

Table. Range of variation in landscape structure for Pure Aspen Forest (21,480 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 <sup>1</sup>		Percentiles of Simulated Distribution						HRV Departure		
		Metric Value	Percentile of HRV	0	5	25	50	75	95	100	CV <sup>2</sup>	Index <sup>3</sup>
<i>Seral Stage Composition</i> <sup>4</sup>												
PLAND	Stand Initiation	0.025	0	0.030	0.145	0.282	0.416	0.625	1.002	1.406	206	67
	Stem Exclusion	0.427	46	0.098	0.186	0.309	0.453	0.626	0.929	1.391	164	
	Understory Reinitiation	1.307	100	0.127	0.223	0.357	0.485	0.600	0.786	1.039	116	
	Shifting Mosaic	0.775	8	0.547	0.719	0.954	1.103	1.213	1.410	1.645	63	
<i>Class Configuration</i> <sup>5</sup>												
PD	Stand Initiation	0.008	0	0.024	0.054	0.072	0.084	0.098	0.117	0.152	75	100
	Stem Exclusion	0.030	0	0.042	0.066	0.084	0.097	0.115	0.141	0.187	77	
	Understory Reinitiation	0.051	0	0.056	0.085	0.099	0.114	0.131	0.159	0.215	65	
	Shifting Mosaic	0.021	0	0.137	0.149	0.177	0.202	0.222	0.256	0.297	53	
ED	Stand Initiation	0.069	0	0.143	0.416	0.706	0.919	1.211	1.748	2.370	145	76
	Stem Exclusion	0.729	23	0.310	0.490	0.735	0.970	1.246	1.700	2.270	125	
	Understory Reinitiation	1.772	99	0.393	0.582	0.822	1.059	1.226	1.502	2.028	87	
	Shifting Mosaic	0.960	0	1.257	1.540	1.828	2.046	2.182	2.414	2.668	43	
AREA_MN	Stand Initiation	3.279	18	0.930	2.512	3.635	5.097	6.618	8.898	11.289	125	82
	Stem Exclusion	14.151	100	1.172	2.365	3.620	4.633	5.791	7.460	10.573	110	
	Understory Reinitiation	25.763	100	1.282	2.351	3.307	4.063	5.002	6.182	7.329	94	
	Shifting Mosaic	36.496	100	2.485	3.188	4.845	5.658	6.325	7.425	10.389	75	
AREA_AM	Stand Initiation	28.344	6	13.658	26.313	52.965	97.642	147.321	246.343	379.542	225	19
	Stem Exclusion	74.578	33	16.737	33.293	59.884	104.552	158.696	249.044	371.303	206	
	Understory Reinitiation	135.222	68	11.621	42.306	68.797	100.078	148.187	266.360	385.614	224	
	Shifting Mosaic	178.654	75	54.766	76.669	110.769	150.176	177.183	226.882	297.253	100	
GYRATE_AM	Stand Initiation	243.905	7	163.333	229.974	325.826	420.570	511.428	620.991	775.872	93	41
	Stem Exclusion	392.182	41	171.667	253.959	345.808	428.558	508.639	651.324	788.882	93	
	Understory Reinitiation	508.162	77	144.666	275.984	359.022	421.232	503.132	680.196	807.964	96	
	Shifting Mosaic	625.031	97	303.841	388.079	461.107	526.190	562.258	618.318	694.089	44	
SHAPE_MN	Stand Initiation	1.423	55	1.250	1.331	1.384	1.414	1.450	1.507	1.561	12	75

	Stem Exclusion	1.637	100	1.187	1.289	1.337	1.372	1.402	1.455	1.507	12	
	Understory Reinitiation	1.807	100	1.230	1.277	1.309	1.338	1.367	1.395	1.428	9	
	Shifting Mosaic	1.891	100	1.241	1.281	1.321	1.342	1.359	1.387	1.471	8	
SHAPE_AM	Stand Initiation	2.315	7	2.054	2.263	2.621	2.883	3.269	3.930	5.066	58	36
	Stem Exclusion	2.428	13	1.873	2.287	2.614	2.873	3.292	3.940	4.464	58	
	Understory Reinitiation	2.587	20	1.968	2.299	2.628	2.926	3.273	3.861	4.529	53	
	Shifting Mosaic	3.142	73	2.286	2.538	2.821	2.977	3.154	3.376	3.682	28	
CPLAND	Stand Initiation	0.018	0	0.012	0.086	0.184	0.289	0.450	0.754	1.086	231	65
	Stem Exclusion	0.317	42	0.068	0.146	0.242	0.358	0.503	0.759	1.135	171	
	Understory Reinitiation	1.065	100	0.089	0.163	0.269	0.376	0.473	0.609	0.822	119	
	Shifting Mosaic	0.611	10	0.399	0.555	0.754	0.871	0.974	1.133	1.353	66	
CORE_MN	Stand Initiation	2.437	27	0.358	1.426	2.365	3.567	4.819	6.696	8.974	148	75
	Stem Exclusion	10.505	100	0.882	1.826	2.859	3.671	4.629	6.093	8.626	116	
	Understory Reinitiation	20.987	100	0.903	1.689	2.531	3.058	3.884	4.848	5.908	103	
	Shifting Mosaic	28.755	100	1.850	2.426	3.755	4.471	5.055	5.912	8.150	78	
CORE_AM	Stand Initiation	23.913	9	8.213	18.381	42.262	79.809	121.351	212.838	320.790	244	16
	Stem Exclusion	59.797	30	12.940	27.086	51.490	91.586	140.044	216.219	317.769	207	
	Understory Reinitiation	117.347	70	8.525	34.944	55.866	81.645	127.452	217.023	302.464	223	
	Shifting Mosaic	139.876	67	45.093	64.265	92.155	124.495	146.454	180.092	230.521	93	
CAI_MN	Stand Initiation	36.367	99	12.566	16.351	20.975	24.086	27.369	32.887	40.760	69	75
	Stem Exclusion	62.005	89	39.049	45.817	51.005	54.149	58.083	64.094	74.071	34	
	Understory Reinitiation	68.895	99	22.544	35.034	45.480	52.207	56.961	63.630	75.829	55	
	Shifting Mosaic	63.500	87	28.532	40.105	49.728	55.359	60.284	66.038	71.065	47	
CAI_AM	Stand Initiation	74.300	85	38.503	56.966	65.277	69.579	72.728	76.299	80.548	28	50
	Stem Exclusion	74.236	5	69.305	74.337	77.967	79.764	81.039	82.788	83.880	11	
	Understory Reinitiation	81.460	95	61.043	69.487	74.209	77.104	78.860	81.774	83.986	16	
	Shifting Mosaic	78.789	43	69.762	74.572	77.220	79.146	80.517	81.979	84.752	9	
PROX_MN	Stand Initiation	6.746	2	3.115	8.620	15.690	29.918	49.715	81.985	126.006	245	51
	Stem Exclusion	12.032	19	3.513	6.915	14.054	24.700	40.546	75.401	107.303	277	
	Understory Reinitiation	21.738	58	2.170	6.129	12.246	19.417	30.452	57.948	90.821	267	
	Shifting Mosaic	15.687	3	11.752	17.688	31.706	40.579	53.122	79.696	99.032	153	
PROX_AM	Stand Initiation	9.544	5	1.575	9.430	23.504	45.166	90.939	174.925	281.606	366	41

	Stem Exclusion	12.771	13	2.683	7.958	19.224	39.775	78.103	175.443	313.698	421	
	Understory Reinitiation	31.921	52	2.197	5.705	16.184	30.011	57.800	97.755	368.016	307	
	Shifting Mosaic	30.983	16	11.740	22.033	38.035	53.750	76.034	120.541	207.231	183	
CWED	Stand Initiation	0.015	0	0.048	0.133	0.216	0.276	0.361	0.518	0.680	140	75
	Stem Exclusion	0.213	42	0.082	0.113	0.181	0.236	0.295	0.410	0.545	126	
	Understory Reinitiation	0.505	100	0.094	0.133	0.199	0.246	0.295	0.366	0.548	95	
	Shifting Mosaic	0.307	0	0.342	0.407	0.475	0.525	0.560	0.614	0.675	39	
TECI	Stand Initiation	21.850	0	26.074	27.297	29.202	30.607	31.756	33.138	35.481	19	97
	Stem Exclusion	29.262	100	20.942	22.358	23.483	24.046	24.665	25.844	27.302	14	
	Understory Reinitiation	28.334	97	17.539	20.705	22.215	23.889	25.177	27.965	30.728	30	
	Shifting Mosaic	31.964	100	20.221	23.483	24.707	25.744	27.002	28.744	31.448	20	
CLUMPY	Stand Initiation	0.840	19	0.712	0.809	0.847	0.868	0.880	0.895	0.906	10	78
	Stem Exclusion	0.897	97	0.764	0.821	0.853	0.869	0.879	0.894	0.901	8	
	Understory Reinitiation	0.916	100	0.764	0.832	0.854	0.867	0.875	0.888	0.897	6	
	Shifting Mosaic	0.925	100	0.847	0.862	0.881	0.888	0.891	0.897	0.904	4	
IJI	Stand Initiation	58.752	1	55.027	60.823	65.124	67.237	68.817	71.103	73.846	15	35
	Stem Exclusion	64.977	38	56.026	61.101	63.963	65.613	66.872	68.511	70.240	11	
	Understory Reinitiation	64.795	63	56.750	60.402	62.328	63.901	65.611	67.631	69.790	11	
	Shifting Mosaic	66.885	13	61.476	65.983	67.552	68.660	69.691	70.979	71.978	7	

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**Summary Indices<sup>6</sup>:**

<i>Seral-Stage Departure Index</i>	67
<i>Class Configuration Departure Index</i>	60
<i>Cover Type Departure Index</i>	64

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<sup>1</sup>Some 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.

<sup>2</sup>CV = 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).

<sup>3</sup>HRV 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).

<sup>4</sup>Landscape 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.

<sup>5</sup>Landscape 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.

<sup>6</sup>Seral-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.