

Table. Range of variation in landscape structure for Cool Moist Mixed-Conifer Forest under the simulated HRV disturbance scenario on the Columbine 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							CV ²	HRV Departure Index ³
		Metric Value	Percentile of HRV	0	5	25	50	75	95	100		
<i>Seral Stage Composition</i> ⁴												
PLAND	Stand Initiation	0.215	5	0.113	0.219	0.378	0.555	0.819	1.164	1.589	170	85
	Stem Exclusion	0.810	10	0.535	0.736	1.031	1.231	1.398	1.655	1.916	75	
	Understory Reinitiation	2.640	100	0.347	0.533	0.877	1.060	1.319	1.556	1.791	97	
	Shifting Mosaic	0.055	0	0.435	0.545	0.651	0.771	0.957	1.177	1.551	82	
<i>Class Configuration</i> ⁵												
PD	Stand Initiation	0.085	0	0.102	0.154	0.200	0.239	0.295	0.381	0.461	95	100
	Stem Exclusion	0.048	0	0.250	0.384	0.466	0.517	0.603	0.928	1.226	105	
	Understory Reinitiation	0.097	0	0.394	0.474	0.572	0.657	0.725	0.857	1.027	58	
	Shifting Mosaic	0.001	0	0.184	0.350	0.440	0.501	0.549	0.664	0.745	63	
ED	Stand Initiation	0.651	1	0.522	0.871	1.329	1.736	2.320	3.135	3.862	130	86
	Stem Exclusion	1.194	0	2.076	2.614	3.424	3.880	4.324	5.269	6.367	68	
	Understory Reinitiation	2.941	14	1.729	2.359	3.452	4.004	4.640	5.936	6.870	89	
	Shifting Mosaic	0.072	0	1.676	2.004	2.307	2.595	2.986	3.475	3.920	57	
AREA_MN	Stand Initiation	2.549	58	0.692	1.086	1.775	2.318	2.950	4.136	5.808	132	75
	Stem Exclusion	17.025	100	0.723	1.077	1.791	2.327	2.819	3.790	5.176	117	
	Understory Reinitiation	27.178	100	0.498	0.946	1.275	1.587	2.028	2.629	3.252	106	
	Shifting Mosaic	85.094	100	0.834	0.992	1.294	1.634	1.936	2.929	6.080	119	
AREA_AM	Stand Initiation	16.834	5	7.655	16.446	35.088	49.215	69.112	126.224	246.998	223	51
	Stem Exclusion	80.043	76	19.210	32.989	47.589	58.625	78.126	113.319	154.183	137	
	Understory Reinitiation	215.676	100	10.350	21.132	42.526	54.478	67.992	100.734	149.896	146	
	Shifting Mosaic	103.633	81	17.546	26.398	46.775	58.990	81.225	133.067	175.602	181	
GYRATE_A	Stand Initiation	187.525	5	128.477	191.524	263.913	308.243	363.394	508.084	884.215	103	83
	Stem Exclusion	431.554	88	196.111	250.205	302.731	336.287	386.831	467.116	530.139	65	
	Understory Reinitiation	706.570	100	143.386	191.518	275.176	306.716	357.508	431.077	581.404	78	
	Shifting Mosaic	545.866	100	186.623	217.970	286.430	321.068	378.242	505.608	593.789	90	
SHAPE_MN	Stand Initiation	1.333	31	1.236	1.288	1.325	1.356	1.389	1.423	1.490	10	75

	Stem Exclusion	1.674	100	1.234	1.292	1.333	1.362	1.383	1.425	1.471	10	
	Understory Reinitiation	1.677	100	1.256	1.295	1.318	1.341	1.379	1.480	1.559	14	
	Shifting Mosaic	3.109	100	1.214	1.234	1.264	1.282	1.301	1.355	1.683	9	
SHAPE_AM	Stand Initiation	2.059	0	2.241	2.416	2.739	2.983	3.307	3.923	4.688	51	70
	Stem Exclusion	2.427	0	2.473	2.784	3.054	3.244	3.519	4.087	5.893	40	
	Understory Reinitiation	2.555	5	2.260	2.569	3.027	3.269	3.590	4.643	6.860	63	
	Shifting Mosaic	3.048	66	2.222	2.381	2.656	2.864	3.122	3.807	5.666	50	
CPLAND	Stand Initiation	0.153	14	0.036	0.092	0.208	0.311	0.507	0.745	1.101	210	76
	Stem Exclusion	0.756	10	0.508	0.696	0.972	1.171	1.332	1.584	1.830	76	
	Understory Reinitiation	2.398	100	0.265	0.385	0.691	0.870	1.064	1.347	1.568	111	
	Shifting Mosaic	0.054	0	0.304	0.425	0.530	0.654	0.814	1.040	1.392	94	
CORE_MN	Stand Initiation	1.813	73	0.213	0.453	0.948	1.339	1.850	2.643	4.253	164	75
	Stem Exclusion	15.886	100	0.691	1.017	1.696	2.207	2.677	3.618	4.972	118	
	Understory Reinitiation	24.682	100	0.372	0.693	1.007	1.295	1.672	2.251	2.868	120	
	Shifting Mosaic	83.313	100	0.635	0.799	1.052	1.349	1.654	2.398	5.442	119	
CORE_AM	Stand Initiation	12.879	9	3.223	9.595	22.981	34.614	50.962	98.759	200.207	258	47
	Stem Exclusion	76.574	75	18.798	32.039	45.730	57.622	75.273	110.078	148.708	135	
	Understory Reinitiation	201.047	100	7.915	18.016	38.240	49.032	62.740	93.489	138.329	154	
	Shifting Mosaic	102.479	81	15.126	23.070	42.474	53.618	72.461	123.076	162.371	187	
CAI_MN	Stand Initiation	44.912	100	4.401	8.482	12.716	15.341	18.930	23.522	28.804	98	57
	Stem Exclusion	88.710	21	83.100	86.972	88.880	89.876	90.870	92.934	94.066	7	
	Understory Reinitiation	55.600	22	33.743	45.626	56.888	64.926	70.873	76.320	80.888	47	
	Shifting Mosaic	96.381	100	34.111	44.098	58.772	65.650	70.584	76.787	81.843	50	
CAI_AM	Stand Initiation	71.113	99	24.904	40.970	51.903	58.013	62.512	68.013	73.380	47	97
	Stem Exclusion	93.312	3	92.723	93.700	94.522	95.113	95.490	96.086	96.683	3	
	Understory Reinitiation	90.815	100	61.877	71.757	78.710	82.745	85.276	88.362	90.375	20	
	Shifting Mosaic	97.907	100	69.918	75.879	81.123	84.287	86.551	89.344	90.984	16	
PROX_MN	Stand Initiation	7.889	18	2.510	4.093	9.496	16.206	23.864	35.654	94.929	195	57
	Stem Exclusion	39.450	91	8.941	12.969	19.000	26.003	32.435	43.004	63.980	116	
	Understory Reinitiation	31.606	84	3.422	8.020	15.007	19.870	26.761	41.899	58.462	171	
	Shifting Mosaic	0.000	0	5.459	7.542	9.668	13.393	18.497	28.375	48.985	156	
PROX_AM	Stand Initiation	5.706	15	1.383	3.594	7.350	13.569	24.568	59.688	117.279	413	43

	Stem Exclusion	19.644	25	6.217	11.693	19.531	26.224	38.973	77.080	112.147	249	
	Understory Reinitiation	43.441	83	3.736	10.939	16.443	24.044	37.963	58.888	154.322	199	
	Shifting Mosaic	0.000	0	4.511	5.934	9.948	15.770	22.199	30.386	108.797	155	
CWED	Stand Initiation	0.153	0	0.190	0.292	0.417	0.540	0.749	0.965	1.253	125	94
	Stem Exclusion	0.252	0	0.422	0.520	0.683	0.775	0.859	1.052	1.272	69	
	Understory Reinitiation	0.414	6	0.281	0.409	0.556	0.661	0.760	0.954	1.249	82	
	Shifting Mosaic	0.002	0	0.227	0.267	0.317	0.367	0.414	0.497	0.574	63	
TECI	Stand Initiation	23.413	0	27.514	29.326	30.821	31.813	32.751	34.309	36.457	16	90
	Stem Exclusion	20.822	100	19.007	19.439	19.770	19.982	20.133	20.396	20.812	5	
	Understory Reinitiation	14.031	10	11.812	12.746	14.922	16.274	17.768	20.480	23.252	48	
	Shifting Mosaic	2.833	0	8.058	10.318	12.413	13.958	15.788	18.803	23.150	61	
CLUMPY	Stand Initiation	0.818	58	0.655	0.718	0.783	0.811	0.830	0.855	0.882	17	75
	Stem Exclusion	0.911	100	0.607	0.708	0.774	0.806	0.820	0.852	0.878	18	
	Understory Reinitiation	0.931	100	0.588	0.678	0.731	0.762	0.787	0.817	0.843	18	
	Shifting Mosaic	0.937	100	0.724	0.741	0.768	0.796	0.819	0.842	0.872	13	
IJI	Stand Initiation	53.694	1	51.493	56.589	59.670	61.635	63.344	66.465	70.525	16	99
	Stem Exclusion	67.658	100	37.803	43.814	54.488	57.659	60.492	63.810	68.078	35	
	Understory Reinitiation	62.710	100	38.804	45.483	50.029	52.685	54.930	58.461	61.394	25	
	Shifting Mosaic	33.775	0	45.564	48.876	51.746	54.495	56.690	60.948	64.354	22	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	85
<i>Class Configuration Departure Index</i>	75
<i>Cover Type Departure Index</i>	80

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.