

Table. Range of variation in landscape structure for Warm Dry Mixed-Conifer 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	0.05	99	0.00	0.01	0.02	0.02	0.03	0.04	0.05	152	94
	Stem Exclusion	0.72	100	0.02	0.03	0.04	0.05	0.06	0.07	0.08	76	
	Understory Reinitiation	0.26	93	0.06	0.07	0.08	0.10	0.11	0.29	0.43	234	
	Shifting Mosaic	0.01	0	0.04	0.15	0.24	0.32	0.38	0.48	0.55	104	
	Fire Maintained Open Canopy	0.00	0	0.20	0.26	0.35	0.42	0.47	0.55	0.67	71	
<i>Class Configuration</i> ⁵												
PD	Stand Initiation	0.02	75	0.00	0.01	0.01	0.02	0.02	0.03	0.04	131	80
	Stem Exclusion	0.38	100	0.02	0.03	0.04	0.04	0.05	0.06	0.07	65	
	Understory Reinitiation	0.05	1	0.05	0.06	0.06	0.07	0.08	0.16	0.23	141	
	Shifting Mosaic	0.00	0	0.02	0.07	0.12	0.15	0.18	0.22	0.25	100	
	Fire Maintained Open Canopy	0.00	0	0.11	0.14	0.18	0.20	0.22	0.26	0.32	61	
ED	Stand Initiation	0.23	98	0.03	0.05	0.09	0.12	0.15	0.21	0.28	142	90
	Stem Exclusion	3.84	100	0.14	0.19	0.24	0.30	0.34	0.40	0.47	71	
	Understory Reinitiation	0.90	89	0.31	0.38	0.46	0.53	0.60	1.48	2.18	207	
	Shifting Mosaic	0.02	0	0.20	0.69	1.19	1.51	1.80	2.26	2.57	103	
	Fire Maintained Open Canopy	0.00	0	0.97	1.31	1.68	1.98	2.22	2.65	3.21	68	
AREA_MN	Stand Initiation	2.11	100	0.92	1.02	1.10	1.18	1.27	1.46	1.67	37	100
	Stem Exclusion	1.91	100	1.01	1.10	1.16	1.21	1.27	1.36	1.49	22	
	Understory Reinitiation	5.59	100	1.13	1.17	1.24	1.30	1.39	1.83	2.13	51	
	Shifting Mosaic	8.94	100	1.50	1.74	1.93	2.06	2.18	2.39	3.21	32	
	Fire Maintained Open Canopy	0.00	0	1.52	1.73	1.91	2.02	2.15	2.27	2.44	27	
AREA_AM	Stand Initiation	19.94	100	1.14	1.40	1.71	2.06	2.64	3.84	8.05	118	96
	Stem Exclusion	9.07	100	1.50	1.69	2.01	2.35	2.76	4.18	5.92	106	
	Understory Reinitiation	91.11	100	1.84	2.01	2.43	2.79	3.72	8.37	17.21	228	
	Shifting Mosaic	22.76	95	3.50	5.14	7.82	9.81	12.35	22.23	52.18	174	
	Fire Maintained Open Canopy	0.00	0	4.42	6.44	11.05	15.17	20.30	27.42	38.70	138	
GYRATE_AM	Stand Initiation	206.59	100	47.16	51.88	57.42	62.96	69.73	83.56	113.26	50	99

	Stem Exclusion	128.04	100	52.88	57.48	62.18	66.94	71.09	82.04	94.50	37	
	Understory Reinitiation	505.79	100	59.98	62.38	67.62	72.50	81.17	119.86	168.87	79	
	Shifting Mosaic	227.78	99	84.86	102.37	122.54	135.60	149.03	200.95	362.79	73	
	Fire Maintained Open Canopy	0.00	0	92.38	106.11	135.22	155.70	180.62	206.15	255.83	64	
SHAPE_MN	Stand Initiation	1.87	100	1.39	1.45	1.49	1.52	1.55	1.58	1.63	9	100
	Stem Exclusion	1.82	100	1.43	1.49	1.52	1.54	1.56	1.58	1.62	6	
	Understory Reinitiation	1.93	100	1.50	1.51	1.53	1.55	1.58	1.70	1.73	12	
	Shifting Mosaic	2.27	100	1.62	1.65	1.68	1.70	1.71	1.74	1.77	5	
	Fire Maintained Open Canopy	-	-	1.61	1.65	1.68	1.70	1.71	1.73	1.76	5	
SHAPE_AM	Stand Initiation	2.59	100	1.43	1.50	1.59	1.66	1.72	1.88	2.04	23	95
	Stem Exclusion	2.45	100	1.49	1.59	1.66	1.72	1.76	1.84	1.95	14	
	Understory Reinitiation	5.16	100	1.60	1.65	1.70	1.76	1.85	2.17	2.71	29	
	Shifting Mosaic	2.97	95	1.95	2.10	2.28	2.40	2.53	2.97	3.89	36	
	Fire Maintained Open Canopy	-	-	1.97	2.10	2.38	2.56	2.84	2.99	3.34	35	
CPLAND	Stand Initiation	0.04	100	0.00	0.00	0.01	0.01	0.01	0.02	0.03	173	98
	Stem Exclusion	0.43	100	0.02	0.02	0.03	0.03	0.04	0.05	0.05	72	
	Understory Reinitiation	0.10	98	0.02	0.03	0.03	0.04	0.04	0.09	0.13	174	
	Shifting Mosaic	0.00	0	0.01	0.05	0.07	0.10	0.12	0.16	0.19	114	
	Fire Maintained Open Canopy	0.00	0	0.09	0.11	0.13	0.15	0.17	0.20	0.22	58	
CORE_MN	Stand Initiation	1.87	100	0.28	0.35	0.43	0.50	0.58	0.70	0.93	70	100
	Stem Exclusion	1.14	100	0.65	0.70	0.77	0.81	0.87	0.96	1.09	32	
	Understory Reinitiation	2.20	100	0.38	0.41	0.48	0.52	0.58	0.64	0.80	45	
	Shifting Mosaic	4.48	100	0.35	0.44	0.56	0.65	0.74	0.90	1.19	70	
	Fire Maintained Open Canopy	0.00	0	0.49	0.61	0.70	0.75	0.81	0.91	1.06	39	
CORE_AM	Stand Initiation	17.51	100	0.36	0.54	0.74	0.99	1.33	2.11	5.58	158	98
	Stem Exclusion	6.46	100	0.99	1.18	1.44	1.74	2.08	3.50	5.17	133	
	Understory Reinitiation	41.25	100	0.75	0.85	1.18	1.55	2.06	4.93	6.73	265	
	Shifting Mosaic	12.71	98	1.45	1.83	3.38	4.60	6.77	10.46	31.46	187	
	Fire Maintained Open Canopy	0.00	0	1.86	2.92	5.42	8.20	10.88	17.85	29.02	182	
CAI_MN	Stand Initiation	96.21	100	22.42	28.16	33.92	37.87	41.90	46.87	58.67	49	80
	Stem Exclusion	55.87	3	48.86	57.39	60.80	63.01	65.43	68.73	73.30	18	
	Understory Reinitiation	29.43	17	18.81	23.17	30.94	33.24	35.34	38.60	41.77	46	
	Shifting Mosaic	30.05	95	9.64	13.38	18.12	21.18	24.72	29.81	46.13	78	
	Fire Maintained Open Canopy	0.00	0	18.31	24.45	28.98	31.51	34.24	38.64	43.90	45	

CAI_AM	Stand Initiation	88.59	100	26.63	32.38	38.02	42.54	46.00	52.33	58.00	47	77
	Stem Exclusion	59.65	2	55.58	61.13	64.76	67.33	70.03	73.38	77.90	18	
	Understory Reinitiation	39.32	51	23.90	30.74	36.40	39.25	42.10	45.75	49.35	38	
	Shifting Mosaic	50.17	98	18.28	22.56	27.73	31.54	35.18	40.08	56.60	56	
	Fire Maintained Open Canopy	0.00	0	25.74	30.92	34.65	37.66	40.48	45.19	48.53	38	
PROX_MN	Stand Initiation	4.88	100	0.03	0.10	0.24	0.38	0.61	1.03	1.73	246	100
	Stem Exclusion	7.48	100	0.21	0.36	0.56	0.73	0.92	1.19	1.63	115	
	Understory Reinitiation	12.11	100	0.44	0.69	1.01	1.31	1.64	4.06	6.62	257	
	Shifting Mosaic	0.00	0	1.58	4.18	5.71	6.82	7.96	10.24	14.91	89	
	Fire Maintained Open Canopy	0.00	0	2.24	3.75	5.84	7.77	10.16	11.84	18.03	104	
PROX_AM	Stand Initiation	5.10	99	0.02	0.10	0.24	0.44	0.71	1.82	8.02	393	100
	Stem Exclusion	15.27	100	0.20	0.39	0.67	0.88	1.23	2.59	6.31	250	
	Understory Reinitiation	108.61	100	0.47	0.75	1.40	1.90	3.19	6.52	15.30	304	
	Shifting Mosaic	0.00	0	1.73	6.84	11.24	13.75	18.24	30.38	47.22	171	
	Fire Maintained Open Canopy	0.00	0	3.06	6.47	13.67	22.69	35.75	51.26	88.91	197	
CWED	Stand Initiation	0.02	6	0.01	0.01	0.03	0.03	0.04	0.06	0.08	134	88
	Stem Exclusion	0.88	100	0.03	0.05	0.06	0.07	0.08	0.10	0.12	74	
	Understory Reinitiation	0.37	92	0.08	0.09	0.11	0.13	0.16	0.50	0.83	310	
	Shifting Mosaic	0.01	0	0.07	0.23	0.42	0.54	0.65	0.80	0.91	106	
	Fire Maintained Open Canopy	0.00	0	0.25	0.35	0.50	0.61	0.72	0.91	1.19	93	
TECI	Stand Initiation	6.55	0	22.58	24.47	26.83	28.06	29.26	30.79	32.16	23	75
	Stem Exclusion	23.04	0	22.77	23.37	24.11	24.62	25.04	25.75	26.91	10	
	Understory Reinitiation	40.60	100	21.24	22.26	23.80	25.32	26.74	34.33	38.23	48	
	Shifting Mosaic	36.02	56	19.78	31.35	33.93	35.64	37.47	40.30	42.05	25	
	Fire Maintained Open Canopy	-	-	22.06	26.17	29.06	31.13	33.23	35.63	39.91	30	
CLUMPY	Stand Initiation	0.71	99	0.61	0.63	0.65	0.66	0.67	0.69	0.72	9	88
	Stem Exclusion	0.67	89	0.62	0.64	0.64	0.65	0.66	0.67	0.69	6	
	Understory Reinitiation	0.79	100	0.64	0.64	0.65	0.66	0.67	0.69	0.71	7	
	Shifting Mosaic	0.85	100	0.66	0.68	0.70	0.70	0.71	0.72	0.76	6	
	Fire Maintained Open Canopy	-	-	0.67	0.69	0.69	0.70	0.71	0.72	0.73	5	
IJI	Stand Initiation	32.01	0	49.54	52.82	57.81	60.60	62.64	65.02	67.41	20	71
	Stem Exclusion	61.85	25	50.05	59.11	61.70	63.47	64.68	66.46	68.41	12	
	Understory Reinitiation	61.28	4	59.08	61.42	63.69	65.06	66.21	68.30	72.01	11	

Shifting Mosaic	49.13	0	50.19	55.32	58.19	60.57	63.01	65.86	69.47	17
Fire Maintained Open Canopy	-	-	55.94	59.96	61.50	62.78	63.95	65.46	67.55	9
Summary Indices⁶:										
<i>Seral-Stage Departure Index</i>										94
<i>Class Configuration Departure Index</i>										91
<i>Cover Type Departure Index</i>										92

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.