

Table. Range of variation in landscape structure for Cool Moist Mixed-Conifer Forest (34,287 ha) under the simulated HRV disturbance scenario on the 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	0.095	0	0.137	0.296	0.439	0.586	0.712	1.033	1.468	126	85
	Stem Exclusion	1.032	15	0.656	0.869	1.114	1.255	1.373	1.633	1.968	61	
	Understory Reinitiation	2.838	100	0.404	0.508	0.983	1.186	1.325	1.522	1.938	86	
	Shifting Mosaic	0.080	0	0.618	0.719	0.878	1.020	1.166	1.618	1.805	88	
<i>Class Configuration</i> ⁵												
PD	Stand Initiation	0.032	0	0.123	0.167	0.213	0.241	0.286	0.346	0.427	74	100
	Stem Exclusion	0.045	0	0.227	0.371	0.494	0.540	0.622	0.906	1.141	99	
	Understory Reinitiation	0.093	0	0.330	0.471	0.620	0.707	0.778	0.866	0.984	56	
	Shifting Mosaic	0.001	0	0.224	0.377	0.500	0.572	0.626	0.673	0.716	52	
ED	Stand Initiation	0.254	0	0.650	1.076	1.462	1.806	2.159	2.883	3.685	100	82
	Stem Exclusion	1.434	0	2.135	2.867	3.717	4.042	4.421	5.292	6.300	60	
	Understory Reinitiation	3.425	18	1.957	2.444	3.959	4.394	4.911	5.879	6.473	78	
	Shifting Mosaic	0.095	0	2.353	2.554	3.006	3.267	3.518	3.966	4.395	43	
AREA_MN	Stand Initiation	2.993	83	0.924	1.409	1.991	2.313	2.763	3.578	4.744	94	83
	Stem Exclusion	22.843	100	0.848	1.198	1.828	2.324	2.692	3.600	4.747	103	
	Understory Reinitiation	30.646	100	0.605	0.943	1.368	1.667	1.921	2.306	2.694	82	
	Shifting Mosaic	75.174	100	1.152	1.232	1.469	1.733	2.208	4.158	5.970	169	
AREA_AM	Stand Initiation	31.621	12	14.592	27.300	37.021	46.223	57.959	86.308	170.760	128	88
	Stem Exclusion	137.809	100	27.199	35.544	46.989	56.164	64.847	82.479	93.302	84	
	Understory Reinitiation	154.280	100	16.465	29.081	43.934	51.178	60.203	76.489	104.723	93	
	Shifting Mosaic	222.367	100	28.581	34.035	53.944	68.102	80.010	102.454	116.057	100	
GYRATE_AM	Stand Initiation	229.383	5	152.928	230.462	268.904	301.743	337.118	413.610	651.034	61	96
	Stem Exclusion	540.484	100	217.349	260.870	302.330	330.131	353.380	390.631	418.232	39	
	Understory Reinitiation	579.318	100	169.996	228.661	277.756	307.232	329.514	377.838	439.960	49	
	Shifting Mosaic	892.005	100	227.096	250.683	311.114	343.825	375.728	440.073	491.523	55	
SHAPE_MN	Stand Initiation	1.337	18	1.260	1.315	1.344	1.367	1.385	1.417	1.475	7	82

	Stem Exclusion	1.768	100	1.276	1.305	1.345	1.371	1.391	1.426	1.468	9	
	Understory Reinitiation	1.815	100	1.265	1.303	1.330	1.348	1.378	1.446	1.518	11	
	Shifting Mosaic	2.657	100	1.246	1.262	1.279	1.293	1.312	1.408	1.617	11	
SHAPE_AM	Stand Initiation	1.971	0	2.340	2.623	2.811	2.978	3.164	3.495	4.005	29	95
	Stem Exclusion	2.636	1	2.564	2.879	3.077	3.207	3.409	3.781	4.643	28	
	Understory Reinitiation	2.539	1	2.439	2.778	3.015	3.224	3.454	4.278	5.430	47	
	Shifting Mosaic	3.502	96	2.573	2.673	2.810	2.935	3.092	3.430	4.209	26	
CPLAND	Stand Initiation	0.069	1	0.053	0.139	0.243	0.337	0.430	0.662	0.991	155	85
	Stem Exclusion	0.942	14	0.603	0.802	1.034	1.169	1.277	1.515	1.815	61	
	Understory Reinitiation	2.505	100	0.313	0.394	0.760	0.944	1.070	1.259	1.685	92	
	Shifting Mosaic	0.077	0	0.460	0.554	0.703	0.817	0.940	1.300	1.514	91	
CORE_MN	Stand Initiation	2.171	93	0.347	0.674	1.084	1.342	1.666	2.333	3.346	124	93
	Stem Exclusion	20.837	100	0.784	1.122	1.683	2.173	2.515	3.374	4.418	104	
	Understory Reinitiation	27.053	100	0.462	0.753	1.081	1.319	1.553	1.915	2.311	88	
	Shifting Mosaic	72.750	100	0.831	0.967	1.180	1.403	1.789	3.394	5.088	173	
CORE_AM	Stand Initiation	26.104	28	7.873	17.316	25.365	33.300	41.483	64.209	137.019	141	75
	Stem Exclusion	129.287	100	25.641	33.767	44.579	53.555	61.935	79.263	89.943	85	
	Understory Reinitiation	140.887	100	13.461	24.336	38.981	45.212	53.667	69.472	87.485	100	
	Shifting Mosaic	219.158	100	23.947	29.413	46.752	61.175	71.339	92.424	105.748	103	
CAI_MN	Stand Initiation	44.162	100	7.838	10.465	13.570	15.603	18.177	22.095	25.895	75	82
	Stem Exclusion	84.778	6	81.960	84.641	86.050	86.873	87.812	89.778	91.442	6	
	Understory Reinitiation	69.708	88	41.179	50.072	58.751	62.923	67.109	73.128	76.205	37	
	Shifting Mosaic	90.336	100	32.696	48.856	57.346	63.409	66.762	71.735	77.768	36	
CAI_AM	Stand Initiation	72.533	100	32.632	46.747	53.676	57.699	60.754	66.052	70.517	33	98
	Stem Exclusion	91.217	2	90.874	91.520	92.476	93.084	93.515	94.120	94.823	3	
	Understory Reinitiation	88.278	100	68.496	74.056	77.557	80.416	82.234	85.373	87.810	14	
	Shifting Mosaic	96.776	100	71.794	75.478	78.681	80.551	82.029	83.946	86.356	11	
PROX_MN	Stand Initiation	7.654	7	3.043	7.017	11.599	15.451	20.227	29.768	41.678	147	68
	Stem Exclusion	23.896	57	11.519	14.568	19.671	23.002	27.122	35.563	45.509	91	
	Understory Reinitiation	42.813	100	4.964	8.399	15.594	19.530	23.543	29.742	36.736	109	
	Shifting Mosaic	0.028	0	8.299	9.690	13.695	15.923	18.944	30.051	44.077	128	
PROX_AM	Stand Initiation	4.716	0	2.992	7.035	13.091	20.930	31.452	50.072	111.699	206	91

	Stem Exclusion	13.390	0	10.064	19.273	24.782	32.872	44.087	71.114	103.589	158	
	Understory Reinitiation	60.866	92	9.671	15.651	22.943	32.043	44.590	66.533	80.939	159	
	Shifting Mosaic	0.011	0	11.037	12.754	19.417	31.630	39.525	63.340	103.232	160	
CWED	Stand Initiation	0.062	0	0.219	0.350	0.461	0.561	0.675	0.890	1.142	96	85
	Stem Exclusion	0.331	0	0.432	0.593	0.758	0.827	0.896	1.071	1.264	58	
	Understory Reinitiation	0.552	15	0.317	0.414	0.660	0.731	0.806	0.952	1.122	74	
	Shifting Mosaic	0.004	0	0.339	0.405	0.463	0.504	0.562	0.693	0.775	57	
TECI	Stand Initiation	24.373	0	28.310	29.533	30.662	31.553	32.226	33.355	34.905	12	75
	Stem Exclusion	23.104	100	19.402	19.946	20.199	20.352	20.515	20.745	21.150	4	
	Understory Reinitiation	16.105	33	12.894	14.578	15.717	16.622	17.600	19.590	21.989	30	
	Shifting Mosaic	4.277	0	10.690	12.839	14.475	15.934	17.135	19.571	23.475	42	
CLUMPY	Stand Initiation	0.840	95	0.695	0.751	0.788	0.805	0.820	0.839	0.863	11	95
	Stem Exclusion	0.915	100	0.661	0.723	0.776	0.800	0.815	0.840	0.864	15	
	Understory Reinitiation	0.924	100	0.602	0.687	0.734	0.762	0.781	0.811	0.829	16	
	Shifting Mosaic	0.935	100	0.734	0.751	0.782	0.797	0.817	0.855	0.861	13	
IJI	Stand Initiation	56.628	0	57.210	60.522	62.376	63.985	65.405	67.678	70.452	11	99
	Stem Exclusion	69.979	99	45.076	49.120	56.366	59.411	61.705	65.635	71.324	28	
	Understory Reinitiation	64.599	100	41.601	47.511	53.184	55.098	57.070	59.835	65.724	22	
	Shifting Mosaic	43.318	0	51.193	53.390	55.534	57.143	60.307	64.782	66.647	20	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	85
<i>Class Configuration Departure Index</i>	87
<i>Cover Type Departure Index</i>	86

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 95 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 25-75 percentile range of variation, where a 0 represents no departure (i.e., within the 25-75 percentiles of variation) and 100 represents complete departure (i.e., outside the 0-100 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.