

Table. Range of variation in landscape structure for Cool Moist Mixed-Conifer with Aspen 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							HRV Departure	
		Metric Value	Percentile of HRV	0	5	25	50	75	95	100	CV ²	Index ³
<i>Seral Stage Composition</i> ⁴												
PLAND	Stand Initiation	0.882	52	0.054	0.188	0.454	0.845	1.535	2.810	4.592	310	75
	Stem Exclusion	0.296	0	0.513	0.947	1.581	2.386	3.084	4.142	4.898	134	
	Understory Reinitiation	8.835	100	2.217	2.966	3.797	4.369	5.004	6.033	6.919	70	
	Shifting Mosaic	0.043	0	0.338	1.126	1.717	2.010	2.495	3.197	3.952	103	
<i>Class Configuration</i> ⁵												
PD	Stand Initiation	0.252	33	0.064	0.134	0.230	0.304	0.420	0.589	0.994	150	75
	Stem Exclusion	0.018	0	0.406	0.486	0.592	0.671	0.755	0.941	1.162	68	
	Understory Reinitiation	0.294	0	0.701	0.903	1.074	1.198	1.350	1.567	2.114	55	
	Shifting Mosaic	0.002	0	0.192	0.441	1.050	1.183	1.288	1.532	1.800	92	
ED	Stand Initiation	2.134	43	0.267	0.796	1.462	2.442	3.737	6.489	10.932	233	50
	Stem Exclusion	0.413	0	2.084	3.215	4.556	5.986	7.344	8.522	11.692	89	
	Understory Reinitiation	10.200	53	7.114	8.023	9.160	10.097	11.045	12.364	14.413	43	
	Shifting Mosaic	0.056	0	1.173	3.437	5.789	6.379	7.329	8.772	9.602	84	
AREA_MN	Stand Initiation	3.498	64	0.437	1.002	1.778	2.930	4.101	6.551	10.047	189	75
	Stem Exclusion	16.597	100	1.069	1.583	2.600	3.339	4.256	5.930	8.315	130	
	Understory Reinitiation	30.048	100	1.245	2.113	2.944	3.562	4.417	6.195	9.497	115	
	Shifting Mosaic	21.896	100	0.878	1.154	1.547	1.813	2.106	3.025	5.615	103	
AREA_AM	Stand Initiation	63.357	35	3.178	19.206	51.872	90.745	169.535	298.644	464.920	308	32
	Stem Exclusion	88.836	30	28.116	42.496	82.251	126.122	188.457	316.442	444.798	217	
	Understory Reinitiation	297.692	97	56.041	86.333	132.163	171.193	210.976	291.803	348.469	120	
	Shifting Mosaic	115.284	86	46.359	53.018	68.781	84.964	104.686	130.664	196.828	91	
GYRATE_AI	Stand Initiation	361.894	36	82.217	196.026	319.921	425.759	581.657	821.668	1082.830	147	46
	Stem Exclusion	471.192	41	228.521	284.538	402.712	507.233	621.454	774.894	989.172	97	
	Understory Reinitiation	841.890	100	299.209	397.702	509.218	573.070	643.213	740.710	830.187	60	
	Shifting Mosaic	532.324	96	274.236	302.037	357.567	404.272	457.696	519.231	689.890	54	
SHAPE_MN	Stand Initiation	1.300	20	1.187	1.260	1.306	1.346	1.385	1.443	1.541	14	80

	Stem Exclusion	1.618	100	1.233	1.278	1.325	1.354	1.378	1.428	1.480	11	
	Understory Reinitiation	1.698	100	1.247	1.275	1.309	1.334	1.359	1.411	1.430	10	
	Shifting Mosaic	1.707	100	1.221	1.231	1.255	1.273	1.287	1.356	1.601	10	
SHAPE_AM	Stand Initiation	2.799	10	1.907	2.605	3.168	3.679	4.352	5.410	7.860	76	61
	Stem Exclusion	2.181	0	2.582	3.024	3.525	3.916	4.393	5.075	5.860	52	
	Understory Reinitiation	3.392	13	2.898	3.175	3.593	3.792	4.058	4.524	5.348	36	
	Shifting Mosaic	2.945	16	2.578	2.762	3.026	3.241	3.593	4.232	6.000	45	
CPLAND	Stand Initiation	0.496	56	0.011	0.056	0.206	0.413	0.843	1.751	2.565	410	75
	Stem Exclusion	0.229	0	0.224	0.554	0.990	1.618	2.127	2.987	3.582	150	
	Understory Reinitiation	7.662	100	1.471	2.164	2.951	3.472	4.114	5.076	6.068	84	
	Shifting Mosaic	0.034	0	0.248	0.879	1.296	1.607	2.061	2.724	3.370	115	
CORE_MN	Stand Initiation	1.965	66	0.053	0.295	0.727	1.492	2.299	4.065	6.565	253	75
	Stem Exclusion	12.836	100	0.468	0.856	1.648	2.236	2.931	4.351	6.128	156	
	Understory Reinitiation	26.059	100	0.837	1.543	2.287	2.857	3.601	5.319	8.168	132	
	Shifting Mosaic	17.708	100	0.589	0.850	1.219	1.438	1.743	2.551	4.823	118	
CORE_AM	Stand Initiation	45.786	42	0.663	7.118	27.865	56.721	108.944	207.133	343.442	353	23
	Stem Exclusion	72.863	33	17.248	29.224	59.510	98.803	154.166	261.940	374.634	236	
	Understory Reinitiation	267.199	95	46.531	76.972	118.579	152.603	184.532	271.799	329.272	128	
	Shifting Mosaic	97.062	78	37.444	43.900	60.422	74.558	94.871	118.738	182.296	100	
CAI_MN	Stand Initiation	8.464	30	1.879	4.946	7.705	10.739	14.296	20.786	25.108	147	56
	Stem Exclusion	57.203	100	6.465	9.211	12.464	16.325	22.086	30.879	49.200	133	
	Understory Reinitiation	43.843	83	13.566	19.193	28.151	33.758	39.866	52.282	57.069	98	
	Shifting Mosaic	24.916	2	19.582	29.842	44.153	52.171	60.870	68.805	77.884	75	
CAI_AM	Stand Initiation	56.164	71	9.249	27.206	41.334	50.040	56.903	63.609	68.382	73	48
	Stem Exclusion	77.343	100	43.772	52.407	63.188	66.797	69.971	73.677	76.929	32	
	Understory Reinitiation	86.725	98	62.835	72.723	77.046	80.054	82.727	85.582	87.697	16	
	Shifting Mosaic	80.875	55	55.986	69.559	77.148	80.311	83.021	86.193	87.940	21	
PROX_MN	Stand Initiation	33.873	62	0.881	4.447	11.895	25.747	53.156	118.260	246.568	442	69
	Stem Exclusion	2.489	0	6.355	14.728	28.449	43.504	64.789	114.087	168.880	228	
	Understory Reinitiation	199.754	100	18.121	31.330	46.308	59.398	78.849	114.380	151.224	140	
	Shifting Mosaic	49.843	94	9.578	12.016	16.484	21.381	28.941	54.038	92.511	197	
PROX_AM	Stand Initiation	56.306	61	0.563	4.742	17.440	37.886	96.279	271.792	1137.765	705	69

	Stem Exclusion	0.916	0	9.538	20.675	43.099	81.744	152.047	421.085	1161.809	490	
	Understory Reinitiation	488.728	94	38.142	54.847	101.107	138.466	210.295	518.983	893.369	335	
	Shifting Mosaic	7.599	0	11.590	23.933	43.677	70.540	101.433	133.516	211.771	155	
CWED	Stand Initiation	0.757	37	0.106	0.307	0.571	0.914	1.478	2.413	4.129	230	64
	Stem Exclusion	0.117	0	0.548	0.884	1.266	1.641	1.977	2.305	3.054	87	
	Understory Reinitiation	2.016	89	1.177	1.378	1.538	1.686	1.870	2.183	2.551	48	
	Shifting Mosaic	0.011	0	0.190	0.453	0.677	0.809	0.971	1.233	1.791	96	
TECI	Stand Initiation	35.467	14	31.214	33.976	36.571	38.317	40.252	42.356	46.955	22	53
	Stem Exclusion	28.302	92	24.560	25.882	26.653	27.209	27.773	28.431	28.897	9	
	Understory Reinitiation	19.718	80	10.740	12.553	15.007	16.862	19.084	23.147	29.218	63	
	Shifting Mosaic	19.986	96	6.681	8.797	10.868	12.725	15.227	18.978	29.037	80	
CLUMPY	Stand Initiation	0.852	75	0.557	0.712	0.781	0.825	0.852	0.875	0.888	20	75
	Stem Exclusion	0.920	100	0.717	0.765	0.820	0.839	0.853	0.872	0.888	13	
	Understory Reinitiation	0.922	100	0.758	0.813	0.836	0.851	0.865	0.879	0.903	8	
	Shifting Mosaic	0.938	100	0.726	0.757	0.790	0.805	0.820	0.847	0.863	11	
IJI	Stand Initiation	38.847	0	49.627	55.200	58.865	60.934	63.171	65.602	68.653	17	73
	Stem Exclusion	69.882	100	47.410	53.820	58.097	60.256	62.210	64.543	67.541	18	
	Understory Reinitiation	68.237	98	51.535	55.567	58.415	61.037	63.140	66.198	74.057	17	
	Shifting Mosaic	48.914	31	37.642	44.797	47.846	50.641	52.856	56.199	58.854	23	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	75
<i>Class Configuration Departure Index</i>	61
<i>Cover Type Departure Index</i>	68

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.