land condition classes (CONDITION CLASS STATUS >1)” to “All condition classes”.
- 2.52.OWNER GROUP. Clarified the *When collected CORE OPTIONAL* from “All accessible forest land condition classes (CONDITION CLASS = 1) and nonforest land condition classes (CONDITION CLASS STATUS >1)” to “All condition classes”.
- 2.5.3 FOREST TYPE. Added this note to the text: . NOTE: Canopy cover is used to determine whether an area is forest or nonforest. Stocking is used with other variables such as this one.”
- 2.5.4 STAND SIZE CLASS. Added “seedlings and saplings” to the first sentence and this note to the text: . NOTE: Canopy cover is used to determine whether an area is forest or nonforest. Stocking is used with other variables such as this one.” Also, in each code, changed “...5 percent crown cover...” to “...10 percent canopy cover...” and added “seedlings and saplings” to accommodate the new definition of forest land. Also, deleted code 6 to correct the field guide to match the MIDAS program.
- 2.5.5 REGENERATION STATUS. Changed the last sentence before the Note from “In these cases, there is no need to differentiate conditions based on stand origin ” to “In these cases, there is no need to differentiate conditions based on regeneration status”.
- 2.5.6 TREE DENSITY. Changed the second sentence from “Base the classification on the number of stems/unit area, basal area, tree cover, or stocking of all live trees in the condition that are not overtopped, compared to any previously defined condition class TREE DENSITY.” to “Base the classification on the number of stems/unit area, basal area, tree cover, or stocking of all live trees, seedlings, and saplings in the condition that are not overtopped, compared to any previously defined condition class TREE DENSITY.”
- 2.5.7 OWNER. Added this new variable and renumbered the rest of the section. Changed the final version of the text to “Record the name and address of the ownership of the condition. If a drop-down list is provided in the PDR, either select the correct name or select “Other” and type the correct name in the NOTES field. If there is more than one ownership on a condition, choose the ownership in the given condition that is closest to the center of the lowest numbered subplot.” Also, in the first sentence changed “owner of the condition” to “ownership of the condition”. Also, in the *When collected CORE*, changed “First” to All”. Also, clarified the *When collected CORE OPTIONAL* from “All accessible forest land condition classes (CONDITION CLASS STATUS = 1) and nonforest land condition classes (CONDITION CLASS STATUS > 1)” to “All condition classes”.
- 2.5.8 (old) PRIVATE OWNER INDUSTRIAL STATUS. Deleted from the field guide (determined by expert panel) in final revision of the Ownership proposal.

- 2.5.8 OWNER CLASS. (was 2.5.7) Modified the descriptive text. Changed the *When collected* CORE OPTIONAL statement from “CORE OPTIONAL: All accessible forest land condition classes (CONDITION CLASS STATUS = 1) and nonforest land condition classes (CONDITION CLASS STATUS > 1)” to “CORE OPTIONAL: All condition classes (CONDITION CLASS STATUS ≥ 1)”. Also, dropped code 44 and modified the text in codes 42, 43, and 45. Added back in: the OWNER GROUP names back in as subheadings; Boy Scouts of America as an example in OWNER CLASS-FIELD code 42; and church camps in OWNER CLASS code 43, with the agreement of the proposal champion. Added back in code 44 with the agreement of the proposal champion. Also, clarified the *When collected* CORE OPTIONAL from “All accessible forest land condition classes (CONDITION CLASS STATUS = 1) and nonforest land condition classes (CONDITION CLASS STATUS > 1)” to “All condition classes”.
- 2.5.9 OWNER SUB-CLASS (CORE OPTIONAL). Added this new variable and renumbered the rest of the section.
- 2.5.10 PUBLIC ADMINISTRATIVELY WITHDRAWN STATUS (CORE OPTIONAL). Added this new variable and renumbered the rest of the section. Clarified *When collected* from “Any defined and documented combination of STATECD, COUNTYCD (if necessary), CONDITION CLASS and OWNCD (<40) for each individual assessment, where RESERVED STATUS=0.” to “When OWNCD <40 and RESERVED STATUS=0”.
- 2.5.11 ADMINISTRATIVELY WITHDRAWN AREA NAME. Added this new variable and renumbered the rest of the section.
- 2.5.12 ADMINISTRATIVELY WITHDRAWN NOTES (CORE OPTIONAL). Added this new variable and renumbered the rest of the section.
- 2.5.13 RESERVED AREA NAME. Added this new variable and renumbered the rest of the section.
- 2.5.15 STAND AGE. Changed the first sentence from “Record the average total age, to the nearest year, of the trees (plurality of all live trees not overtopped) in the predominant STAND SIZE CLASS of the condition, determined using local procedures.” to “Record the average total age, to the nearest year, of the trees (plurality of all live trees, seedlings, and saplings not overtopped) in the predominant STAND SIZE CLASS of the condition, determined using local procedures.” Also added this note to the first paragraph “NOTE: Canopy cover is used to determine whether an area is forest or nonforest. Stocking is used with other variables such as this one.”
- 2.5.15.2 **ACI** RANGE TYPE. Added this variable
- 2.5.16 DISTURBANCE 1. Changed the *When collected* from “All accessible forest land condition classes (CONDITION CLASS STATUS = 1) or accessible nonforest condition classes when nonforest is being sampled (NONFOREST SAMPLING STATUS = 1 and CONDITION CLASS STATUS = 2 and NONFOREST CONDITION CLASS STATUS = 2)” to “All accessible forest land condition classes (CONDITION CLASS STATUS = 1) or accessible nonforest condition classes when nonforest is being sampled (NONFOREST CONDITION CLASS STATUS = 2)”. Also, in code 80, changed the final sentence from “Must include a plot-level note to describe further.” to “Must include a condition-level note to describe further.”
- 2.5.22 TREATMENT1. Changed the *When collected* from “All accessible forest land condition classes (CONDITION CLASS STATUS = 1), or accessible nonforest condition classes when nonforest is being sampled (NONFOREST SAMPLING STATUS = 1 and CONDITION CLASS STATUS = 2 and NONFOREST CONDITION CLASS STATUS = 2)” to “All accessible forest land condition classes (CONDITION CLASS STATUS = 1”.
- 2.5.25 CANOPY COVER SAMPLE METHOD. Deleted text under sub-acre method since it is not used in RMRS
- 2.5.28 PHYSIOGRAPHIC CLASS. Changed the *When collected* from “All accessible forest land condition classes (CONDITION CLASS STATUS = 1), or accessible nonforest condition classes when nonforest is being sampled (NONFOREST SAMPLING STATUS = 1 and CONDITION CLASS STATUS = 2 and NONFOREST CONDITION CLASS STATUS = 2)” to “All accessible forest land condition classes (CONDITION CLASS STATUS = 1), or accessible nonforest condition classes when nonforest is being sampled (NONFOREST CONDITION CLASS STATUS = 2)”.

- 2.5.29 LAND COVER CLASS. Added this new variable and renumbered the rest of the section. In code 06, dropped the following sentence: “The Common Land Unit (CLU) and/or the Cropland Data Layer code (from prefield) can be used to guide assignment of this class if it is ambiguous.” Also changed final sentence in code 08 from “Can include the natural material portions of quarries, mines, and gravel pits.” to “Can include the natural material portions of quarries, mines, gravel pits, and cut or burned land <10% vegetation.” Also in code 09, deleted “Sparsely Vegetated” form the name of the code. Also added a paragraph to the description.
- 2.5.30 PRESENT NONFOREST LAND USE. Modified the text. Changed the *When collected* from “CORE: SAMPLE KIND = 2, current CONDITION CLASS STATUS = 2, CORE OPTIONAL: SAMPLE KIND = 1, 2, or 3; current CONDITION CLASS STATUS = 2” to “CONDITION CLASS STATUS = 2”.
- 2.5.31 CANOPY COVER SAMPLE METHOD. Changed first sentence from “Record the CANOPY COVER SAMPLE METHOD used to determine LIVE CANOPY COVER, LIVE PLUS MISSING CANOPY COVER, and TOTAL STEMS for the condition.” to “Record the CANOPY COVER SAMPLE METHOD used to determine LIVE CANOPY COVER and LIVE PLUS MISSING CANOPY COVER for the condition.” Also, under Subplot method number 3, deleted the second paragraph and the table, and changed “plots” to “subplots” in the last sentence of the first paragraph. Also, under Acre method, deleted the old number 3 and moved the old number 4 to number 3; corrected the equation “Canopy Area = pi*long axis d/2*short axis d/2” to “pi*((long axis diameter/2)*(90 degrees axis diameter/2))”; in the paragraph Transition zones and forest/nonforest encroachment, deleted “stocking” from the first sentence; replaced figure 15 with a new figure. Also, under Sub-acre method, deleted the old number 4 and moved old number 5 and 6 up; deleted the far right column in the table; in the second column, changed “67.6” to “68.0” and “49.0” to “48.1”. Also, changed the *When collected* from “CONDITION CLASS STATUS = 1 or 2” to “CONDITION CLASS STATUS = 1, 2, or 5”.
- 2.5.31.1RM Crown Cover. Deleted “in the cardinal directions” and added the following table:

Subplot	Degrees			
	Transect direction from center of subplot			
1 and 2	090	180	270	360
3 and 4	045	135	225	315

- 2.5.32 LIVE CANOPY COVER. Changed text just prior to the *When collected* from “LIVE CANOPY COVER can be based on an ocular estimate when the condition in question is certain to contain greater than 10% LIVE PLUS MISSING CANOPY COVER or TOTAL STEMS greater than 200.” to “LIVE CANOPY COVER can be based on an ocular estimate when the condition in question is certain to contain greater than 10% LIVE PLUS MISSING CANOPY COVER or CURRENT AFFORESTATION CODE =1 and TOTAL STEMS greater than or equal to 150.” Also, added this sentence to the last paragraph of text: “For LIVE CANOPY COVER <1 percent (trace), record 01. Also, changed the *When collected* from “All CONDITION CLASS STATUS = 1 or 2” to “CONDITION CLASS STATUS = 1, 2, or 5”.
- 2.5.33 LIVE PLUS MISSING CANOPY COVER. Deleted “chaining” from the first sentence. Added the following to the text “Dead trees and dead portions of live trees are not considered as missing unless it is part of the condition disturbance.” Also, changed the *When collected* from “CONDITION CLASS STATUS = 1 or 2” to “CONDITION CLASS STATUS = 1, 2, or 5”.
- 2.5.34 CURRENT AFFORESTATION CODE. Added this new variable.
- 2.5.35 PREVIOUS AFFORESTATION CODE. Added this new variable.
- 2.5.36 TOTAL STEMS. Change *When collected* from “CONDITION CLASS STATUS = 1 or 2” to “CURRENT AFFORESTATION CODE = 1 or PREVIOUS AFFORESTATION CODE = 1”. Also, in the second sentence, changed “plot size” to “subplot size”.
- 2.5.37 CHAINING CODE. Added this new variable.

- 3.3 SUBPLOT NONSAMPLED REASON. Added codes 06, 07, 08, and 09.
- 3.11.2**ACI** GROUND SURFACE COVER TRANSECTS. The ground cover transects were also changed to the following (to match P2 DWM and the Crown Cover transects):

Subplot	Degrees			
	Transect direction from center of subplot			
1 and 2	090	180	270	360
3 and 4	045	135	225	315

- 3.8 SUBPLOT SLOPE. Changed the *When collected* from “All subplots with at least one accessible forest land condition present on subplot (SUBPLOT/MACROPLOT STATUS = 1) or subplots with an accessible nonforest condition class present when nonforest is being sampled (NONFOREST SAMPLING STATUS = 1 and SUBPLOT/MACROPLOT STATUS = 2 and NONFOREST SUBPLOT/MACROPLOT STATUS = 1)” to “All subplots with at least one accessible forest land condition present on subplot (SUBPLOT/MACROPLOT STATUS = 1) or subplots with an accessible nonforest condition class present when nonforest is being sampled (NONFOREST SUBPLOT/MACROPLOT STATUS = 1)”.
- 3.9 SUBPLOT ASPECT. Changed the *When collected* from “All subplots with at least one accessible forest land condition present on subplot (SUBPLOT/MACROPLOT STATUS = 1) or subplots with an accessible nonforest condition class present when nonforest is being sampled (NONFOREST SAMPLING STATUS = 1 and SUBPLOT/MACROPLOT STATUS = 2 and NONFOREST SUBPLOT/MACROPLOT STATUS = 1)” to “All subplots with at least one accessible forest land condition present on subplot (SUBPLOT/MACROPLOT STATUS = 1) or subplots with an accessible nonforest condition class present when nonforest is being sampled (NONFOREST SUBPLOT/MACROPLOT STATUS = 1)”.
- 3.10.1**RM** VEGETATION SAMPLE STATUS. Deleted this item. Now a national variable in Section 8.
- 3.10.2**RM** VEGETATION NOT SAMPLED REASON. Deleted this time. Now a national variable in Section 8.
- 4.1 Reference Procedure. In #5, in the first sentence, changed “MQO’s” to “tolerances”.
- 5.0 Tree and Sapling Data. Fifth paragraph. Corrected the first sentence from “Once tallied, dead trees over 5.0 inches in diameter are tracked until they no longer qualify as standing dead.” to “Once tallied, dead trees 5.0 inches and greater in diameter are tracked until they no longer qualify as standing dead.”
- 5.0 Tree and Sapling Data. Added the last two **RM** bullet points under: “The following apply at remeasurement:”
- 5.5 HORIZONTAL DISTANCE. Added the following text to the description “Note: On remeasurement plots (SAMPLE KIND = 2), the current crew is responsible for verifying downloaded data and updating when it is out of tolerance. When the old pin or dowel is not found, the current crew cruisers should make sure that consider all “edge” trees or saplings that were in or out on the previous occasion when reestablishing the subplot center. For saplings on the microplot that become trees at the time of plot remeasurement, crews must collect new HORIZONTAL DISTANCE information from the subplot center.” Also, Modified the tolerances to the following:
 - Microplot: +/- 0.2 ft
 - Microplot woodland species: +/- 0.4 ft
 - Subplot: +/- 1.0 ft from 0.1 to 23.0 ft
 - Subplot: +/- 0.2 ft from 23.1 to 24.0 ft
 - Subplot multi-stemmed woodland species: +/- 2.0 ft
 - Annular plot: +/- 3.0 ft from 24.0 to 55.9 ft
 - Annular plot: +/- 1.0 ft from 55.9 to 58.9 ft
 - Annular plot woodland species: +/- 6.0 ft

- 5.7.1 RECONCILE. In code 6, corrected “i.e.” to “e.g.”
- 5.8 SPECIES. Modified the text to reflect the addition of Caribbean species in version 5.1.
- 5.9.2 DIAMETER AT BREAST HEIGHT (DBH). Under #2, figure 26 was updated to clarify measure of trees that fork at or above 1.0 foot.
- 5.12 DIAMETER CHECK. Modified the text from “Record this code to identify any irregularities in diameter measurement positions (e.g., abnormal swellings, diseases, damage, new measurement positions, etc.) that may affect use of this tree in diameter growth/change analyses.” to “Record this code to identify the accuracy of the diameter measurement (due to factors such as abnormal swellings, diseases, damage, new measurement positions, etc.) that may affect use of this tree in diameter growth/change analyses.” Also added the following Note: “If either code 1 or code 2 is used, a tree-level note is required.”
- 5.14.2RM ABNORMAL TERMINATION. Added this new variable.
- 5.15 ACTUAL LENGTH. Added the following Note: “: Some regions will measure ACTUAL LENGTH differently due to growth form. Some examples are swamp tupelo, cypress, trees growing off of old high stumps with stilted roots in the West. Check regional field guides for regional guidance.”
- 5.20 Tree Damage. Changed from CORE OPTIONAL to CORE. Also completely revised the text.
- 5.20.1 DAMAGE AGENT 1. Added this new variable.
- 5.20.2 DAMAGE AGENT 2. Added this new variable.
- 5.20.3 DAMAGE AGENT 3. Added this new variable.
- 5.25.5RM RADIAL GROWTH/ AGE CODE. Added this new variable.
- 5.25.8RM RADIAL GROWTH AND TREE AGE CHECK. Added code 3 “Age measured from a collected tree core”
- 5.26. DWARF MISTLETOE CLASS (CORE OPTIONAL). Added the following note: “In addition to these requirements, longleaf pine (0121) seedlings must be greater than or equal to 0.5 inches DRC.”
- 6.0 SEEDLING DATA. Modified the first sentence from “Stocking and regeneration information are obtained by counting live seedlings within the 6.8-foot radius microplot located 90 degrees and 12.0 feet from each subplot center within each of the four subplots.” to “Regeneration information is obtained by counting live seedlings within the 6.8-foot radius microplot located 90 degrees and 12.0 feet from each subplot center within each of the four subplots.”
- 7.2.2 SPECIES. The site tree selection guidelines and values for the Eastern and Western U.S. were moved to this location from appendix 4. Also, added the following to match what is listed in 5.8 SPECIES: “Field width: 4 digits Tolerance: No errors MQO: At least 99% of the time for genus, at least 95% of the time for species”. Also, the following changes were made in the list of valid *Values*:

Type of change	Species code	Common name	Region
Western U.S. species			
Added code	0068	eastern red cedar	RMRS
Added code	0101	whitebark pine	RMRS, PNW
Added region	0231	Pacific yew	RMRS
Added region	0351	red alder	RMRS
Added code	0462	hackberry	RMRS
Added code	0544	green ash	RMRS

Type of change	Species code	Common name	Region
Added code	0742	eastern cottonwood	RMRS
Added code	0972	American elm	RMRS

- 8.0 Phase 2 (P2) Vegetation Profile (Core Optional). The introductory text was clarified.
- 8.1 Vegetation Sampling Design. The text in this section was clarified.
- 8.2 General definitions. Canopy cover – this text was expanded and clarified. Figure 45 was clarified. Growth habits – this text was clarified including adding subshrubs to the description. Layer codes – this text was expanded and clarified: a table and figure were added. NRCS PLANTS database – the database reference was updated (occurred in version 5.1 but repeated here for clarity.) Figure 46 was added and the following figures renumbered. New figure 47 was clarified. Tables 1 and 2 were updated.
- 8.3.1 P2 VEGETATION SAMPLING STATUS. Modified code 2 from “Vegetation data collected on all accessible land conditions (CONDITION CLASS STATUS=1 or 2, NONFOREST SAMPLING STATUS =1 and NONFOREST PLOT STATUS=1)” to “P2 Vegetation data collected on all accessible land conditions (CONDITION CLASS STATUS=1 or NONFOREST CONDITION CLASS STATUS =2)”.
- 8.3.2 LEVEL OF DETAIL. Modified the text from “This plot-level variable determines whether data are collected for vegetation structure growth habits only or for individual species (that qualify as most abundant) as well. If LEVEL OF DETAIL = 3, then a tree species could be recorded twice, but it would have two different species growth habits (see 8.6.1).” to “This plot-level variable determines whether data are collected for *Vegetation Structure* only or for *Species Composition* as well. If LEVEL OF DETAIL = 3, then a tree species could be recorded twice, but it would have two different SPECIES GROWTH HABITS (see 8.6.1).” Also modified text in all three codes.
- 8.4.1 SUBPLOT NUMBER. Modified *When collected* from “On all plots where P2 Vegetation is being sampled (P2 VEGETATION SAMPLING STATUS = 1 or 2)” to “On all subplots where P2 Vegetation is being sampled (P2 VEGETATION SAMPLING STATUS = 1 or 2)”.
- 8.4.2 P2VEG SUBPLOT SAMPLE STATUS. Clarified the text. Also modified the *When collected* from “On all subplots where P2 vegetation is being sampled on accessible forest land (P2 VEGETATION SAMPLING STATUS=1 and SUBPLOT STATUS = 1) or is being sampled on accessible forest land or nonforest land and at least one accessible nonforest land condition is present on the plot (P2 VEGETATION SAMPLING STATUS=2 and NONFOREST SUBPLOT STATUS=1) to “On all subplots where P2 Vegetation is being sampled on accessible forest land (P2 VEGETATION SAMPLING STATUS=1) and at least one accessible forest land condition (CONDITION CLASS STATUS = 1) exists within the 24-foot radius subplot, or P2 Vegetation is being sampled on all accessible land conditions (P2 VEGETATION SAMPLING STATUS=2) and at least one accessible forest condition or measurable nonforest condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) exists within the 24-foot radius subplot.”
- 8.4.3 VEGETATION NONSAMPLED REASON. Modified the *When collected* from “On all subplots where P2 vegetation is being sampled on all accessible land conditions (P2 VEG SUBPLOT SAMPLE STATUS = 2)” to “On all subplots where P2 VEG SUBPLOT SAMPLE STATUS = 2”.
- 8.4.4 CONDITION CLASS NUMBER. Clarified the text. Also, modified the *When collected* from “Any accessible condition class when P2 vegetation is being sampled on accessible forest land conditions (P2 VEGETATION SAMPLING STATUS =1)” to “Any accessible measured land condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) when P2 vegetation is being sampled on the subplot (P2 VEG SUBPLOT SAMPLE STATUS = 1)”.
- 8.4.5 VEGETATION SUBPLOT NOTES. Added the following text: “When plant specimens are collected, use this field to record a community type description for each subplot sampled for P2 Vegetation. The community description is intended to fully automate the specimen collection process by providing a description of the community in which this plant was found. Some examples of community descriptions are as follows:
 - 25 year aspen boundary of mature trees. very little slope. a lot of light entry

- *acer saccharum* floodplain forest. hummock-hollow microtopography.
- mature mesic hemlock-hardwood forest adjacent to pond

The community type description field is a note that is accessible via Ctrl+E from the P2 Subplot screen for P2VEG.”

- 8.5 Vegetation Structure. Clarified the introductory text. Canopy cover by layer – clarified the description. Aerial View Coverage – this text was almost completely rewritten for clarity. Vegetation Structure Growth Habits – the definitions of the growth habits Tally Tree Species (TT), Non-tally Tree Species (NT), and Shrubs/Subshrubs/Woody Vines (SH) were clarified.
- 8.5.1 TALLY TREE SPECIES COVER LAYER 1. Modified the *When collected* from “On all conditions within subplots where (P2 VEGETATION SAMPLING STATUS=1 and CONDITION CLASS STATUS = 1) or (P2 VEGETATION SAMPLING STATUS=2 and NONFOREST CONDITION STATUS=2)” to “Any accessible measured land condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) when P2 vegetation is being sampled on the subplot (P2 VEG SUBPLOT SAMPLE STATUS = 1)”.
- 8.5.6 NON_TALLY TREE SPECIES COVER LAYER 1. Modified the *When collected* from “On all conditions within subplots where (P2 VEGETATION SAMPLING STATUS=1 and CONDITION CLASS STATUS = 1) or (P2 VEGETATION SAMPLING STATUS=2 and NONFOREST CONDITION STATUS=2)” to “Any accessible measured land condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) when P2 vegetation is being sampled on the subplot (P2 VEG SUBPLOT SAMPLE STATUS = 1)”.
- 8.5.10 NON_TALLY TREE SPECIES COVER – AERIAL VIEW. Changed the last sentence in the text from “Follow the same procedures as for NON-TALLY TREE SPECIES COVER LAYER 1” to “Follow the same procedures as for NON-TALLY TREE SPECIES COVER LAYER 1, but include all layers.”
- 8.5.11 SHRUB AND WOODY VINE COVER LAYER 1. Change the variable name from “SHRUB AND WOODY VINE COVER LAYER 1” to “SHRUB, SUBSHRUB, AND WOODY VINE COVER LAYER 1”. Changed the text from “Record a total canopy coverage for shrubs in layer 1 (0-2.0 feet) to the nearest percent.” to “Record canopy cover for shrubs/subshrubs/woody vines in layer 1 (0-2.0 feet) to the nearest percent.” Also modified the *When collected* from “On all conditions within subplots where (P2 VEGETATION SAMPLING STATUS=1 and CONDITION CLASS STATUS = 1) or (P2 VEGETATION SAMPLING STATUS=2 and NONFOREST CONDITION STATUS=2)” to “Any accessible measured land condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) when P2 vegetation is being sampled on the subplot (P2 VEG SUBPLOT SAMPLE STATUS = 1)”.
- 8.5.12 SHRUB AND WOODY VINE COVER LAYER 2. Change the variable name from “SHRUB AND WOODY VINE COVER LAYER 2” to “SHRUB, SUBSHRUB, AND WOODY VINE COVER LAYER 2”. Changed the text from “Record a total canopy coverage for shrubs in layer 2 (2.1-6.0 feet) to the nearest percent.” to “Record canopy cover for shrubs/subshrubs/woody vines in layer 2 (2.1-6.0 feet) to the nearest percent.”
- 8.5.13 SHRUB AND WOODY VINE COVER LAYER 3. Change the variable name from “SHRUB AND WOODY VINE COVER LAYER 3” to “SHRUB, SUBSHRUB, AND WOODY VINE COVER LAYER 3”. Changed the text from “Record a total canopy coverage for shrubs in layer 3 (6.1-16.0 feet) to the nearest percent.” to “Record canopy cover for shrubs/subshrubs/woody vines in layer 3 (6.1-16.0 feet) to the nearest percent.”
- 8.5.14 SHRUB AND WOODY VINE COVER LAYER 4. Change the variable name from “SHRUB AND WOODY VINE COVER LAYER 4” to “SHRUB, SUBSHRUB, AND WOODY VINE COVER LAYER 4”. Changed the text from “Record a total canopy coverage for shrubs in layer 4 (16.1 feet and above) to the nearest percent.” to “Record canopy cover for shrubs/subshrubs/woody vines in layer 4 (16.1 feet and above) to the nearest percent.”
- 8.5.15 SHRUB AND WOODY VINE COVER – AERIAL VIEW. Change the variable name from “SHRUB AND WOODY VINE COVER – AERIAL VIEW” to “SHRUB, SUBSHRUB, AND WOODY VINE COVER = AERIAL VIEW”. Changed the text from “Record the total canopy cover for the shrub/ woody vine growth habit over all layers. Follow the same procedures as for SHRUB AND WOODY VINE COVER LAYER 1, but include all layers.” to “Record the total aerial canopy cover for the shrub/subshrub/woody vine growth habit over all layers. Follow the same procedures as for SHRUB, SUBSHRUB, AND WOODY VINE COVER LAYER 1, but include all layers”.

- 8.5.16 FORB COVER LAYER 1. Modified the *When collected* from “On all conditions within subplots where (P2 VEGETATION SAMPLING STATUS=1 and CONDITION CLASS STATUS = 1) or (P2 VEGETATION SAMPLING STATUS=2 and NONFOREST CONDITION STATUS=2)” to “Any accessible measured land condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) when P2 vegetation is being sampled on the subplot (P2 VEG SUBPLOT SAMPLE STATUS = 1)”.
- 8.5.20 FORB COVER _ AERIAL VIEW. Changed the text from “Record the total canopy cover for the forb growth habit over all layers. Follow the same procedures as for FORB COVER LAYER 1.” to “Record the total aerial canopy cover for the forb growth habit over all layers. Follow the same procedures as for FORB COVER LAYER 1, but include all layers.”
- 8.5.21 GRAMINOID COVER LAYER 1. Modified the *When collected* from “On all conditions within subplots where (P2 VEGETATION SAMPLING STATUS=1 and CONDITION CLASS STATUS = 1) or (P2 VEGETATION SAMPLING STATUS=2 and NONFOREST CONDITION STATUS=2)” to “Any accessible measured land condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) when P2 vegetation is being sampled on the subplot (P2 VEG SUBPLOT SAMPLE STATUS = 1)”.
- 8.5.25 GRAMINOID COVER – AERIAL VIEW. Changed the text from “Record the total canopy cover for the graminoid growth habit over all layers. Follow the same procedures as for GRAMINOID COVER LAYER 1.” To “Record the total aerial canopy cover for the graminoid growth habit over all layers. Follow the same procedures as for GRAMINOID COVER LAYER 1, but include all layers.”
- 8.6 Species Composition. The text was extensively rewritten for clarity. Also, the caption for figure 48 was revised. Also, a new figure was added, figure 49. Renumbered the rest of figures following figure 49.
- 8.6.1 SPECIES GROWTH HABIT. The text was extensively rewritten for clarity. All five codes were also revised.
- 8.6.2 SPECIES CODE. Three sentences in the text were revised. The first two were changed from “Record a code for each sampled vascular plant species found rooted in or overhanging the sampled condition of the subplot at any height. Species codes must be the standardized codes in the Natural Resource Conservation Service (NRCS) PLANTS database (currently January 2010 version).” to “Record a code for each most abundant (see section 8.6) vascular plant species. Species codes must be the standardized codes in the Natural Resource Conservation Service (NRCS) PLANTS database (currently January 2010 version).” The other sentence was changed from “For example, if several unknown CAREX species are present, only record the individual species present with cover of at least 3 percent.” to “For example, if several unknown CAREX species are present, only record the individual most abundant species.” Also added the following sentence to the text: “See appendix 10, Unknown Plant Specimen Collection.” Also the *When collected* was changed from “LEVEL OF DETAIL = 2 or 3 and species canopy cover on the full subplot is 3% or greater.” to “Level of detail = 2 or 3 and species total aerial canopy cover on the full subplot and within a SPECIES GROWTH HABIT is 3% or greater.”
- 8.6.4 SPECIES CANOPY COVER. The text was extensively revised. Also, the *When collected* was changed from “For each plant species present on the subplot with canopy cover greater than or equal to 3%. A plant species is defined as a unique SPECIES CODE and UNIQUE SPECIES NUMBER pair.” to “For each plant species present on the subplot with total aerial canopy cover greater than or equal to 3% within a SPECIES GROWTH HABIT. A plant species is defined as a unique SPECIES CODE and UNIQUE SPECIES NUMBER pair.”
- 8.6.5 SPECIES VEGETATION LAYER. The text was clarified.
- 8.6.6 SPECIMEN OFFICIALLY COLLECTED. The text was clarified.
- 8.6.6.1 **RM** Community Description for Specimen Label. Added this new variable.
- 8.6.7 SPECIMEN LABEL NUMBER. The text was changed from “Record the label number for the collected specimen. Pre-numbered labels are provided to each crew by the regional coordinator.” to “Record the label number for the collected specimen. Pre-numbered labels are provided to each crew by the regional coordinator or auto-generated with the data collection software.” Also, the *Values* were clarified from “1 to 99999, as pre-printed and assigned by region” to “1 to 99999, as pre-printed and assigned by region or auto-generated in the PDR”.

- 9.1 Invasive species sample design. Deleted the reference to appendix 9 from paragraph 3.
- 9.2 Species Records. The fourth sentence was changed to use terminology consistent with the rest of the chapter (“foliage” instead of “vegetation and plant parts”).
- 9.3 INVASIVE PLANT SAMPLING STATUS (Plot-level variable). In code 2, NONFOREST CONDITION STATUS was corrected to NONFOREST CONDITION CLASS STATUS.
- 9.5 INVASIVE PLANT SUBPLOT STATUS (Subplot-level variable). Changed the variable name to “INVASIVE PLANT SUBPLOT SAMPLE STATUS”. Also, the *When collected* was changed from “On all subplots where (INVASIVE PLANT SAMPLING STATUS=1 and SUBPLOT STATUS=1) or (INVASIVE PLANT SAMPLING STATUS=2 and NONFOREST SUBPLOT STATUS=2)” to “On all subplots where invasive species are being sampled on accessible forest land (INVASIVE PLANT SAMPLING STATUS=1 and at least one accessible forest land condition (CONDITION CLASS STATUS = 1) exists within the 24-foot radius subplot, or invasive species are being sampled on all accessible land conditions (INVASIVE PLANT SAMPLING STATUS=2) and at least one accessible forest condition or measurable nonforest condition (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS = 2) exists within the 24-foot radius subplot”
- 9.6 INVASIVE PLANT NONSAMPLED REASON (Subplot-level variable). The *When collected* was changed from “On all subplots where INVASIVE PLANT SUBPLOT STATUS = 3” to “On all subplots where INVASIVE PLANT SUBPLOT SAMPLE STATUS = 3”.
- 9.8 CONDITION CLASS NUMBER. The *When collected* was changed from “Any condition class where (INVASIVE PLANT SAMPLING STATUS=1 and CONDITION CLASS STATUS=1) or (INVASIVE PLANT SAMPLING STATUS=2 and NONFOREST CONDITION CLASS STATUS=2).” to “Any accessible measured land condition within subplots (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS =2) when invasive plants are being sampled on the subplot (INVASIVE PLANT SUBPLOT SAMPLE STATUS=1 or 2)”.
- 9.9 SPECIES CODE. Updated the text for no appendix 9, and updated the reference to the PLANTS database. The *When collected* was changed from “: On all conditions within subplots where INVASIVE PLANT SUBPLOT STATUS=1 and ((INVASIVE PLANT SAMPLING STATUS=1 and CONDITION CLASS STATUS=1) or (INVASIVE PLANT SAMPLING STATUS=2 and NONFOREST CONDITION CLASS STATUS=2)).” to “Any accessible measured land condition within subplots (CONDITION CLASS STATUS = 1 or NONFOREST CONDITION CLASS STATUS =2) when invasive plants are being sampled on the subplot (INVASIVE PLANT SUBPLOT SAMPLE STATUS=1 or 2)”.
- 9.13 INVASIVE SPECIMEN COLLECTED. The *When collected* was changed from “Each record where INVASIVES PLANT SUBPLOT STATUS=1, INVASIVE PLANT SPECIMEN COLLECTION RULE = 1, and an unknown SPECIES CODE was used.” to “All species records when INVASIVE PLANT SPECIMEN COLLECTION RULE = 1” Also, the text was clarified.
- Chapter 10. Down Woody Materials. Added this new section. This chapter takes the place of the old P3 Down Woody Materials procedures.
- 12.1.2RM. Deleted “if it still meets the RP tree requirements.” from the 3rd paragraph and added “and if the old RP is not visited, use the previous RP description and Diameter.
- 12.1.2RM. Changed the text from “For plots within sight of trails or roads, metal tags must be spray painted gray or brown on both sides.” to “For plots within sight of trails or roads, it may be required to spray paint metal tags gray or brown on both sides.”
- 12.1.4RM Lack of Suitable Witness Landmarks. Added this new item.
- 12.1.5RM Subplot/Microplot Monumentation. Added this new item
- 12.1.6RM Subplot/Microplot monumentation for location with bedrock. Added this new item.

- **12.4RM** Owner Information. Changed the item description to match new ownership procedures.
- **12.9RM** Photographing the Plot Location. Added wording to the first paragraph “(or lowest numbered established subplot if the PC is inaccessible)”.
- List of APPENDICES. Modifications were made to number 3 and number 4 to match changes in the respective appendices. Added appendix 11 and appendix 12.
- Appendix 2. FIA Forest Type Codes. Code 962 description. Clarified the text.
- Appendix 2. Deleted **RM** – FOREST TYPE section (Determining FOREST TYPE and **RM** – examples) and kept only the national language
- Appendix2. Deleted all Forest Types codes and descriptions only collected in the East.
- Appendix 3. Deleted all codes not valid in Rocky Mountain Region.
- Appendix 4. Moved the text to 7.2.2 and changed the title to “Was previously: Site Tree Selection Criteria and Species list (This information is now located in 7.2.2 SPECIES”.
- Appendix 6. Glossary. Updated the definition of Accessible Forest Land to match the change in definition approved through the change process.
- Appendix 7. Tolerance/MQO/VALUE/Units Table. Not including this Appendix due to space limitations.
- Appendix 9. Invasive Plant list. The table was deleted and the following text was added: “To obtain a current invasive plant list, contact the local region for the appropriate list.”
- Appendix 10. Unknown Plant Specimen Collection. The text was clarified.
- Appendix 11. Damage... Added this new appendix.
- Appendix 13. Ownership Prefield Procedures. Added this new appendix.
- **RM** Appendix A.1 Added “PHOTOS TAKEN?”
- Appendix A.11 DWM Data Form. Updated this form.
- Appendix A.12 DWM Data Form cont’d. Added this new form.
- **RM** Appendix C and D. Modified item numbers to match national format.
- **RM** Appendix C.2.2**RM**. Updated the procedures for averaging location coordinates
- **RM** Appendix C.2.3**RM**. Added Obtaining GPS ERROR for the Garmin GPSmap 62S
- **RM** Appendix E. All Conditions Inventory (ACI). Added this new appendix.
- **RM** Appendix F. P3 Soil Measurements and Sampling. Added this new appendix