

Table. Range of variation in landscape structure for Pure Aspen Forest under the simulated HRV disturbance scenario on the Pagosa 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	0.001	0.016	0.052	0.086	0.119	0.187	0.291	200	74
	Stem Exclusion	0.120	75	0.010	0.028	0.060	0.091	0.120	0.178	0.292	165	
	Understory Reinitiation	0.240	100	0.022	0.041	0.066	0.090	0.120	0.174	0.244	147	
	Shifting Mosaic	0.108	1	0.087	0.125	0.154	0.186	0.219	0.262	0.298	74	
<i>Class Configuration</i> ⁵												
PD	Stand Initiation	0.000	0	0.003	0.008	0.015	0.020	0.026	0.036	0.049	142	90
	Stem Exclusion	0.007	0	0.006	0.011	0.018	0.025	0.030	0.039	0.054	113	
	Understory Reinitiation	0.020	10	0.008	0.017	0.023	0.028	0.033	0.040	0.048	83	
	Shifting Mosaic	0.006	0	0.033	0.041	0.047	0.053	0.059	0.073	0.097	60	
ED	Stand Initiation	0.000	0	0.007	0.053	0.136	0.211	0.280	0.431	0.596	179	71
	Stem Exclusion	0.213	44	0.052	0.084	0.157	0.231	0.292	0.412	0.555	142	
	Understory Reinitiation	0.420	96	0.062	0.125	0.178	0.228	0.291	0.383	0.458	113	
	Shifting Mosaic	0.155	0	0.254	0.327	0.389	0.442	0.502	0.572	0.616	55	
AREA_MN	Stand Initiation	0.000	0	0.211	1.560	3.060	4.223	5.219	7.285	9.905	136	100
	Stem Exclusion	16.988	100	0.768	1.748	2.815	3.762	4.719	6.367	11.417	123	
	Understory Reinitiation	12.113	100	0.854	1.672	2.543	3.235	4.105	5.635	8.824	122	
	Shifting Mosaic	17.978	100	1.478	2.035	2.766	3.397	4.274	5.569	7.154	104	
AREA_AM	Stand Initiation	0.000	0	0.373	7.667	15.166	21.549	29.375	39.723	58.413	149	58
	Stem Exclusion	32.356	83	3.669	8.488	15.560	21.997	28.312	38.906	54.768	138	
	Understory Reinitiation	26.998	67	5.756	10.458	16.588	21.897	29.844	39.517	50.600	133	
	Shifting Mosaic	52.580	100	11.282	14.425	21.955	26.202	29.880	38.136	44.514	90	
GYRATE_AM	Stand Initiation	0.000	0	35.564	117.281	170.023	205.233	236.656	286.262	364.780	82	66
	Stem Exclusion	269.507	91	89.301	126.492	170.221	203.404	232.747	282.424	351.453	77	
	Understory Reinitiation	218.320	61	111.081	137.301	179.024	204.011	237.328	292.852	332.045	76	
	Shifting Mosaic	348.313	100	145.311	168.958	200.963	223.113	243.724	284.725	312.523	52	
SHAPE_MN	Stand Initiation			1.077	1.270	1.372	1.419	1.480	1.567	1.640	21	100

	Stem Exclusion	1.783	100	1.182	1.243	1.323	1.391	1.442	1.531	1.613	21	
	Understory Reinitiation	1.609	100	1.178	1.239	1.300	1.344	1.385	1.463	1.604	17	
	Shifting Mosaic	1.616	100	1.224	1.253	1.290	1.319	1.353	1.412	1.491	12	
SHAPE_AM	Stand Initiation			1.341	1.683	1.867	2.025	2.191	2.453	2.877	38	23
	Stem Exclusion	2.182	77	1.495	1.692	1.873	2.003	2.167	2.388	3.013	35	
	Understory Reinitiation	1.758	10	1.540	1.705	1.856	2.012	2.171	2.352	2.803	32	
	Shifting Mosaic	2.016	62	1.707	1.789	1.906	1.985	2.071	2.192	2.274	20	
CPLAND	Stand Initiation	0.000	0	0.000	0.008	0.034	0.058	0.086	0.134	0.236	218	68
	Stem Exclusion	0.083	63	0.005	0.020	0.044	0.067	0.092	0.137	0.233	173	
	Understory Reinitiation	0.177	99	0.011	0.027	0.046	0.065	0.088	0.128	0.191	156	
	Shifting Mosaic	0.089	6	0.052	0.085	0.113	0.139	0.167	0.200	0.241	82	
CORE_MN	Stand Initiation	0.000	0	0.008	0.840	1.973	2.909	3.737	5.409	8.015	157	100
	Stem Exclusion	11.656	100	0.525	1.240	2.109	2.860	3.655	5.023	9.259	132	
	Understory Reinitiation	8.940	100	0.392	1.042	1.771	2.368	3.079	4.389	6.898	141	
	Shifting Mosaic	14.735	100	0.987	1.502	2.032	2.483	3.272	4.244	5.513	110	
CORE_AM	Stand Initiation	0.000	0	0.002	4.500	10.840	16.216	23.285	32.485	43.846	173	50
	Stem Exclusion	23.815	74	1.968	5.807	12.011	17.931	24.159	35.346	48.612	165	
	Understory Reinitiation	21.226	65	3.140	7.234	12.175	17.691	25.109	35.355	48.347	159	
	Shifting Mosaic	48.213	100	7.351	10.878	17.741	21.863	25.529	33.802	41.853	105	
CAI_MN	Stand Initiation	0.000	0	7.340	16.865	25.357	32.413	38.796	49.025	58.295	99	72
	Stem Exclusion	62.045	78	28.335	40.025	51.340	56.573	61.174	66.818	77.835	47	
	Understory Reinitiation	70.310	99	13.981	30.305	42.735	50.828	57.592	64.779	73.422	68	
	Shifting Mosaic	69.837	96	23.224	37.446	49.422	56.585	62.447	69.158	78.931	56	
CAI_AM	Stand Initiation	0.000	0	3.704	50.692	63.507	68.003	72.217	77.662	82.274	40	59
	Stem Exclusion	68.617	13	40.901	65.676	72.224	75.399	79.172	83.462	88.175	24	
	Understory Reinitiation	73.805	59	44.404	58.014	66.820	72.334	76.762	82.380	93.207	34	
	Shifting Mosaic	81.963	97	59.068	66.303	71.971	74.885	77.424	81.272	84.443	20	
PROX_MN	Stand Initiation	0.000	0	0.003	1.346	4.218	6.174	9.801	16.885	21.946	252	50
	Stem Exclusion	8.210	75	0.023	1.064	3.344	5.495	8.179	14.284	21.240	241	
	Understory Reinitiation	4.171	45	0.574	1.350	2.959	4.730	6.901	11.190	17.898	208	
	Shifting Mosaic	1.754	0	2.077	3.028	4.849	6.431	7.721	10.324	15.821	113	
PROX_AM	Stand Initiation	0.000	0	0.001	0.252	1.872	3.943	7.078	18.516	32.162	463	62

	Stem Exclusion	12.035	91	0.001	0.279	1.492	3.361	6.752	18.318	49.592	537	
	Understory Reinitiation	5.124	71	0.094	0.394	1.179	2.723	5.703	14.342	25.577	512	
	Shifting Mosaic	1.579	4	0.449	1.771	3.886	6.082	8.880	11.743	22.215	164	
CWED	Stand Initiation	0.000	0	0.002	0.015	0.040	0.058	0.080	0.111	0.162	165	75
	Stem Exclusion	0.068	70	0.010	0.019	0.038	0.054	0.070	0.098	0.136	147	
	Understory Reinitiation	0.129	100	0.011	0.030	0.044	0.057	0.072	0.100	0.131	121	
	Shifting Mosaic	0.040	0	0.064	0.080	0.097	0.112	0.127	0.142	0.162	56	
TECI	Stand Initiation			21.323	24.405	26.806	28.419	30.392	32.736	37.828	29	61
	Stem Exclusion	31.625	100	17.368	20.313	22.280	23.501	24.820	27.043	30.974	29	
	Understory Reinitiation	30.723	96	14.844	19.977	22.642	24.559	26.999	30.165	35.201	41	
	Shifting Mosaic	25.535	55	19.010	21.041	23.551	25.127	26.602	29.312	33.253	33	
CLUMPY	Stand Initiation			0.372	0.789	0.839	0.858	0.873	0.896	0.914	13	98
	Stem Exclusion	0.901	99	0.717	0.805	0.838	0.855	0.868	0.889	0.915	10	
	Understory Reinitiation	0.899	100	0.751	0.799	0.838	0.854	0.868	0.885	0.903	10	
	Shifting Mosaic	0.923	100	0.797	0.826	0.848	0.860	0.871	0.882	0.895	6	
IJI	Stand Initiation			35.295	53.210	60.960	64.498	67.080	70.142	74.240	26	62
	Stem Exclusion	56.025	4	45.280	56.728	61.071	63.562	65.885	68.566	72.272	19	
	Understory Reinitiation	62.689	42	47.881	55.128	60.640	63.555	65.774	68.637	70.888	21	
	Shifting Mosaic	58.360	0	59.820	64.436	66.449	68.081	69.566	71.105	72.851	10	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	74
<i>Class Configuration Departure Index</i>	70
<i>Cover Type Departure Index</i>	72

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.