

Table S1. Vegetation indexes that were explored in the remote sensing analysis for hypothesis 1.

Index Name	Equation
Green NDVI	$\frac{NIR - Green}{NIR + Green}$
SAVI	$\frac{NIR - Red}{NIR + Red} + 1.5$
NDVI	$\frac{NIR - Red}{NIR + Red}$
EVI	$\frac{NIR - Red}{NIR + (6 * Red) - (7.5 * Blue) + 1} * 2.5$
NDSVI	$\frac{SWIR_1 - Red}{SWIR_1 + Red}$
NDTI	$\frac{SWIR_1 - SWIR_2}{SWIR_1 + SWIR_2}$

Table S2: Model performance metrics

Model	R2	R2_adjusted	Sign
H1: TVC ~ NDSVI + Green NDVI	0.35		+
H1: dNBR ~ TVC(modelled)	0.42	0.42	+
H1: dNBR ~ TVC(in situ)	0.27	0.20	+
H3: Post-Fire Fuel Connectivity ~ # Cheatgrass Seeds + covariates	0.84	0.75	+
H4: Post-Fire Diversity ~ Post-Fire Fuel Connectivity	0.92	0.89	-

Table S3: Seeds germinated in the greenhouse from the cores we collected.

Plot	p1	p2	p3	p4	p5	p6	p7	p8	p9	p10	p11	p12	p13	p14
Burn Severity (dNBR)	195	307	300	226	266	143	211	191	99	181	238	248	272	304
<i>B. tectorum</i>														
U_T2	162	87	70	437	453	5	15	40	16	35	8	225	129	176
U_B4	73	32	25	49	68	2	6	6	4	6	0	30	19	59
B_T2	48	19	4	29	1	0	1	0	15	5	3	9	11	34
B_B4	10	5	1	4	5	0	1	0	3	0	0	0	6	8
<i>P. secunda</i>														
U_T2	17	3	1	71	6	65	502	212	175	546	143	116	141	66
U_B4	13	0	0	18	2	10	55	24	19	49	29	19	29	51
B_T2	11	0	0	2	1	3	21	0	37	32	5	28	8	63
B_B4	3	0	0	0	0	0	4	1	4	4	2	6	18	35
<i>A. tridentata</i>														
U_T2	1	0	0	0	0	0	1	2	0	0	0	1	7	0
U_B4	0	0	0	0	0	0	0	3	0	0	2	0	6	1
B_T2	1	0	2	0	0	0	1	1	0	0	0	0	9	5
B_B4	0	0	0	0	0	0	0	1	0	0	0	0	1	2
<i>A. desertorum</i>														
U_T2	0	0	0	0	0	0	0	59	1	0	0	5	0	0
U_B4	0	0	0	0	0	0	0	8	0	0	1	1	0	0
B_T2	7	0	0	0	0	1	0	0	0	0	0	1	0	0
B_B4	2	0	0	0	0	3	0	0	0	0	0	0	0	0
<i>C. testiculatum</i>														
U_T2	24	0	0	0	0	0	2	28	30	0	1	2	3	0
U_B4	23	0	0	0	0	0	1	12	0	0	0	0	0	0
B_T2	6	0	0	0	0	0	0	0	0	0	0	0	0	0
B_B4	4	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>C. parviflora</i>														
U_T2	0	0	0	0	0	6	10	0	0	3	0	0	1	0
U_B4	0	0	0	0	0	3	0	4	0	1	2	0	0	0
B_T2	0	0	0	0	0	0	2	0	0	3	0	0	0	0
B_B4	0	0	0	0	0	1	1	4	0	5	0	0	0	0
<i>S. altissimum</i>														
U_T2	0	20	23	0	0	0	0	1	0	1	0	0	0	1
U_B4	0	6	13	0	0	0	0	0	0	0	0	1	0	0
B_T2	0	1	14	1	0	0	0	0	0	0	0	0	0	15
B_B4	0	0	1	0	0	0	0	0	0	0	0	1	0	11
<i>M. gracilis</i>														
U_T2	0	0	0	1	0	1	0	0	0	0	0	0	0	0
U_B4	0	0	1	12	8	0	2	0	0	1	0	0	0	0
B_T2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
B_B4	0	0	0	3	7	0	0	1	1	0	0	0	0	0
Other species														
All treatments	9	3	0	0	0	4	0	17	2	0	11	1	11	6

Note:

U = Unburned

B = Burned

T2 = Top 2 cm

B4 = Bottom 4 cm