

Table. Range of variation in landscape structure for Cool Moist Mixed-Conifer with Aspen Forest under the simulated HRV disturbance scenario on the Dolores District, San Juan National Forest, Colorado, and the degree of departure of the current landscape from the simulated range of variation (see text for details).

Landscape Metric	Condition Class (seral stage)	Current Landscape ¹		Percentiles of Simulated Distribution							HRV Departure	
		Metric Value	Percentile of HRV	0	5	25	50	75	95	100	CV ²	Index ³
<i>Seral Stage Composition⁴</i>												
PLAND	Stand Initiation	0.033	2	0.013	0.057	0.195	0.374	0.701	1.947	3.148	505	73
	Stem Exclusion	0.962	40	0.094	0.397	0.682	1.106	1.842	3.018	3.764	237	
	Understory Reinitiation	5.157	100	0.988	1.425	2.013	2.791	3.445	4.374	5.000	106	
	Shifting Mosaic	0.033	0	0.218	0.333	0.990	1.483	1.848	2.964	3.800	177	
<i>Class Configuration⁵</i>												
PD	Stand Initiation	0.007	0	0.043	0.078	0.132	0.177	0.248	0.476	0.699	225	100
	Stem Exclusion	0.023	0	0.167	0.243	0.344	0.423	0.526	0.700	0.869	108	
	Understory Reinitiation	0.134	0	0.345	0.490	0.705	0.821	0.936	1.149	1.570	80	
	Shifting Mosaic	0.001	0	0.044	0.098	0.674	0.810	0.905	1.122	1.373	126	
ED	Stand Initiation	0.081	0	0.103	0.323	0.730	1.274	2.051	4.983	6.990	366	74
	Stem Exclusion	1.015	1	0.549	1.493	2.306	3.405	4.726	6.889	8.890	158	
	Understory Reinitiation	6.483	34	3.325	4.335	6.075	7.055	7.575	8.687	10.079	62	
	Shifting Mosaic	0.040	0	0.740	1.416	3.846	4.467	5.822	7.849	10.314	144	
AREA_MN	Stand Initiation	4.382	91	0.236	0.621	1.335	2.048	3.375	4.931	6.887	210	91
	Stem Exclusion	42.500	100	0.564	1.303	1.854	2.512	3.615	5.418	6.222	164	
	Understory Reinitiation	38.423	100	1.096	1.535	2.246	3.323	4.532	7.605	14.094	183	
	Shifting Mosaic	42.531	100	0.467	0.667	1.377	1.947	3.115	5.471	9.759	247	
AREA_AM	Stand Initiation	7.095	5	1.222	7.112	23.191	43.727	84.090	229.203	422.460	508	45
	Stem Exclusion	492.587	100	8.755	24.330	41.495	65.455	110.494	227.885	351.125	311	
	Understory Reinitiation	186.457	68	25.857	42.778	63.849	124.322	214.733	342.665	402.184	241	
	Shifting Mosaic	43.027	27	8.464	20.749	42.491	56.877	81.042	152.828	351.018	232	
GYRATE_AM	Stand Initiation	124.770	6	42.592	117.859	216.290	307.604	419.082	617.883	883.430	163	51
	Stem Exclusion	942.748	100	147.209	219.567	295.601	368.241	455.532	600.774	733.840	104	
	Understory Reinitiation	651.708	82	225.903	294.568	357.985	479.071	605.124	759.179	858.682	97	
	Shifting Mosaic	299.836	30	123.556	188.139	278.877	335.214	399.422	541.057	780.900	105	
SHAPE_MN	Stand Initiation	1.314	39	1.131	1.215	1.282	1.335	1.383	1.440	1.587	17	75

	Stem Exclusion	1.816	100	1.203	1.264	1.315	1.357	1.393	1.455	1.534	14	
	Understory Reinitiation	1.962	100	1.202	1.269	1.321	1.363	1.392	1.449	1.515	13	
	Shifting Mosaic	1.934	100	1.173	1.202	1.259	1.293	1.352	1.583	1.864	29	
SHAPE_AM	Stand Initiation	1.507	0	1.415	2.094	2.625	3.026	3.724	4.946	7.433	94	58
	Stem Exclusion	3.979	75	2.123	2.534	2.942	3.399	3.990	4.788	6.686	66	
	Understory Reinitiation	3.108	17	2.579	2.825	3.294	3.682	4.003	4.373	6.714	42	
	Shifting Mosaic	1.998	0	2.108	2.478	2.768	3.024	3.460	4.178	6.160	56	
CPLAND	Stand Initiation	0.015	5	0.001	0.014	0.079	0.160	0.359	1.074	2.185	664	70
	Stem Exclusion	0.828	59	0.042	0.201	0.401	0.664	1.239	2.103	2.757	286	
	Understory Reinitiation	4.449	100	0.601	0.943	1.395	2.147	2.819	3.643	4.275	126	
	Shifting Mosaic	0.033	0	0.112	0.233	0.691	1.145	1.491	2.413	3.226	190	
CORE_MN	Stand Initiation	1.990	79	0.009	0.132	0.514	0.911	1.775	2.964	4.874	311	79
	Stem Exclusion	36.575	100	0.253	0.662	1.091	1.624	2.406	4.013	4.846	206	
	Understory Reinitiation	33.149	100	0.782	1.068	1.594	2.579	3.632	6.258	11.920	201	
	Shifting Mosaic	42.125	100	0.181	0.460	1.013	1.549	2.462	4.460	7.987	258	
CORE_AM	Stand Initiation	3.625	8	0.107	2.192	11.465	24.602	50.199	145.307	257.431	582	42
	Stem Exclusion	440.177	100	5.773	16.202	29.776	48.517	82.981	182.045	268.651	342	
	Understory Reinitiation	165.364	68	19.262	34.055	51.786	105.701	191.902	311.121	367.786	262	
	Shifting Mosaic	42.577	41	4.965	17.495	33.962	48.186	72.078	135.046	319.689	244	
CAI_MN	Stand Initiation	32.345	100	0.904	3.516	6.514	9.734	13.499	20.984	32.115	179	100
	Stem Exclusion	66.855	100	6.181	8.562	11.634	14.822	19.178	30.030	47.049	145	
	Understory Reinitiation	79.542	100	7.063	17.075	25.735	37.812	47.178	59.715	66.895	113	
	Shifting Mosaic	99.138	100	19.275	24.781	36.892	46.921	57.285	68.463	78.225	93	
CAI_AM	Stand Initiation	45.420	49	3.171	19.066	36.128	45.811	54.195	63.342	70.774	97	75
	Stem Exclusion	86.060	100	38.406	50.473	57.398	63.710	68.459	73.303	78.114	36	
	Understory Reinitiation	86.274	100	52.092	60.405	71.678	78.483	81.914	84.709	86.261	31	
	Shifting Mosaic	99.045	100	35.175	58.675	72.112	77.346	80.853	84.176	86.446	33	
PROX_MN	Stand Initiation	4.295	17	0.380	1.990	6.322	11.887	29.436	84.684	197.512	696	66
	Stem Exclusion	102.099	93	2.430	6.348	13.422	24.623	49.796	108.047	165.760	413	
	Understory Reinitiation	134.629	92	9.936	15.794	28.344	48.993	86.825	141.239	190.061	256	
	Shifting Mosaic	3.024	3	1.831	4.836	12.388	18.341	25.970	75.244	114.764	384	
PROX_AM	Stand Initiation	3.663	12	0.156	2.121	7.954	18.984	51.095	184.513	385.956	961	52

	Stem Exclusion	40.390	44	2.813	9.340	22.570	47.537	102.504	216.755	440.257	436	
	Understory Reinitiation	272.602	89	18.960	24.858	50.802	104.159	184.396	419.286	654.921	379	
	Shifting Mosaic	2.989	0	3.189	7.122	19.105	39.944	75.539	249.142	540.093	606	
CWED	Stand Initiation	0.033	0	0.039	0.131	0.269	0.473	0.756	1.692	2.751	330	74
	Stem Exclusion	0.256	1	0.144	0.401	0.635	0.912	1.224	1.747	2.264	148	
	Understory Reinitiation	1.225	58	0.597	0.733	0.988	1.175	1.381	1.833	2.599	94	
	Shifting Mosaic	0.001	0	0.095	0.176	0.541	0.691	0.846	1.106	1.683	135	
TECI	Stand Initiation	40.338	86	28.641	31.835	34.937	37.281	39.238	41.940	45.819	27	45
	Stem Exclusion	25.203	15	23.293	24.380	25.627	26.496	27.134	27.924	28.676	13	
	Understory Reinitiation	18.891	59	8.860	11.202	14.624	17.791	20.671	27.005	32.388	89	
	Shifting Mosaic	3.228	0	8.283	9.507	12.099	14.658	17.778	24.175	28.915	100	
CLUMPY	Stand Initiation	0.868	98	0.457	0.638	0.752	0.798	0.838	0.859	0.890	28	98
	Stem Exclusion	0.938	100	0.647	0.739	0.785	0.815	0.841	0.864	0.885	15	
	Understory Reinitiation	0.919	100	0.699	0.765	0.808	0.838	0.864	0.898	0.911	16	
	Shifting Mosaic	0.950	100	0.616	0.681	0.764	0.808	0.830	0.862	0.888	22	
IJI	Stand Initiation	49.605	1	37.797	53.608	57.970	60.534	63.304	66.574	70.170	21	68
	Stem Exclusion	62.944	81	48.122	52.880	57.485	59.963	62.389	65.744	67.799	21	
	Understory Reinitiation	68.527	93	42.303	51.208	57.285	60.512	63.696	70.296	73.231	32	
	Shifting Mosaic	42.951	5	36.823	43.106	49.971	53.026	56.034	61.791	65.574	35	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	73
<i>Class Configuration Departure Index</i>	70
<i>Cover Type Departure Index</i>	72

¹Some stand conditions are not represented in the current landscape. Certain metrics are logically zero if the class is absent, while others are undefined (indicated by missing data). HRV departure index is undefined if the current landscape condition is undefined.

²CV = coefficient of variation in the simulated distribution, computed as the difference between the 5 and 95th percentiles divided by the median and multiplied by 100 to convert to a percentage. n/d = not defined (division by zero).

³HRV departure index represents the degree of departure of the current landscape condition from the historic range of variability and is given here specifically as the degree of departure from the 25-75th percentile range of variation, where a 0 represents no departure (i.e., within the 25-75th percentiles of variation) and 100 represents complete departure (i.e., outside the 0-100th percentiles of variation).

⁴Landscape composition here represents the distribution of area among seral stages for the corresponding cover type. PLAND = the percent of the landscape encompassed by the corresponding seral stage. Note, PLAND = the percentage of the entire landscape, not as a percent of the corresponding cover type.

⁵Landscape configuration here represents the spatial character, distribution, and arrangement of the corresponding cover type. The landscape metrics listed here are described in detail in the FRAGSTATS methods section. PD = patch density; ED = edge density; AREA_MN = mean patch size; AREA_AM = area-weighted mean patch size; GYRATE_AM = area-weighted mean patch radius of gyration (correlation length); SHAPE_MN = mean patch shape index; SHAPE_AM = area-weighted mean patch shape index; CPLAND = core area percent of landscape; CORE_MN = mean patch core area; CORE_AM = area-weighted mean patch core area; CAI_MN = mean patch core area index; CAI_AM = area-weighted mean patch core area index; PROX_MN = mean proximity index; PROX_AM = area-weighted mean proximity index; CWED = contrast-weighted edge density; TECI = total edge contrast index; CLUMPY = clumpiness index; IJI = interspersion and juxtaposition index.

⁶Seral-stage departure index is based on the distribution of area (percentage of landscape) among seral stages and is computed as the mean departure across seral stages. Class configuration departure index is based on several landscape metrics that quantify different aspects of the spatial distribution of the cover type and is computed as the mean departure across metrics. Cover type departure index is computed as the mean of the seral-stage and class configuration departure indices.