

Input Parameters	Fire Behavior		
	Low	Moderate	High
1-hour fuel moisture (%)	15	7	3
10-hr fuel moisture (%)	18	10	5
100-hr fuel moisture (%)	25	12	8
Live herbaceous fuel moisture (%)	110	75	50
Live woody fuel moisture (%)	140	100	75
Midflame wind speed (mi/hr)	5	15	25
Wind direction (degrees)	70	70	70

Surface Fire Behavior Test Case

	Parameter	Unit	Low Fire Behavior						Moderate Fire Behavior						High Fire Behavior					
			FM3		SH3		TU2		FM3		SH3		TU2		FM3		SH3		TU2	
			IFTDSS	BehavePlus	IFTDSS	BehavePlus	IFTDSS	BehavePlus	IFTDSS	BehavePlus	IFTDSS	BehavePlus	IFTDSS	BehavePlus	IFTDSS	BehavePlus	IFTDSS	BehavePlus	IFTDSS	BehavePlus
Outputs	Head Fire Spread Rate	chains/hour	81.14	81.1	2.35	2.4	8.15	8.2	455.28	455.3	13.11	13.1	51.73	51.7	1,284.64	1,284.60	29.12	29.1	125.08	125.1
	Backing Fire Spread Rate	chains/hour	4.14	4.1	0.12	0.1	0.41	0.4	5.04	5	0.14	0.1	0.57	0.6	6.09	6.1	0.19	0.2	0.75	0.8
	Flanking Fire Spread Rate	chains/hour	7.88	7.9	0.23	0.2	0.79	0.8	9.97	9.9	0.29	0.3	1.13	1.1	12.12	12.1	0.39	0.4	1.5	1.5
	Heat Per Unit Area	Btu/ft^2	624.89	625	391.62	392	337.44	337	711.58	712	464.19	464	386.95	687	900.19	900	566.11	566	466	466
	Head Fire Fireline Intensity	Btu/ft/s	929.52	930	16.89	17	50.42	50	5,939.44	5,939.00	111.54	112	367.01	367	21,201.20	21,201.00	302.21	302	1,068.61	1,069.00
	Backing Fire Fireline Intensity	Btu/ft/s	47.43	47	0.85	1	2.56	3	65.76	66	1.23	1	4.07	4	100.51	101	2.01	2	6.44	6
	Flanking Fire Fireline Intensity	Btu/ft/s	90.26	90	1.62	2	4.87	5	130.09	129	2.43	2	8.05	8	200.06	199	4	4	12.8	13
	Head Fire Flame Length	ft	10.44	10.4	1.65	1.7	2.73	2.7	24.5	24.5	3.94	3.9	6.81	6.8	43.99	44	6.23	6.2	11.13	11.1
	Backing Fire Flame Length	ft	2.66	2.7	0.42	0.4	0.69	0.7	3.09	3.1	0.49	0.5	0.86	0.9	3.75	3.8	0.62	0.6	1.06	1.1
	Flanking Fire Flame Length	ft	3.57	3.6	0.56	0.6	0.93	0.9	4.22	4.2	0.68	0.7	1.17	1.2	5.15	5.1	0.85	0.8	1.45	1.5
	Reaction Intensity	Btu/ft^2/min	2,440.97	2,441.00	1,398.60	1,399.00	1,552.31	1,552.00	2,779.61	2,780.00	1,657.78	1,658.00	1,780.08	1,780.00	3,516.38	3,516.00	2,021.79	2,022.00	2,143.75	2,144.00
	Head Fire Spread Direction	degrees	248	248	248	248	248	248	250	250	249	249	249	249	250	250	250	250	250	250
	Backing Fire Spread Direction	degrees	68		68		68		70		69		69		70		70		70	
	Flanking Fire Spread Direction	degrees	338		338		338		340		339		339		340		340		340	
	Head Fire Spread Distance	chains	243.41	243.4	7.06	7.1	24.45	24.5	1,365.84	1,365.80	39.32	39.3	155.2	155.2	3,853.93	3,853.90	87.35	87.4	375.24	375.2
	Backing Fire Spread Distance	chains	12.42	12.4	0.36	0.4	1.24	1.2	15.12	15.1	0.43	0.4	1.72	1.7	18.27	18.3	0.58	0.6	2.26	2.3
	Flanking Fire Spread Distance	chains	23.64	23.6	0.68	0.7	2.36	2.3	29.91	29.7	0.86	0.9	3.4	3.4	36.37	36.2	1.16	1.1	4.49	4.5
	Residence Time	min	0.26	0.26	0.28	0.28	0.22	0.22	0.26	0.26	0.28	0.28	0.22	0.22	0.26	0.26	0.28	0.28	0.22	0.22
	Effective Wind Speed (Head Fire)	miles/hour	5.31	5.3	5.36	5.4	5.33	5.3	15.22	15.2	15.28	15.3	15.21	15.2	25.19	25.2	20.68	20.7	21.92	21.9
Inputs	Fire Behavior Fuel Model		FM3		SH3		TU2		FM3		SH3		TU2		FM3		SH3		TU2	
	1-hr Fuel Moisture	percent	15	15	15	15	15	15	7	7	7	7	7	7	3	3	3	3	3	3
	10-hr Fuel Moisture	percent	18	18	18	18	18	18	10	10	10	10	10	10	5	5	5	5	5	5
	100-hr Fuel Moisture	percent	25	25	25	25	25	25	12	12	12	12	12	12	8	8	8	8	8	8
	Live Herbaceous Fuel Moisture	percent	110	110	110	110	110	110	75	75	75	75	75	75	50	50	50	50	50	50
	Live Woody Fuel Moisture	percent	140	140	140	140	140	140	100	100	100	100	100	100	75	75	75	75	75	75
	Midflame Wind Speed	miles/hour	5	5	5	5	5	5	15	15	15	15	15	15	25	25	25	25	25	25
	Wind Direction (from North)	degrees	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
	Slope	percent	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	Aspect	degrees	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
	Elapsed Time	hours	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Flanking Fire Direction	degrees	90		90		90		90		90		90		90		90		90	
	Spread Direction (from north) - Backing	degrees		68		68		68		70		69		69		70		70		70
	Spread Direction (from north) - Flanking	degrees		338		338		338		340		339		339		340		340		340

FM3: Tall grass
SH3(143): Moderate Load, Humid Climate Shrub)
TU2(162): Moderate Load, Humid Climate Timber-Shrub