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Article

Detecting Vegetation Recovery after Fire in A Fire-Frequented Habitat Using Normalized Difference Vegetation Index (NDVI)

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SUPPLEMENTARY MATERIALS

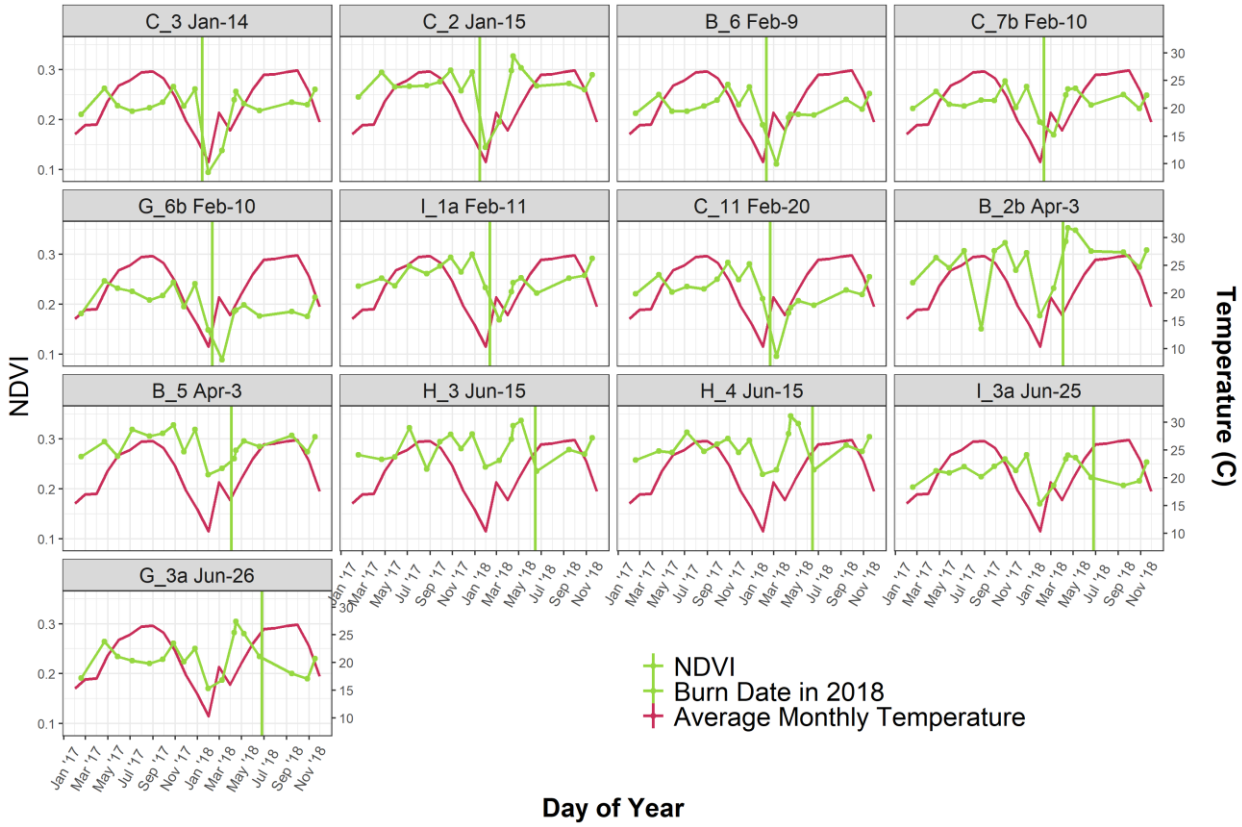

Figure S1. Relationship between NDVI and average monthly temperature for each burn unit. Normalized difference vegetation index plotted with corresponding scale along the left-axis and average monthly temperature plotted with corresponding scale along the right-axis for the 2017 and 2018 calendar years.

S2:

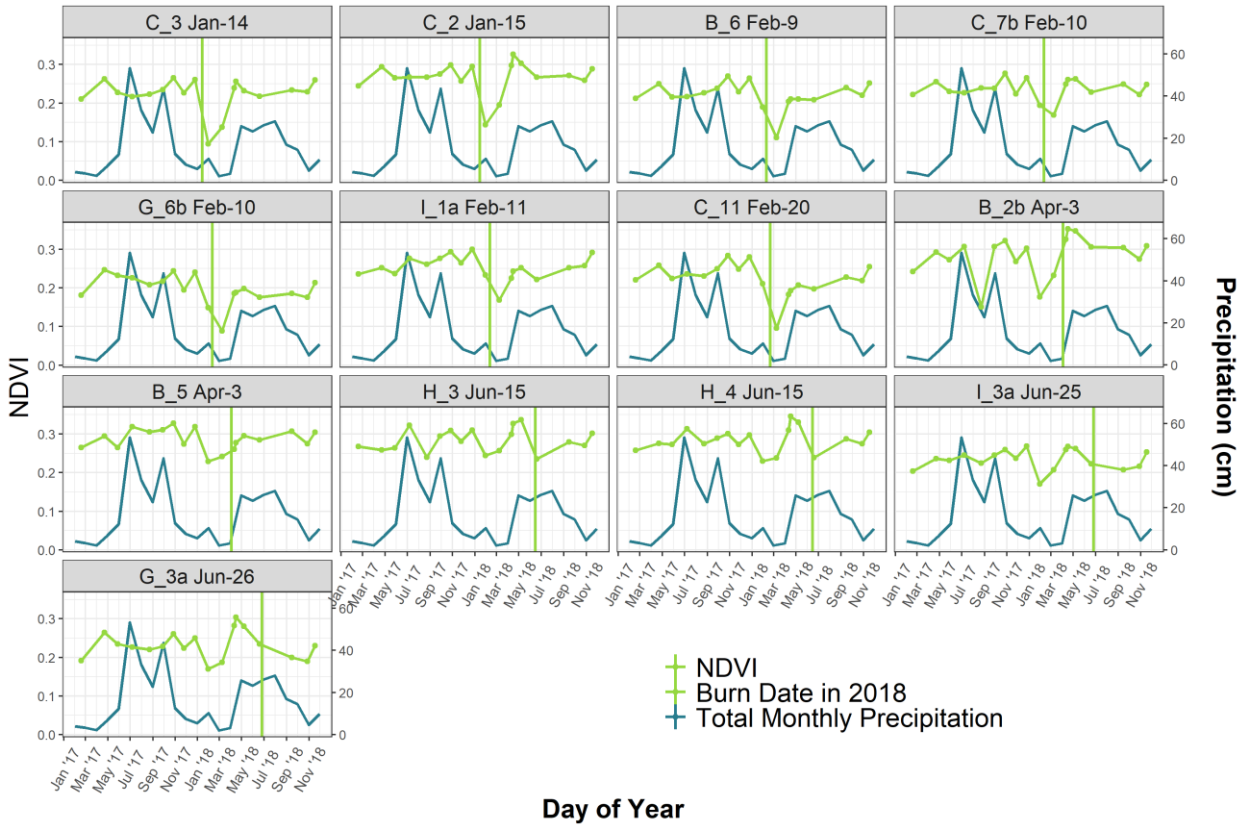

Figure S2. Relationship between NDVI and total monthly precipitation for each burn unit. Normalized difference vegetation index plotted with corresponding scale along the left-axis and total monthly precipitation plotted with corresponding scale along the right-axis for the 2017 and 2018 calendar years.

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Table S1. Burn day weather parameters for the study burn units. Dates for each burn in 2018 are included next to the burn unit name. Weather predictions were taken from prescribed burn plans submitted to the Florida Forest Service. Ignition plans for all burns apply a combination of backing, flanking, head, and dot fire lighting techniques that are chosen based on weather and fuel conditions at the time of each ignition.

	C-3 (Jan-14)			**C-2 (Jan-15)**			B-6 (Feb-9)		
	Max	**Min**	**Preferred**	**Max**	**Min**	Preferred	Max	Min	Preferred
Temperature (F)	95	70	80	90	40	65	95	55	85
Relative Humidity (%)	65	30	40–55	70	20	40–55	70	30	40–55
Wind-Midflame (Mph)	8	2	3–5	5	1	2–4	10	1	3–5
20-Ft Winds (Mph)	20	4	8–12	15	2	8–12	20	3	8–12
Wind Direction	N, NE, E, SW, W, NW		NW, N, NE, W	N, NE, E, W, NW		NW, N, NE	N, NE, E, SW, W, NW		W, NW, N, SW, NE
Transport Wind Speed (Mph)	20	5	12	20	5	12	20	5	1–2
Transport Wind Direction	Any		Any			Any			Any
Mixing Height (ft)	6000	1500	2000-4000	6000	1500	2000–4000	6000	1500	2000–4000
Dispersion Index-Day	70	25	40–65	75	25	40–65	70	25	40–65
Dispersion Index-Night	10	1	3–6	8	2	3–6	20	3	5–15
LVORI	10	1	1–5	10		1–5	10		1–5
KBDI	450	100	250	450	50	300	550	50	200
1-Hr Fuel Moisture (%)	15	6	7–8	15	6	7–8	15	6	7–8
10-Hr Fuel Moisture (%)	30	8	10–12	16	7	10–12	16	10	10–12

Table S1. Continued.

	C-7b (Feb-10)			G-6b (Feb-10)			I-1a (Feb-11)		
	Min	Max	Preferred	Min	Max	Preferred	Min	Max	Preferred
Temperature (F)	80	55	65	93	55	70	95	45	65–85
Relative Humidity (%)	70	30	35–55	65	35	40–50	65	25	35–50
Wind-Midflame (Mph)	6	1	2–4	8	1	3–5	12	3	4–7
20-Ft Winds (Mph)	18	5	10–15	15	5	8–12	20	5	10–15
Wind Direction	N, NE, E, S, SW, W, NW		S, E, N, NE	S, SW, SE, W, NW		SE, S, SW, W	S, SE, SW, E		S, SW
Transport Wind Speed (Mph)	25	5	10–20	20	5	7–12	20	5	7–12
Transport Wind Direction			Any			Any	Any		SW, W, E, SE, S
Mixing Height (ft)	6000	1500	2000–4000	7000	1700	4000	7000	1700	4000
Dispersion Index-Day	70	25	40–65	70	35	45-65	80	20	40–65
Dispersion Index-Night	9	1	1–5	20	3	15	20	2	15
LVORI	10	1	1–5	10	1	1–5	6		1–5
KBDI	550	100	300	550	100	400	600	100	350
1-Hr Fuel Moisture (%)	15	6	7–8	14	6	7–8	14	6	7–9
10-Hr Fuel Moisture (%)	16	6	8-12	16	7	8–10	16	8	10–12

Table S1. Continued.

	C-11 (Feb-20)			B-2b (Apr-3)			B-5 (Apr-3)		
	Max	Min	Preferred	Max	Min	Preferred	Max	Min	Preferred
Temperature (F)	95	55	75	90	55	75	95	40	75
Relative Humidity (%)	65	35	40–55	60	30	40-55	60	20	40–50
Wind-Midflame (Mph)	10	1	3–5	5	2	3–4	6	1	3–5
20-Ft Winds (Mph)	15	3	5–12	15	2	5–10	15	20	8–12
Wind Direction	W, SW, S, SE, E		S, SW, SE, E	S, SE, SW		S, SW	E, SW, S, NW		SW, S, SE
Transport Wind Speed (Mph)	20	5	9	17	3	9	20	5	12
Transport Wind Direction	W, SW, S, SE		S, SW, SE			Any			Any
Mixing Height (ft)	7000	1700	4000	6000	1500	3500–4500	6000	1500	2000–4000
Dispersion Index-Day	70	25	35–65	70	25	35–65	80	25	40–65
Dispersion Index-Night	>6	2	3	12	2	2–10	10	3	3–7
LVORI	10	1	4	10		1–5	10		1–5
KBDI	450	150	250	550	100	300	600	50	200
1-Hr Fuel Moisture (%)	15	6	7–8	15	6	7–8	15	6	7–8
10-Hr Fuel Moisture (%)	16	10	10–12	16	7	10–12	16	10	10–12

Table S1. Continued.

	H-3 & H-4 (Jun-15)			I-3a (June-25)			G-3a (Jun-26)		
	Max	Min	Preferred	Max	Min	Preferred	Max	Min	Preferred
Temperature (F)	90	55	80	95	32	70	85	55	70
Relative Humidity (%)	70	25	35–65	80	25	40	65	35	40–55
Wind-Midflame (Mph)	10	2	3–5	10	1	3	6	2	3–5
20-Ft Winds (Mph)	17	4	8–12	20	5	10	22	5	8–12
Wind Direction	N, NW, W		N, NW	S, SW, SE		S, SE	SW, S, SE		SW, S, SE
Transport Wind Speed (Mph)	17	3	9	30	5	10	20	5	9
Transport Wind Direction			Any	S, SW, SE		SE	SW, S, SE		S, SW
Mixing Height (ft)	6000	1500	2000–4000	7000	1700	4000	7000	1700	4000
Dispersion Index-Day	70	30	40–65	85	20	45	80	30	35–65
Dispersion Index-Night	8	1	3–5	20	1	4	15	3	5
LVORI				10		6–8	10		1–5
KBDI	550	100	200	550	0	250–350	550	150	200
1-Hr Fuel Moisture (%)	15	6	7–8	14	6	7–9	15	6	7–8
10-Hr Fuel Moisture (%)	16	7	10–12	16	8	10–12	16	7	10–12