

## Data Dictionary for TreeMap Separated Attribute Rasters

Attribute definitions and data sources of TreeMap separated attribute rasters. All fields derived from FIA tables unless otherwise noted. Variable section references correspond to [FIA database documentation](#) (Burrill et al. 2018).

Attribute	Description	Source (table/column/query); Sec = FIADB manual section
ALSTK: All-Live-Tree Stocking (percent)	The sum of stocking percent values of all live trees on the condition.	From COND.ALSTK (Sec. 2.4.53)
BALIVE: Live Tree Basal Area (ft <sup>2</sup> )	Basal area in square feet per acre of all live trees greater than or equal to 1.0 inch d.b.h./d.r.c. sampled in the condition.	From COND.BALIVE (Sec. 2.4.51)
CANOPYPCT: Live Canopy Cover (percent)	Live canopy cover percent derived from the <a href="#">Forest Vegetation Simulator</a> .	From Forest Vegetation Simulator
CARBON_D: Carbon, Standing Dead (tons/acre)	Carbon, standing dead (tons per acre)	Query; Sum (DRYBIO_BOLE, DRYBIO_TOP, DRYBIO_STUMP, DRYBIO_SAPLING, DRYBIO_WDLD_SPP) / 2 / 2000*TPA_UNADJ WHERE (((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=2) AND ((TREE.DIA)>=5) AND ((TREE.STANDING_DEAD_CD)=1))
CARBON_DWN: Carbon, Down Dead (tons/acre)	Carbon (tons per acre) of woody material greater than 3 inches in diameter on the ground, and stumps and their roots greater than 3 inches in diameter. Estimated from models based on geographic area, forest type, and live tree carbon density (Smith and Heath 2008).	From COND.CARBON_DOWN_DEAD (Sec. 2.4.67)
CARBON_L: Carbon, Live Above Ground (tons/acre)	Carbon, live above ground (tons per acre)	Query; Sum (DRYBIO_BOLE, DRYBIO_TOP, DRYBIO_STUMP, DRYBIO_SAPLING, DRYBIO_WDLD_SPP) / 2 / 2000*TPA_UNADJ WHERE (((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=1))
DRYBIO_D: Dry Standing Dead Tree Biomass, Above Ground (tons/acre)	Dry standing dead tree biomass, above ground (tons per acre)	Query; Sum (DRYBIO_BOLE, DRYBIO_TOP, DRYBIO_STUMP, DRYBIO_SAPLING, DRYBIO_WDLD_SPP) / 2000*TPA_UNADJ WHERE (((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=2) AND ((TREE.DIA)>=5) AND ((TREE.STANDING_DEAD_CD)=1))

<p>DRYBIO_L: Dry Live Tree Biomass, Above Ground (tons/acre)</p>	<p>Dry live tree biomass, above ground (tons per acre)</p>	<p>Query; Sum (DRYBIO_BOLE, DRYBIO_TOP, DRYBIO_STUMP, DRYBIO_SAPLING, DRYBIO_WDLD_SPP) /2000*TPA_UNADJ WHERE (((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=1))</p>														
<p>FLDSZCD: Field Stand-Size Class Code</p>	<p>Field-assigned classification of the predominant (based on stocking) diameter class of live trees within the condition.</p> <table border="1" data-bbox="300 514 1149 1724"> <thead> <tr> <th data-bbox="300 514 409 548">Code</th> <th data-bbox="409 514 1149 548">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="300 548 409 743">0</td> <td data-bbox="409 548 1149 743">Nonstocked - Meeting the definition of accessible land and one of the following applies (1) less than 10 percent stocked by trees, seedlings, and saplings and not classified as cover trees, or (2) for several woodland species where stocking standards are not available, less than 10 percent canopy cover of trees, seedlings, and saplings.</td> </tr> <tr> <td data-bbox="300 743 409 877">1</td> <td data-bbox="409 743 1149 877">≤4.9 inches (seedlings/saplings). At least 10 percent stocking (or 10 percent canopy cover if stocking standards are not available) in trees, seedlings, and saplings, and at least 2/3 of the canopy cover is in trees less than 5.0 inches d.b.h./d.r.c.</td> </tr> <tr> <td data-bbox="300 877 409 1104">2</td> <td data-bbox="409 877 1149 1104">5.0-8.9 inches (softwoods)/ 5.0-10.9 inches (hardwoods). At least 10 percent stocking (or 10 percent canopy cover if stocking standards are not available) in trees, seedlings, and saplings; and at least one-third of the canopy cover is in trees greater than 5.0 inches d.b.h./d.r.c. and the plurality of the canopy cover is in softwoods 5.0-8.9 inches diameter and/or hardwoods 5.0-10.9 inches d.b.h., and/or woodland trees 5.0-8.9 inches d.r.c.</td> </tr> <tr> <td data-bbox="300 1104 409 1362">3</td> <td data-bbox="409 1104 1149 1362">9.0-19.9 inches (softwoods)/ 11.0-19.9 inches (hardwoods). 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At least 10 percent stocking (or 10 percent canopy cover if stocking standards are not available) in trees, seedlings, and saplings; and at least one-third of the canopy cover is in trees greater than 5.0 inches d.b.h./d.r.c. and the plurality of the canopy cover is in trees greater than or equal to 40.0 inches d.b.h.</td> </tr> </tbody> </table>	Code	Description	0	Nonstocked - Meeting the definition of accessible land and one of the following applies (1) less than 10 percent stocked by trees, seedlings, and saplings and not classified as cover trees, or (2) for several woodland species where stocking standards are not available, less than 10 percent canopy cover of trees, seedlings, and saplings.	1	≤4.9 inches (seedlings/saplings). 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At least 10 percent stocking (or 10 percent canopy cover if stocking standards are not available) in trees, seedlings, and saplings; and at least one-third of the canopy cover is in trees greater than 5.0 inches d.b.h./d.r.c. and the plurality of the canopy cover is in trees greater than or equal to 40.0 inches d.b.h.	<p>From COND.FLDSZCD (Sec. 2.4.21)</p>
Code	Description															
0	Nonstocked - Meeting the definition of accessible land and one of the following applies (1) less than 10 percent stocked by trees, seedlings, and saplings and not classified as cover trees, or (2) for several woodland species where stocking standards are not available, less than 10 percent canopy cover of trees, seedlings, and saplings.															
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<p>FLDTYPCD: Field Forest Type Code</p>	<p>A code indicating the forest type, assigned by the field crew, based on the tree species or species groups forming a plurality of all live stocking. The field crew assesses the forest type based on the acre of forest land around the plot, in</p>	<p>From COND.FLDTYPCD (Sec. 2.4.17)</p>														

	addition to the species sampled on the condition. See Appendix D of the <a href="#">FIA database documentation</a> for a table of values.											
FORTYPCD: Algorithm Forest Type Code	This is the forest type used for reporting purposes. It is primarily derived using a computer algorithm, except when less than 25 percent of the plot samples a particular forest condition or in a few other cases. See Appendix D of the <a href="#">FIA database documentation</a> for a table of values.	From COND.FORTYPCD (Sec. 2.4.16)										
GSSTK: Growing-Stock Stocking (percent)	The sum of stocking percent values of all growing-stock trees on the condition.	From COND.GSSTK (Sec. 2.4.54)										
QMD_RMRS: Stand Quadratic Mean Diameter (in)	Stand density index maximum, Rocky Mountain Research Station. The quadratic mean diameter, or the diameter of the tree of average basal area, on the condition. Based on live trees greater than or equal to 1.0 inch d.b.h./d.r.c.	From COND.QMD_RMRS (Sec. 2.4.136)										
SDIPCT_RMRS: Stand Density Index (percent of maximum)	Stand density index percent, Rocky Mountain Research Station. A relative measure of stand density for live trees (greater than or equal to 1.0 inch d.b.h./d.r.c.) on the condition, expressed as a percentage of the maximum stand density index (SDI).	From COND.SDIPCT_RMRS (Sec. 2.4.139)										
STANDHT: Height of Dominant Trees (ft)	Height of dominant trees, in feet, derived from the <a href="#">Forest Vegetation Simulator</a> .	From Forest Vegetation Simulator										
STDSZCD: Algorithm Stand-Size Class Code	A classification of the predominant (based on stocking) diameter class of live trees within the condition assigned using an algorithm. <table border="1" data-bbox="300 1203 1151 1665"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Large diameter - Stands with an all live stocking value of at least 10 (base 100); with more than 50 percent of the stocking in medium and large diameter trees; and with the stocking of large diameter trees equal to or greater than the stocking of medium diameter trees.</td> </tr> <tr> <td>2</td> <td>Medium diameter - Stands with an all live stocking value of at least 10 (base 100); with more than 50 percent of the stocking in medium and large diameter trees; and with the stocking of large diameter trees less than the stocking of medium diameter trees.</td> </tr> <tr> <td>3</td> <td>Small diameter - Stands with an all live stocking value of at least 10 (base 100) on which at least 50 percent of the stocking is in small diameter trees.</td> </tr> <tr> <td>5</td> <td>Nonstocked - Forest land with all live stocking value less than 10.</td> </tr> </tbody> </table>	Code	Description	1	Large diameter - Stands with an all live stocking value of at least 10 (base 100); with more than 50 percent of the stocking in medium and large diameter trees; and with the stocking of large diameter trees equal to or greater than the stocking of medium diameter trees.	2	Medium diameter - Stands with an all live stocking value of at least 10 (base 100); with more than 50 percent of the stocking in medium and large diameter trees; and with the stocking of large diameter trees less than the stocking of medium diameter trees.	3	Small diameter - Stands with an all live stocking value of at least 10 (base 100) on which at least 50 percent of the stocking is in small diameter trees.	5	Nonstocked - Forest land with all live stocking value less than 10.	From COND.STDSZCD (Sec. 2.4.20)
Code	Description											
1	Large diameter - Stands with an all live stocking value of at least 10 (base 100); with more than 50 percent of the stocking in medium and large diameter trees; and with the stocking of large diameter trees equal to or greater than the stocking of medium diameter trees.											
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3	Small diameter - Stands with an all live stocking value of at least 10 (base 100) on which at least 50 percent of the stocking is in small diameter trees.											
5	Nonstocked - Forest land with all live stocking value less than 10.											
TPA_DEAD: Dead Trees Per Acre	Number of standing dead trees per acre (DIA >5")	Query; Sum TREE.TPA_UNADJ WHERE										

		((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=2) AND ((TREE.DIA)>=5) AND ((TREE.STANDING_DEAD_CD)=1))
TPA_LIVE: Live Trees Per Acre	Number of live trees per acre	Query; Sum TREE.TPA_UNADJ WHERE (((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=1) AND ((TREE.DIA)>=1))
VOLBFNET_L: Volume, Live (sawlog-board- ft/acre)	Volume, live, sawlog board feet per acre (log rule: Int'l ¼ inch)	Query Sum VOLBFNET * TPA_UNADJ WHERE (((TREE.TREECLCD)=2) AND ((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=1))
VOLCFNET_D: Volume, Standing Dead (ft <sup>3</sup> /acre)	Volume, standing dead, cubic feet per acre	Query Sum VOLCFNET*TPA_UNADJ WHERE (((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=2) AND ((TREE.DIA)>=5) AND ((TREE.STANDING_DEAD_CD)=1))
VOLCFNET_L: Volume, Live (ft <sup>3</sup> /acre)	Volume, live, cubic feet per acre	Query Sum VOLCFNET*TPA_UNADJ WHERE (((COND.COND_STATUS_CD)=1) AND ((TREE.STATUSCD)=1))

## References

Burrill, Elizabeth A., Andrea M. Wilson, Jeffrey A. Turner, Scott A. Pugh, James Menlove, Glenn Christiansen, Barbara L. Conkling, and Winne David. 2018. "The Forest Inventory and Analysis Database: Database Description and User Guide Version 8.0 for Phase 2." [Online].  
[https://www.fia.fs.usda.gov/library/database-documentation/current/ver80/FIADB%20User%20Guide%20P2\\_8-0.pdf](https://www.fia.fs.usda.gov/library/database-documentation/current/ver80/FIADB%20User%20Guide%20P2_8-0.pdf)