

## FHM 1991 Download Files:

Files are arranged by Indicator, Year, and State. Filename protocols are as follows:

**ST\*\*\*\*\* YYYY.csv**

Where

- **ST** is the State Acronym (for ex. AL=Alabama),
- **\*\*\*\*\*** is the data type (for ex. TREE = tree measurement data),
- **YYYY** is the year the data were collected,
- File extension **.csv** is for comma-separated values, a comma-delimited format that may be used in most applications, including MSExcel.

## Download Files Descriptions:

### AREA\_PERCENT\_1991.CSV

Name	Type	Comments
LAST_UPDATE	DATE	Date of last data view update
STATE	NUMBER(2)	State FIPS Code.
STATE_DESCR	VARCHAR2(80)	State FIPS Code description.
STATE_ABBREV	CHAR(2)	Two letter postal state code abbreviation.
COUNTY	NUMBER(3)	County FIPS Code. See the FHM_State_County_codes.xls download file for an explanation of the codes.
PROJECT	NUMBER(4)	Code for the project to which the plot is associated. (e.g., detection monitoring, SAMAB demo, etc).
PROJECT_DESCR	VARCHAR2(80)	Project code description.
HEXAGON_NBR	NUMBER(7)	HEX_NUM EMAP 7 digit hexagon identifier (Not identified in public data).
PLOT_NBR	NUMBER(3)	Plot number identifier within a hexagon.
POINT_NBR	NUMBER(1)	POINT Subplot number (1 to 4) where data were collected.
AREA_PERCENT	NUMBER	Area of subplot or microplot that is in the given condition class in percent.
CONDITION_CLASS_NBR	NUMBER(1)	Arbitrary number to identify land use and forest type on plot, subplot, or microplot.
PLOT_TYPE	NUMBER(1)	Code to identify plot type (subplot or microplot)
PLOT_TYPE_DESCR	VARCHAR2(80)	Plot type code description
P3ID	NUMBER	Unique public plot identifier

### PLOT\_1991.CSV

Name	Type	Comments
LAST_UPDATE	DATE	Date of last data view update
STATE	NUMBER(2)	State FIP Code.
STATE_DESCR	VARCHAR2(80)	State FIPS Code description.
STATE_ABBREV	CHAR(2)	Two letter postal state code abbreviation.
COUNTY	NUMBER(3)	County FIPS Code. See the FHM_State_County_codes.xls download file for an explanation of the codes.
FHM_REGION	NUMBER(2)	FHM Region code.
FHM_REGION_DESCR	VARCHAR2(80)	FHM Region code description

PROJECT	NUMBER(4)	Code for the project to which the plot is associated. (e.g., detection monitoring, SAMAB demo, etc).
PROJECT_DESCR	VARCHAR2(80)	Project code description.
MEASUREMENT_TYPE	NUMBER(1)	Code to indicate: 1 - Plot establishment, initial mensuration visit. 2 - Annual crown measurement. 3 - Mensuration re-measurement.
PANEL	NUMBER	Panel number. The total number of plots in a state are divided into 4 panels (0, 1, 2, 3). Used for interpenetrating design whereby one panel is measured every four years.
OVERLAP	NUMBER	Overlap number. Each panel is divided into 3 overlap numbers. Panel    Overlap numbers 0        1, 2, 3 1        4, 5, 6 2        7, 8, 9 3        10, 11, 12 Used for interpenetrating design whereby 1/3 of plots of previous panel are measured in current year
HIERARCHIAL_ID	NUMBER	An addressing scheme based on the hierarchical structure of the EMAP grid. (Not identified in public data).
GRID_INTENSIFICATION	NUMBER	Degree of intensification of hexagon grid 0    No intensification 3    Triple intensification
ECOREGION_CODE	VARCHAR2(10)	
HEXAGON_NBR	NUMBER(7)	EMAP 7-digit hexagon number. (Not identified in public data).
PLOT_NBR	NUMBER(3)	Plot number identifier within a hexagon.
PLOT_STATUS	NUMBER(1)	Current status code of a plot for forest / non-forest, etc.
PLOT_STATUS_DESCR	VARCHAR2(80)	Current plot_status code description.
ELEVATION_CLASS	NUMBER(3)	Elevation class code; code times 100 = elevation (feet). 0        sealevel to    99 ft 1        100 to    199 ft 2        200 to    299 ft 3        300 to    399 ft 4        400 to    499 ft 5        500 to    599 ft .        . .        . .        . 128    12800 to 12899 ft 129    12900 to 12999 ft 130    13000 to 13099 ft 999    unknown
INCLUSION_PROBABILITY	NUMBER(8)	The multiplier used to include this plot for expansion to the acre or hectare.
LAST_PLOT_MENS_YEAR	NUMBER(4)	Year of last visit to plot where plot was in forest condition and mensuration data were collected (MT1 or MT3 visit). NULL indicates plot has always been non-forest.
LAST_PLOT_TALLY_YEAR	NUMBER(4)	Year of last visit to plot where plot was in forest condition NULL indicates plot has always been non-forest.
LAST_PLOT_VISIT_YEAR	NUMBER(4)	Year of last visit to plot, regardless if plot was forest or nonforest.
PREVIOUS_VISIT_YEAR	NUMBER(4)	Year of previous visit to plot
PLOT_COND_CLASS_YEAR	NUMBER(4)	Present year condition class data were collected on plot.
COND_CLASS_YEAR	NUMBER(4)	Most recent year when condition class data were collected on plot.
PLOT_ENTRANCE_YEAR	NUMBER(4)	Year plot entered FHM system (first year plot visited).
PLOT_EXIT_YEAR	NUMBER(4)	Year plot left FHM system.

PLOT_EXIT_REASON	NUMBER(4)	Code for reason plot exited FHM system. 1 Dangerous plot 2 Permanent land use change 3 No longer needed for scientific purposes 4 Objective for plot discontinued 5 Plot should have never been tallied 6 Access denied. Plot replaced with next highest plot number 7 Lost Plot. Plot replaced with next highest plot number
PHOTO_YEAR	NUMBER(4)	Year aerial photo was taken.
PLOT_TERRAIN_POSITION	NUMBER(1)	Position of the point in relation to topography. 1 top and upper slopes (convex) 2 midslope (uniform angle) 3 bench (level) 4 lower slope (concave) 5 flatland (not related to slope) 6 bottomland (occasional flooding) 7 forested wetlands (year-round water)
MONTH	VARCHAR2(9)	Month of plot visit.
DAY	NUMBER	Day of plot visit.
YEAR	NUMBER	Year of plot visit.
CREW_TALLY1	NUMBER(7)	Code to identify crew person.
CREW_TALLY2	NUMBER(7)	Code to identify crew person.
ELEVATION	NUMBER	Elevation of the plot center (feet).
P3ID	NUMBER	Unique public plot identifier

#### **PLOT\_COND\_CLASS\_1991.CSV**

Name	Type	Comments
LAST_UPDATE	DATE	Date of last data view update
STATE	NUMBER(2)	State FIPS Code.
STATE_DESCR	VARCHAR2(80)	State FIPS Code description.
STATE_ABBREV	CHAR(2)	Two letter postal state code abbreviation.
COUNTY	NUMBER(3)	County FIPS Code. See the FHM_State_County_codes.xls download file for an explanation of the codes.
PROJECT	NUMBER(4)	Code for the project to which the plot is associated. (e.g., detection monitoring, SAMAB demo, etc.)
PROJECT_DESCR	VARCHAR2(80)	Project code description.
HEXAGON_NBR	NUMBER(7)	EMAP 7 digit hexagon identifier. (Not identified in public data).
PLOT_NBR	NUMBER(3)	Plot number identifier within a hexagon.
CONDITION_CLASS_NBR	NUMBER(1)	An arbitrary number used to identify and map different land uses and forest conditions occurring on a plot.
FHM_SPECIES	NUMBER(3)	Code for FHM tree species.
SPECIES_COMMON_NAME	VARCHAR2(80)	FHM tree species code description.
LAND_USE_CLASS	NUMBER(2)	Land use code.
LAND_USE_CLASS_DESCR	VARCHAR2(80)	Land use code description.
FOREST_TYPE	NUMBER(4)	Code for forest type on this condition class.
FOREST_TYPE_DESCR	VARCHAR2(80)	Forest type code description.
PLOT_AREA_PCT	NUMBER	Area of total plot that is in the given condition class in percent.
SITE_TREE_AGE	NUMBER(3)	Age of the site index tree.
SITE_TREE_HEIGHT	NUMBER(3)	Height of the site index tree to the nearest foot.
STAND_AGE	NUMBER(3)	Estimated stand age for the forested condition class defined on the plot.
STAND_ORIGIN	NUMBER(1)	Code describing how the tree stand was established. 1 Natural stand 2 Softwoods planted or seeded 3 Hardwoods planted or seeded 4 Recent harvest, no trees present

STAND_SIZE_CLASS	NUMBER(1)	Stand size based on all live trees on plot. 1 Sawtimber; 9.0"+ Softwoods + Woodland species; 11.0"+ Hardwoods 2 Poletimber; 5.0-8.9" Softwoods + Woodland species; 5.0-10.9" Hardwoods 3 Sapling/Seedling; 1.0-4.9" All 4 Nonstocked
DISTURB_YEAR1	NUMBER(4)	Year disturbance occurred (0 indicates continuous disturbance).
PAST_DISTURB1	NUMBER(2)	Code for past natural or human caused disturbance. 0 none 1 harvest 2 commercial thinning 3 selected cutting or highgrade 4 other cutting 5 site preparation 6 artificial regeneration on forest 7 artificial regeneration on nonforest 8 prescribed burning 9 other silviculture prescription 10 natural reversion on nonforest 11 disease 12 insects 13 weather 14 fire 15 grazing 16 other 17 mining 18 development
DISTURB_YEAR2	NUMBER(4)	Year disturbance occurred (0 indicates continuous disturbance).
PAST_DISTURB2	NUMBER(2)	Code for past natural or human caused disturbance. See PAST_DISTURB1 for an explanation of the codes.
DISTURB_YEAR3	NUMBER(4)	Year disturbance occurred (0 indicates continuous disturbance).
PAST_DISTURB3	NUMBER(2)	Code for past natural or human caused disturbance. See PAST_DISTURB1 for an explanation of the codes.
CONDITION_CLASS_CHANGE	NUMBER(1)	Change in the condition class. (MT3 only) ADDED IN 1991-1993 WITH NULL VALUE FOR JOINS. 0 The condition class has been copied from the plot map 1 The condition class is different from the plot map
P3ID	NUMBER	Unique public plot identifier

### POINT\_1991.CSV

Name	Type	Comments
LAST_UPDATE	DATE	Date of last data view update
STATE	NUMBER(2)	State FIPS Code.
STATE_DESCR	VARCHAR2(80)	State FIPS Code description.
STATE_ABBREV	CHAR(2)	Two letter postal state code abbreviation.
COUNTY	NUMBER(3)	County FIPS Code. See the FHM_State_County_codes.xls download file for an explanation of the codes.
PROJECT	NUMBER(4)	Code for the project to which the plot is associated. (e.g., detection monitoring, SAMAB demo, etc.)
PROJECT_DESCR	VARCHAR2(80)	Project code description.
HEXAGON_NBR	NUMBER(7)	EMAP 7-DIGIT hexagon number. (Not identified in public data).
PLOT_NBR	NUMBER(3)	Plot number identifier within a hexagon.
POINT_NBR	NUMBER(1)	Point number (1 to 4) within the plot.
ASPECT	NUMBER(3)	Direction of slope to the nearest degree of the subplot. When pct_slope is less than 5%, aspect is recorded as 000.

MICROPLOT_OFFSET	NUMBER(1)	Microplot offset code to indicate if an offset was used. 0 - No offset, distances measured from microplot center. 1 - Offset used.
SUBPLOT_OFFSET	NUMBER(1)	Records whether an offset was used on the subplot 0 - No offset, distances measured from microplot center. 1 - Offset used.
PCT_SLOPE	NUMBER(3)	The angle of slope, expressed as a percent.
SLOPE_CORRECTION	NUMBER(6,2)	Distance correction due to slope to nearest 0.1 foot.
TERRAIN_POSITION	NUMBER(1)	Position of the point in relation to topography. 1 top and upper slopes (convex) 2 midslope (uniform angle) 3 bench (level) 4 lower slope (concave) 5 flatland (not related to slope) 6 bottomland (occasional flooding) 7 forested wetlands (year-round water)
CURRENT_POINT_STATUS	NUMBER(1)	Records the status of forest condition on the point. 0 - Entire point non-forest condition 1 - at least 1 forest condition on point.
MICRO_RELIEF	NUMBER(1)	Code for the shape of the slope. (Attribute was dropped). 1 - Planar 2 - Concave 3 - Convex 4 - Complex 0 - Lost/unknown data
POINT_HISTORY	NUMBER(1)	Records if the point had been rotated in 1991 and de-rotated in 1991. 0 - Normal non-rotated point. 1 - Point rotated in 1991 then de-rotated in 1991.
SUBPLOT_COND_CLASS1	NUMBER(1)	Arbitrary number to identify land use and forest type on plot, subplot, or microplot. Plot condition class at subplot or microplot center (in BOUNDARY this is defined as contrasting condition class)
SUBPLOT_COND_CLASS2	NUMBER(1)	Arbitrary number to identify land use and forest type on plot, subplot, or microplot. Plot condition class at subplot or microplot center (in BOUNDARY this is defined as contrasting condition class)
SUBPLOT_COND_CLASS3	NUMBER(1)	Arbitrary number to identify land use and forest type on plot, subplot, or microplot. Plot condition class at subplot or microplot center (in BOUNDARY this is defined as contrasting condition class)
SUBPLOT_COND_CLASS4	NUMBER(1)	Arbitrary number to identify land use and forest type on plot, subplot, or microplot. Plot condition class at subplot or microplot center (in BOUNDARY this is defined as contrasting condition class)
P3ID	NUMBER	Unique public plot identifier

### SEEDLING\_1991.CSV

Name	Type	Comments
LAST_UPDATE	DATE	Date of last data view update
STATE	NUMBER(2)	State FIPS Code.
STATE_DESCR	VARCHAR2(80)	State FIPS Code description.
STATE_ABBREV	CHAR(2)	Two letter postal state code abbreviation.
COUNTY	NUMBER(3)	County FIPS Code. See the FHM_State_County_codes.xls download file for an explanation of the codes.
PROJECT	NUMBER(4)	Code for the project to which the plot is associated. (e.g., detection monitoring, SAMAB demo, etc.)
PROJECT_DESCR	VARCHAR2(80)	Project code description.
HEXAGON_NBR	NUMBER(7)	EMAP 7-DIGIT hexagon number. (Not identified in public data).
PLOT_NBR	NUMBER(3)	Plot number identifier within a hexagon.
POINT_NBR	NUMBER(1)	Point number (1 to 4) within the plot.

CONDITION_CLASS_NBR	NUMBER(1)	An arbitrary number used to identify and map different land uses and forest conditions occurring on a plot.
FHM_SPECIES	NUMBER(3)	Code for FHM tree species.
SPECIES_COMMON_NAME	VARCHAR2(80)	FHM tree species code description.
CROWN_CLASS	NUMBER(1)	Code that categorizes the tree by the location of the crown. 1 open grown 2 dominant 3 codominant 4 intermediate 5 overtopped (supressed)
CROWN_VIGOR_CLASS	NUMBER(1)	Crown vigor class code. 1 80-100% normal foliage 2 21-79% normal foliage 3 1-20% normal foliage
NBR_SEEDLINGS	NUMBER(2)	The number of seedlings by species within the microplot
LAND_USE_CLASS	NUMBER(2)	Land use code.
LAND_USE_CLASS_DESCR	VARCHAR2(80)	Land use code description
FOREST_TYPE	NUMBER(4)	Code for forest type on this condition class.
FOREST_TYPE_DESCR	VARCHAR2(80)	Forest type code description.
STAND_AGE	NUMBER(3)	Estimated stand age for the forested condition class defined on the plot.
STAND_ORIGIN	NUMBER(1)	Code describing how the tree stand was established. 1 Natural stand 2 Softwoods planted or seeded 3 Hardwoods planted or seeded 4 Recent harvest, no trees present
STAND_SIZE_CLASS	NUMBER(1)	Stand size based on all live trees on plot. 1 Sawtimber; 9.0"+ Softwoods + Woodland species; 11.0"+ Hardwoods 2 Poletimber; 5.0-8.9" Softwoods + Woodland species; 5.0-10.9" Hardwoods 3 Sapling/Seedling; 1.0-4.9" All 4 Nonstocked
P3ID	NUMBER	Unique public plot identifier

### TREE\_1991.CSV

Name	Type	Comments
LAST_UPDATE	DATE	Date of last data view update
STATE	NUMBER(2)	State FIPS Code.
STATE_DESCR	VARCHAR2(80)	State FIPS Code description.
STATE_ABBREV	CHAR(2)	Two letter postal state code abbreviation.
COUNTY	NUMBER(3)	County FIPS Code. See the FHM_State_County_codes.xls download file for an explanation of the codes.
FHM_REGION	NUMBER(2)	FHM Region. code
FHM_REGION_DESCR	VARCHAR2(80)	FHM Region description.
PROJECT	NUMBER(4)	Code for the project to which the plot is associated. (e.g., detection monitoring, SAMAB demo, etc.)
PROJECT_DESCR	VARCHAR2(80)	Project code description.
MEASUREMENT_TYPE	NUMBER(1)	Code to indicate: 1 - Plot establishment, initial mensuration visit. 2 - Annual crown measurement. 3 - Mensuration re-measurement.

PLOT_STATUS	NUMBER(1)	Code to indicate: 1 = at least one forest condition 2 = entire plot nonforest 3 = entire plot access denied 4 = entire plot unsafe condition 5 = lost data (forested plot relocated, data lost to PDR failure) 6 = lost plot (forested plot not relocated, substitute plot installed)
HEXAGON_NBR	NUMBER(7)	EMAP 7-DIGIT hexagon number. (Not identified in public data).
PLOT_NBR	NUMBER(3)	Plot number identifier within a hexagon.
POINT_NBR	NUMBER(1)	Point number (1 to 4) within the plot.
TREE_NBR	NUMBER(4)	Number identifying sapling and trees on the point.
TREE_TYPE	NUMBER(1)	tree_type = 1 trees (dbh >= 5 inches). tree_type = 2 saplings (dbh < 5 inches).
TREE_TYPE_DESCR	VARCHAR2(80)	Tree type from definition table.
PK_TREE	NUMBER(6)	System generated number assigned as primary key for tree. Its primary use is for the joining of tables.
FHM_SPECIES	NUMBER(3)	Code for FHM tree species.
SPECIES_COMMON_NAME	VARCHAR2(80)	FHM tree species code description.
CURRENT_TREE_HISTORY	NUMBER(2)	Code for the current tree history. 1 Live/Survivor tree 2 Ingrowth tree on microplot 3 Ingrowth tree on subplot 4 Outgrowth tree from microplot 5 Dead Tree (qualifies as snag) 6 Dead Tree (doesn't qualify as snag) 7 Cut tree 8 Land-use change 9 Missed Tree 10 Tree should not have been tallied (extra tree) 11 Access denied 12 Dangerous condition 13 Lost data 14 Missed snag 15 Tree diameter dropped below threshold
OLD_TREE_HISTORY	NUMBER(2)	Records the previous tree history.
LAST_HISTORY	NUMBER(2)	Last history of tree.
FIELD_TREE_HISTORY	NUMBER(2)	Set if tree is a ZOMBIE tree (previous tree recorded as dead that is now alive) 1 - History codes changed because of current years data. 2 - History codes changed because of subsequent years data.
HISTORY_CHECK	NUMBER(1)	Value recorded by the field crew. Used for ZOMBIE trees
DBH	NUMBER	Diameter, in inches, at breast height (4.5 feet).
DBH_CHECK	NUMBER(1)	Code to indicate abnormalities with DBH 0 - Normal DBH, no problems. 1 - Problem with DBH. The notes should clarify the problem.
PREVIOUS_DBH	NUMBER	Previous dbh recorded for a missed tree from the previous survey.
ESTIMATED_DBH	NUMBER	Estimated dbh recorded for a missed tree from the previous survey.
DRC	NUMBER	Diameter at root collar (woodland species only).
ESTIMATED_DRC	NUMBER	Estimated drc recorded for a missed tree from the previous survey.
NBR_STEMS	NUMBER(3)	Number of stems for a woodland species.
DLS	NUMBER(6,2)	Diameter of largest stem for woodland species.

CROWN_CLASS	NUMBER(1)	Code that categorizes the tree by the location of the crown. 1 open grown 2 dominant 3 codominant 4 intermediate 5 overtopped (suppressed).
CROWN_DENSITY	NUMBER(2)	Crown density code. Crown density is the amount of crown branches, foliage and reproductive structures that blocks light visibility through the crown, as a percentage of the crown outline. 00 0% 05 1-5% 10 6-10% 15 11-15% . . . . 95 91-95% 99 96-100%
CROWN_DIAMETER_90	NUMBER	Crown diameter, in feet, at 90 degrees to the widest point.
CROWN_DIAMETER_WIDE	NUMBER	Crown diameter, in feet, at widest point.
CROWN_DIEBACK	NUMBER(2)	Crown dieback code. Branch mortality in the outer, upper portion of the crown, as a percentage of the crown outline. 01 0% 05 1--5% 10 6-10% 15 11-15% . . . . 95 91-95% 99 96-100%
CROWN_RATIO	NUMBER(2)	Crown ratio code. Crown length as a percentage of the tree height. 00 0% 05 1--5% 10 6-10% 15 11-15% . . . . 95 91-95% 99 96-100%
CROWN_VIGOR_CLASS	NUMBER(1)	Crown vigor class code. 1 80-100% normal foliage 2 21-79% normal foliage 3 1-20% normal foliage
FOLIAGE_TRANSPARENCY	NUMBER(2)	Foliage transparency code. The amount of light penetrating through the foliage of the crown, as a percentage of the crown foliage outline. 00 0% 05 1--5% 10 6-10% 15 11-15% . . . . 95 91-95% 99 96-100%

CROWN_GEOMETRIC_SHAPE	NUMBER(1)	Code for shape of crown. 1 Triangular crown 2 Triangular top, elliptical bottom 3 Parabolic top, elliptical bottom 4 Overall elliptical or circular crown 5 Elliptical top, triangular bottom 6 Elliptical top, parabolic bottom 7 No general geometric form
CROWN_PARTIAL	NUMBER(1)	Crown partial code. 1 Full form crown, crown not deformed 2 One-half of the crown missing 3 On-third of the crown missing 4 One fourth of crown missing 5 One fifth of crown missing 9 Tree with sloping base
CROWN_SLOPE	NUMBER(1)	Code for crown slope. 0 Crown not sloping at base 1 Indicates 10 percent slope of crown at base 2 Indicates 20 percent slope of crown at base 3 Indicates 30 percent slope of crown at base 4 Indicates 40 percent slope of crown at base 5 Indicates 50 percent slope of crown at base 6 Indicates 60 percent slope of crown at base 7 Indicates 70 percent slope of crown at base 8 Indicates 80 percent slope of crown at base 9 Indicates 90 percent slope or more of crown at base
CAUSE_OF_DEATH	NUMBER(3)	Code for cause of death. 1 Snag, cause unknown 100 Insect 200 Disease 300 Fire 400 Animal 500 Weather 600 Suppression / Competition 700 Logging and related; human damage 800 Unknown 900 True mistletoe 910 Dwarf mistletoe 999 Other (make note)
MORTALITY_YEAR	NUMBER(4)	Year that tree died.
GROUND_YEAR	NUMBER(4)	Year that tree fell to the ground.
NON_FOREST_YEAR	NUMBER(4)	Year that tree land use class was determined non-forest.

TREE_DAMAGE1	NUMBER(2)	<p>Code for type of tree damage.</p> <ol style="list-style-type: none"> <li>1 Dead</li> <li>2 Open wound</li> <li>3 Closed wound;healed, cankers;lesions</li> <li>4 Small holes or pinholes</li> <li>5 Broken</li> <li>6 Removed; missing</li> <li>7 Rotten branch stubs</li> <li>8 Resinosis; bleeding</li> <li>9 Deformed, twisted, curled</li> <li>10 Galls</li> <li>11 Imbedded foreign objects</li> <li>12 Conks, mold, and fuzz on surface</li> <li>13 Fader Tree</li> <li>14 Other</li> <li>20 Crook or sweep</li> <li>21 Crack or seam</li> <li>22 Swelling</li> <li>23 Leaning</li> <li>24 Abundance of epicormic branches or water sprouts on trunk or base</li> <li>40 Excessive branching</li> <li>41 Abundance of seeds or cones</li> <li>42 Stunted, dwarfed</li> <li>60 Defoliation</li> <li>61 General discoloration</li> <li>62 Pale green foliage</li> <li>63 Yellow-green foliage</li> <li>64 Leaves spotted</li> <li>65 Damaged leaves</li> <li>66 Distorted foliage</li> <li>67 Stunted Foliage (Valid, but not in Field Guide)</li> <li>99 Other Damage (Valid in 1991 Only)</li> </ol>
TREE_DAMAGE_LOC1	NUMBER(2)	<p>Code for location of tree damage.</p> <ol style="list-style-type: none"> <li>1 crown stem</li> <li>2 upper bole</li> <li>3 lower bole</li> <li>4 roots and stump</li> <li>5 whole trunk</li> <li>9 whole crown</li> <li>60 branches (throughout)</li> <li>61 branches (lower third)</li> <li>62 branches (middle third)</li> <li>63 branches (upper third)</li> <li>70 buds and shoots (throughout)</li> <li>71 buds and shoots (lower third)</li> <li>72 buds and shoots (middle third)</li> <li>73 buds and shoots (upper third)</li> <li>80 foliage (throughout)</li> <li>81 foliage (lower third)</li> <li>82 foliage (middle third)</li> <li>83 foliage (upper third)</li> </ol>

TREE_DAMAGE_CAUSE1	NUMBER(3)	Code for cause of tree damage. 0 None (valid 1991 only) 100 Insect 101 Insect low, CA and CO 1992 only 102 Insect moderate, CA and CO 1992 only 103 Insect severe, CA and CO 1992 only 200 Disease 201 Disease low, CA and CO 1992 only 202 Disease moderate, CA and CO 1992 only 203 Disease severe, CA and CO 1992 only 210 Blister Rust on Sugar Pine, CA 1992 only 220 Stem Diseases - General CO 1992 only 222 Ceratocystis canker, Ceratocystis fimbriata, CO 1992 only 223 Comandra blister rust, Cronartium comandrae, CO 1992 only 225 Cryptosphaeria canker, Cryptosphaeria populina, CO 1992 only 226 Cytospora canker, Cytospora sp., CO 1992 only 228 Western gall rust, Peridermium harknessii, CO 1992 only 260 Broom Rusts/Limb Rusts, CO 1992 only 276 White trunk rot, Phellinus tremulae CO 1992 only 300 Fire 301 Fire low, CA and CO 1992 only 302 Fire moderate, CA and CO 1992 only 303 Fire severe, CA and CO 1992 only 400 Animal 401 Animal low, CA and CO 1992 only 402 Animal moderate, CA and CO 1992 only 403 Animal severe, CA and CO 1992 only 500 Weather 501 Weather low, CA and CO 1992 only 502 Weather moderate, CA and CO 1992 only 503 Weather severe, CA and CO 1992 only 600 Suppression / Competition 601 Suppression / Competition low, CA and CO 1992 only 602 Suppression / Competition moderate, CA and CO 1992 only 603 Suppression / Competition severe, CA and CO 1992 only 700 Logging and related; human damage 701 Logging and related; human damage low, CA and CO 1992 only 702 Logging and related; human damage moderate, CA and CO 1992 only 703 Logging and related; human damage severe, CA and CO 1992 only 800 Unknown 801 Unknown low, CA and CO 1992 only 802 Unknown moderate, CA and CO 1992 only 803 Unknown severe, CA and CO 1992 only 900 True mistletoe 910 Dwarf mistletoe 911 Dwarf mistletoe / severity rating 912 Dwarf mistletoe / severity rating 913 Dwarf mistletoe / severity rating 914 Dwarf mistletoe / severity rating 915 Dwarf mistletoe / severity rating 916 Dwarf mistletoe / severity rating 999 Other (make note)
TREE_DAMAGE2	NUMBER(2)	Code for type of tree damage. See TREE_DAMAGE1 for an explanation of the codes.

TREE_DAMAGE_LOC2	NUMBER(2)	Code for location of tree damage. See TREE_DAMAGE_LOC1 for an explanation of the codes.
TREE_DAMAGE_CAUSE2	NUMBER(3)	Code for cause of tree damage. See TREE_DAMAGE_CAUSE1 for an explanation of the codes.
TREE_DAMAGE3	NUMBER(2)	Code for type of tree damage. See TREE_DAMAGE1 for an explanation of the codes.
TREE_DAMAGE_LOC3	NUMBER(2)	Code for location of tree damage. See TREE_DAMAGE_LOC1 for an explanation of the codes.
TREE_DAMAGE_CAUSE3	NUMBER(3)	Code for cause of tree damage. See TREE_DAMAGE_CAUSE1 for an explanation of the codes.
CONDITION_CLASS_NBR	NUMBER(1)	An arbitrary number used to identify and map different land uses and forest conditions occurring on a plot.
PLOT_TYPE	NUMBER(1)	Code to identify plot type (subplot or microplot)
PLOT_TYPE_DESCR	VARCHAR2(80)	Plot type code description
LAND_USE_CLASS	NUMBER(2)	Land use code.
LAND_USE_CLASS_DESCR	VARCHAR2(80)	Land use code description
FOREST_TYPE	NUMBER(4)	Code for forest type on this condition class.
FOREST_TYPE_DESCR	VARCHAR2(80)	Forest type code description.
STAND_AGE	NUMBER(3)	Estimated stand age for the forested condition class defined on the plot.
STAND_ORIGIN	NUMBER(1)	Code describing how the tree stand was established. 1 Natural stand 2 Softwoods planted or seeded 3 Hardwoods planted or seeded 4 Recent harvest, no trees present
STAND_SIZE_CLASS	NUMBER(1)	Stand size based on all live trees on plot. 1 Sawtimber; 9.0"+ Softwoods + Woodland species; 11.0"+ Hardwoods 2 Poletimber; 5.0-8.9" Softwoods + Woodland species; 5.0-10.9" Hardwoods 3 Sapling/Seedling; 1.0-4.9" All 4 Nonstocked
NEEDLE_RETENTION_PERIOD	NUMBER(1)	Number of years needles are retained on conifer species.
TREE_HEIGHT	NUMBER	NULL
AZIMUTH	NUMBER(3)	Azimuth. The direction, to the nearest degree, from subplot center (microplot center for saplings) to the center of the base of the tree (geographic center for multi-stemmed woodland species).
DISTANCE	NUMBER	Horizontal distance in feet from the subplot center (microplot for saplings) to the pith at the base of the tree (geographic center for multi-stemmed woodland species).
DISTANCE_REFERENCE	NUMBER(1)	The point from which the distance is referred to distref = 1 for subplot; distref = 2 for microplot.
OFFSET_POINT	NUMBER(1)	Offset point number for measurement if subplot/ microplot center cannot be occupied.
ENTRANCE_YEAR	NUMBER(4)	Year that tree was first tallied.
EXIT_YEAR	NUMBER(4)	Year that tree was dropped from FHM system.

EXIT_REASON	NUMBER(3)	Code for reason that tree was dropped from FHM system 1 Dead and gone 2 Tree cut and removed 3 Permanent land use change to non-forest 4 Permanent access denial 5 Permanent dangerous conditions 6 Tree on a rotated point 7 Change in sampling protocol from 1990 to 1991 8 Tree could not be found in subsequent years 9 Extra Tree, Tree should not have been tallied 10 Species dropped or changed. 12 Tree diameter dropped below threshold 13 NOT USED BECAUSE IT IS TOO SCARY!!! :) 14 Site tree no longer suitable 15 Lost data 16 Site trees are no longer monumented
LAST_TALLY_YEAR	NUMBER(4)	Most recent year that tree was tallied. Usually the current year
PREVIOUS_TALLY_YEAR	NUMBER(4)	Year of previous tally.
MENSURATION_YEAR	NUMBER(4)	Start of the current mensuration cycle
LAST_MENSURATION_YEAR	NUMBER(4)	Year of last visit to plot when tree was tallied and mensuration data were collected (MT1 or MT3 visit).
YEAR_DETERMINED_EXTRA	NUMBER(4)	Year tree was determined extra. Only valid for extra trees, tree history = 10.
YEAR_DETERMINED_MISSING	NUMBER(4)	Year tree was determined to be a missed tree.
NOTE_YEAR	NUMBER(4)	Year note was entered.
OFFICE_NOTE	VARCHAR2(80)	Note entered in data processing office.
POINT_HISTORY	NUMBER(1)	Records if the point had been rotated in 1990 and de-rotated in 1991. 0 - Normal non-rotated point 1 - Point rotated in 1990 then de-rotated in 1991
YEAR	NUMBER	Year of the DATA VIEW.
P3ID	NUMBER	Unique public plot identifier

#### UNDERSTORY\_1991.CSV

Name	Type	Comments
LAST_UPDATE	NUMBER(7)	Date of last data view update
STATE	NUMBER(2)	State FIPS Code.
STATE_DESCR	NUMBER(2)	State FIPS Code description.
STATE_ABBREV	NUMBER(2)	Two letter postal state code abbreviation.
COUNTY	NUMBER(2)	County FIPS Code. See the FHM_State_County_codes.xls download file for an explanation of the codes.
PROJECT	NUMBER(2)	Code for the project to which the plot is associated. (e.g., detection monitoring, SAMAB demo, etc.)
PROJECT_DESCR	NUMBER(1)	Project code description.
HEXAGON_NBR	CHAR(1)	EMAP 7-DIGIT hexagon number. (Not identified in public data).
PLOT_NBR	NUMBER(7)	Plot number identifier within a hexagon.
POINT_NBR	NUMBER(2)	Point number (1 to 4) within the plot.
PCT_FERNS	NUMBER(2)	Percent cover of ferns within the microplot.
PCT_HERBS	NUMBER(2)	Percent cover of herbs within the microplot.
PCT_MOSS	NUMBER(2)	Percent cover of moss within the microplot.
PCT_SEEDLINGS	NUMBER(2)	Percent cover of seedlings <1 foot in length within the microplot
PCT_SHRUBS	NUMBER(1)	Percent cover of shrubs within the microplot.
P3ID	NUMBER	Unique public plot identifier

