

Table. Range of variation in landscape structure for Pure 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 Composition</i> ⁴												
PLAND	Stand Initiation	0.000	0	0.058	0.263	0.551	0.975	1.549	2.876	3.847	268	63
	Stem Exclusion	1.080	54	0.150	0.352	0.677	1.007	1.544	2.604	3.817	224	
	Understory Reinitiation	3.278	100	0.215	0.442	0.782	1.103	1.452	2.164	2.949	156	
	Shifting Mosaic	1.808	12	0.910	1.463	2.259	2.761	3.119	3.663	4.429	80	
<i>Class Configuration</i> ⁵												
PD	Stand Initiation	0.000	0	0.037	0.123	0.166	0.200	0.237	0.317	0.411	97	100
	Stem Exclusion	0.068	0	0.072	0.142	0.192	0.227	0.280	0.377	0.488	103	
	Understory Reinitiation	0.110	0	0.117	0.174	0.226	0.266	0.313	0.414	0.603	90	
	Shifting Mosaic	0.040	0	0.251	0.321	0.399	0.456	0.514	0.645	0.790	71	
ED	Stand Initiation	0.000	0	0.189	0.858	1.450	2.078	3.000	4.824	6.684	191	73
	Stem Exclusion	1.780	30	0.459	0.982	1.642	2.168	3.063	4.685	6.452	171	
	Understory Reinitiation	4.327	98	0.811	1.243	1.853	2.379	3.013	3.990	5.559	115	
	Shifting Mosaic	2.165	0	1.934	3.035	4.294	4.850	5.358	5.895	6.510	59	
AREA_MN	Stand Initiation	0.000	0	0.961	1.864	3.191	4.936	6.897	9.454	13.780	154	100
	Stem Exclusion	15.911	100	0.707	1.952	3.240	4.606	6.051	8.237	11.296	136	
	Understory Reinitiation	29.684	100	1.115	2.070	3.069	3.988	5.257	6.958	9.197	123	
	Shifting Mosaic	45.439	100	1.818	2.617	4.846	6.166	7.032	8.859	13.174	101	
AREA_AM	Stand Initiation	0.000	0	7.365	21.945	54.154	107.529	170.834	289.970	470.208	249	25
	Stem Exclusion	88.606	36	11.248	28.144	63.278	120.069	190.680	310.586	453.610	235	
	Understory Reinitiation	152.682	64	11.402	35.486	72.028	116.652	192.155	307.738	478.841	233	
	Shifting Mosaic	201.424	68	59.982	86.252	129.788	176.349	216.417	285.030	369.232	113	
GYRATE_AM	Stand Initiation	0.000	0	125.373	213.305	329.185	455.891	562.705	698.936	915.307	107	38
	Stem Exclusion	437.194	44	133.906	228.858	355.732	462.263	574.854	732.189	921.883	109	
	Understory Reinitiation	541.887	70	145.138	264.421	373.161	458.392	566.365	737.010	970.705	103	
	Shifting Mosaic	667.100	88	305.604	414.183	496.010	580.685	628.165	711.177	769.631	51	
SHAPE_MN	Stand Initiation			1.237	1.308	1.366	1.409	1.455	1.527	1.579	16	100

	Stem Exclusion	1.666	100	1.155	1.268	1.329	1.369	1.404	1.471	1.525	15	
	Understory Reinitiation	1.865	100	1.211	1.263	1.300	1.333	1.369	1.418	1.452	12	
	Shifting Mosaic	2.033	100	1.202	1.253	1.317	1.348	1.369	1.411	1.528	12	
SHAPE_AM	Stand Initiation			1.912	2.271	2.706	3.036	3.524	4.299	5.137	67	11
	Stem Exclusion	2.564	17	1.865	2.275	2.707	3.072	3.583	4.287	5.065	66	
	Understory Reinitiation	2.723	26	2.026	2.302	2.700	3.122	3.553	4.363	5.199	66	
	Shifting Mosaic	3.254	57	2.391	2.598	2.969	3.180	3.405	3.726	4.071	35	
CPLAND	Stand Initiation	0.000	0	0.021	0.156	0.359	0.664	1.125	2.123	3.063	296	60
	Stem Exclusion	0.814	50	0.116	0.252	0.524	0.815	1.241	2.156	3.113	234	
	Understory Reinitiation	2.669	100	0.147	0.300	0.564	0.848	1.121	1.692	2.350	164	
	Shifting Mosaic	1.411	15	0.615	1.059	1.726	2.179	2.478	2.953	3.649	87	
CORE_MN	Stand Initiation	0.000	0	0.321	0.978	2.037	3.414	5.059	7.040	10.935	178	100
	Stem Exclusion	11.989	100	0.571	1.450	2.468	3.649	4.837	6.803	9.212	147	
	Understory Reinitiation	24.168	100	0.768	1.376	2.316	3.035	4.110	5.493	7.333	136	
	Shifting Mosaic	35.460	100	1.200	1.918	3.780	4.773	5.563	7.036	10.762	107	
CORE_AM	Stand Initiation	0.000	0	3.923	14.731	41.305	88.843	144.580	250.513	397.996	265	25
	Stem Exclusion	71.427	35	9.090	21.784	53.976	105.798	164.756	265.296	393.447	230	
	Understory Reinitiation	131.826	66	8.213	28.693	58.372	97.264	161.021	242.870	367.554	220	
	Shifting Mosaic	157.425	59	46.799	71.029	108.073	146.027	174.856	228.861	282.836	108	
CAI_MN	Stand Initiation	0.000	0	7.816	13.745	18.541	22.316	26.205	33.182	42.921	87	93
	Stem Exclusion	66.820	97	37.763	42.837	47.852	51.973	56.491	64.835	79.742	42	
	Understory Reinitiation	68.793	99	14.963	30.235	42.488	50.070	56.998	64.235	77.923	68	
	Shifting Mosaic	67.629	97	19.119	32.339	46.269	54.984	60.960	66.702	70.748	62	
CAI_AM	Stand Initiation	0.000	0	32.279	50.985	62.813	69.088	73.229	76.867	81.522	37	53
	Stem Exclusion	75.352	15	63.957	71.883	76.835	79.610	81.475	83.273	86.059	14	
	Understory Reinitiation	81.417	93	51.536	64.945	72.596	76.153	78.649	82.140	87.417	23	
	Shifting Mosaic	78.037	38	64.141	71.225	76.743	78.885	80.502	82.195	85.491	14	
PROX_MN	Stand Initiation	0.000	0	3.630	7.793	15.502	33.730	59.747	101.481	165.453	278	45
	Stem Exclusion	14.306	26	1.922	5.834	13.907	29.636	50.259	95.375	155.549	302	
	Understory Reinitiation	30.176	67	1.898	5.212	13.380	22.900	38.326	76.327	131.118	311	
	Shifting Mosaic	17.527	5	10.553	17.414	38.036	51.367	71.670	108.188	139.311	177	
PROX_AM	Stand Initiation	0.000	0	1.804	8.452	20.997	47.175	105.328	196.035	399.517	398	41

	Stem Exclusion	12.457	18	2.151	7.426	18.583	41.409	94.512	210.878	400.015	491	
	Understory Reinitiation	39.848	59	1.053	4.727	14.810	31.580	64.517	125.262	434.438	382	
	Shifting Mosaic	31.688	15	8.262	18.424	43.619	64.879	90.986	145.672	249.192	196	
CWED	Stand Initiation	0.000	0	0.063	0.267	0.460	0.657	0.927	1.389	1.929	171	73
	Stem Exclusion	0.522	47	0.109	0.253	0.409	0.544	0.741	1.137	1.499	162	
	Understory Reinitiation	1.256	99	0.167	0.287	0.439	0.568	0.729	1.000	1.586	126	
	Shifting Mosaic	0.705	1	0.617	0.878	1.124	1.276	1.408	1.568	1.713	54	
TECI	Stand Initiation			25.175	27.497	29.763	31.211	32.628	34.114	36.424	21	91
	Stem Exclusion	29.220	100	20.980	22.535	23.744	24.425	25.421	26.733	28.580	17	
	Understory Reinitiation	28.853	95	18.227	19.864	22.229	24.088	25.977	29.257	33.921	39	
	Shifting Mosaic	32.424	98	19.613	23.003	24.910	26.286	28.046	31.183	35.094	31	
CLUMPY	Stand Initiation			0.702	0.786	0.837	0.868	0.881	0.896	0.910	13	97
	Stem Exclusion	0.900	98	0.717	0.804	0.847	0.871	0.881	0.897	0.904	11	
	Understory Reinitiation	0.917	100	0.735	0.814	0.851	0.867	0.879	0.893	0.901	9	
	Shifting Mosaic	0.927	100	0.829	0.855	0.881	0.890	0.895	0.902	0.909	5	
IJI	Stand Initiation			52.289	56.452	61.085	63.866	66.385	69.684	73.212	21	22
	Stem Exclusion	63.413	56	43.979	57.121	60.611	62.752	64.843	66.859	69.552	16	
	Understory Reinitiation	65.424	92	50.247	56.399	59.324	61.124	63.270	66.121	70.068	16	
	Shifting Mosaic	66.885	42	57.197	60.986	65.517	67.378	68.407	69.582	70.998	13	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	63
<i>Class Configuration Departure Index</i>	64
<i>Cover Type Departure Index</i>	64

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.