

Table. Range of variation in landscape structure for Pure 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 Composition</i> ⁴												
PLAND	Stand Initiation	0.09	0	0.05	0.24	0.53	0.86	1.19	1.93	2.63	197	75
	Stem Exclusion	3.07	100	0.17	0.32	0.59	0.91	1.22	1.74	2.49	156	
	Understory Reinitiation	1.00	62	0.24	0.40	0.64	0.89	1.17	1.66	2.15	141	
	Shifting Mosaic	0.49	0	0.71	1.14	1.60	1.90	2.14	2.48	2.93	71	
<i>Class Configuration</i> ⁵												
PD	Stand Initiation	0.03	0	0.02	0.07	0.11	0.15	0.20	0.27	0.36	132	75
	Stem Exclusion	0.42	100	0.06	0.08	0.12	0.16	0.19	0.24	0.34	104	
	Understory Reinitiation	0.15	50	0.08	0.10	0.13	0.15	0.18	0.23	0.28	85	
	Shifting Mosaic	0.04	0	0.14	0.18	0.23	0.26	0.29	0.33	0.43	59	
ED	Stand Initiation	0.35	0	0.22	0.94	1.77	2.66	3.56	5.55	7.28	173	75
	Stem Exclusion	8.62	100	0.74	1.14	1.92	2.79	3.55	4.86	6.89	133	
	Understory Reinitiation	2.91	59	0.97	1.40	2.02	2.67	3.37	4.55	5.82	118	
	Shifting Mosaic	1.19	0	2.13	3.34	4.60	5.28	5.98	6.85	8.33	67	
AREA_MN	Stand Initiation	3.01	4	2.37	3.16	4.49	5.38	6.48	7.68	9.07	84	61
	Stem Exclusion	7.25	90	2.64	3.72	4.84	5.80	6.67	7.75	9.09	69	
	Understory Reinitiation	6.54	73	2.97	4.03	4.86	5.66	6.63	7.99	9.70	70	
	Shifting Mosaic	14.05	100	4.86	5.72	6.46	7.15	7.62	8.43	9.37	38	
AREA_AM	Stand Initiation	15.67	1	12.52	29.05	101.43	178.76	295.83	546.46	834.22	289	37
	Stem Exclusion	453.74	88	15.28	44.58	116.79	179.75	322.30	543.87	823.56	278	
	Understory Reinitiation	139.80	38	28.01	53.61	103.37	169.97	288.45	540.83	876.31	287	
	Shifting Mosaic	284.20	44	69.56	149.00	235.07	296.89	369.42	503.68	689.21	119	
GYRATE_AM	Stand Initiation	162.60	0	137.65	229.78	418.15	564.29	745.19	1030.92	1252.92	142	41
	Stem Exclusion	1010.09	91	175.70	287.87	454.75	595.02	774.26	1070.95	1629.00	132	
	Understory Reinitiation	543.01	47	205.83	315.39	440.97	556.66	741.78	1054.72	1452.29	133	
	Shifting Mosaic	774.73	48	379.45	540.07	681.22	783.55	868.40	1022.03	1316.25	62	
SHAPE_MN	Stand Initiation	1.79	13	1.65	1.76	1.82	1.86	1.89	1.94	1.98	9	83

	Stem Exclusion	1.93	97	1.70	1.77	1.82	1.85	1.88	1.93	1.96	8	
	Understory Reinitiation	1.92	98	1.68	1.77	1.81	1.84	1.87	1.91	1.95	8	
	Shifting Mosaic	2.12	100	1.74	1.81	1.87	1.89	1.91	1.94	1.97	7	
SHAPE_AM	Stand Initiation	2.41	0	2.10	3.06	4.21	5.11	6.08	7.66	9.82	90	41
	Stem Exclusion	7.22	88	2.68	3.53	4.35	5.16	6.26	7.66	9.62	80	
	Understory Reinitiation	4.45	36	2.72	3.41	4.15	4.97	5.98	7.91	9.51	90	
	Shifting Mosaic	6.85	78	3.73	4.84	5.66	6.17	6.75	7.70	9.27	46	
CPLAND	Stand Initiation	0.07	0	0.03	0.20	0.44	0.72	1.06	1.69	2.36	206	75
	Stem Exclusion	1.68	100	0.07	0.16	0.32	0.50	0.72	1.01	1.50	169	
	Understory Reinitiation	0.47	66	0.08	0.15	0.27	0.40	0.54	0.82	1.02	169	
	Shifting Mosaic	0.26	0	0.33	0.49	0.76	0.90	1.03	1.20	1.40	79	
CORE_MN	Stand Initiation	2.33	4	1.57	2.50	3.72	4.53	5.65	6.81	8.15	95	47
	Stem Exclusion	3.96	75	1.05	1.75	2.57	3.25	3.95	4.69	5.78	90	
	Understory Reinitiation	3.05	73	0.95	1.41	1.98	2.47	3.10	3.99	4.89	104	
	Shifting Mosaic	7.28	100	1.91	2.58	3.05	3.40	3.74	4.21	4.67	48	
CORE_AM	Stand Initiation	13.00	1	10.09	25.49	89.99	159.35	266.70	510.73	793.93	305	37
	Stem Exclusion	315.70	88	7.82	27.20	81.66	132.70	234.16	390.88	550.32	274	
	Understory Reinitiation	95.04	45	11.51	29.39	62.53	102.49	178.17	314.19	547.60	278	
	Shifting Mosaic	164.86	44	37.56	84.03	136.77	172.87	219.64	300.20	412.15	125	
CAI_MN	Stand Initiation	68.93	6	54.71	68.70	72.77	75.41	78.05	82.05	84.73	18	67
	Stem Exclusion	18.59	0	19.57	21.58	23.85	25.76	28.45	33.25	41.47	45	
	Understory Reinitiation	18.08	46	11.21	13.58	16.21	18.61	21.03	24.37	28.58	58	
	Shifting Mosaic	18.19	2	13.31	19.41	22.56	24.44	26.27	30.22	36.32	44	
CAI_AM	Stand Initiation	77.37	4	63.89	77.89	82.31	85.00	87.56	90.69	92.73	15	37
	Stem Exclusion	54.60	36	39.23	46.75	53.21	56.39	58.74	62.46	67.20	28	
	Understory Reinitiation	46.55	72	26.07	34.55	40.56	44.32	46.88	50.76	54.61	37	
	Shifting Mosaic	51.85	91	36.26	42.76	45.85	47.61	49.63	52.78	55.44	21	
PROX_MN	Stand Initiation	4.98	0	4.48	12.52	34.62	58.78	99.35	189.53	364.24	301	76
	Stem Exclusion	162.42	95	4.42	11.37	32.16	54.05	91.86	164.61	247.12	283	
	Understory Reinitiation	20.09	17	4.09	11.64	23.03	41.19	67.81	142.50	289.18	318	
	Shifting Mosaic	25.92	2	16.43	44.06	82.61	115.22	156.18	223.38	364.71	156	
PROX_AM	Stand Initiation	3.99	0	6.45	24.76	65.59	134.26	273.24	610.25	1392.28	436	69

	Stem Exclusion	562.42	94	5.64	21.71	60.89	116.70	245.43	609.93	1145.72	504	
	Understory Reinitiation	56.55	35	8.05	17.34	40.80	87.36	162.86	401.68	849.02	440	
	Shifting Mosaic	32.42	0	48.45	92.62	173.20	271.64	458.96	665.37	961.56	211	
CWED	Stand Initiation	0.08	0	0.06	0.22	0.41	0.60	0.79	1.18	1.58	159	75
	Stem Exclusion	2.91	100	0.25	0.37	0.62	0.88	1.14	1.53	2.12	132	
	Understory Reinitiation	1.32	64	0.40	0.62	0.90	1.17	1.49	1.98	2.56	116	
	Shifting Mosaic	0.53	0	0.74	1.47	1.96	2.25	2.55	2.93	3.50	65	
TECI	Stand Initiation	23.77	84	18.48	19.94	21.68	22.53	23.35	24.56	27.46	21	38
	Stem Exclusion	33.78	88	26.81	29.12	31.05	32.15	33.02	34.29	35.37	16	
	Understory Reinitiation	45.27	77	38.54	41.13	42.63	43.73	45.14	46.99	49.52	13	
	Shifting Mosaic	44.65	89	34.70	39.47	41.59	42.64	43.74	45.26	48.82	14	
CLUMPY	Stand Initiation	0.75	5	0.72	0.75	0.79	0.80	0.82	0.83	0.84	10	45
	Stem Exclusion	0.82	70	0.73	0.77	0.80	0.81	0.82	0.84	0.85	8	
	Understory Reinitiation	0.82	65	0.75	0.78	0.80	0.81	0.82	0.84	0.85	7	
	Shifting Mosaic	0.85	100	0.79	0.81	0.82	0.82	0.83	0.84	0.84	3	
IJI	Stand Initiation	51.16	85	35.27	39.03	44.20	47.51	50.01	53.13	54.77	30	18
	Stem Exclusion	45.72	17	38.64	42.81	46.44	48.73	50.74	53.56	56.11	22	
	Understory Reinitiation	48.91	52	38.09	43.05	45.96	48.72	51.48	54.66	59.63	24	
	Shifting Mosaic	52.16	57	42.02	45.29	49.60	51.44	53.53	57.44	60.32	24	

Summary Indices⁶:

<i>Seral-Stage Departure Index</i>	75
<i>Class Configuration Departure Index</i>	55
<i>Cover Type Departure Index</i>	65

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.