Begay B., Fitzgerald S., Strimbu B.M., 2026. Impact of forest management activities on forest aesthetics using photogrammetric point cloud. Ann. For. Res. 69(1): 183-204.

Table 5 Stand A Visual Impact metrics categorized by pattern number and viewpoints. Five viewpoints delineated in the various management patterns in highly visible locations were chosen. Total Visible area is shown in the pixels column, with each pixel spatial size recorded in meters. Critical Area High (CAH) and Critical Area Low (CAL) refer to the special designation areas in meters where roads outside the McDonald Dunn Research Forest and CAL refer to roads inside the McDonald Dunn Research Forest.

Design	Viewpoint	Pixels (m)	CAH (m)	CAL (m)
1	1	1457193	3.630966	2.582745
1	2	429508	0.713887	0.900452
1	3	307790	0.569578	0.242163
1	4	1828803	9.387533	0.562659
1	5	242237	0	0.527323
2	1	1955857	5.00932	3.614163
2	2	2233447	10.34754	1.14904
2	3	173298	0	0.344218
2	4	703663	1.798433	1.34623
2	5	1376240	7.464312	0.387708
3	1	82101	0	0.201885
3	2	4962169	20.94144	0.667432
3	3	4825953	21.99337	1.665243
3	4	843711	5.698003	0.320743
3	5	538534	1.434694	0.02644
4	1	5109483	20.82395	0.964699
4	2	2898672	9.87574	0
4	3	3223361	17.10662	1.49054
4	4	2329114	13.61105	0.288372
4	5	1993491	6.943456	1.618787
5	1	1960390	4.166023	3.91069
5	2	5449474	23.49069	2.423115
5	3	2441800	13.98193	0.464805
5	4	2663776	9.748965	2.137214
5	5	2103342	7.641762	1.675869
6	1	2353049	10.84521	1.295079
6	2	5750202	27.44006	0.251553
6	3	993096	1.992164	2.518745
6	4	1482807	6.737575	0.074873
6	5	778153	3.273899	0.026934
7	1	2210389	9.44931	1.361798
7	2	7017860	33.71555	0.272063
7	3	1035933	2.309447	2.640568
7	4	1410911	6.448709	0.010873
7	5	764156	3.278594	0.023969
8	1	4925274	27.18802	0.200155
8	2	4475973	25.42838	0.184094
8	3	888857	2.75053	1.48535
8	4	985501	4.805211	0.019521
8	5	1016920	4.45358	0
9	1	3509651	16.07519	2.172303
9	2	5106789	26.85887	3.162702
9	3	5354299	26.44324	0.103784
9	4	2300123	7.978044	1.835005
9	5	2283959	13.88584	0.013838
10	1	1012680	4.677458	0.787525
10	2	6514738	28.85425	0.02644
10	3	1756330	7.919727	0.444048
10	4	2453286	15.92495	0.078827
10	5	757725	3.712511	0
11	1	1929618	7.44825	1.965476
11	2	6249060	27.0998	1.791514
11	3	2464906	11.22501	0.811494
11	4	908596	5.066649	0.091182
11	5	815069	1.25233	0.68547
12	1	1244196	3.184694	2.420644
12	2	1735751	6.872989	0.330133
12	3	1190736	3.027535	2.723348
12	4	2284823	14.46876	0.722289
12	5	2906593	15.08826	2.232597
13	1	4575	0	0.036077
13	2	427123	0.648899	0.918244
13	3	448761	3.296386	0.131954
13	4	12580	0.125035	0.090935
13	5	986413	5.285584	0.285901
14	1	291771	0.769239	0.540419
14	2	39807	0	0.406983
14	3	46996	0.155429	0.029406
14	4	1055528	5.358727	0.088711
14	5	174886	0.255507	0.241916
15	1	3747015	13.12006	4.496577
15	2	9592289	43.29212	3.691507
15	3	7262589	29.74877	2.177987
15	4	5496802	28.22932	1.657089
15	5	4030196	19.90582	3.523476

Table 6 Stand B Visual Impact metrics categorized by pattern number and viewpoints. Five viewpoints delineated in the various management patterns in highly visible locations were chosen. Total Visible area is shown in the pixels column, with each pixel spatial size recorded in meters. Critical Area High (CAH) and Critical Area Low (CAL) refer to the special designation areas in meters where roads outside the McDonald Dunn Research Forest and CAL refer to roads inside the McDonald Dunn Research Forest.

Design	Viewpoint	Pixels (m)	CAH (m)	CAL (m)
1	1	2053	0	0
1	2	2830	0	0.005436
1	3	3383	0	0.00766
1	4	6822	0	0.050409
1	5	3450	0	0
2	1	35240	0.430705	0.018039
2	2	5442	0	0.00173
2	3	8036	0	0.066718
2	4	14418	0	0.168526
2	5	3489	0	0.016062
3	1	1607	0	0
3	2	7270	0	0.000988
3	3	7922	0	0.000741
3	4	4227	0	0.044479
3	5	4407	0	0.059305
4	1	6762	0	0.006178
4	2	5841	0	0
4	3	7294	0	0
4	4	8188	0	0.07339
4	5	20157	0	0.157159
5	1	2093	0	0
5	2	4022	0	0.006425
5	3	10774	0	0.107491
5	4	4558	0	0.002718
5	5	4244	0	0.003954
6	1	3897	0	0.045467
6	2	7320	0	0.033359
6	3	2552	0	0.005931
6	4	2660	0	0.047444
6	5	4489	0	0.057823
7	1	344589	2.745835	0.101807
7	2	5873	0	0.052881
7	3	97394	0.807293	0.014085
7	4	3800	0	0.040525
7	5	6367	0.045467	0.017297
8	1	3660	0	0.049915
8	2	5789	0	0.029158
8	3	114078	0.795926	0.003954
8	4	23480	0.073637	0.435647
8	5	2892	0	0.068201
9	1	5891	0	0.013344
9	2	45544	0	0.032124
9	3	3851	0	0.042255
9	4	10359	0	0.072896
9	5	3170	0	0.000247
10	1	199474	0.249576	0.504342
10	2	51096	0.041019	0.13146
10	3	4714	0	0.025205
10	4	4040	0	0.099583
10	5	13012	0	0.10502
11	1	310919	2.375177	0.117622
11	2	286321	0.301716	0.569084
11	3	185004	0.40377	0.475678
11	4	17341	0	0.153452
11	5	14552	0	0.142827
12	1	41566	0	0.19892
12	2	38569	0.285407	0.123306
12	3	4321	0	0.058317
12	4	2507	0	0.007413
12	5	16090	0	0.1878
13	1	6469	0	0
13	2	28835	0.050657	0
13	3	7040	0.000988	0
13	4	4445	0.077097	0
13	5	7238	0.155429	0
14	1	4186	0	0
14	2	4368	0.000988	0
14	3	30825	0.15024	0
14	4	9212	0.170997	0
14	5	3341	0.039784	0
15	1	226871	0.255507	0.713887
15	2	206906	0.503107	0.553763
15	3	16921	0.124294	0.023722
15	4	91568	0.236727	0.237221
15	5	4158	0.066471	0

Table 7 Stand A metrics for each design. Stand area is 29.7 ha and initially had 7069 trees.

Design	Area [ha]		Trees		Height after Harvest (m)	Volume (m3)	
	uncut	Cut	uncut	Cut		uncut	cut
1	5.34	24.34	1450	5619	21.3	2040.9	6939.3
2	5.64	24.04	1254	5815	21.2	1882.4	7097.8
3	5.34	24.34	1399	5670	18.8	1769.7	7210.5
4	2.86	26.83	884	6185	18.7	1076.2	7904.0
5	2.64	27.05	617	6452	21.5	1109.6	7870.5
6	5.33	24.35	1226	5843	19.4	1597.5	7382.6
7	1.86	27.82	427	6642	18.5	484.7	8495.5
8	5.84	23.84	1791	5278	18.4	2282.8	6697.3
9	2.40	27.28	669	6400	17.8	718.1	8262.1
10	10.42	19.26	2207	4862	19.3	2649.8	6330.4
11	4.31	25.37	1044	6025	22.6	1946.1	7034.0
12	4.75	24.93	1194	5875	21.6	2078.8	6901.3
13	8.84	20.84	2138	4931	20.4	2847.2	6133.0
14	9.83	19.85	2278	4791	19.6	2832.3	6147.9
15	0.00	29.68	0	7069	0.0	0.0	8980.1

Table 8 Stand B metrics for each design. Stand area is 3.47 ha and initially had 498 trees.

Design	Area [ha]		Trees		Height after Harvest (m)	Volume (m3)	
	uncut	Cut	uncut	Cut		uncut	cut
1	1.07	2.40	156	342	31.8	315.0	662.5
2	0.43	3.04	63	435	35.0	161.0	816.4
3	1.23	2.24	167	331	31.4	330.7	646.7
4	0.66	2.81	100	398	32.6	216.2	761.3
5	1.26	2.21	181	317	30.4	341.5	636.0
6	0.92	2.55	134	364	29.9	247.5	730.0
7	0.76	2.71	134	364	28.9	176.8	800.7
8	0.57	2.89	112	386	34.1	196.8	780.7
9	1.41	2.06	82	416	33.9	170.2	807.3
10	0.25	3.21	72	426	32.6	82.9	894.6
11	0.25	3.21	35	463	35.6	92.5	885.0
12	0.52	2.95	34	464	36.1	175.8	801.7
13	0.50	2.97	64	434	31.6	145.4	832.1
14	0.39	3.08	74	424	36.2	152.1	825.3
15	0.00	3.47	0	498	0.0	0.0	977.5