

Table. Range of variation in landscape structure for Spruce-Fir-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 <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<sup>4</sup></i>												
PLAND	Stand Initiation	0.004	0	0.004	0.036	0.152	0.417	0.981	3.125	5.859	741	87
	Stem Exclusion	0.664	13	0.118	0.508	1.073	1.759	2.669	5.251	7.901	270	
	Understory Reinitiation	9.334	100	1.449	2.054	3.087	4.457	5.399	6.960	8.430	110	
	Shifting Mosaic	0.023	0	0.252	0.414	1.895	2.715	3.621	5.093	5.864	172	
<i>Class Configuration<sup>5</sup></i>												
PD	Stand Initiation	0.000	0	0.016	0.041	0.070	0.108	0.160	0.274	0.435	217	100
	Stem Exclusion	0.030	0	0.104	0.194	0.264	0.321	0.378	0.555	0.835	113	
	Understory Reinitiation	0.150	0	0.397	0.468	0.629	0.766	0.941	1.225	1.875	99	
	Shifting Mosaic	0.001	0	0.199	0.416	0.662	0.821	0.998	1.141	1.470	88	
ED	Stand Initiation	0.009	0	0.037	0.193	0.495	1.019	1.930	4.976	8.915	470	87
	Stem Exclusion	0.840	1	0.506	1.547	2.483	3.658	5.092	7.626	11.994	166	
	Understory Reinitiation	9.795	88	3.777	4.983	6.752	8.355	9.261	10.984	12.524	72	
	Shifting Mosaic	0.046	0	1.387	2.237	4.755	5.930	7.282	9.632	12.714	125	
AREA_MN	Stand Initiation	9.750	90	0.253	0.633	2.119	3.771	7.031	12.486	22.585	314	90
	Stem Exclusion	22.382	100	1.022	1.979	3.773	5.367	7.437	12.503	19.434	196	
	Understory Reinitiation	62.134	100	1.182	2.255	3.926	5.464	7.635	11.443	14.340	168	
	Shifting Mosaic	29.844	100	0.539	0.599	2.052	3.227	4.385	7.935	14.393	227	
AREA_AM	Stand Initiation	9.750	9	0.588	4.640	36.460	76.185	214.118	421.609	809.900	547	54
	Stem Exclusion	191.234	54	25.049	36.273	107.551	182.165	298.009	563.133	862.500	289	
	Understory Reinitiation	737.979	98	67.109	104.141	201.829	301.721	394.913	666.795	814.246	186	
	Shifting Mosaic	38.932	9	9.404	17.709	119.918	215.452	343.914	670.614	1118.342	303	
GYRATE_AI	Stand Initiation	141.069	9	30.035	94.208	272.172	407.076	647.090	942.323	1443.291	208	44
	Stem Exclusion	678.725	66	182.978	264.244	451.759	592.128	761.530	1044.177	1362.789	132	
	Understory Reinitiation	1236.497	99	345.795	444.847	623.094	745.254	869.757	1104.030	1288.940	88	
	Shifting Mosaic	442.137	20	120.705	183.093	488.219	643.567	807.733	1173.203	1674.587	154	
SHAPE_MN	Stand Initiation	1.920	100	1.076	1.218	1.296	1.361	1.424	1.510	1.589	21	100

	Stem Exclusion	1.641	100	1.226	1.277	1.340	1.382	1.431	1.499	1.630	16	
	Understory Reinitiation	2.077	100	1.199	1.248	1.308	1.347	1.387	1.449	1.552	15	
	Shifting Mosaic	2.611	100	1.181	1.208	1.249	1.282	1.325	1.510	1.710	24	
SHAPE_AM	Stand Initiation	1.920	5	1.172	1.946	2.726	3.285	4.153	5.815	11.187	118	51
	Stem Exclusion	2.762	5	2.147	2.750	3.491	3.963	4.576	5.849	6.881	78	
	Understory Reinitiation	4.697	74	2.676	3.074	3.845	4.200	4.715	5.546	7.932	59	
	Shifting Mosaic	2.966	14	1.975	2.283	3.227	3.846	4.573	5.640	7.456	87	
CPLAND	Stand Initiation	0.003	3	0.000	0.009	0.086	0.232	0.630	2.188	4.760	941	77
	Stem Exclusion	0.544	19	0.067	0.289	0.724	1.244	1.960	4.178	5.987	313	
	Understory Reinitiation	7.720	100	0.798	1.486	2.374	3.567	4.447	5.743	6.978	119	
	Shifting Mosaic	0.016	0	0.088	0.270	1.342	2.124	2.909	4.141	4.743	182	
CORE_MN	Stand Initiation	6.313	86	0.003	0.141	1.023	2.362	4.821	9.538	18.514	398	86
	Stem Exclusion	18.356	100	0.506	1.151	2.500	3.808	5.423	9.921	15.867	230	
	Understory Reinitiation	51.392	100	0.620	1.674	3.052	4.389	6.304	9.475	12.391	178	
	Shifting Mosaic	20.906	100	0.174	0.395	1.533	2.497	3.483	6.489	12.131	244	
CORE_AM	Stand Initiation	6.313	12	0.011	1.257	21.024	51.571	168.642	347.848	718.798	672	52
	Stem Exclusion	169.665	58	16.505	26.383	76.983	150.526	249.136	480.359	747.412	302	
	Understory Reinitiation	649.546	98	53.368	88.898	174.989	268.957	353.437	606.306	740.002	192	
	Shifting Mosaic	27.959	9	6.064	11.749	101.270	189.966	311.328	603.196	1023.165	311	
CAI_MN	Stand Initiation	64.744	100	0.187	3.894	10.011	15.766	21.744	33.331	54.838	187	90
	Stem Exclusion	56.356	99	7.965	10.998	14.521	18.179	24.345	39.175	61.431	155	
	Understory Reinitiation	68.786	100	4.242	16.966	29.989	37.531	46.413	60.509	70.115	116	
	Shifting Mosaic	66.744	91	10.315	27.775	42.803	53.212	61.024	68.782	72.504	77	
CAI_AM	Stand Initiation	64.744	61	0.968	20.005	46.493	61.127	69.105	77.446	89.053	94	33
	Stem Exclusion	82.014	99	45.769	56.578	66.961	71.183	74.868	79.858	83.215	33	
	Understory Reinitiation	82.711	69	51.097	70.289	78.170	81.135	83.141	84.872	86.408	18	
	Shifting Mosaic	70.052	16	30.754	63.644	72.296	77.173	80.502	82.598	84.668	25	
PROX_MN	Stand Initiation	0.000	0	0.214	1.838	9.713	23.873	82.679	250.673	603.567	1042	99
	Stem Exclusion	3.050	0	4.542	12.872	32.136	64.356	111.766	242.414	575.762	357	
	Understory Reinitiation	300.506	99	11.683	27.292	57.549	90.482	153.513	240.401	314.187	236	
	Shifting Mosaic	0.000	0	2.504	3.344	25.725	60.605	104.817	179.863	290.680	291	
PROX_AM	Stand Initiation	0.000	0	0.097	1.171	7.484	34.636	128.678	467.498	1311.613	1346	83

	Stem Exclusion	2.390	0	4.373	13.619	47.066	118.300	218.318	634.366	1159.674	525	
	Understory Reinitiation	397.389	83	18.969	57.457	122.975	184.383	303.817	597.989	790.366	293	
	Shifting Mosaic	0.000	0	6.683	10.292	62.724	116.318	191.804	464.659	727.698	391	
CWED	Stand Initiation	0.003	0	0.014	0.074	0.175	0.339	0.632	1.422	2.776	398	97
	Stem Exclusion	0.225	1	0.136	0.422	0.706	0.994	1.408	2.007	3.444	159	
	Understory Reinitiation	2.839	98	0.675	0.933	1.278	1.584	1.838	2.381	3.291	91	
	Shifting Mosaic	0.015	0	0.246	0.427	0.909	1.107	1.408	1.786	2.313	123	
TECI	Stand Initiation	31.667	30	22.826	27.522	30.994	33.644	37.012	42.076	47.645	43	48
	Stem Exclusion	26.698	24	23.483	25.039	26.739	27.698	28.552	29.641	31.935	17	
	Understory Reinitiation	28.808	97	10.844	14.299	17.357	19.985	22.353	26.823	35.580	63	
	Shifting Mosaic	33.214	100	10.381	13.335	16.628	18.709	21.199	25.138	33.515	63	
CLUMPY	Stand Initiation	0.920	100	0.450	0.631	0.810	0.855	0.884	0.907	0.921	32	97
	Stem Exclusion	0.926	100	0.735	0.797	0.848	0.871	0.888	0.905	0.920	12	
	Understory Reinitiation	0.929	100	0.783	0.826	0.861	0.877	0.895	0.906	0.916	9	
	Shifting Mosaic	0.905	98	0.637	0.661	0.831	0.859	0.874	0.891	0.915	27	
IJI	Stand Initiation	22.110	0	31.881	45.251	54.100	58.101	60.798	64.226	68.297	33	76
	Stem Exclusion	57.284	24	43.925	50.930	57.502	60.981	63.528	66.288	68.183	25	
	Understory Reinitiation	66.484	100	42.648	51.095	56.388	59.465	61.917	64.169	66.519	22	
	Shifting Mosaic	31.182	0	35.411	40.701	49.138	51.292	54.244	58.951	61.566	36	

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

<i>Seral-Stage Departure Index</i>	87
<i>Class Configuration Departure Index</i>	76
<i>Cover Type Departure Index</i>	82

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