

GREAT TRINITY FOREST

Stand and Stock Tables

Tables describing the live tree structure of the
forest.

Volume 6

Live tree stand and stock tables were created from the Forest Vegetation Simulator and forest inventory data. The tables describe each forest unit by species and are shown in 10-year increments. A unit summary statistics report is included at the beginning of each unit's section.

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Overview

Summary statistics were calculated for each forest unit at the time growth and yield models were run. The figures are displayed for each 10 year period and one year following the treatment and planting of a stand.

The following defines the descriptive statistics for each stand:

QMD – Quadratic Mean Diameter

The Diameter at Breast Height (DBH) associated with the mean Basal Area per tree. QMD is very useful to use in conjunction with basal area per acre and trees per acre when making forest management decisions. It is calculated by taking the square root of Basal Area per Acre (BAA) divided by Trees per Acre (TPA) and the constant 0.00545415:

$$QMD = \sqrt{\frac{BAA}{TPA} / 0.00545415}$$

TPA – Trees Per Acre

Trees per acre is the average number of total trees per acre.

BA/A – Basal Area Per Acre

Basal area is measure of stand density that is the total square foot cross sectional area measured at 4.5 feet above ground on the uphill side of all trees per acre. The individual basal area of a tree can be calculated by using the following formula :

$$BA_{\text{per tree}} = DBH^2 \times 0.00545415$$

Top Ht. – Top Height

Top height is the average height in feet of the 40 largest diameter trees.

SDI – Stand Density Index

Stand density index is a measure of stand density based on trees per acre and QMD. Because it is a function of QMD and trees per acre it is more sensitive to variances in diameter class distributions and can be used to distinguish between stands that could have similar basal areas but vary in size class. SDI maximums and minimums vary by species and forest type.

CCF – Crown Competition Factor

Crown competition factor is another measure of stand density that is based in tree diameters. CCF represents the percentage of an acre that is covered by tree crowns. A CCF of 100 would theoretically indicate that tree crowns will just touch in an unthinned, evenly spaced, stand.

MAI – Mean Annual Increment

The mean annual increment is the average annual growth of merchantable material in cubic feet up to the measured point in time.

Management Unit 2034

40.2 acres

Summary Statistics

Planting Year: 2034

	QMD	TPA	BA/A	Top Ht.	SDI	CCF	MAI
2006	8.1	230	83.00	50	164	187	25.1
2010	8.8	227	96.00	55	184	208	30.2
2020	10.4	226	133.00	63	240	266	43.8
2030	12.4	189	158.00	68	267	289	52.0
2035	3.8	276	22.00	25	59	32	7.5
2040	4.2	273	26.00	31	68	38	8.3
2050	5.3	269	41.00	42	97	68	10.1
2060	6.4	264	59.00	50	129	103	12.2
2070	7.6	260	82.00	55	167	147	15.7
2080	9.0	255	113.00	59	215	191	20.6
2090	10.6	228	140.00	62	250	219	25.1
2100	12.2	204	164.00	65	279	243	28.7
2110	13.6	186	189.00	66	306	266	31.6
2120	15.0	170	209.00	66	326	283	33.5

*Terms: QMD - Quadratic mean diameter; TPA - Trees per acre; BA/A - Basal Area/Acre (Sq.Ft.); Top Ht. - Top Height;
SDI - Stand Density Index; CCF - Crown Competition Factor; MAI - Mean Annual Increment

*Per acre values

Management Unit 2034

YEAR: 2006

40.2 acres

SPECIES: ALL

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	24.0	2.10	19	0	0.0
6	61.3	10.40	24	44	0.0
8	70.3	21.20	31	151	0.0
10	40.0	19.30	40	225	0.0
12	19.5	13.80	47	233	0.0
14	13.0	12.60	55	263	0.0
16	1.0	1.40	65	34	0.0
18	0.0	0.00	0	0	0.0
20	0.0	0.00	0	0	0.0
22	0.0	0.00	0	0	0.0
24	0.0	0.00	0	0	0.0
26	0.5	1.80	80	56	0.0
TOTALS:	229.6	82.60	32	1,006	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: CW

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	0.0	0.00	0	0	0.0
6	0.0	0.00	0	0	0.0
8	2.2	0.80	40	11	0.0
10	4.0	2.20	45	36	0.0
12	10.0	7.20	50	136	0.0
14	9.0	9.00	58	196	0.0
TOTALS:	25.2	19.20	51	379	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: EL

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	3.0	0.30	18	0	0.0
6	10.0	1.70	23	11	0.0
8	13.0	4.00	26	37	0.0
10	10.0	4.80	33	54	0.0
12	5.5	3.90	41	58	0.0
14	2.0	1.80	45	30	0.0
TOTALS:	43.5	16.50	29	189	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

Management Unit 2034

YEAR: 2006

40.2 acres

SPECIES: GA

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	20.0	1.70	19	0	0.0
6	42.0	7.00	24	23	0.0
8	45.7	13.80	32	73	0.0
10	25.0	11.90	42	129	0.0
12	4.0	2.60	50	40	0.0
TOTALS:	136.7	37.00	30	265	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: HB

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	0.0	0.00	0	0	0.0
6	2.5	0.40	24	2	0.0
8	3.4	1.00	29	11	0.0
10	1.0	0.40	34	5	0.0
TOTALS:	6.9	1.80	28	18	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: HI

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	0.0	0.00	0	0	0.0
6	0.0	0.00	0	0	0.0
8	0.0	0.00	0	0	0.0
10	0.0	0.00	0	0	0.0
12	0.0	0.00	0	0	0.0
14	2.0	1.80	55	37	0.0
16	1.0	1.40	65	34	0.0
18	0.0	0.00	0	0	0.0
20	0.0	0.00	0	0	0.0
22	0.0	0.00	0	0	0.0
24	0.0	0.00	0	0	0.0
26	0.5	1.80	80	56	0.0
TOTALS:	3.5	5.00	61	127	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

Management Unit 2034

YEAR: 2006

40.2 acres

SPECIES: JU

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	1.0	0.10	15	0	0.0
6	5.2	0.90	23	5	0.0
8	3.0	0.80	26	8	0.0
TOTALS:	9.2	1.80	23	13	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: WI

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	0.0	0.00	0	0	0.0
6	1.6	0.30	34	3	0.0
8	3.0	0.80	40	11	0.0
TOTALS:	4.6	1.10	38	14	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

Management Unit 2034

YEAR: 2010

40.2 acres

SPECIES: ALL

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	23.2	2.40	22	10	0.5
6	59.5	11.80	27	57	1.2
8	67.9	23.80	36	214	0.7
10	38.5	21.00	44	283	0.0
12	21.6	16.80	51	305	0.0
14	13.7	14.80	58	324	0.0
16	1.3	1.70	64	41	0.0
18	0.9	1.40	67	35	0.0
20	0.0	0.00	0	0	0.0
22	0.0	0.00	0	0	0.0
24	0.0	0.00	0	0	0.0
26	0.4	1.50	81	45	0.0
28	0.1	0.50	81	16	0.0
TOTALS:	227.1	95.70	37	1,329	2.4

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: CW

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	0.0	0.00	0	0	0.0
6	0.0	0.00	0	0	0.0
8	1.7	0.70	46	11	0.0
10	3.5	2.10	50	39	0.0
12	9.8	7.80	55	161	0.0
14	9.1	9.90	61	229	0.0
16	1.1	1.50	64	35	0.0
TOTALS:	25.2	22.00	56	475	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: EL

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	3.0	0.30	19	0	0.0
6	10.0	1.90	25	14	0.0
8	11.2	3.90	29	37	0.0
10	10.8	5.70	35	69	0.0
12	5.9	4.60	44	73	0.0
14	2.6	2.70	48	48	0.0
TOTALS:	43.5	19.10	32	240	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

Management Unit 2034

YEAR: 2010

40.2 acres

SPECIES: GA

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	19.5	2.00	22	10	0.5
6	41.1	8.10	28	27	0.9
8	45.3	16.00	38	130	0.4
10	23.0	12.50	47	168	0.0
12	6.0	4.40	53	71	0.0
TOTALS:	134.9	43.00	35	406	1.8

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: HB

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	0.0	0.00	0	0	0.0
6	2.4	0.50	26	4	0.1
8	3.1	1.00	31	11	0.1
10	1.2	0.60	35	7	0.0
TOTALS:	6.7	2.10	30	23	0.2

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

SPECIES: HI

DBH	TPA	BA/A	TOTAL HT	TOTAL CU. FT.	MORTALITY TPA
2	0.0	0.00	0	0	0.0
4	0.0	0.00	0	0	0.0
6	0.0	0.00	0	0	0.0
8	0.0	0.00	0	0	0.0
10	0.0	0.00	0	0	0.0
12	0.0	0.00	0	0	0.0
14	2.0	2.20	57	46	0.0
16	0.2	0.20	67	6	0.0
18	0.9	1.40	67	35	0.0
20	0.0	0.00	0	0	0.0
22	0.0	0.00	0	0	0.0
24	0.0	0.00	0	0	0.0
26	0.4	1.50	81	45	0.0
28	0.1	0.50	81	16	0.0
TOTALS:	3.6	5.80	63	147	0.0

* Terms: DBH - Diameter at breast height; TPA - Trees per acre; BA/A - Basal Area / Acre

* Mortality TPA includes all tree mortality occurring during the preceding growth period.

* Data per acre.

