

Table. Range of variation in landscape structure for Spruce-Fir-Aspen Forest under the simulated HRV disturbance scenario on the Uncompahgre Plateau Landscape, 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 Composition⁴</i>												
PLAND	Stand Initiation	0.04	4	0.01	0.04	0.13	0.25	0.51	1.27	2.38	482	60
	Stem Exclusion	1.12	60	0.15	0.32	0.59	0.95	1.38	2.01	2.64	178	
	Understory Reinitiation	2.37	89	0.42	0.77	1.41	1.73	2.05	2.59	2.84	105	
	Shifting Mosaic	0.04	0	0.06	0.10	0.21	0.39	0.61	0.95	1.43	216	
<i>Class Configuration⁵</i>												
PD	Stand Initiation	0.02	3	0.01	0.02	0.04	0.06	0.10	0.15	0.28	215	92
	Stem Exclusion	0.23	96	0.05	0.09	0.13	0.16	0.19	0.22	0.29	84	
	Understory Reinitiation	0.12	1	0.09	0.14	0.17	0.19	0.21	0.24	0.28	56	
	Shifting Mosaic	0.01	0	0.02	0.02	0.04	0.05	0.08	0.10	0.11	145	
ED	Stand Initiation	0.17	4	0.04	0.20	0.51	0.91	1.68	3.41	6.37	353	46
	Stem Exclusion	4.00	74	0.61	1.23	2.03	3.03	4.01	5.42	6.92	138	
	Understory Reinitiation	5.01	69	1.41	2.49	3.90	4.46	5.23	6.37	7.05	87	
	Shifting Mosaic	0.14	0	0.26	0.37	0.73	1.13	1.64	2.31	2.96	171	
AREA_MN	Stand Initiation	2.62	18	1.14	1.86	2.90	3.96	5.68	10.19	18.30	210	32
	Stem Exclusion	4.81	34	2.39	2.99	4.34	5.70	7.45	10.33	12.47	129	
	Understory Reinitiation	19.11	100	3.19	5.28	7.25	9.14	10.65	13.15	15.82	86	
	Shifting Mosaic	8.39	63	1.65	2.85	4.66	7.19	10.25	15.66	22.59	178	
AREA_AM	Stand Initiation	10.44	13	1.60	5.68	17.11	55.91	200.41	1139.71	4302.97	2028	43
	Stem Exclusion	93.99	28	10.89	25.12	86.96	220.60	565.38	2334.82	4455.14	1047	
	Understory Reinitiation	2353.15	93	51.63	127.32	393.14	966.08	1446.05	2761.46	5109.23	273	
	Shifting Mosaic	27.56	12	3.63	20.08	68.05	296.05	545.78	1499.49	2048.66	500	
GYRATE_AM	Stand Initiation	161.86	15	59.84	113.11	205.84	347.99	607.77	1475.49	3213.46	392	38
	Stem Exclusion	466.88	31	171.47	227.03	415.73	622.63	1049.30	2168.77	3342.65	312	
	Understory Reinitiation	2295.71	93	306.51	505.12	856.28	1341.34	1659.99	2405.39	3916.85	142	
	Shifting Mosaic	290.40	16	87.15	197.70	376.40	759.92	1005.87	1787.05	2308.47	209	
SHAPE_MN	Stand Initiation	1.72	16	1.48	1.65	1.75	1.81	1.88	1.97	2.04	17	76

	Stem Exclusion	1.96	94	1.68	1.76	1.83	1.88	1.91	1.96	2.00	11	
	Understory Reinitiation	2.03	99	1.72	1.83	1.87	1.92	1.95	1.99	2.08	8	
	Shifting Mosaic	2.36	99	1.57	1.69	1.78	1.85	1.93	2.23	2.46	29	
SHAPE_AM	Stand Initiation	2.40	11	1.69	2.13	2.80	3.84	5.79	12.70	22.46	275	49
	Stem Exclusion	4.41	27	2.52	2.97	4.35	6.07	8.77	16.36	21.24	221	
	Understory Reinitiation	16.65	94	3.63	4.93	7.53	10.40	12.76	17.67	23.72	122	
	Shifting Mosaic	3.12	9	2.02	2.61	4.17	6.83	9.24	13.31	16.20	157	
CPLAND	Stand Initiation	0.03	7	0.00	0.02	0.07	0.16	0.34	0.97	1.95	600	51
	Stem Exclusion	0.69	56	0.08	0.17	0.36	0.61	0.93	1.44	1.95	206	
	Understory Reinitiation	1.63	83	0.19	0.45	0.97	1.22	1.52	1.93	2.14	122	
	Shifting Mosaic	0.02	0	0.02	0.07	0.16	0.31	0.48	0.77	1.21	230	
CORE_MN	Stand Initiation	1.80	31	0.20	0.93	1.60	2.49	4.03	8.13	15.97	289	25
	Stem Exclusion	2.97	34	1.03	1.53	2.58	3.73	5.09	7.53	8.97	161	
	Understory Reinitiation	13.12	100	1.57	3.11	4.95	6.47	7.79	9.60	12.39	100	
	Shifting Mosaic	4.17	33	0.67	2.08	3.39	5.35	8.02	13.06	17.40	205	
CORE_AM	Stand Initiation	7.83	16	0.30	3.49	11.23	41.34	163.71	986.41	3805.83	2378	43
	Stem Exclusion	73.71	29	6.49	18.38	64.52	168.02	450.05	1971.69	3729.27	1163	
	Understory Reinitiation	1776.82	88	35.49	92.72	323.26	785.41	1201.96	2346.77	4205.66	287	
	Shifting Mosaic	14.77	5	1.70	16.76	54.92	256.16	465.25	1344.48	1790.83	518	
CAI_MN	Stand Initiation	57.50	95	15.43	34.02	42.10	47.08	51.87	57.92	63.82	51	85
	Stem Exclusion	41.48	95	26.52	30.29	33.38	35.32	37.63	41.48	47.43	32	
	Understory Reinitiation	25.82	2	20.97	30.03	35.08	38.12	40.86	44.07	47.89	37	
	Shifting Mosaic	38.64	3	17.01	41.70	53.26	59.59	63.61	70.49	74.27	48	
CAI_AM	Stand Initiation	68.63	65	17.34	45.60	56.34	63.78	71.99	80.43	87.25	55	24
	Stem Exclusion	61.65	36	43.16	51.20	59.09	64.52	69.03	72.99	75.24	34	
	Understory Reinitiation	68.66	31	46.30	59.39	67.95	71.12	73.82	75.58	78.32	23	
	Shifting Mosaic	49.74	1	40.20	59.48	73.29	77.82	81.25	84.51	88.06	32	
PROX_MN	Stand Initiation	4.80	15	0.36	2.27	8.59	20.28	60.06	404.17	1323.74	1981	48
	Stem Exclusion	34.19	30	5.34	10.24	28.93	75.31	194.29	760.98	1409.63	997	
	Understory Reinitiation	727.88	88	13.88	44.45	152.30	310.87	496.06	1092.02	2304.25	337	
	Shifting Mosaic	0.04	0	3.64	6.34	26.71	96.96	215.88	681.23	1274.66	696	
PROX_AM	Stand Initiation	6.16	14	0.24	2.90	12.65	44.69	176.88	1044.26	4811.95	2330	56

	Stem Exclusion	39.75	16	5.72	16.93	62.41	205.17	539.99	2011.85	4869.91	972	
	Understory Reinitiation	1699.16	86	11.14	149.22	343.23	712.34	1152.27	2745.86	12994.13	365	
	Shifting Mosaic	0.02	0	4.10	10.99	47.16	182.86	423.28	1570.27	4899.10	853	
CWED	Stand Initiation	0.04	2	0.01	0.05	0.14	0.23	0.40	0.75	1.70	305	70
	Stem Exclusion	0.94	68	0.16	0.33	0.54	0.75	1.01	1.36	1.73	137	
	Understory Reinitiation	1.56	98	0.47	0.69	0.90	1.05	1.21	1.46	1.73	74	
	Shifting Mosaic	0.05	0	0.05	0.06	0.11	0.16	0.24	0.35	0.45	185	
TECI	Stand Initiation	22.19	18	17.60	20.39	23.10	25.39	27.86	31.06	38.61	42	73
	Stem Exclusion	23.46	8	21.26	23.15	24.37	25.48	26.86	28.26	29.65	20	
	Understory Reinitiation	31.18	99	18.49	19.68	21.72	23.31	24.99	28.20	35.87	37	
	Shifting Mosaic	32.84	100	5.91	10.51	13.16	14.72	17.28	23.16	34.13	86	
CLUMPY	Stand Initiation	0.74	25	0.64	0.70	0.74	0.77	0.80	0.84	0.88	19	25
	Stem Exclusion	0.78	25	0.72	0.75	0.77	0.80	0.82	0.84	0.85	12	
	Understory Reinitiation	0.87	100	0.74	0.79	0.82	0.83	0.85	0.86	0.86	8	
	Shifting Mosaic	0.81	36	0.67	0.76	0.80	0.82	0.85	0.87	0.88	14	
IJI	Stand Initiation	59.58	19	50.12	56.85	60.52	62.69	64.78	68.45	72.33	19	30
	Stem Exclusion	67.63	41	57.99	63.26	66.54	68.06	69.72	71.53	73.95	12	
	Understory Reinitiation	65.01	63	53.39	59.84	62.65	64.25	65.79	68.32	71.62	13	
	Shifting Mosaic	62.18	100	35.93	44.90	50.42	52.91	55.15	59.16	62.85	27	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	60
<i>Class Configuration Departure Index</i>	50
<i>Cover Type Departure Index</i>	55

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.