Major changes from version 2.1 to version 3.0 of the FIA database user guide. **Additional changes made in the user guide to add or clarify definitions, and to provide more information to the user are not documented in this table.**

- Modified: Chapter 3. Modified the section *Summary of Condition Proportions* to be consistent with other changes in the database.

FIADB variable name	Table Name	Action	Old Text	New Text
TABLENM	Survey	Deleted this variable		
MODDATE	Survey	Deleted this variable		
CENSUSYR	Survey	Deleted this variable		
NFSYR	Survey	Deleted this variable		
RSCD	Survey	Deleted this variable		
NUMPANEL	Survey	Deleted this variable		
SUBDIVCD	Survey	Deleted this variable		
CYLELEN	Survey	Deleted this variable		
NUMSUBPANEL	Survey	Deleted this variable		
TABLENM	County	Deleted this variable		
TABLENM	Plot	Deleted this variable		
EXPCURR	Plot	Deleted this variable		
EXPVOL	Plot	Deleted this variable		
EXPGROW	Plot	Deleted this variable		
EXPMORT	Plot	Deleted this variable		
EXPREMV	Plot	Deleted this variable		
EXPCHNG	Plot	Deleted this variable		
RSCD_EVALID_EXPCURR	Plot	Deleted this variable		
RSCD_EVALID_EXPVOL	Plot	Deleted this variable		

FIADB variable name	Table Name	Action	Old Text	New Text
RSCD_EVALID_EXPGROW	Plot	Deleted this variable		
RSCD_EVALID_EXPMORT	Plot	Deleted this variable		
RSCD_EVALID_EXPREMV	Plot	Deleted this variable		
RSCD_EVALID_EXPCHNG	Plot	Deleted this variable		
RSCD_EVALID_EXPALL	Plot	Deleted this variable		
EXPALL	Plot	Deleted this variable		
LASTCYCLEMEAS	Plot	Deleted this variable		
LASTSUBCYCLEMEAS	Plot	Deleted this variable		
FIELD_VISIT	Plot	Deleted this variable		
INVYR	Plot	Added this variable		
SAMP_METHOD_CD	Plot	Added this variable		
SUBP_EXAMINE_CD	Plot	Added this variable		
MACRO_BREAKPOINT_DIA	Plot	Added this variable		
LAST_INVYR_MEASURED	Plot	Added this variable		
PLOT_STATUS_CODE	Plot	Modified code 1	Sampled – at least one accessible forest land condition present on plot or previously had at least one accessible forest land condition on plot	Sampled – at least one accessible forest land condition present on plot
PLOT_STATUS_CODE	Plot	Modified code 2	Sampled – no accessible forest land condition present on plot or previously had at least one accessible forest land condition on plot	Sampled – no accessible forest land condition present on plot
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 01	Assign this code to condition classes beyond the U.S. border. Entire plots would only be assigned this code if	Entire plot is outside of the U.S. border

FIADB variable name	Table Name	Action	Old Text	New Text
			it is determined that a previously measured plot is currently beyond the U.S. border	
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 02	Any area within the sampled area of a plot to which access is denied by the legal owner, or to which an owner of the only reasonable route to the plot denies access. There are no minimum area or width requirements for a condition class delineated by denied access. Because a denied-access condition can become accessible in the future, it remains in the sample and is re-examined at the next occasion to determine if access is available. In some regions denied access plots may be replaced; check with the field supervisor regarding regional protocols for plot replacement.	Denied access – Access to the entire plot is denied by the legal owner, or by the owner of the only reasonable route to the plot. Because a denied-access plot can become accessible in the future, it remains in the sample and is re-examined at the next occasion to determine if access is available.
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 03	Hazardous situation – Any area within the sampled area on plot that cannot be accessed because of a hazard or danger, for example cliffs, quarries, strip mines, illegal substance plantations, temporary high water, etc. Although the hazard is not likely to change over time, a hazardous condition remains in the sample and is re-examined at the next occasion to determine if the hazard is still	Entire plot cannot be accessed because of a hazard or danger, for example cliffs, quarries, strip mines, illegal substance plantations, high water, etc. Although most hazards will not change over time, a hazardous plot remains in the sample and is re-examined at the next occasion to determine if the hazard is still present.

FIADB variable name	Table Name	Action	Old Text	New Text
			present. There are no minimum size or width requirements for a condition class delineated by a hazardous condition. In some regions hazardous plots may be replaced; check with the field supervisor regarding regional protocols for plot replacement.	
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 05	Lost data – The plot data file was discovered to be corrupt after a panel was completed and submitted for processing. This code is assigned to entire plots or full subplots that could not be processed, and is applied at the time of processing after notification to the region. Note: This code is for office use only.	Lost data – Plot data file was discovered to be corrupt after a panel was completed and submitted for processing. This code is applied at the time of processing after notification to the units. This code is for office use only.
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 06	Lost plot – This code applies to whole plots that cannot be relocated. This situation requires notification of the field supervisor. Whenever this code is assigned, a replacement plot is required. The plot that is lost is assigned SAMPLE KIND = 2 and NONSAMPLED REASON = 6. The replacement plot is assigned SAMPLE KIND = 3.	Lost plot – Entire plot cannot be found. Whenever this code is assigned, a replacement plot is required. The plot that is lost is assigned SAMPLE KIND = 2 and NONSAMPLED REASON = 6. The replacement plot is assigned SAMPLE KIND = 3.
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 07	Plot in wrong location – This	Wrong location – Previous

FIADB variable name	Table Name	Action	Old Text	New Text
			code applies to whole plots that can be relocated, but their placement is beyond the tolerance limits for plot location. This situation requires verification by the regional office. Whenever this code is assigned, a replacement plot is required. The plot that is lost is assigned SAMPLE KIND = 2 and NONSAMPLED REASON = 7. The replacement plot is assigned SAMPLE KIND = 3.	plot can be found, but its placement is beyond the tolerance limits for plot location. Whenever this code is assigned, a replacement plot is required. The plot being relocated is assigned SAMPLE KIND = 2 and NONSAMPLED REASON = 7. Its replacement plot is assigned SAMPLE KIND = 3.
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 08	Skipped visit – This code applies to whole plots that are skipped (i.e., the entire plot should be assigned to this condition class). It is used for plots that are not completed prior to the time a panel is finished and submitted for processing. Note: This code is for office use only.	Skipped visit – Entire plot skipped. Used for plots that are not completed prior to the time a panel is finished and submitted for processing. This code is for office use only.
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 09	Dropped intensified plot - This code applies only to regions engaged in intensification. It is used for intensified plots that have been dropped due to a change in grid density. Note: • This code is for office use only. • This code is primarily	Dropped intensified plot - Intensified plot dropped due to a change in grid density. This code used only by units engaged in intensification. This code is for office use only.

FIADB variable name	Table Name	Action	Old Text	New Text
			intended for regions engaged in sub-paneling for intensification purposes. • Plot records for dropped subpanels may be generated with the information management system.	
PLOT_NONSAMPLE_REASN_CD	Plot	Modified code 10	Other – This code is used whenever a plot or condition class is not sampled due to a reason other than one of the specific reasons already listed. A field note is required to describe the situation.	Other – Entire plot not sampled due to a reason other than one of the specific reasons already listed. A field note is required to describe the situation.
TABLENM	Subplot	Deleted this variable		
INVYR	Subplot	Added this variable		
ROOT_DIS_SEV_CD_PNWRS	Subplot	Added this variable		
TABLENM	Condition	Deleted this variable		
CONDPROP	Condition	Deleted this variable		
LANDCLCD	Condition	Deleted this variable		
MICRPROP	Condition	Deleted this variable		
DAMINDEX	Condition	Deleted this variable		
CONDPROPUN (SRS)	Condition	Deleted this variable		
MACRPROP	Condition	Deleted this variable		
SUBPPROP	Condition	Deleted this variable		

FIADB variable name	Table Name	Action	Old Text	New Text
CONDPROP_ALL	Condition	Deleted this variable		
CONDPROP_CHNG	Condition	Deleted this variable		
CONDPROP_CURR	Condition	Deleted this variable		
MACRPROP_ALL	Condition	Deleted this variable		
MACRPROP_CHNG	Condition	Deleted this variable		
MACRPROP_CURR	Condition	Deleted this variable		
MICRPROP_ALL	Condition	Deleted this variable		
MICRPROP_CHNG	Condition	Deleted this variable		
MICRPROP_CURR	Condition	Deleted this variable		
INVYR	Condition	Added this variable		
CONDPROP_UNADJ	Condition	Added this variable		
MICRPROP_UNADJ	Condition	Added this variable		
SUBPROP_UNADJ	Condition	Added this variable		
MACRPROP_UNADJ	Condition	Added this variable		
PASTNFCD	Condition	Added this variable		
STND_COND_CD_PNWRS	Condition	Added this variable		
STND_STRUC_CD_PNWRS	Condition	Added this variable		
STUMP_CD_PNWRS	Condition	Added this variable		
DISTANCE_WATER_SRS	Condition	Added this variable		
FIRE_SRS	Condition	Added this variable		
GRAZING_SRS	Condition	Added this variable		
LAND_USE_SRS	Condition	Added this variable		
OPERABILITY_SRS	Condition	Added this variable		
TRTCD1_SRS	Condition	Added this variable		
TRTCD2_SRS	Condition	Added this variable		

FIADB variable name	Table Name	Action	Old Text	New Text
TRTCD3_SRS	Condition	Added this variable		
RESERVCD	Condition	Added text to description	Reserved status code. Reserved land is land that is withdrawn by law(s) prohibiting the management of the land for the production of wood products.	Reserved status code. Reserved land is land that is withdrawn by law(s) prohibiting the management of the land for the production of wood products. CORE: All accessible forestland condition classes (CONDITION CLASS STATUS = 1); CORE OPTIONAL: Nonforest condition classes (CONDITION CLASS STATUS >1)
OWNCD	Condition	Added text to description	Owner class code. A code to indicate the class in which the landowner (at the time of the inventory) belongs.	Owner class code. A code to indicate the class in which the landowner (at the time of the inventory) belongs. CORE: All accessible forest land condition classes (CONDITION CLASS STATUS = 1); CORE OPTIONAL: Nonforest condition classes (CONDITION CLASS STATUS > 1)
OWNCRPCD	Condition	Added text to description	Owner group code. A broader group of landowner classes.	Owner group code. A broader group of landowner classes. CORE: All accessible forest land condition classes (CONDITION CLASS STATUS = 1);CORE OPTIONAL: Non-forest condition classes (CONDITION CLASS STATUS > 1)

FIADB variable name	Table Name	Action	Old Text	New Text
FORINDCD	Condition	Added text to description	Private owner industrial status code. A code to indicate whether the landowner owns and operates a primary wood processing plant. A primary wood processing plant is any commercial operation that originates the primary processing of wood on a regular and continuing basis. Examples include: pulp or paper mill, sawmill, panel board mill, post or pole mill.	Private owner industrial status code. A code to indicate whether the landowner owns and operates a primary wood processing plant. A primary wood processing plant is any commercial operation that originates the primary processing of wood on a regular and continuing basis. Examples include: pulp or paper mill, sawmill, panel board mill, post or pole mill. CORE: All accessible forest land condition classes (CONDITION CLASS STATUS = 1) when the owner group is private (OWNER GROUP 40); CORE OPTIONAL: Non-forest condition classes (CONDITION CLASS STATUS > 1) when the owner group is private (OWNER GROUP 40)

FIADB variable name	Table Name	Action	Old Text	New Text
STDAGE	Condition	Added text to description	Stand age. For annual inventories (MANUAL > 1.0), stand age is equal to the field-recorded stand age (FLDAGE) with two exceptions. One exception is if field-recorded stand age equals either 998 or 999, then stand age is computed. The other exception is that RMRS always computes stand age using field recorded tree ages from trees in the calculated stand size class. If no tree ages are available, then RMRS sets this attribute equal to the field recorded stand age. For all inventories, nonstocked stands have stand age set to 0. In periodic inventories, stand age is determined using local procedures. Annual inventory data will contain stand ages assigned to the nearest year. For some older inventories, stand age was recorded in 10-year classes for stands < 100 years old, 20-year age classes for stands between 100 and 200 years, and 100-year age classes if older than 200 years. These classes were converted to store the midpoint of the age class in years. Age is difficult to measure and therefore stand age may have large measurement errors.	Stand age. For annual inventories (MANUAL > 1.0), stand age is equal to the field-recorded stand age (FLDAGE) with two exceptions. One exception is if field-recorded stand age equals either 998 or 999, then stand age is computed. The other exception is that RMRS always computes stand age using field recorded tree ages from trees in the calculated stand size class. If no tree ages are available, then RMRS sets this attribute equal to the field recorded stand age. For all inventories, nonstocked stands have stand age set to 0. In periodic inventories, stand age is determined using local procedures. Annual inventory data will contain stand ages assigned to the nearest year. For some older inventories, stand age was recorded in 10-year classes for stands < 100 years old, 20-year age classes for stands between 100 and 200 years, and 100-year age classes if older than 200 years. These classes were converted to store the midpoint of the age class in years. Null values in the periodic data (INVYR < 1999) indicate that the stand was recorded as mixed age on forested condition classes.

FIADB variable name	Table Name	Action	Old Text	New Text
				Age is difficult to measure and therefore stand age may have large measurement errors.

FIADB variable name	Table Name	Action	Old Text	New Text
TRTCD1	Condition	Updated text in code 30 to match version 3.0 national field guide	Artificial regeneration- Planting or direct seeding has resulted in a stand at least 50 percent stocked with live trees of any size.	Artificial regeneration- Following a disturbance or treatment (usually cutting), a new stand where at least 50% of the live trees present resulted from planting or direct seeding.
TRTCD1	Condition	Updated text in code 40 to match version 3.0 national field guide	Natural regeneration – Growth of existing trees and/or natural seeding has resulted in a stand at least 50 percent stocked with live trees of any size.	Natural regeneration – Following a disturbance or treatment (usually cutting), a new stand where at least 50% of the live trees present (of any size) were established through the growth of existing trees and/or natural seeding or sprouting.
TRTCD1	Condition	Updated text in code 50 to match version 3.0 national field guide	Other silvicultural treatment – The use of fertilizers, herbicides, girdling, pruning, or other activities (not already listed above) designed to improve the commercial value of the residual stand.	Other silvicultural treatment – The use of fertilizers, herbicides, girdling, pruning, or other activities (not covered by codes 10-40) designed to improve the commercial value of the residual stand, or chaining, which is a practice used on western woodlands to encourage wildlife forage.
TABLENM	Tree	Deleted this variable		
TPACURR	Tree	Deleted this variable		
TPAMORT	Tree	Deleted this variable		
TPAREMV	Tree	Deleted this variable		
TPAGROW	Tree	Deleted this variable		

FIADB variable name	Table Name	Action	Old Text	New Text
TPA	Tree	Deleted this variable		
TPACURR_SAMP	Tree	Deleted this variable		
TPAGROW_SAMP	Tree	Deleted this variable		
TPAMORT_SAMP	Tree	Deleted this variable		
TPAREMV_SAMP	Tree	Deleted this variable		
INVYR	Tree	Added this variable		
TPA_UNADJ	Tree	Added this variable		
BORED_CD_PNWRS	Tree	Added this variable		
DAMLOC1_PNWRS	Tree	Added this variable		
DAMLOC2_PNWRS	Tree	Added this variable		
DIACHECK_PNWRS	Tree	Added this variable		
DMG_AGENT1_CD_PNWRS	Tree	Added this variable		
DMG_AGENT2_CD_PNWRS	Tree	Added this variable		
DMG_AGENT3_CD_PNWRS	Tree	Added this variable		
MIST_CL_CD_PNWRS	Tree	Added this variable		
SEVERITY1_CD_PNWRS	Tree	Added this variable		
SEVERITY1A_CD_PNWRS	Tree	Added this variable		
SEVERITY1B_CD_PNWRS	Tree	Added this variable		
SEVERITY2_CD_PNWRS	Tree	Added this variable		
SEVERITY2A_CD_PNWRS	Tree	Added this variable		
SEVERITY2B_CD_PNWRS	Tree	Added this variable		
SEVERITY3_CD_PNWRS	Tree	Added this variable		
UNKNOWN_DAMTYP1_PNWRS	Tree	Added this variable		
UNKNOWN_DAMTYP2_PNWRS	Tree	Added this variable		
PREV_STATUS_CD	Tree	Added text to	Previous tree status code.	Previous tree status code.

FIADB variable name	Table Name	Action	Old Text	New Text
		description	Tree status that was recorded at the previous inventory.	Tree status that was recorded at the previous inventory on all tally trees ≥ 1.0 in DBH.
RECONCILECD	Tree	Added text to code 1	Ingrowth – new tree not qualifying as through growth (includes reversions	Ingrowth or reversions – either a new tally tree not qualifying as through growth or a new tree on land that was formerly nonforest and now qualifies as forest land (reversion or encroachment).
RECONCILECD	Tree	Modified code 5	Shrank – live tree that shrank below threshold diameter on microplot/ subplot/annular plot	Shrank – live tree that shrank below threshold diameter on microplot/ subplot/macroplot plot
RECONCILECD	Tree	Modified code 6	Missing – tree was tallied in previous inventory, but is now missing due to natural causes such as landslide, fire, etc.	Missing (moved) – tree was correctly tallied in previous inventory, but has now moved beyond the radius of the plot due to natural causes (i.e., small earth movement, hurricane). Tree must be either live before and still alive now or dead before and dead now. If tree was live before and now dead, this is a mortality tree and should have PRESENT TREE STATUS = 2 (not 0).
RECONCILECD	Tree	Added code 9		Tree was sampled before, but now the area where the tree was located is nonsampled. All trees on the nonsampled area have RECONCILE = 9.
STANDING_DEAD_CD	Tree	Added text to description	Standing dead code. A code to indicate if a tree qualifies as standing dead. To qualify	Standing dead code. A code to indicate if a tree qualifies as standing dead. To qualify

FIADB variable name	Table Name	Action	Old Text	New Text
			as a standing dead tally tree, the dead tree must be at least 5.0 inches in diameter, have a bole that has an unbroken actual length of at least 4.5 feet, and lean less than 45 degrees from vertical. New in field guide 2.0. (etc.)	as a standing dead tally tree, the dead tree must be at least 5.0 inches in diameter, have a bole that has an unbroken actual length of at least 4.5 feet, and lean less than 45 degrees from vertical as measured from the base of the tree to 4.5 feet. New in field guide 2.0. (etc.)
UNCRCD	Tree	Modified description	Uncompacted live crown ratio. Percentage determined by dividing the live crown length by the total live tree length. Expressed as a percentage of the total tree length. (*Core* on phase 3 plots, *Core Optional* on phase 2 plots)	Uncompacted live crown ratio. Percentage determined by dividing the live crown length by the actual tree length. Expressed as a percentage of the total tree length. Phase 2 (CORE OPTIONAL) – All live tally trees $\geq$ 5.0 in DBH/DRC; Phase 3 (CORE) – All live tally trees $\geq$ 1.0 in DBH/DRC
AGENTCD	Tree	Added text to description	Cause of death (agent) code. Beginning in the year 1999 this variable will be collected on only dead and cut trees. Before 1999, this variable was collected on all trees (live, dead, and cut). Cause of damage was recorded for live trees if the presence of damage or pathogen activity was serious enough to reduce the quality or vigor of the tree. When a tree was damaged by more than one agent, the most severe damage was coded. When no damage was observed on a	Cause of death (agent) code. Beginning in the year 1999 this variable will be collected on only dead and cut trees. Before 1999, this variable was collected on all trees (live, dead, and cut). Cause of damage was recorded for live trees if the presence of damage or pathogen activity was serious enough to reduce the quality or vigor of the tree. When a tree was damaged by more than one agent, the most severe damage was coded. When no damage was observed on

FIADB variable name	Table Name	Action	Old Text	New Text
			live tree, 00 was recorded. Damage recorded for dead trees was the cause of death. When the cause of death could not be determined for a tree, 99 was recorded. Each FIA program records specific codes that may differ from one State to the next. These codes fall within the ranges listed below. For the specific codes used in a particular State, contact the FIA program responsible for that State	a live tree, 00 was recorded. Damage recorded for dead trees was the cause of death. When the cause of death could not be determined for a tree, 99 was recorded. Each FIA program records specific codes that may differ from one State to the next. These codes fall within the ranges listed below. For the specific codes used in a particular State, contact the FIA program responsible for that State. CORE: SAMPLE KIND = 2 plots: all PREVIOUSPAST TREE STATUS = 1 and PRESENT TREE STATUS = 2 or 3; or PRESENT TREE STATUS = 2 and RECONCILE = 1, 2, or 3; CORE OPTIONAL: SAMPLE KIND = 1 plots; all MORTALITY = 1
TABLENM	Seedling	Deleted this variable		
TPACURR	Seedling	Deleted this variable		
TPA	Seedling	Deleted this variable		
INVYR	Seedling	Added this variable		
TPA_UNADJ	Seedling	Added this variable		
TREECOUNT	Seedling	Modified description text	Tree count. Seedling count. Indicates the number of seedlings (DIA < 1.0 inch) present on the microplot. Conifer seedlings are at least	Tree count. Seedling count. Indicates the number of seedlings (DIA < 1.0 inch) present on the microplot. Conifer seedlings are at least

FIADB variable name	Table Name	Action	Old Text	New Text
			6 inches tall and hardwood seedlings are at least 12 inches tall. Began in field guide 2.0. Optionally populated by some FIA stations prior to field guide 2.0.	6 inches tall and hardwood seedlings are at least 12 inches tall. Began in field guide 2.0. Prior to field guide 2.0, the national core procedure was to record the actual seedling count up to six seedlings and then record 6+ if more than six seedlings were present. However, the following regions collected the actual seedling count prior to field guide 2.0: Rocky Mountain Research Station (RMRS) and North Central Research Station (NCRS). For data collected prior to field guide 2.0 and TREECOUNT is null, a value of 6 in TREECOUNT_CALC (number 21) probably represents more than 6 seedlings.
TREECOUNT_CALC	Seedling	Modified description text	Tree count used in calculations. This attribute is set either to TREECOUNT or COUNTCD (converted to a number).	Tree count used in calculations. This attribute is set either to COUNTCD, which has been dropped, or TREECOUNT. Prior to field guide 2.0, the national core procedure was to record the actual seedling count up to six seedlings and then record 6+ if more than six seedlings were present. However, the following regions collected the actual seedling count prior to field guide 2.0: Rocky Mountain Research Station (RMRS) and North Central Research Station (NCRS).

FIADB variable name	Table Name	Action	Old Text	New Text
				For data collected prior to field guide 2.0 and TREECOUNT is null, a value of 6 in TREECOUNT_CALC probably represents more than 6 seedlings.
TABLENM	Sitetree	Deleted this variable		
INVYR	Sitetree	Added this variable		
COND_CLASS_LIST	Sitetree	Added this variable		
SITREE_EQU_NO_PNWRS	Sitetree	Added this variable		
TABLENM	Boundary	Deleted this variable		
PREV_BND_CN	Boundary	Deleted this variable		
INVYR	Boundary	Added this variable		
TABLENM	Population plot stratum assignment	Deleted this variable		
CYCLE	Population plot stratum assignment	Deleted this variable		
SUBCYCLE	Population plot stratum assignment	Deleted this variable		
EXPNS	Population plot stratum assignment	Deleted this variable		
EUS_CN	Population plot stratum assignment	Deleted this variable		
STRATUM_CN	Population plot stratum assignment	Added this variable		

FIADB variable name	Table Name	Action	Old Text	New Text
INVYR	Population plot stratum assignment	Added this variable		
ESTUNIT	Population plot stratum assignment	Changed variable name	ESTUNIT	ESTN_UNIT
TABLENM	Subplot condition table	Deleted this variable		
INVYR	Subplot condition table	Added this variable		
NONFR_INCL_PCT_SUBP	Subplot condition table	Added this variable		
NONFR_INCL_PCT_MACRO	Subplot condition table	Added this variable		
	Population evaluation group	Added this table		
	Population evaluation	Added this table		
	Population estimation unit	Added this table		
	Population stratum	Added this table		
	Plot population stratum assignment	Modified the name	Plot population stratum assignment	Population plot stratum assignment
	Population Attribute	Added this table		
	Population evaluation attribute	Added this table		

- Chapter 4 – Calculating Population Estimates and Their associated Sampling Errors. Replaced old chapter 4 with a revised chapter to match current estimation procedures.

- Appendix A -- Index of Column Names. Updated the contents of Appendix A

- Appendix B – Forest Inventory and Analysis (FIA) Design Codes and Definitions by Region. The design codes have been listed with their definitions.

- Appendix C – State, Survey Unit, and County Codes. Additional codes for Puerto Rico (codes 1101 – 081) have been added.

- Appendix E -- National Forest Names Codes and Names. The following codes have been added:

Region	Code	National Forest/Grassland/Area
Region 1	103	Beaverhead-Deerlodge [now combined]
Region 2	206	Medicine Bow-Routt [now combined]
Region 4	413	Salmon-Challis [now combined]
	415	Caribou-Targhee [now combined]
	417	Humboldt-Toiyabe [now combined]

- Appendix F -- National Forest Names Codes and Names. The following codes have been added:

SPCD	COMMON_NAME	SCIENTIFIC NAME	SPGRPCD	MAJGRP	Occurrence by Research Station				
					NCRS	NERS	PNWRS	RMRS	SRS
0010	fir spp.	*Abies spp.*	6	2	X	X			X
0014	Santa Lucia fir or bristlecone fir	*Abies bracteata*	12	2			X		
0040	white-cedar spp.	*Chamaecyparis spp.*	9 E, 24 W	2		X	X		
0050	cypress	*Cupressus spp.*	24	2			X		
0051	Arizona cypress	*Cupressus arizonica*	24	2			X	X	X
0052	Baker or Modoc cypress	*Cupressus bakeri*	24	2			X		
0053	Tecate cypress	*Cupressus forbesii*	24	2			X		
0054	Monterey cypress	*Cupressus macrocarpa*	24	2			X		
0055	Sargent cypress	*Cupressus sargentii*	24	2			X		
0056	MacNab's cypress	*Cupressus macnabiana*	9 E, 24 W	2			X		
0057	redcedar / juniper spp.	*Juniperus spp.*	9 E, 23 W	2	X	X			X
0061	Ashe juniper	*Juniperus ashei*	9	2	X				X
0064	western juniper	*Juniperus occidentalis*	24	2			X	X	
0067	southern redcedar	*Juniperus virginiana ~~var siliciola~~*	9	2					X
0071	tamarack (native)	*Larix laricina*	9 E, 24 W	2	X	X	X		
0073	western larch	*Larix occidentalis*	19	2			X	X	
0081	incense-cedar	*Calocedrus decurrens*	20	2			X	X	
0090	spruce spp.	*Picea spp.*	6	2	X	X			X
0095	black spruce	*Picea mariana*	6 E, 18 W	2	X	X	X		X
0100	pine spp.	*Pinus spp.*	9 E, 24 W	1	X	X	X		
0102	Rocky Mountain bristlecone pine	*Pinus aristata*	24	1			~~X~~	X	
0106	common or two-needle pinyon	*Pinus edulis*	23	1			X	X	X
0108	lodgepole pine	*Pinus contorta*	21	1	X		X	X	
0118	Chihuahua pine	*Pinus leiophylla ~~var. chihuahuana~~*	24	1				X	
0127	gray pine or California foothill pine	*Pinus sabiniana*	24	1			X		
0130	Scotch pine	*Pinus sylvestris*	3 E, 24 W	1	X	X	X	X	X
0137	Washoe pine	*Pinus washoensis*	24	1			X	X	
0138	four-leaf pine or Parry pinyon pine	*Pinus quadrifolia*	24	1			X		
0139	Torrey~~a~~ pine	*Pinus torreyana*	24	1			X		
0140	Mexican pinyon pine	*Pinus cembroides*	23	1				X	X
0142	Great Basin bristlecone pine	*Pinus longaeva*	24	1			X	X	
0143	Arizona pinyon pine	*Pinus monophylla ~~var fallax~~*	23	1				X	
0144	Honduras pine	*Pinus elliottii ~~var elliottii~~*	9 E, 24 W	1					X
0200	Douglas-fir spp.	*Pseudotsuga spp.*	9 E, 10 W	2	X		X		
0201	bigcone Douglas-fir	*Pseudotsuga macrocarpa*	10	2			X		
0220	baldcypress spp.	*Taxodium spp.*	9 E, 24 W	2	X	X			X
0230	yew spp.	*Taxus spp.*	9 E, 24 W	2	X		X		
0231	Pacific yew	*Taxus brevifolia*	24	2			X	X	
0232	Florida yew	*Taxus floridana*	9 E, 24 W	2					X
0240	Thuja spp.	*Thuja spp.*	9 E, 24 W	2	X		X		
0250	Torreya (nutmeg) spp.	*Torreya spp.*	9 E, 24 W	2			X		
0251	California torreya (nutmeg)	*Torreya californica*	24	2			X		
0252	Florida torreya (nutmeg)	*Torreya taxifolia*	9	2					X
0260	hemlock spp.	*Tsuga spp.*	7	2	X				X
0299	Unknown dead conifer	*Tree evergreen*	9 E, 24 W	2	X	X	X	X	X
0300	acacia spp.	*Acacia spp.*	41 E, 48 W	3			X		

SPCD	COMMON_NAME	SCIENTIFIC NAME	SPGRPCD	MAJGRP	Occurrence by Research Station				
					NCRS	NERS	PNWRS	RMRS	SRS
0303	sweet acacia	*Acacia farnesiana*	43 E, 48 W	3				X	X
0304	catclaw acacia	*Acacia greggii*	43 E, 48 W	3			X	X	X
0310	maple spp.	*Acer spp.*	31	4	X	X			X
0313	boxelder	*Acer negundo*	41 E, 47 W	3	X	X	X	X	X
0330	buckeye, horsechestnut spp.	*Aesculus spp.*	41 E, 47 W	3	X	X	~~X~~		X
0331	Ohio buckeye	*Aesculus glabra*	41 E, 47 W	3	X	X			X
0332	yellow buckeye	*Aesculus flava*	43	3	X	X			X
0333	California buckeye	*Aesculus californica*	41 E, 47 W	3			X		
0334	Texas buckeye	*Aesculus glabra ~~var arguta~~*	41	3	X				X
0336	red buckeye	*Aesculus pavia*	43 E, 47 W	3	X	X			X
0337	painted buckeye	*Aesculus sylvatica*	41 E, 47 W	3		X			X
0341	ailanthus	*Ailanthus altissima*	43 E, 47 W	4	X	X	X		X
0350	alder spp.	*Alnus spp.*	41 E, 47 W	3	X		X		
0353	Arizona alder	*Alnus oblongifolia*	43 E, 47 W	3		X			
0356	serviceberry spp.	*Amelanchier spp.*	43 E, 48 W	4	X	X			X
0357	common serviceberry	*Amelanchier arborea*	43 E, 48 W	4	X				
0358	roundleaf serviceberry	*Amelanchier sanguinea*	43 E, 48 W	4	X				
0360	Madrone spp.	*Arbutus spp.*	43 E, 47 W	4			X		
0362	Arizona madrone	*Arbutus arizonica*	43 E, 47 W	4			X		
0370	birch spp.	*Betula spp.*	41	4	X	X			X
0375	paper birch	*Betula papyrifera*	41 E, 47 W	3	X	X	X	X	
0377	Virginia roundleaf birch	*Betula uber*	41 E, 47 W	3					X
0378	northwestern paper birch	*Betula x utahensis*	47	3			X		
0381	chittamwood,gum bumelia	*Sideroxylon lanuginosum ~~sub. lanuginosum~~*	43	4	X				X
0400	hickory spp.	*Carya spp.*	29	4	X	X			X
0410	sand hickory	*Carya pallida*	29	4	X	X			X
0411	scrub hickory	*Carya floridana*	29 E, 47 W	4					X
0412	red hickory	*Carya ovalis*	29 E, 47 W	4	X	X			X
0413	southern shagbark hickory	*Carya carolinae-septentrionalis*	29 E, 47 W	4					X
0420	chestnut spp.	*Castanea spp.*	43 E, 47 W	3	X	X			X
0422	Allegheny chinkapin	*Castanea pumila*	43	3	X	X			X
0423	Ozark chinkapin	*Castanea pumila ~~var ozarkensis~~*	43	3	X				X
0424	Chinese chestnut	*Castanea mollissima*	43 E, 47 W	3	X	X			X
0431	giant chinkapin,golden chinkapin	*Chrysolepis chrysophylla ~~var chrysophylla~~*	47	3			X		
0450	catalpa spp.	*Catalpa spp.*	42	4	X	X			X
0451	southern catalpa	*Catalpa bignonioides*	43	4	X				X
0463	netleaf hackberry	*Celtis laevigata ~~var reticulata~~*	41	3	X				X
0481	yellowwood	*Cladrastis kentukea*	43	4	X	X			X
0490	dogwood spp.	*Cornus spp.*	43 E, 47 W	4	X	X	X		
0500	hawthorn spp.	*Crataegus spp.*	43	4	X	X			X
0501	cockspur hawthorn	*Crataegus crus-galli*	43	4	X	X			X
0502	downy hawthorn	*Crataegus mollis*	43	4	X	X			X
0503	Brainerd's hawthorn	*Crataegus brainerdii*	43 E, 47 W	4	X	X			X
0504	pear hawthorn	*Crataegus calpodendron*	43 E, 47 W	4	X	X			X
0505	fireberry hawthorn	*Crataegus chrysocarpa*	43 E, 47 W	4	X	X			X
0506	broadleaf hawthorn	*Crataegus dilatata*	43 E, 47 W	4	X	X			X
0507	fanleaf hawthorn	*Crataegus flabellata*	43 E, 47 W	4	X	X			X
0508	oneseed hawthorn	*Crataegus monogyna*	43 E, 47 W	4	X	X			X
0509	scarlet hawthorn	*Crataegus pedicellata*	43 E, 47 W	4	X	X			X

SPCD	COMMON_NAME	SCIENTIFIC NAME	SPGRPCD	MAJGRP	Occurrence by Research Station				
					NCRS	NERS	PNWRS	RMRS	SRS
5091	Washington hawthorn	*Crataegus phaenopyrum*	43 E, 47 W	4	X	X			X
5092	fleshy hawthorn	*Crataegus succulenta*	43 E, 47 W	4	X	X			X
5093	dwarf hawthorn	*Crataegus uniflora*	43 E, 47 W	4	X	X			X
0510	eucalyptus spp.	*Eucalyptus spp.*	42 E, 47 W	4			X	X	X
0511	Tasmanian bluegum	*Eucalyptus globulus*	43 E, 47 W	4			X		
0512	river redgum	*Eucalyptus camaldulensis*	43 E, 47 W	4			X		
0513	grand eucalyptus	*Eucalyptus grandis*	43 E, 47 W	4			X		X
0514	swampmahogany	*Eucalyptus robusta*	43 E, 47 W	4					X
0520	persimmon spp.	*Diospyros spp.*	43 E, 47 W	4	X	X			X
0522	Texas persimmon	*Diospyros texana*	43 E, 47 W	4					X
0540	ash spp.	*Fraxinus spp.*	36	3	X	X	X		X
0544	green ash	*Fraxinus pennsylvanica*	36 E, 47 W	4	X	X		X	X
0549	Texas ash	*Fraxinus texensis*	36 E, 47 W	3					X
0550	honeylocust spp.	*Gleditsia spp.*	42 E, 47 W	4	X	X	X		
0561	Ginkgo, maidenhair tree	*Ginkgo biloba*	43 E, 47 W	3	X	X	X		
0580	silverbell spp.	*Halesia spp.*	43	3	X	X			X
0581	Carolina silverbell	*Halesia carolina*	41 E, 47 W	3					X
0582	two-wing silverbell	*Halesia diptera*	41 E, 47 W	3					X
0583	little silverbell	*Halesia parviflora*	41 E, 47 W	3					X
0591	American holly	*Ilex opaca*	42 E, 47 W	4	X	X	X		X
0600	walnut spp.	*Juglans spp.*	41 E, 47 W	4	X	X	X	X	X
0602	black walnut	*Juglans nigra*	40	4	X	X	X	X	X
0603	northern California black walnut	*Juglans hindsii*	47	4			X		
0604	southern California black walnut	*Juglans californica*	47	4			X		
0605	Texas walnut	*Juglans microcarpa*	41 E, 47 W	4	X				X
0606	Arizona walnut	*Juglans major*	43 E, 47 W	4			X		
0650	magnolia spp.	*Magnolia spp.*	41	3	X	X			X
0652	southern magnolia	*Magnolia grandiflora*	41	3		X			X
0653	sweetbay	*Magnolia virginiana*	43	3		X			X
0654	bigleaf magnolia	*Magnolia macrophylla*	43	4		X			X
0655	mountain or Fraser magnolia	*Magnolia fraseri*	41	3		X			X
0657	pyramid magnolia	*Magnolia pyramidata*	41 E, 47 W	3					X
0658	umbrella magnolia	*Magnolia tripetala*	41 E, 47 W	3		X	X		X
0660	apple spp.	*Malus spp.*	43 E, 47 W	4	X	X	X	X	X
0661	Oregon crab apple	*Malus fusca*	47	4			X		
0662	southern crabapple	*Malus angustifolia*	43 E, 47 W	4	X	X			X
0663	sweet crabapple	*Malus coronaria*	43 E, 47 W	4	X	X			X
0664	prairie crabapple	*Malus ioensis*	43 E, 47 W	4	X				
0680	mulberry spp.	*Morus spp.*	42	4	X	X		X	X
0683	Texas mulberry	*Morus microphylla*	42 E, 47 W	4					X
0684	black mulberry	*Morus nigra*	43 E, 47 W	4		X			X
0690	tupelo spp.	*Nyssa spp.*	35 E, 47 W	3	X	X			X
0692	Ogeechee tupelo	*Nyssa ogeche*	43	4					X
0711	sourwood	*Oxydendrum arboreum*	43	4	X	X			X
0720	bay spp.	*Persea spp.*	43 E, 47 W	3		X			X
7211	avocado	*Persea americana*	43 E, 47 W	3					X
0722	water-elm, planertree	*Planera aquatica*	43	3	X				X
0729	Sycamore spp.	*Platanus spp.*	41 E, 47 W	3	X	X	X		
0731	American sycamore	*Platanus occidentalis*	41	3	X	X	X	X	X
0732	Arizona sycamore	*Platanus wrightii*	41 E, 47 W	3			X		
0742	eastern cottonwood	*Populus deltoides*	37 E, 44 W	3	X	X		X	X

					Occurrence by Research Station				
SPCD	COMMON_NAME	SCIENTIFIC NAME	SPGRPCD	MAJGRP	NCRS	NERS	PNWRS	RMRS	SRS
0745	plains cottonwood	*Populus ~~deltoides var monilifera~~*	37 E, 44 W	3	X			X	
0747	black cottonwood	*Populus balsamifera ~~var trichocarpa~~*	37 E, 44 W	4	X		X	X	
0753	Lombardy poplar	*Populus nigra*	37 E, 44 W	3	X	X	X		
0755	mesquite spp.	*Prosopis spp.*	48	4					X
0756	western honey mesquite	*Prosopis glandulosa ~~var torreyana~~*	48	4			X	X	X
0757	velvet mesquite	*Prosopis velutina*	48	4			X	X	X
0758	screwbean mesquite	*Prosopis pubescens*	48	4			X	X	X
0760	cherry and plum spp.	*Prunus spp.*	43 E, 47 W	4	X	X	X		X
0763	chokecherry	*Prunus virginiana*	43 E, 47 W	4	X	X	X		X
0764	peach	*Prunus persica*	43 E, 47 W	3	X	X			X
0766	American plum	*Prunus americana*	43	4	X	X			X
0768	bitter cherry	*Prunus emarginata*	47	4			X		
0769	Allegheny plum	*Prunus alleghaniensis*	43 E, 47 W	3	X	X			X
0770	Chickasaw plum	*Prunus angustifolia*	43 E, 47 W	3	X	X			X
0771	sweet cherry, domesticated	*Prunus avium*	43 E, 47 W	3	X	X	X		
0772	sour cherry, domesticated	*Prunus cerasus*	43 E, 47 W	3	X	X	X		
0773	European plum, domesticated	*Prunus domestica*	43 E, 47 W	3	X	X	X		
0774	Mahaleb plum, domesticated	*Prunus mahaleb*	43 E, 47 W	3	X	X	X		
0800	oak--deciduous spp.	*Quercus spp.*	42 E, 48 W	4	X	X	X		X
0801	California live oak	*Quercus agrifolia*	46	4			X		
0808	Durand oak	*Quercus sinuata ~~var sinuata~~*	25	4					X
0810	Emory oak	*Quercus emoryi*	48	4				X	X
0816	scrub oak	*Quercus ilicifolia*	43	4		X			X
0826	chinkapin oak	*Quercus muehlenbergii*	25 E, 46 W	4	X	X		X	X
0827	water oak	*Quercus nigra*	28	4	X	X			X
0828	Nuttall oak	*Quercus buckleyi*	28	4	X				X
0839	interior live oak	*Quercus wislizeni*	46	4			X		
0845	dwarf chinakapin oak	*Quercus prinoides*	43	4	X				X
0847	netleaf oak	*Quercus rugosa*	43 E, 48 W	4				X	
0850	oak – evergreen spp.	*Quercus spp.*	48	4				X	X
0852	sea torchwood	*Amyris elemifera*	43 E, 47 W	3					X
0853	pond-apple	*Annona glabra*	43 E, 47 W	3					X
0854	gumbo limbo	*Bursera simaruba*	43 E, 47 W	3					X
0855	sheoak spp.	*Casuarina spp.*	43 E, 47 W	3					X
0856	gray sheoak	*Casuarina glauca*	43 E, 47 W	3					X
0857	belah	*Casuarina lepidophloia*	43 E, 47 W	3					X
0858	camphor tree	*Cinnamomum camphora*	43 E, 47 W	3					X
0859	Florida fiddlewood	*Citharexylum fruticosum*	43 E, 47 W	3					X
0860	citrus spp.	*Citrus spp.*	43 E, 47 W	3					X
0863	tietongue, pigeon-plum	*Coccoloba diversifolia*	43 E, 47 W	3					X
0864	soldierwood	*Colubrina elliptica*	43 E, 47 W	3					X
0865	longleaf geigertree	*Cordia sebestena*	43 E, 47 W	3					X
0866	carrotwood	*Cupaniopsis anacardioides*	43 E, 47 W	3					X
0873	red stopper	*Eugenia rhombea*	43 E, 47 W	3					X
0874	butterbough, inkwood	*Exothea paniculata*	43 E, 47 W	3					X
0876	Florida strangler fig	*Ficus aurea*	43 E, 47 W	3					X
0877	wild banyantree, shortleaf fig	*Ficus citrifolia*	43 E, 47 W	3					X
0882	beeftree, longleaf blolly	*Guapira discolor*	43 E, 47 W	3					X
0883	manchineel	*Hippomane mancinella*	43 E, 47 W	3					X

SPCD	COMMON_NAME	SCIENTIFIC NAME	SPGRPCD	MAJGRP	Occurrence by Research Station NCRS	NERS	PNWRS	RMRS	SRS
0884	false tamarind	*Lysiloma latisiliquum*	43 E, 47 W	3					X
0885	mango	*Mangifera indica*	43 E, 47 W	3					X
0886	Florida poinsontree	*Metopium toxiferum*	43 E, 47 W	3					X
0887	fishpoison tree	*Piscidia piscipula*	43 E, 47 W	3					X
0888	octopus tree, schefflera	*Schefflera actinophylla*	43 E, 47 W	3					X
0890	false mastic	*Sideroxylon foetidissimum*	43 E, 47 W	3					X
0891	white bully, willow bustic	*Sideroxylon salicifolium*	43 E, 47 W	3					X
0895	paradisetree	*Simarouba glauca*	43 E, 47 W	3					X
0896	Java plum	*Syzygium cumini*	43 E, 47 W	3					X
0897	tamarind	*Tamarindus indica*	43 E, 47 W	3					X
0902	New Mexico locust	*Robinia neomexicana*	48	4				X	X
0906	Everglades palm, paurotis-palm	*Acoelorraphe wrightii*	43 E, 47 W	3					X
0907	Florida silver palm	*Coccothrinax argentata*	43 E, 47 W	3					X
0908	coconut palm	*Cocos nucifera*	43 E, 47 W	3					X
0909	royal palm spp.	*Roystonea spp.*	43 E, 47 W	3					X
0912	cabbage palmetto	*Sabal palmetto*	43 E, 47 W	3					X
0913	key thatch palm	*Thrinax morrisii*	43 E, 47 W	3					X
0914	Florida thatch palm	*Thrinax radiata*	43 E, 47 W	3					X
0915	other palms	*Family Arecaceae not listed above*	43 E, 47 W	3					X
0919	western soapberry	*Sapindus saponaria ~~var drummondii~~*	43	4	X				X
0920	willow spp.	*Salix spp.*	43 E, 47 W	3	X	X	X		X
0922	black willow	*Salix nigra*	41	3	X	X	X		X
0923	Bebb willow	*Salix bebbiana*	43 E, 47 W	3	X				
0924	Bonpland willow	*Salix bonplandiana*	41 E, 47 W	3					X
0925	coastal plain willow	*Salix caroliniana*	43 E, 47 W	3	X	X			X
0926	balsam willow	*Salix pyrifolia*	43 E, 47 W	3	X	X			
0927	white willow	*Salix alba*	41	3	X	X			X
0928	Scouler's willow	*Salix scouleriana*	41 E, 47 W	3	X		X		
0929	weeping willow	*Salix sepulcralis*	41 E, 47 W	3	X	X			X
0934	mountain-ash spp.	*Sorbus spp.*	43 E, 47 W	4	X	X			X
0937	northern mountain-ash	*Sorbus decora*	43 E, 47 W	4	X	X			
0940	West Indian mahogany	*Swietenia mahagoni*	43 E, 47 W	4					X
0950	basswood spp.	*Tilia spp.*	38	3	X	X			X
0952	white basswood	*Tilia americana ~~var heterophylla~~*	38	3	X	X			X
0953	Carolina basswood	*Tilia americana ~~var caroliniana~~*	38	3	X				X
0972	American elm	*Ulmus americana*	41 E, 47 W	3	X	X		X	X
0973	cedar elm	*Ulmus crassifolia*	41	3	X				X
0974	Siberian elm	*Ulmus pumila*	41 E, 47 W	3	X			X	X
0976	September elm	*Ulmus serotina*	41	3	X				X
0981	California-laurel	*Umbellularia californica*	47	4			X		
0982	Joshua tree	*Yucca brevifolia*	43 E, 47 W	3			X		
0986	black-mangrove	*Avicennia germinans*	43 E, 47 W	4					X
0987	buttonwood mangrove	*Conocarpus erectus*	43 E, 47 W	4					
0988	white-mangrove	*Laguncularia racemosa*	43 E, 47 W	4					X
0991	saltcedar	*Tamarix spp.*	43 E, 47 W	3	X	X	X		
0993	chinaberry	*Melia azedarach*	43	4	X	X			X
0995	tungoil tree	*Vernicia fordii*	43	4					X
0998	unknown dead hardwood	*Tree broadleaf*	43 E, 47 W	3	X	X	X		X
0999	other or unknown live tree	*Tree unknown*	43 E, 47 W	3	X	X			X