

PLOT, CONDITION & SUBPLOT LEVEL SUMMARY

PHASE

- 2 Standard field plot
3 Standard field plot/FHM

PLOT STATUS

- 1 At Least one accessible forest condition
2 No accessible forest conditions - Nonforest
3 Nonsampled
4 Landclearing
5 Intensification

PLOT NONSAMPLED REASON

- 01 Outside U.S. boundary
02 Denied access
03 Hazardous
11 Out of state boundary

SAMPLE KIND

- 1 Initial plot establishment
2 Remeasurement of national plot design
3 Replacement plot
8 Remeasurement regional fixed-radius plot
9 Remeasurement prism plot

PLOT IN CORRECT COUNTY?

- 0 No
1 Yes

QA STATUS

- 1 Standard production plot
2 Cold check
3 Reference plot
4 Training / practice plot
5 Botched plot file
6 Blind check
7 Hot check

CREW TYPE

- 1 Standard field crew
2 QA crew

WATER ON PLOT

(excluding census & noncensus water, must occur on the subplot, in forest cond.)

- 0 None
1 Permanent streams or ponds
2 Deep swamps, bogs or marshes
3 Ditch / canal
4 Temporary streams
5 Flood zones
9 Other temporary water (specify in notes)

HORIZONTAL DISTANCE TO ROAD / URBAN / AG.

- 1 100 ft or less
2 101 ft to 300 ft
3 301 ft to 500 ft
4 501 ft to 1000 ft
5 1001 ft to 1/2 mile
6 >1/2 mile to 1 mile
7 >1 mile to 3 miles
8 >3 miles to 5 miles
9 >5 miles

GPS UNIT

- 0 GPS coordinates not collected
1 Rockwell PLGR
2 Other brand capable of field averaging
3 Trimble GeoExplorer or Pathfinder Pro
4 Recreational GPS (Garmin, Magellan, etc)
8 Previous coordinates correct (in NaTally)

PLOT ACCESSIBILITY

- 0 Typical plot for the area
1 Plot suitable for a one-person crew
2 Plot affected by seasonal high water
3 Plot affected by permanent water
4 Plot is accessed by boat
5 Plot access requires long hike
6 Plot has significant permanent thick brush
7 Plot has significant temporary thick brush
8 Plot has significant deadfall/windthrow
9 Other (describe in plot notes)

PRESENT LAND USE

- 01 Accessible timber land
02 Accessible other forest land (unproductive)
10 Other agricultural land
11 Cropland
12 Pasture (improved)
13 Idle farmland
14 Orchard
15 Christmas tree plantation
16 Maintained wildlife openings
20 Rangeland
30 Other developed
31 Cultural (business, residential, etc.)
32 Rights-of-way (road, railroad, utility line)
33 Recreation area
34 Mining
40 Other non-forest (barren land, rock)
41 Marsh
42 Beaches
91 Census water
92 Noncensus water
99 Nonsampled

CONDITION CLASS STATUS

- 1 Accessible forest land
2 Nonforest land
3 Noncensus water
4 Census water
5 Nonsampled

CONDITION NONSAMPLED REASON

- 01 Outside U.S. boundary
02 Denied access area
03 Hazardous situation
10 Other

RESERVED STATUS

- 0 Not reserved
1 Reserved

OWNER CLASS

- 11 National Forest
12 National Grassland
13 Other Forest Service
21 National Park Service
22 Bureau of Land Management
23 Fish & Wildlife Service
24 Department of Defense / Energy
25 Other Federal
31 State
32 Local (County, Municipality, etc.)
33 Other Non-Federal Public
41 Corporate
42 Non-Govt. Conservation / Natural Res. Organiz. (Nature Conservancy, Boy Scouts of Am.)
43 Unincorporated Partnerships / Associations / Clubs (4H, Hunt Clubs that own, not lease)
44 Native American (Indian) within reservation boundaries
45 Individual

OWNER GROUP

- 10 US Forest Service
20 Other Federal
30 State & Local Government
40 Private

PRIVATE OWNER INDUSTRIAL STATUS (owned by industry w/ wood processing plant)

- 0 Land is not owned by industrial owner with a wood processing plant
1 Land is owned by industrial owner with a wood processing plant

STAND SIZE CLASS

- 0 Nonstocked
1 Up to 4.9" (seedlings / saplings)
2 5.0" to (8.9" softwoods) or (10.9" hardwoods)
3 (9.0" softwoods) or (11.0" hardwoods) to 19.9"
4 20.0" to 39.9"
5 40.0" plus

REGENERATION STATUS

- 0 Natural
1 Artificial

TREE DENSITY

- 1 Initial density class
2 Density class 2 - density different than 1
3 Density class 3 - density different than 1 & 2

STAND STRUCTURE

- 0 Nonstocked
1 Single-storied
2 Two-storied
3 Multi-storied

DISTURBANCE

(one acre in size & 25% of condition)

- 00 None
10 Insect damage to both
11 Insect damage to understory veg
12 Insect damage to trees (incl. seed/sap)
20 Disease damage to both
21 Disease damage to understory veg.
22 Disease damage to trees (incl. seed/sap)
30 Fire (crown & ground, prescribed or natural)
31 Ground fire
32 Crown fire
40 Animal (other than the following:)
41 Beaver (including flooding caused by beaver)
42 Porcupine
43 Deer / ungulate (hoofed mammal)
44 Bear
45 Rabbit
46 Domestic animal / livestock (includes grazing)
50 Weather (other than the following:)
51 Ice
52 Wind (includes hurricane, tornado)
53 Flooding (weather-induced)
54 Drought
55 Earth movement/avalanche
60 Vegetation (suppression, competition, vines)
70 Unknown / not sure / other (include in notes)
80 Human (any significant threshold human caused damage not described in the disturbance codes above, or in the treatment codes below)

TREATMENT

(one acre in size & 25% of condition)

- 00 None
11 Clearcut harvest (residual stand stocking <50%)
12 Partial harvest (high grading or selection harvest)
13 Seed-tree / shelterwood harvest
14 Commercial thinning
15 Timber stand improvement (stands less than 5" DBH)
20 Site preparation
30 Artificial regeneration (50% stocked)
40 Natural regeneration (50% stocked)
50 Other silvicultural treatment

PHYSIOGRAPHIC CLASS

- 11 Dry tops
12 Dry slopes
13 Deep sands
19 Other xeric
21 Flatwoods
22 Rolling uplands
23 Moist slopes & covets
24 Narrow floodplains / bottomlands
25 Broad floodplains / bottomlands
29 Other mesic
31 Swamps / bogs
32 Small drains
33 Bays & wet pocosins
34 Beaver ponds
35 Cypress ponds
39 Other hydric

OPERABILITY

- 0 No problems
1 Seasonal access due to water conditions in wet weather
2 Mixed wet & dry areas
3 Broken terrain, cliffs, gullies, etc
4 Year-round water problems
5 Slopes of 20 - 40%
6 Slopes more than 40%

FIRE / GRAZING

(by domestic animals; must occur on the subplot in forest)

- 0 No evidence of fire / grazing
1 Evidence of fire / grazing

SUBPLOT STATUS

- 1 Sampled - at least one accessible forest land cond.
2 Sampled - no accessible forest land condition
3 Nonsampled
9 Replacement subplot (SK 2 & 8 only)

SUBPLOT NONSAMPLED REASON

- 01 Outside U.S. boundary
02 Denied access
03 Hazardous situation

NONNATIVE INVASIVE PLANTS

- 0000 None
0341 Tree of heaven
0345 Mimosa (Silktree)
0712 Royal Paulownia (princesstree)
0993 Chinaberry
0994 Popcom tree (tallowtree)
0997 Russian olive
2037 Silverthorn
2038 Autumn olive
2042 Winged euonymus, burning bush
2103 Chinese / European privet
2104 Japanese/glossy privet
2105 Bush honeysuckle
2113 Nandina (heavenly or sacred bamboo)
2160 Exotic roses
3026 Oriental / Asian bittersweet
3030 Exotic climbing yams - Air yam (air potato) or chinese yam
3042 Wintercreeper
3071 English ivy
3101 Japanese honeysuckle
3123 Kudzu
3211 Periwinkle
3251 Chinese / Japanese wisteria
4008 Giant reed
4051 Tall fescue
4055 Cogongrass (japgrass)
4080 Nepalese browntop
4085 Chinese silvergrass
4130 Exotic bamboos
5171 Japanese climbing fern
6002 Garlic mustard
6052 Shrubby lespedeza
6053 Chinese lespedeza
6095 Tropical soda apple

FLORIDA ONLY

- FL02 Australian-pine
FL03 Camphor tree
FL04 Carrotwood
FL06 Melaleuca
FL08 Schefflera
FL09 Java plum
FL11 Coral ardisia
FL25 Lantana

- FL22 Surinam cherry
FL26 Common guava
FL27 Downy rose myrtle
FL28 Brazilian pepper, Florida Holly
FL29 Wetland nightshade
FL31 Rosary pea
FL35 Cat's-claw vine
FL37 Skunk vine
FL46 Napier grass
FL54 Old World climbing fern
FL56 Sword fern
FL64 Hairy indigo

NONNATIVE INVASIVE PERCENT COVERAGE

- 1 Trace <01%
2 01 - 10%
3 11 - 50%
4 51 - 90%
5 91 - 100%

PLOT TYPE

- 1 Subplot
2 Microplot

BOUNDARY STATUS

- 0 Delete boundary
1 New boundary
2 Remeasured boundary (with or without change)

BOUNDARY CHANGE

- 0 No change
1 Real change
2 Cruiser error
3 Procedural change

DISTANCE & AZIMUTHS TO / FROM SUBPLOTS OTHER THAN PC

Table with columns: From, To, Azimuth, Distance. Rows show distances and azimuths between subplots.

Minimum number of trees required for 10% stocking, by dbh class

Table with columns: DBH CLASS, 1 ACRE, 1/2 ACRE, 1/6 ACRE. Rows show required tree counts for different stocking levels and DBH classes.

PHOTO NOTATIONS table with columns for Plot #, Reference Angle, Course Line, Interior Angle, Starting Point, Way Point, Land Use, Date, and Cruiser/Initiator.

SLOPE CORRECTION FORMULA

Enter slope in decimal format i.e. 45% as .45 & follow formula:

.45 INV (or 2nd) TAN COS x distance = Horizontal distance

- If you are trying to determine if tree is in or out, measure the slope & slope distance. Enter into formula. Answer is horizontal distance.

- If you are trying to go a certain distance i.e. 70 feet, measure slope & slope distance. Answer is horizontal distance. Subtract from distance you want to go. Answer gives number of feet you need to add to reach goal distance.

.45 INV TAN COS x 70 = horizontal distance 70 - horizontal distance = slope correction





### PLOT LEVEL DATA

PLOT TYPE	STATE	CYCLE	PANEL	COUNTY	PLOT NUMBER	PHASE	PLOT STATUS	PLOT NONSAMPLED REASON	SAMPLE KIND	FIELD GUIDE VERSION	PLOT IN CORRECT COUNTY?	CORRECT COUNTY	CURRENT DATE	PAST DATE	QA STATUS	CREW TYPE	CRUISER/ASST NUMBERS	NUMBER OF ACCESSIBLE FOREST LAND CONDITIONS	NUMBER OF TREE ENTRIES	NUMBER OF PRISM POINTS REMEASURED	NUMBER OF SUBPLOT CENTERS REVERTED	HORIZONTAL DISTANCE TO:			PLOT ACCESSIBILITY	PRESENT LAND USE @ PC	CONDITION CLASS STATUS @ PC	PLOT LEVEL NOTES
	1.1	1.19	1.20	1.2	1.3	1.21	1.4	1.5	1.7	1.9	1.22	1.23	1.10	1.24	1.14	1.15	1.25/26	1.27	1.28	1.29	1.30	1.12	1.31	1.32	1.33	2.5.25	2.4.2	1.18
Forest	X	X	X	X	X	X	1		X	X	X	X	X	@	X	X	X	X	X	\$	\$	X	X	X	X			X
Landclearing	X	X	X	X	X	X	4		X	X	X	X	X	@	X	X	X		X	\$					X			X
Nonforest	X	X	X	X	X	X	2		X	X	X	X	X	@	X	X	X								X	X	X	X
Nonsampled	X	X	X	X	X	X	3	X	X	X	X	X	X	@	X	X	X									X	X	X
Intensification	X	X	X	X	X		5			X	X	X	X		X	X	X									X	X	X

@ Sample Kind = 2, 8, or 9  
\$ Sample Kind = 9 only

↔ GPS must be completed for all plot types except intensifications ↔

### CONDITION LEVEL DATA

Forest and landcleared plots only

CONDITION STATUS	CONDITION CLASS NUMBER	PRESENT LAND USE	CONDITION CLASS STATUS	CONDITION NONSAMPLED REASON	RESERVED STATUS	OWNER CLASS	OWNER GROUP	PRIVATE OWNER INDUSTRIAL STATUS	TRACT SIZE (TOTAL ACRES)	TRACT SIZE (PERCENT FOREST)	FOREST TYPE	STAND SIZE CLASS	REGENERATION STATUS	ARTIFICIAL REGENERATION SPECIES	TREE DENSITY	STAND AGE	STAND STRUCTURE	DISTURBANCE	DISTURBANCE YEAR	TREATMENT	TREATMENT 1 YEAR	PHYSIOGRAPHIC CLASS	OPERABILITY	SITE CLASS	FIRE	GRAZING
ITEM NUMBER	2.4.1	2.5.25	2.4.2	2.4.3	2.5.1	2.5.7	2.5.2	2.5.8	2.5.26	2.5.27	2.5.3	2.5.4	2.5.5	2.5.9	2.5.6	2.5.10	2.5.28	2.5.11	2.5.12	2.5.17	2.5.18	2.5.23	2.5.29	2.5.30	2.5.31	2.5.32
Forest	X	X	1		X	X	X	X	#	#	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nonforest	X	X	2																							
Noncensus water	X	X	3																							
Census water	X	X	4																							
Nonsampled	X	X	5	X																						

# When Private Owner Industrial Status = 0

### SUBPLOT LEVEL DATA

Forest and landcleared plots

MANUAL SECTION AND SUBPLOT STATUS	SUBPLOT NUMBER	SUBPLOT STATUS	SUBPLOT NONSAMPLED REASON	SUBPLOT CENTER CONDITION	MICROPLOT CENTER CONDITION	SUBPLOT CONDITION CLASS LIST	SUBPLOT SLOPE	SUBPLOT ASPECT	SNOW/WATER DEPTH	NONNATIVE INVASIVE PLANTS	NONNATIVE INVASIVE PERCENT COVERAGE
ITEM NUMBER	3.1	3.2	3.3	3.4	3.5	3.9	3.6	3.7	3.8	3.10	3.11
Sampled w/ accessible forest condition	X	1		X	X	X	X	X	X	X	X
Sample w/o accessible forest condition	X	2		X	X						
Nonsampled	X	3	X	X	X						
Replacement w/ accessible forest condition	X	9		X	X	X	X	X	X	X	X

Note: Subplot Status 9 (Replacement) is valid for Sample Kinds 2 & 8 only.



## Sample Kinds 1, 3 and 2

		Sample Kind 1 and 3				Sample Kind 2 Remeasured trees										Sample Kind 2 new trees				
Items required for ALL trees located on the fixed-radius subplot.		Item Number	Live sapling	Live pole	Live sawtimber	Standing dead	No status	Remeasured tree in a landclearing	Remeasured live sapling	Remeasured live pole	Remeasured live sawtimber	Remeasured standing dead/still standing	Remeasured standing dead/down	Mortality down (includes all mortality saplings)	Mortality pole/saw standing	Utilized	New live sapling	New live pole	New live sawtimber	New standing dead
Subplot Number	5.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tree Record Number	5.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Condition Class Number	5.3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Azimuth	5.4	X	X	X	X			X	X	X	X			X			X	X	X	X
Horizontal Distance	5.5	X	X	X	X			X	X	X	X			X			X	X	X	X
Tree Status	Present	5.7	1	1	1	2	0	1 - 3	1	1	1	2	2	2	2	3	1	1	1	2
	Previous	5.6					1 or 2	1 or 2	1	1	1	2	2	1	1	1 or 2				
	Reconcile	5.7.1					&										1 or 3	1 - 3	1 - 3	1 - 4
	Standing Dead	5.7.2				1						1	0	0	1					1
Species	5.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Diameter	Present Diameter	5.9.2	X	X	X	X			X	X	X	X			X		X	X	X	X
	Previous	5.9.1					X	X	X	X	X	X	X	X	X	X				
	Diameter Check	5.12	0 or 1	0 or 1	0 or 1	0 or 1			X	X	X	X			X		0 or 1	0 or 1	0 or 1	0 or 1
	Length to Diameter Point	5.24	X	X	X	X			X	X	X	X			X		X	X	X	X
Tree Class	5.34	X	X	X				X	X	X							X	X	X	@
Crown Class	5.17	X	X	X				X	X	X							X	X	X	
Compacted Crown Ratio	5.19	X	X	X				X	X	X							X	X	X	
Tree Grade	5.35			\$						\$									\$	
Cull	Board Foot	5.36			\$					\$									\$	
	% Rotten/Missing	5.13		X	X				X	X				●	●			X	X	@
Length	Total	5.14	X	X	X	X			X	X	X	X			X		X	X	X	X
	Actual	5.15	X	X	X	X			X	X	X	X			X		X	X	X	X
	Length Method	5.16	X	X	X	X			X	X	X	X			X		X	X	X	X
Fusiform/Rust/Dieback	5.37		X	X					X	X								X	X	
Dieback Severity	5.38		X	X					X	X								X	X	
Cause of Death	5.21						81-83*							X	X	80				@
Mortality Year	5.22						X							X	X	X				@
Decay class	5.23				X						X			X						X
Utilization Class	5.39						%									X				

§ Record if TREE CLASS = 2

● Record if PREVIOUS DIAMETER ≥ 5.0 in and length ≥ 5 ft (Valid codes: 00 - 49, record 99 if ≥ 50%)

% Record if CAUSE OF DEATH = 83

& Record codes 5 - 8 for forested conditions, codes 7 - 8 for landcleared conditions where the tree should not have been tallied due to cruiser error or procedural change or code 9 for trees in a nonsampled condition

@ Record if Reconcile = 1 - 3

\* Codes 10 - 70 also valid when TREE STATUS = 2

### Sample Kinds 1, 3 and 8

		Sample kind 1 and 3				Sample Kind 8 Remeasured subplot trees (PREVIOUS DBH > 5.0 in)									Sample Kind 8 new subplot trees			Sample Kind 8 old microplot sapling only (PREVIOUS DBH 1.0 - 4.9 in)						Old microplot & new microplot (Overlap area)		Was on old microplot grew onto new subplot			New microplot sapling only		
Items required for ALL trees located on the fixed-radius subplot.		Item Number	Live sapling	Live pole	Live sawlimber	Standing dead	No status	Remeasured tree in landclearing	Remeasured live pole	Remeasured live sawlimber	Remeasured standing dead/sjill standing	Remeasured standing dead/down	Mortality down	Mortality pole/saw standing	Utilized	New live pole	New live sawlimber	New standing dead	No status	Remeasured sapling in landclearing	Remeasured live sapling only	Missed live sapling	Mortality sapling/down	Utilized sapling	Remeasure live sapling in overlap	Missed live sapling in overlap	Remeasured live pole	Live sawlimber	Mortality pole/saw standing	Live sapling only	
Subplot Number	5.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tree Record Number	5.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Condition Class Number	5.3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Azimuth	5.4	X	X	X	X			X	X	X			X		X	X	X								▼	▼	X	X	X	▼	
Horizontal Distance	5.5	X	X	X	X			X	X	X			X		X	X	X								▼	▼	X	X	X	▼	
Tree Status	Present	5.7	1	1	1	2	0	0	1	1	2	2	2	2	3	1	1	2								1	1	1	1	2	1
	Old Microplot	5.32																	0	1-3	1	1	2	3	1	1	1	1	2		
	Previous	5.6					1 or 2	1 or 2	1	1	2	2	1	1	1 or 2				1	1	1		1	1	1		1	1	1		
	Reconcile	5.7.1					&									1-3	1-3	1-4	5-9			3				3				0	
	Standing Dead	5.7.2				1					1	0	0	1				1						0						1	
Species	5.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Diameter	Present Diameter	5.9.2	X	X	X	X			X	X	X			X		X	X	X			X	X			X	X	X	X	X	X	X
	Previous	5.9.3					X	X	X	X	X	X	X	X					X	X	X		X	X	X		X	X	X	X	
	Diameter Check	5.12	0 or 1	0 or 1	0 or 1	0 or 1			X	X	X			X		0 or 1	0 or 1	0 or 1			X	X			X	X	X	X	X	X	0 or 1
	Length to Diameter Point	5.24	X	X	X	X			X	X	X			X		X	X	X			X	X			X	X	X	X	X	X	X
Tree Class	5.34	X	X	X				X	X						X	X	@				X	X			X	X	X	X		X	
Crown Class	5.17	X	X	X				X	X						X	X									X	X	X	X		X	
Compacted Crown Ratio	5.19	X	X	X				X	X						X	X									X	X	X	X		X	
Tree Grade	5.35									\$																				\$	
Cull	Board Foot	5.36								\$																				\$	
	% Rotten/Missing	5.13		X	X				X	X			●	●		X	X	@									X	X			
Length	Total	5.14	X	X	X	X			X	X	X			X		X	X	X			X	X			X	X	X	X	X	X	X
	Actual	5.15	X	X	X	X			X	X	X			X		X	X	X			X	X			X	X	X	X	X	X	X
	Length Method	5.16	X	X	X	X			X	X	X			X		X	X	X			X	X			X	X	X	X	X	X	X
Fusiform/Rust/Dieback	5.37		X	X				X	X						X	X										X	X				
Dieback Severity	5.38		X	X				X	X						X	X										X	X				
Cause of Death	5.21						81-83*						X	X	80		@		81-83				X	80					X		
Mortality Year	5.22						X						X	X	X		@		X				X	X					X		
Decay class	5.23				X					X				X			X												X		
Utilization Class	5.39						%							X					%				X								

\$ Record if TREE CLASS = 2

● Record 99 if length < 5 ft or cull ≥ 50%; otherwise, record % rotten/missing cull. Valid codes: 00 - 49

% Record if CAUSE OF DEATH = 83

& Record codes 5 - 8 for forested conditions, codes 7 - 8 for landcleared conditions where the tree should not have been tallied due to cruiser error or procedural change or code 9 for trees in a nonsampled condition.

@ Record if RECONCILE = 1 - 3

▼ Azimuth and distance is from the new offset microplot

\* Codes 10 - 70 also valid when TREE STATUS = 2