

Table. Range of variation in landscape structure for Mountain Shrubland under the simulated HRV disturbance scenario on the Columbine 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</i> <sup>4</sup>												
PLAND	Herbs - Shrubs	6.727	99	0.192	0.587	1.553	2.290	3.177	4.954	8.138	191	90
	Early Shrub Dominated	5.109	94	0.379	1.076	1.849	2.661	3.657	5.410	7.937	163	
	Late Shrub Dominated	0.631	0	3.020	4.486	6.272	7.093	8.009	9.258	10.362	67	
<i>Class Configuration</i> <sup>5</sup>												
PD	Herbs - Shrubs	0.163	27	0.068	0.102	0.160	0.182	0.198	0.222	0.269	66	67
	Early Shrub Dominated	0.050	0	0.105	0.163	0.220	0.250	0.283	0.351	0.531	75	
	Late Shrub Dominated	0.020	0	0.389	0.419	0.481	0.513	0.562	0.626	0.756	40	
ED	Herbs - Shrubs	7.381	99	0.529	1.167	2.402	3.239	4.213	5.774	8.317	142	65
	Early Shrub Dominated	4.438	63	0.985	1.980	2.989	3.986	4.992	6.403	8.636	111	
	Late Shrub Dominated	0.730	0	4.627	6.509	8.313	9.394	10.356	11.545	12.155	54	
AREA_MN	Herbs - Shrubs	41.302	100	2.207	5.305	9.204	12.630	17.292	24.476	39.455	152	100
	Early Shrub Dominated	102.448	100	2.322	5.080	7.975	10.775	13.799	20.561	29.574	144	
	Late Shrub Dominated	31.435	100	5.618	9.163	11.822	13.859	15.806	18.538	21.972	68	
AREA_AM	Herbs - Shrubs	427.527	73	22.872	68.791	144.491	257.275	441.564	550.964	756.549	187	59
	Early Shrub Dominated	687.026	100	35.462	90.438	165.783	270.309	402.140	529.450	769.089	162	
	Late Shrub Dominated	232.689	5	152.255	225.358	301.010	337.255	367.849	406.929	478.931	54	
GYRATE_AI	Herbs - Shrubs	976.838	92	176.061	341.593	512.740	675.642	863.667	1003.021	1199.041	98	85
	Early Shrub Dominated	1216.286	100	246.585	409.640	544.299	684.440	816.610	986.769	1123.417	84	
	Late Shrub Dominated	677.457	3	578.772	704.540	816.016	872.873	911.189	966.852	1068.094	30	
SHAPE_MN	Herbs - Shrubs	1.929	100	1.279	1.361	1.425	1.473	1.541	1.635	1.744	19	100
	Early Shrub Dominated	2.267	100	1.218	1.304	1.377	1.423	1.471	1.554	1.617	18	
	Late Shrub Dominated	1.743	100	1.250	1.328	1.382	1.413	1.447	1.496	1.556	12	
SHAPE_AM	Herbs - Shrubs	3.580	68	1.844	2.293	2.698	3.188	3.757	4.348	6.363	64	63
	Early Shrub Dominated	4.399	98	1.973	2.433	2.802	3.204	3.668	4.141	4.966	53	
	Late Shrub Dominated	3.172	1	2.978	3.424	3.691	3.867	3.981	4.153	4.459	19	

CPLAND	Herbs - Shrubs	5.046	98	0.145	0.450	1.206	1.803	2.449	4.029	6.892	199	90
	Early Shrub Dominated	4.095	94	0.274	0.865	1.445	2.053	2.894	4.335	6.617	169	
	Late Shrub Dominated	0.466	0	2.191	3.421	4.901	5.499	6.191	7.138	8.188	68	
CORE_MN	Herbs - Shrubs	30.981	100	1.668	3.951	7.158	9.968	13.252	20.012	33.412	161	100
	Early Shrub Dominated	82.118	100	1.676	4.003	6.272	8.527	10.879	16.182	25.125	143	
	Late Shrub Dominated	23.220	100	4.113	6.997	9.247	10.677	12.283	14.270	17.240	68	
CORE_AM	Herbs - Shrubs	360.443	77	17.783	57.949	119.403	217.972	354.965	455.924	622.492	183	65
	Early Shrub Dominated	574.376	100	28.204	73.327	139.678	228.013	333.869	448.209	630.600	164	
	Late Shrub Dominated	173.104	3	126.358	191.637	253.837	284.108	313.590	345.096	416.779	54	
CAI_MN	Herbs - Shrubs	47.360	0	50.580	53.765	56.843	58.497	60.515	64.077	68.860	18	86
	Early Shrub Dominated	57.015	7	52.964	56.224	59.763	62.233	65.133	69.823	74.234	22	
	Late Shrub Dominated	58.020	97	45.443	48.975	51.361	53.067	54.992	57.708	60.473	16	
CAI_AM	Herbs - Shrubs	75.011	18	62.022	71.880	75.775	78.028	80.424	84.025	88.797	16	42
	Early Shrub Dominated	80.156	74	69.542	72.990	76.184	78.064	80.206	83.838	88.130	14	
	Late Shrub Dominated	73.867	1	72.543	75.303	76.468	77.282	78.228	79.571	81.740	6	
PROX_MN	Herbs - Shrubs	70.832	52	4.192	13.873	34.487	68.318	113.282	179.274	342.119	242	47
	Early Shrub Dominated	127.177	85	4.953	19.945	38.858	67.461	106.047	171.237	308.553	224	
	Late Shrub Dominated	2.067	0	35.916	120.173	166.212	199.528	235.127	290.507	330.427	85	
PROX_AM	Herbs - Shrubs	182.121	58	0.497	11.554	50.285	125.744	320.553	516.568	824.044	402	53
	Early Shrub Dominated	400.536	90	1.523	19.984	54.867	123.462	288.872	494.176	694.971	384	
	Late Shrub Dominated	0.229	0	84.170	149.811	262.315	326.856	399.775	493.572	591.077	105	
CWED	Herbs - Shrubs	2.932	100	0.070	0.229	0.543	0.799	1.176	1.679	2.311	181	89
	Early Shrub Dominated	1.735	92	0.138	0.379	0.670	0.977	1.351	1.822	2.378	148	
	Late Shrub Dominated	0.281	0	1.411	1.934	2.475	2.818	3.215	3.759	4.092	65	
TECI	Herbs - Shrubs	39.048	100	12.194	16.710	21.966	24.766	27.552	30.875	35.864	57	100
	Early Shrub Dominated	38.121	100	11.880	17.762	21.821	24.575	26.868	29.945	32.327	50	
	Late Shrub Dominated	37.925	100	25.852	27.890	28.946	29.783	30.657	32.120	33.429	14	
CLUMPY	Herbs - Shrubs	0.927	97	0.822	0.873	0.900	0.911	0.919	0.926	0.931	6	96
	Early Shrub Dominated	0.943	100	0.841	0.882	0.899	0.909	0.915	0.924	0.931	5	
	Late Shrub Dominated	0.932	100	0.893	0.905	0.909	0.912	0.914	0.918	0.921	1	

IJI	Herbs - Shrubs	72.246	52	43.160	58.652	67.529	71.751	75.515	80.253	84.882	30	7
	Early Shrub Dominated	67.659	42	45.810	58.911	64.792	68.795	72.044	75.599	77.994	24	
	Late Shrub Dominated	72.726	80	61.389	63.471	67.325	69.849	72.231	74.701	79.605	16	

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

<i>Seral-Stage Departure Index</i>	90
<i>Class Configuration Departure Index</i>	73
<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.