

**Northern LP Michigan and Eastern UP Michigan**  
(summary of TreeAtlas results 2013-see companion file for keys to interpret)  
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FIA	Common Name	DISTRIB Results (suitable habitat)																				
		Current IV		Modeled IV						Future : Current						Change Class		Modifying Factors				
		FIA IV	Current Modeled	2010 - 2039		2040 - 2069		2070 - 2099		2010 - 2039		2040 - 2069		2070 - 2099		PCM B1	GFDL A1FI	Positive Traits	Negative Traits	DistFact	BioFact	Adapt
		PCM B1	GFDL A1FI	PCM B1	GFDL A1FI	PCM B1	GFDL A1FI	PCM B1	GFDL A1FI	PCM B1	GFDL A1FI	PCM B1	GFDL A1FI	PCM B1	GFDL A1FI							
951	American basswood	263	332	303	361	299	461	299	477	0.91	1.09	0.90	1.39	0.90	1.44	No Change	Sm. Inc.	COL	FTK	0.31	0.16	4.6
531	American beech	270	273	306	286	347	279	330	236	1.12	1.05	1.27	1.02	1.21	0.86	Sm. Inc.	No Change	COL	INS FTK	-1.14	0.03	3.6
972	American elm	202	356	376	653	475	1187	494	1176	1.06	1.83	1.33	3.33	1.39	3.30	Sm. Inc.	Lg. Inc.	EHS	DISE INS	-0.8	0.3	4.0
391	American hornbeam	74	83	111	137	147	221	146	204	1.34	1.65	1.77	2.66	1.76	2.46	Sm. Inc.	Lg. Inc.	COL SES	FTK DRO	0.56	0.62	5.1
935	American mountain-ash	2	1	0	0	0	0	0	0	0.00	0.00	0	0	0	0	Lg. Dec.	Lg. Dec.		FTK COL EHS	-0.23	-1.62	3.1
12	Balsam fir	876	872	657	237	505	98	433	95	0.75	0.27	0.58	0.11	0.50	0.11	Lg. Dec.	Lg. Dec.	COL	INS FTK DRO	-3	-0.35	2.7
741	Balsam poplar	290	272	197	90	131	203	138	158	0.72	0.33	0.48	0.75	0.51	0.58	Sm. Dec.	Sm. Dec.	FRG VRE	COL DRO	0.13	-0.59	4.0
743	Bigtooth aspen	790	738	714	459	629	269	632	151	0.97	0.62	0.85	0.36	0.86	0.21	No Change	Lg. Dec.	FRG DISP	COL DRO FTK	1.01	0.16	5.1
402	Bitternut hickory	13	11	19	86	31	162	34	195	1.73	7.82	2.82	14.73	3.09	17.73	No Change	Lg. Inc.	DRO	COL	2.17	-0.83	5.6
543	Black ash	412	463	413	392	380	267	371	229	0.89	0.85	0.82	0.58	0.80	0.50	No Change	Lg. Dec.		INS COL DISP DRO SES FTK ESP	-1.31	-3	1.7
762	Black cherry	408	522	641	809	825	646	799	503	1.23	1.55	1.58	1.24	1.53	0.96	Sm. Inc.	No Change	DRO EHS	INS FTK COL	-1.56	-0.32	3.0
408	Black hickory	0	0	0	0	0	79	0	138	NA	NA	NA	New	NA	New	NA	New Habitat		EHS COL	1.04	-2.27	4.1
901	Black locust	1	17	31	89	74	307	76	415	1.82	5.24	4.35	18.06	4.47	24.41	Lg. Inc.	Lg. Inc.		COL INS	0	-0.59	3.8
837	Black oak	182	243	287	596	432	700	434	832	1.18	2.45	1.78	2.88	1.79	3.42	Sm. Inc.	Lg. Inc.	DRO EHS	INS DISE	0.51	0.42	4.9
95	Black spruce	419	402	288	38	173	5	128	4	0.72	0.10	0.43	0.01	0.32	0.01	Lg. Dec.	Lg. Dec.	COL EHS DISP	FTK INS DRO	-2.14	1.24	4.3
602	Black walnut	5	4	23	137	43	338	62	438	5.75	34.25	10.75	84.50	15.50	109.50	Lg. Inc.	Lg. Inc.	SES	COL DRO	0.35	-0.83	4.0
922	Black willow	37	59	65	125	76	244	85	279	1.10	2.12	1.29	4.14	1.44	4.73	Sm. Inc.	Lg. Inc.		COL FTK DRO	-0.31	-2.13	2.8
693	Blackgum	3	4	5	11	21	82	20	90	1.25	2.75	5.25	20.50	5.00	22.50	Sm. Inc.	Lg. Inc.	COL FTK		1.46	0.83	5.9
824	Blackjack oak	0	0	0	0	0	82	0	169	NA	NA	NA	New	NA	New	NA	New Habitat	DRO SES FRG VRE	COL FTK	1.56	0.21	5.6
313	Boxelder	5	32	17	93	25	438	22	545	0.53	2.91	0.78	13.69	0.69	17.03	Sm. Dec.	Lg. Inc.	SES DISP DRO COL TGR	FTK	2.39	2.06	7.4
823	Bur oak	22	55	20	129	49	419	29	476	0.36	2.35	0.89	7.62	0.53	8.66	Sm. Dec.	Lg. Inc.	DRO FTK		2.77	-0.16	6.4
601	Butternut	2	2	4	2	2	4	2	0	2.00	1.00	1.00	2.00	1.00	0	No Change	Lg. Dec.		FTK COL DRO DISE	-1.41	-1.27	2.3
832	Chestnut oak	2	2	3	9	9	68	7	53	1.50	4.50	4.50	34.00	3.50	26.50	Sm. Inc.	Lg. Inc.	SES VRE EHS FTK	INS DISE	1.39	1.29	6.1
826	Chinkapin oak	0	0	0	4	1	107	0	171	NA	New	New	New	NA	New	NA	New Habitat	TGR		1.18	-0.66	4.8
763	Chokecherry	71	67	64	49	59	61	60	21	0.96	0.73	0.88	0.91	0.90	0.31	No Change	Lg. Dec.		COL	0.18	-0.86	3.8
521	Common persimmon	0	0	0	0	0	10	0	68	NA	NA	NA	New	NA	New	NA	New Habitat	COL EHS		1.18	0.95	5.8
742	Eastern cottonwood	21	80	59	154	69	679	80	613	0.74	1.93	0.86	8.49	1.00	7.66	No Change	Lg. Inc.	TGR	INS COL DISE FTK	0.22	-0.75	3.9
261	Eastern hemlock	209	275	262	222	293	117	277	89	0.95	0.81	1.07	0.43	1.01	0.32	No Change	Lg. Dec.	COL	INS DRO	-1.34	-0.88	2.7
701	Eastern hophornbeam	168	229	211	228	212	322	215	328	0.92	1.00	0.93	1.41	0.94	1.43	No Change	Sm. Inc.	COL EHS TGR		1.72	1.29	6.4
68	Eastern red cedar	3	2	5	209	12	1249	12	1405	2.50	104.50	6.00	624.50	6.00	702.50	Sm. Inc.	Lg. Inc.	DRO	FTK COL INS	0.56	-1.48	3.9
471	Eastern redbud	0	0	0	6	0	196	0	342	NA	New	NA	New	NA	New	NA	New Habitat			0.9	-0.03	4.9
129	Eastern white pine	460	514	498	526	535	347	522	210	0.97	1.02	1.04	0.68	1.02	0.41	No Change	Lg. Dec.	DISP	DRO FTK INS	-1.97	0.13	3.3
491	Flowering dogwood	4	8	23	69	61	233	62	253	2.88	8.63	7.63	29.13	7.75	31.63	Sm. Inc.	Lg. Inc.	COL		0.07	0.95	5.0
379	Gray birch	0	5	2	6	4	6	4	7	0.40	1.20	0.80	1.20	0.80	1.40	No Change	No Change	DISP EHS	FTK COL INS DISE	-1.14	0.03	3.6
544	Green ash	240	318	256	295	231	635	241	563	0.81	0.93	0.73	2.00	0.76	1.77	Sm. Dec.	Sm. Inc.		INS FTK COL	-0.13	-0.25	4.0
462	Hackberry	0	2	4	107	20	440	19	529	2.00	53.50	10.00	220.00	9.50	264.50	Lg. Inc.	Lg. Inc.	DRO	FTK	1.66	0.3	5.7
552	Honeylocust	1	0	1	35	6	210	6	279	New	New	New	New	New	New	New Habitat	New Habitat		COL	1.91	-0.54	5.5
105	Jack pine	903	844	708	463	578	280	540	268	0.84	0.55	0.69	0.33	0.64	0.32	Sm. Dec.	Lg. Dec.	DRO	COL INS	1.87	-1.24	5.2
409	Mockernut hickory	0	7	12	35	30	167	32	217	1.71	5.00	4.29	23.86	4.57	31.00	Sm. Inc.	Lg. Inc.		FTK	1.69	-0.28	5.4
319	Mountain maple	38	25	12	0	6	0	6	0	0.48	0.00	0.24	0	0.24	0	Lg. Dec.	Lg. Dec.	COL VRE EHS	DRO FTK	0.8	1.48	5.9
809	Northern pin oak	59	57	48	73	60	72	52	173	0.84	1.28	1.05	1.26	0.91	3.04	No Change	Lg. Inc.	DRO FTK	COL	2.52	-0.56	6.0
833	Northern red oak	792	810	887	996	974	895	1008	716	1.10	1.23	1.20	1.11	1.24	0.88	Sm. Inc.	No Change		INS	1.39	0.13	5.4

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241	Northern white-cedar	1246	1147	990	508	820	345	779	316	0.86	0.44	0.72	0.30	0.68	0.28	Sm. Dec.	Lg. Dec.	COL	FTK	-0.7	0.49	4.2	
331	Ohio buckeye	1	0	0	4	1	13	2	18	NA	New	New	New	New	New	New Habitat	New Habitat	COL	SES FTK	0.38	-1.92	3.5	
641	Osage-orange	0	0	2	12	12	95	6	133	New	New	New	New	New	New	New Habitat	New Habitat	EHS ESP		2.32	0.33	6.3	
375	Paper birch	462	512	422	337	390	91	366	43	0.82	0.66	0.76	0.18	0.72	0.08	Sm. Dec.	Lg. Dec.	FRG DISP EHS	FTK COL INS DRO	-1.72	0.18	3.4	
367	Pawpaw	0	0	0	0	0	3	0	22	NA	NA	NA	New	NA	New	NA	New Habitat	COL	DRO	-0.48	-0.32	3.7	
921	Peachleaf willow	9	0	0	0	0	21	0	13	NA	NA	NA	New	NA	New	NA	New Habitat	COL		0.13	-1.65	3.4	
404	Pecan	0	23	0	0	0	3	0	21	0.00	0.00	0	0.13	0	0.91	Lg. Dec.	No Change		FTK INS COL	-1.24	-1.7	2.2	
403	Pignut hickory	0	10	19	70	56	200	58	245	1.90	7.00	5.60	20.00	5.80	24.50	Sm. Inc.	Lg. Inc.	EHS	INS DRO	0.22	0.4	4.7	
761	Pin cherry	71	74	61	50	55	49	61	7	0.82	0.68	0.74	0.66	0.82	0.10	No Change	Lg. Dec.	SES FRG FTK	COL	0.45	-0.68	4.2	
830	Pin oak	7	6	7	51	17	198	18	264	1.17	8.50	2.83	33.00	3.00	44.00	No Change	Lg. Inc.		FTK COL INS DISE	-0.65	-1.39	2.8	
835	Post oak	0	0	0	0	0	281	0	466	NA	NA	NA	New	NA	New	NA	New Habitat	DRO TGR FTK	COL INS DISE	2.17	-0.59	5.7	
746	Quaking aspen	1562	1563	1329	933	1058	356	1042	264	0.85	0.60	0.68	0.23	0.67	0.17	Sm. Dec.	Lg. Dec.	TGR FRG EHS	COL DRO FTK	0.56	0.01	4.7	
316	Red maple	1932	1907	1963	1673	1979	1402	1949	1198	1.03	0.88	1.04	0.74	1.02	0.63	No Change	Sm. Dec.	SES EHS ESP	COL DISP	3	3	8.5	
682	Red mulberry	0	1	1	49	2	271	2	376	1.00	49.00	2.00	271.00	2.00	376.00	No Change	Lg. Inc.	COL DISP	FTK	0.07	0.59	4.7	
125	Red pine	975	865	889	509	786	261	747	193	1.03	0.59	0.91	0.30	0.86	0.22	No Change	Lg. Dec.		INS COL DISP	0.86	-2.42	3.9	
97	Red spruce	0	36	13	11	25	7	20	7	0.36	0.31	0.69	0.19	0.56	0.19	Sm. Dec.	Lg. Dec.	EHS COL	FTK SES	-1.28	-0.62	2.9	
373	River birch	2	0	0	2	1	6	0	35	NA	New	New	New	NA	New	NA	New Habitat	DISP	FTK COL DRO	-0.45	-0.32	3.7	
977	Rock elm	7	3	2	2	1	19	1	26	0.67	0.67	0.33	6.33	0.33	8.67	Sm. Dec.	Lg. Inc.		EHS ESP SES	-0.2	-2.61	2.8	
107	Sand pine	0	1	0	0	0	0	0	0	0.00	0.00	0	0	0	0	Lg. Dec.	Lg. Dec.		DRO INS FTK	-1.09	-1.14	2.7	
931	Sassafras	37	35	67	109	152	251	155	264	1.91	3.11	4.34	7.17	4.43	7.54	Lg. Inc.	Lg. Inc.		COL FTK	0.48	-0.64	4.2	
806	Scarlet oak	3	1	2	17	12	100	14	138	2.00	17.00	12.00	100.00	14.00	138.00	Lg. Inc.	Lg. Inc.	VRE EHS ESP	INS DISE FTK	-0.35	0.71	4.6	
356	Serviceberry	0	3	0	0	0	0	0	0	0.00	0.00	0	0	0	0	Lg. Dec.	Lg. Dec.	COL SES	DRO	-0.38	0.98	4.8	
407	Shagbark hickory	3	31	39	186	74	330	84	384	1.26	6.00	2.39	10.65	2.71	12.39	Lg. Inc.	Lg. Inc.		INS FTK	-0.2	0.37	4.4	
405	Shellbark hickory	0	0	0	0	0	16	0	23	NA	NA	NA	New	NA	New	NA	New Habitat	COL	FTK EHS	-0.48	-0.3	3.7	
817	Shingle oak	0	0	0	0	0	81	0	112	NA	NA	NA	New	NA	New	NA	New Habitat	EHS	COL	1.31	-0.74	4.9	
110	Shortleaf pine	0	0	0	0	0	3	0	13	NA	NA	NA	New	NA	New	NA	New Habitat	EHS	COL INS DRO		0	-0.97	3.6
317	Silver maple	77	106	120	323	152	674	167	748	1.13	3.05	1.43	6.36	1.58	7.06	Sm. Inc.	Lg. Inc.	DISP SES COL	DRO FTK	0.13	1.63	5.6	
975	Slippery elm	19	13	30	162	62	380	81	422	2.31	12.46	4.77	29.23	6.23	32.46	Sm. Inc.	Lg. Inc.	COL	FTK DISE	0.03	0.68	4.8	
711	Sourwood	0	1	0	0	0	1	0	1	0.00	0.00	0	1.00	0	1.00	Lg. Dec.	No Change	COL EHS		2.59	0.98	6.9	
315	Striped maple	20	15	8	4	12	6	9	3	0.53	0.27	0.80	0.40	0.60	0.20	No Change	Sm. Dec.	COL SES	DRO	0.96	0.25	5.1	
318	Sugar maple	1613	1680	1574	1043	1429	843	1385	698	0.94	0.62	0.85	0.50	0.82	0.42	No Change	Lg. Dec.	COL EHS		0.86	1.34	5.8	
461	Sugarberry	0	0	0	0	0	1	0	36	NA	NA	NA	New	NA	New	NA	New Habitat	COL SES	FTK	-0.17	0.64	4.6	
804	Swamp white oak	12	17	15	28	17	106	19	115	0.88	1.65	1.00	6.24	1.12	6.77	No Change	Lg. Inc.			1.04	-0.3	4.9	
372	Sweet birch	1	4	5	10	14	26	12	17	1.25	2.50	3.50	6.50	3.00	4.25	No Change	Sm. Inc.	DISP	FTK COL INS DISE	-1.28	-0.32	3.2	
731	Sycamore	1	0	3	12	12	27	13	101	New	New	New	New	New	New	New Habitat	New Habitat			1.28	-0.9	4.8	
71	Tamarack (native)	204	240	181	131	151	97	148	90	0.75	0.55	0.63	0.40	0.62	0.38	Sm. Dec.	Lg. Dec.		FTK COL INS	-0.48	-1.24	3.1	
541	White ash	255	391	418	459	473	724	484	629	1.07	1.17	1.21	1.85	1.24	1.61	Sm. Inc.	Sm. Inc.		INS FTK COL	-2.01	-0.54	2.7	
802	White oak	389	369	518	744	604	943	628	937	1.40	2.02	1.64	2.56	1.70	2.54	Sm. Inc.	Lg. Inc.	EHS ESP TGR FTK	INS DISE	1.66	1	6.1	
94	White spruce	205	213	159	91	116	72	100	57	0.75	0.43	0.55	0.34	0.47	0.27	Lg. Dec.	Lg. Dec.		INS	0.07	-0.62	3.9	
766	Wild plum	0	0	0	0	0	14	0	114	NA	NA	NA	New	NA	New	NA	New Habitat		COL	0.48	-1.34	3.9	
371	Yellow birch	176	227	195	134	208	43	184	38	0.86	0.59	0.92	0.19	0.81	0.17	No Change	Lg. Dec.	DISP	FTK INS DISE	-1.38	-0.03	3.4	
621	Yellow-poplar	0	3	11	24	33	76	30	98	3.67	8.00	11.00	25.33	10.00	32.67	Lg. Inc.	Lg. Inc.	SES DISP EHS	INP	0.13	1.26	5.3	