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SUPPLEMENT BC-3 TO THE CANADIAN FIRE BEHAVIOR SYSTEM

A BURNING INDEX FOR SPRUCE-FIR LOGGING SLASH WITH GUIDELINES FOR THEIR APPLICATION

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CONTENTS OF SUPPLEMENT BC-3

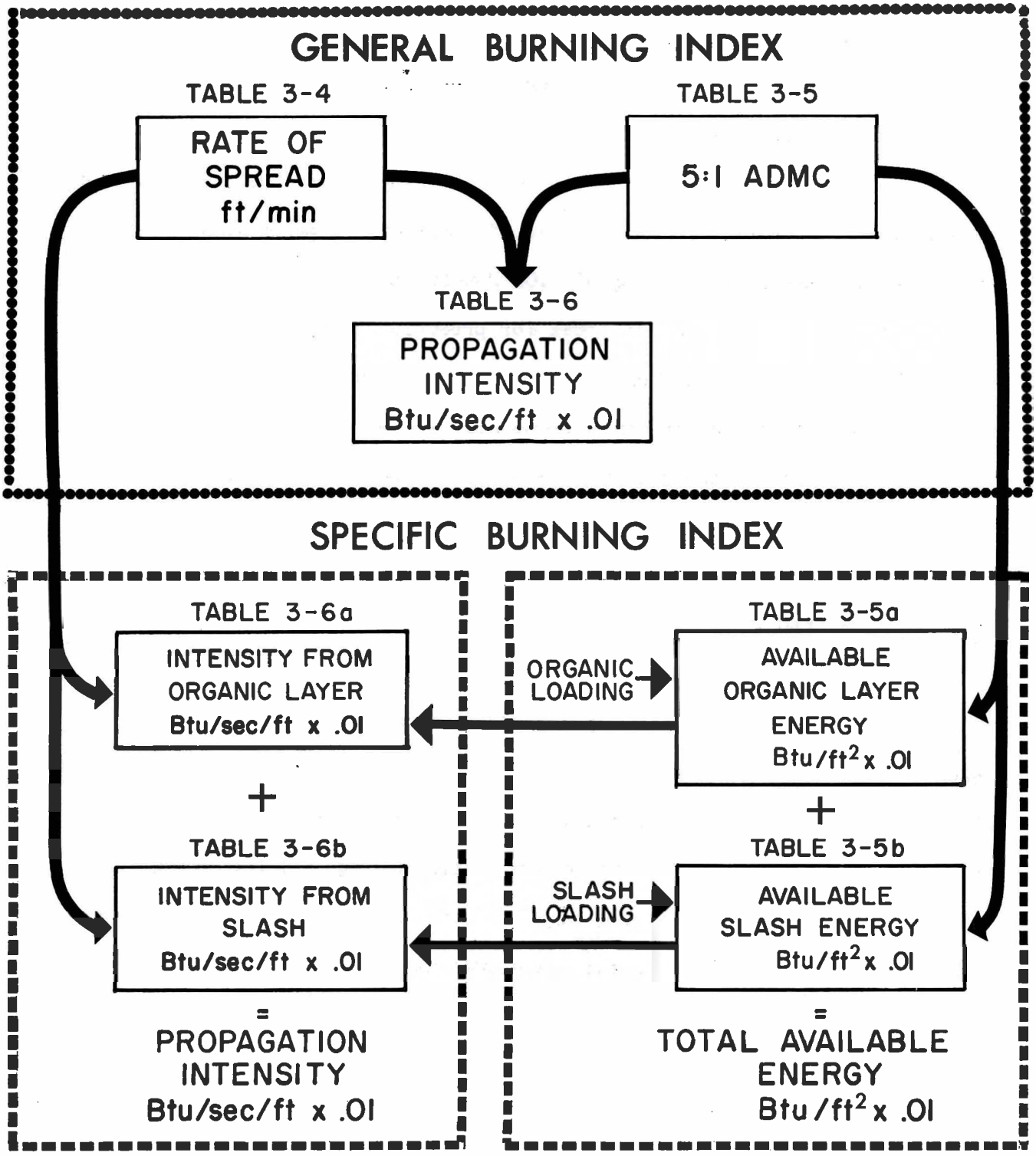
INTRODUCTION TO SUPPLEMENT BC-3

These Burning Indices are numerical expressions of fire behavior resulting from the interaction of weather and the slash fuel complex from harvesting operations in the white spruce, Picea glauca (Moench) Voss and alpine fir, Abies lasiocarpa (Hook.) Nutt. forest association of North Central British Columbia.

This supplement presents two indices; a general slash burning index for day to day fire management on areas of spruce-fir logging slash that assumes an average slash loading of 3.00 lbs/ft^2 and an organic layer loading of 2.00 lbs/ft^2, and a specific index for prescribed fire management that is designed to accept fuel loading as variables. Procedures for estimating slash fuel loading and depth equivalents for various organic layer loadings are provided. Both of these Indices are applicable to tractor skidded logging operations in the spruce-fir associations having fuel loading proportions similar to those in Appendix 3-2. Fuel moisture expressed by the Fine Fuel Moisture Code (FFMC) the Duff Moisture Code (DMC) and the Drought Code (DC) of the Fire Weather Index and wind velocity (at a ht of 10 m) are required to calculate these Indices. Numbering of the tables in this supplement are parallel with the Fire Weather Index to emphasize their functional similarity. The first number refers to the supplement number and the second refers to the table number, letters are used to designate tables required for the specific Indices as shown on the following page. A compilation and record form for daily use of the General Index and occasional use of the Specific Indices is included.

These indices have been designed to satisfy a wide range of uses for various conditions if the user is willing to furnish the additional input required to gain each new pieace of information.

BURNING INDICES FOR SPRUCE-FIR LOGGING SLASH



General Burning Index

The General Burning Index is designed for daily use where a range of loadings and ages of spruce-fir logging slash occupy a significant portion of a rating zone. Calculation of this Index requires only the use of wind speed and code values from columns 3, 9, 12 and 13 of the Fire Weather Index monthly record if the weather station from which the codes are determined is within the spruce-fir forest type. If the weather station is in a different climatic zone from the spruce-fir forest type the seasonal starting date for the DMC and DC should be delayed to coincide with the time of snow departure from the area of interest.

> To illustrate: DMC and DC code values determined from the Summit Lake or Prince George weather stations may be applied to the Spruce Fir Slash Burning Index without adjustment whereas the DMC and DC determined from Penticton or Kamloops weather stations must be reduced to compensate for the time of snow departure from the spruce-fir stands that occur only at the higher elevations.

Adjustments of this type are assumed to be consistent and are entered in the space provided on the Burning Index Record.

This general Burning Index combines rate of spread from table 3-4 with a parameter of available fuel from table 3-5 to provide the propagation intensity of the fire front from table 3-6.

TABLE 3-4 - LINEAR RATE OF SPREAD INDEX IN SPRUCE-FIR LOGGING SLASH

SLOPE %	WIND VELOCITY M.P.H.	TODAY'S FINE FUEL MOISTURE CODE																															
		60 to 65	66 to 67	68 to 69	70 to 71	72 to 73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
		LINEAR RATE OF SPREAD (FT/MIN)																															
	0							.2	.3	.4	.6	.7	.9	1.1	1.3	1.5	1.8	2.1	2.4	2.8	3.2	3.6	4.1	4.6	5.2	5.9	6.6	7.5	8.4	9.4	11	12
28	1						.1	.3	.4	.6	.7	.9	1.1	1.3	1.5	1.8	2.1	2.4	2.7	3.1	3.5	4.0	4.6	5.2	5.9	6.7	7.7	8.7	9.9	11	13	15
36	2					.1	.2	.4	.5	.7	.9	1.1	1.3	1.5	1.7	2.0	2.3	2.6	3.0	3.4	3.9	4.5	5.2	5.9	6.8	7.8	9.0	10	12	14	16	18
40	3					.2	.3	.5	.7	.8	1.0	1.2	1.4	1.7	1.9	2.2	2.5	2.9	3.3	3.8	4.4	5.1	5.9	6.8	7.9	9.2	11	13	15	17	20	23
46	4				.1	.3	.4	.7	.8	1.0	1.2	1.4	1.6	1.9	2.1	2.4	2.8	3.2	3.7	4.3	5.0	5.8	6.8	7.9	9.4	11	13	16	19	22	25	29
50	5				.2	.4	.5	.8	.9	1.1	1.3	1.5	1.8	2.0	2.3	2.7	3.1	3.6	4.1	4.8	5.6	6.7	7.9	9.4	11	13	16	19	23	27	32	37
54	6				.2	.5	.7	.9	1.1	1.3	1.5	1.7	1.9	2.2	2.6	3.0	3.4	4.0	4.6	5.5	6.5	7.8	9.3	11	14	17	20	24	29	34	40	46
57	7			.1	.3	.6	.8	1.0	1.2	1.4	1.6	1.9	2.1	2.4	2.8	3.3	3.8	4.5	5.3	6.3	7.5	9.1	11	14	17	21	25	30	36	43	50	56
60	8			.2	.4	.7	.9	1.1	1.3	1.5	1.8	2.0	2.3	2.7	3.1	3.6	4.2	5.0	6.0	7.2	8.8	11	13	17	21	25	31	38	45	53	61	68
64	9		.3	.5	.8		1.0	1.3	1.5	1.7	1.9	2.2	2.5	2.9	3.4	4.0	4.8	5.7	6.9	8.4	10	13	16	20	25	31	39	47	56	65	74	82
67	10	.1	.3	.6	.9		1.1	1.4	1.6	1.8	2.1	2.4	2.8	3.2	3.8	4.5	5.4	6.5	7.9	9.8	12	15	19	25	31	39	48	58	69	79	89	97
70	11	.2	.4	.7	1.0		1.2	1.5	1.7	2.0	2.3	2.6	3.1	3.6	4.2	5.0	6.1	7.4	9.2	11	15	19	24	30	38	48	59	71	84	96	105	113
72	12	.2	.5	.8	1.1		1.3	1.6	1.9	2.2	2.5	2.9	3.4	4.0	4.7	5.7	6.9	8.5	11	14	17	22	29	37	47	59	73	87	101	114	124	131
75	13	.3	.6	.9	1.3		1.5	1.8	2.1	2.4	2.7	3.2	3.7	4.4	5.3	6.4	7.9	9.9	13	16	21	27	35	45	58	72	89	105	121	135	144	150
77	14	.4	.7	1.0	1.4		1.6	2.0	2.2	2.6	3.0	3.5	4.1	4.9	5.9	7.3	9.1	11	15	19	25	33	42	55	70	88	107	126	144	158	167	171
79	15	.4	.8	1.1	1.5		1.7	2.1	2.4	2.8	3.3	3.8	4.6	5.5	6.7	8.3	10	13	17	23	30	39	51	67	85	107	129	151	169	183	192	195
81	16	.5	.8	1.2	1.6		1.9	2.3	2.7	3.1	3.6	4.2	5.1	6.1	7.6	9.5	12	15	20	27	35	47	62	81	103	128	154	178	198	212	219	220
83	17	.6	.9	1.3	1.8		2.1	2.5	2.9	3.4	4.0	4.7	5.7	6.9	8.6	11	14	18	24	32	43	57	75	98	124	153	183	209	230	243	249	249
85	18	.1	.7	1.0	1.5	2.0	2.2	2.8	3.2	3.7	4.4	5.2	6.3	7.8	9.7	12	16	21	28	38	51	68	90	117	149	183	216	265	265	265	265	265
86	19	.1	.8	1.2	1.6	2.1	2.5	3.0	3.5	4.1	4.8	5.8	7.1	8.8	11	14	19	25	33	45	61	81	108	140	177	216	253	265	265	265	265	265
87	20	.2	.9	1.3	1.7	2.3	2.7	3.3	3.8	4.5	5.4	6.5	8.0	9.9	13	16	22	29	39	53	72	97	129	167	210	255	260	265	265	265	265	265
89	21	.2	.9	1.4	1.9	2.5	2.9	3.6	4.2	5.0	6.0	7.2	9.0	11	15	19	25	34	46	63	85	115	153	198	248	255	260	265	265	265	265	265
90	22	.3	1.0	1.5	2.1	2.8	3.2	4.0	4.7	5.5	6.6	8.1	10	13	17	22	29	39	54	74	101	137	181	234	248	255	260	265	265	265	265	265
91	23	.3	1.1	1.7	2.3	3.0	3.5	4.4	5.1	6.1	7.4	9.1	11	15	19	25	34	46	63	87	120	162	214	234	248	255	260	265	265	265	265	265
93	24	.4	1.3	1.8	2.5	3.3	3.8	4.8	5.7	6.8	8.3	10	13	17	22	29	39	54	74	103	141	190	214	234	248	255	260	265	265	265	265	265
94	25	.4	1.4	2.0	2.7	3.6	4.2	5.3	6.3	7.6	9.3	11	15	19	25	33	45	63	87	120	165	190	214	234	248	255	260	265	265	265	265	265

SPOTTING IS A MAJOR CONTROL CONSIDERATION

For Calculation of the General Index:

Enter Table 3-4 with today's WIND SPEED (Column 1) and FINE FUEL MOISTURE CODE (Column 2). Record today's RATE OF FIRE SPREAD in Column 5.

For Calculation of a Specific Index:

Enter Table 3-4 with CURRENT WIND SPEED (Column 15) and FINE FUEL MOISTURE CODE (Column 16). Record the rate of fire spread adjusted for age of slash and slope in Column 19.

The spread rates in Table 3-4 are for two-year-old to three-year-old spruce-fir slash. Rates of spread for other ages of slash are approximated by the following corrections from Fahnestock and Dieterich 1962[1/] and are applicable for winds less than 5 m.p.h. An arbitrary correction is provided for winds exceeding 5 m.p.h.

The slope correction is provided for use when the slope effect on fire spread exceeds the wind effect, there is no provision to adjust for the combined effect.

TIME OF LOGGING	LESS THAN 5 MPH	MORE THAN 5 MPH
LOGGED DURING THE SAME YEAR OF BURNING	2 X TABLE VALUE	1.5 X TABLE VALUE
LOGGED 1 to 2 YEARS PRIOR TO BURNING	1.5 X TABLE VALUE	1.2 X TABLE VALUE
LOGGED 2 to 3 YEARS PRIOR TO BURNING	TABLE VALUE	
LOGGED 3 to 5 YEARS PRIOR TO BURNING	.5 X TABLE VALUE	.8 X TABLE VALUE

1/ Fahnestock, George R. and John H. Dieterich, 1962. Logging slash flammability after five years, p. 12, table 4, Research Paper No. 70, Dec. 1962. Intermountain Forest and Range Experiment Station, Ogden, Utah.

TABLE 3-5 - ADJUSTED DUFF MOISTURE CODE FOR HEAVY FUELS (5:1 ADMC)

TODAY'S DUFF MOISTURE CODE	TODAY'S DROUGHT CODE																									
	0 to 19	20 to 39	40 to 59	60 to 79	80 to 99	100 to 119	120 to 139	140 to 159	160 to 179	180 to 199	200 to 224	225 to 249	250 to 274	275 to 299	300 to 329	330 to 359	360 to 399	400 to 439	440 to 489	490 to 539	540 to 599	600 to 659	660 to 729	730 to 809	810 to 899	900 to 999	1000 +
	TODAY'S ADJUSTED DUFF MOISTURE CODE (5:1 ADMC)																									
0-1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2-3	3	7	8	9	10	10	10	11	11	11	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12
4-5	4	9	11	14	15	16	17	17	18	18	19	19	19	19	20	20	20	20	21	21	21	21	21	21	21	22
6-7	4	10	13	17	19	20	22	23	23	24	25	26	26	26	27	27	28	28	29	29	29	29	30	30	30	31
8-9	4	11	15	19	22	24	26	27	28	29	30	31	32	33	33	34	35	35	36	36	37	37	38	38	39	39
10-12	4	12	16	21	25	27	30	32	33	35	36	38	39	40	41	42	43	44	44	45	46	47	47	48	49	49	50
13-15	4	12	17	23	27	31	34	36	38	40	42	40	46	47	48	50	51	52	54	55	56	57	58	59	60	61	62
16-18	4	13	18	25	29	33	37	40	42	45	47	50	52	53	55	57	59	60	62	64	65	67	68	70	71	72	73
19-21	5	13	20	26	31	35	39	43	46	49	51	54	57	59	61	63	65	68	70	72	74	76	78	79	81	83	84
22-24	5	13	20	27	32	37	41	45	49	52	55	58	61	64	66	69	72	74	77	79	82	84	86	88	91	93	94
25-27	5	13	21	27	33	39	43	47	51	55	58	62	65	68	71	74	77	80	83	86	89	92	95	97	100	102	104
28-30	5	13	21	28	34	40	45	49	53	57	61	65	69	72	75	79	82	86	89	93	96	99	102	105	108	111	114
31-33	5	14	21	29	35	41	46	51	55	60	64	68	72	76	79	83	87	91	95	97	102	106	110	113	116	120	123
34-36	5	14	22	29	36	42	47	52	57	62	66	71	75	79	83	87	91	95	100	104	108	112	116	120	124	128	131
37-39	5	14	22	29	36	43	48	54	59	63	68	73	78	82	86	90	95	100	104	109	114	118	123	127	132	136	139
40-42	5	14	22	30	37	43	49	55	60	65	70	75	80	84	89	94	99	104	109	114	119	124	129	134	139	143	147
43-45	5	14	22	30	37	44	50	56	61	66	72	77	82	87	92	97	102	107	113	118	124	129	135	140	145	150	155
46-48	5	14	22	30	38	44	51	57	62	68	73	79	84	89	94	99	105	111	117	123	129	134	140	146	152	157	162
49-51	5	14	22	31	38	45	51	58	63	69	74	80	86	91	97	102	108	114	120	127	133	139	145	152	158	164	169
52-54	5	14	23	31	38	45	52	58	64	70	76	82	88	93	99	104	111	117	124	131	137	144	150	157	164	170	176
55-58	5	14	23	31	39	46	53	59	65	71	77	83	90	95	101	107	114	120	127	135	142	149	156	163	170	177	183
59-62	5	14	23	31	39	46	53	60	66	72	78	85	91	97	103	110	117	124	131	139	147	154	162	169	177	185	192
63-66	5	14	23	31	39	47	54	61	67	73	80	87	93	99	106	112	119	127	135	143	151	159	167	175	184	192	200
67-70	5	14	23	32	40	47	54	61	68	74	81	88	95	101	108	115	122	130	138	147	156	164	172	181	190	199	207
71-74	5	14	23	32	40	48	55	62	69	75	82	89	96	103	110	117	125	133	141	150	159	168	177	187	196	205	214
75-78	5	14	23	32	40	48	55	63	69	76	83	90	98	104	111	119	127	136	145	154	163	173	182	192	202	212	221
79-82	5	14	23	32	40	48	56	63	70	77	84	92	99	106	113	121	129	138	147	157	167	177	187	197	207	218	228
83-86	5	14	23	32	41	48	56	63	71	77	85	93	100	107	115	122	131	140	150	160	170	180	190	201	212	223	234
87-90	5	14	23	32	41	48	56	64	71	78	86	93	101	108	116	124	133	142	152	163	173	184	195	206	217	229	240
91-94	5	14	23	32	41	48	57	64	71	79	86	94	102	110	117	125	135	144	155	165	176	187	198	210	222	234	246
95-99	5	14	24	32	41	49	57	65	72	79	87	95	103	111	119	127	136	146	157	168	180	191	202	215	227	240	252
100-104	5	14	24	33	41	49	57	65	73	80	88	96	104	112	120	129	138	149	159	171	183	195	207	219	233	246	258
105-109	5	14	24	33	41	50	58	66	73	81	88	97	105	113	122	130	140	151	162	174	186	198	211	224	238	251	265
110-114	5	14	24	33	41	50	58	66	74	81	89	98	106	114	123	132	142	152	164	176	189	201	214	228	242	256	270
115-119	5	14	24	33	41	50	58	66	74	82	90	99	107	115	124	133	143	154	166	179	192	204	218	232	247	262	276
120-125	5	14	24	33	42	50	58	67	74	82	90	99	108	116	125	134	145	156	168	181	195	208	222	236	252	267	282
126-131	5	14	24	33	42	50	59	67	75	83	91	100	109	117	126	136	146	158	170	183	197	211	225	240	256	272	288
132-137	5	14	24	33	42	51	59	67	75	83	91	100	110	118	127	137	148	160	172	186	200	214	229	244	261	278	294
138-144	5	14	24	33	42	51	59	68	75	83	92	101	110	119	128	138	149	162	175	188	203	217	233	249	266	283	300
145-151	5	14	24	33	42	51	59	68	76	84	93	102	111	120	130	140	151	163	177	191	206	221	236	253	271	289	307
152-159	5	14	24	33	42	51	60	68	76	84	93	103	112	121	131	141	152	165	179	193	208	224	240	257	275	294	312
160+	5	14	24	33	42	51	60	68	76	85	94	103	113	122	131	142	153	167	181	196	211	227	244	262	281	300	319

For Calculation of the General Index:

Enter Table 3-5 with today's DUFF MOISTURE CODE (Column 3) and DROUGHT CODE (Column 4). Record today's 5:1 ADMC in Column 6.

For Calculation of a Specific Index:

Enter Table 3-5 with today's DUFF MOISTURE CODE (Column 17) and DROUGHT CODE (Column 18). Record today's 5:1 ADMC for the specific area in Column 20.

TABLE 3-6 INTENSITY INDEX FOR FIRE FRONTS IN AVERAGE SPRUCE-FIR LOGGING SLASH[1]

RATE OF SPREAD (FT/MIN)	TODAY'S 5:1 ADMC																								
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 to 67	68 to 76	77 to 85	86 to 94	95 to 103	104 to 112	113 to 121	122 to 130	131 to 140	141 to 150	151 to 160	161 to 170	171 to 180	181 to 190	191 to 200
	INTENSITY OF FIRE FRONT (BTU/SEC/FT X .01)																								
<.10	.00	.01	.01	.01	.01	.02	.03	.03	.04	.05	.05	.07	.07	.08	.10	.11	.12	.13	.13	.14	.15	.15	.15	.16	.16	.17	.17
.11 to .30	.01	.03	.05	.08	.09	.10	.11	.14	.18	.20	.24	.28	.30	.38	.39	.43	.48	.51	.54	.57	.58	.61	.62	.65	.66	.66	.66
.31 to .50	.02	.07	.11	.14	.19	.21	.24	.29	.34	.41	.48	.55	.60	.68	.79	.88	.95	1.02	1.08	1.14	1.18	1.20	1.24	1.28	1.30	1.32	1.32
.51 to .70	.04	.11	.17	.23	.29	.31	.35	.43	.54	.62	.70	.82	.89	1.03	1.18	1.31	1.43	1.54	1.63	1.69	1.75	1.80	1.85	1.91	1.95	1.96	1.96
.71 to .90	.05	.14	.22	.29	.36	.42	.47	.57	.69	.82	.94	1.10	1.20	1.36	1.56	1.74	1.90	2.03	2.16	2.24	2.33	2.39	2.46	2.55	2.59	2.61	2.61
.91 to 1.00	.07	.17	.26	.36	.45	.49	.56	.68	.83	.98	1.11	1.29	1.41	1.62	1.84	2.06	2.25	2.41	2.57	2.67	2.75	2.84	2.91	3.01	3.07	3.09	3.09
1.01 to 1.50	.08	.22	.35	.47	.58	.65	.73	.89	1.09	1.28	1.47	1.70	1.85	2.13	2.42	2.70	2.94	3.16	3.37	3.50	3.60	3.72	3.81	3.94	4.02	4.04	4.04
1.51 to 2.00	.11	.32	.44	.65	.81	.89	1.01	1.24	1.50	1.78	2.04	2.37	2.58	2.95	3.37	3.76	4.09	4.39	4.69	4.87	5.02	5.16	5.32	5.49	5.59	5.63	5.63
2.01 to 2.50	.15	.41	.62	.84	1.04	1.16	1.30	1.59	1.92	2.27	2.61	3.03	3.30	3.78	4.31	4.80	5.24	5.61	5.99	6.22	6.41	6.61	6.79	7.02	7.15	7.20	7.20
2.51 to 3.50	.20	.53	.82	1.12	1.37	1.53	1.73	2.11	2.56	3.01	3.46	4.00	4.36	5.00	5.71	6.37	6.93	7.43	7.92	8.23	8.49	8.76	8.99	9.30	9.46	9.53	9.53
3.51 to 4.50	.26	.72	1.09	1.47	1.83	2.03	2.28	2.79	3.38	3.99	4.57	5.30	5.77	6.60	7.55	8.41	9.17	9.82	10.5	10.9	11.2	11.6	11.9	12.3	12.5	12.6	12.6
4.51 to 5.50	.33	.90	1.35	1.84	2.27	2.52	2.84	3.47	4.21	4.96	5.68	6.57	7.16	8.19	9.35	10.4	11.4	12.2	13.0	13.5	13.9	14.3	14.7	15.2	15.5	15.6	15.6
5.51 to 6.50	.39	1.07	1.62	2.19	2.70	3.01	3.39	4.14	5.01	5.90	6.41	7.84	8.53	9.76	11.2	12.4	13.5	14.5	15.5	16.1	16.6	17.1	17.5	18.1	18.5	18.6	18.6
6.51 to 7.50	.46	1.25	1.89	2.54	3.14	3.50	3.92	4.81	5.81	6.85	7.85	9.08	9.89	11.3	12.9	14.4	15.7	16.8	17.9	18.6	19.2	19.8	20.3	21.0	21.4	21.6	21.6
7.51 to 8.90	.53	1.45	2.19	2.97	3.65	4.07	4.57	5.60	6.76	7.96	9.13	10.6	11.5	13.2	15.0	16.8	18.2	19.5	20.8	21.6	22.3	23.0	23.6	24.4	24.9	25.1	25.1
8.91 to 10.0	.62	1.68	2.52	3.42	4.21	4.69	5.28	6.44	7.79	9.17	10.5	12.2	13.2	15.1	17.3	19.3	21.0	22.5	23.9	24.9	25.6	26.4	27.2	28.1	28.6	28.8	28.8
10.1 to 13.9	.68	2.10	3.16	4.28	5.27	5.87	6.59	8.05	9.73	11.4	13.1	15.2	16.5	18.9	21.5	24.0	26.1	27.9	29.8	30.9	32.0	32.9	33.8	35.0	35.6	35.9	35.9
14.0 to 15.9	.98	2.61	3.91	5.29	6.50	7.25	8.14	9.93	12.0	14.1	16.2	18.7	20.3	23.3	26.5	29.6	32.2	34.4	36.7	38.1	39.3	40.6	41.7	43.1	43.9	44.2	44.2
16.0 to 19.9	1.15	3.10	4.65	6.30	7.22	8.60	9.67	11.8	14.3	16.7	19.2	22.1	24.1	27.5	31.4	35.0	38.1	40.8	43.4	45.1	46.5	48.0	49.3	51.0	51.9	52.3	52.3
20.0 to 23.9	1.42	3.75	5.62	7.60	9.32	10.4	11.7	14.2	17.2	20.2	23.1	26.6	29.0	33.1	37.8	42.1	45.7	49.0	52.2	54.2	55.9	57.6	59.2	61.2	62.3	62.8	62.8
24.0 to 29.9	1.72	4.56	6.81	9.20	11.3	12.6	14.1	17.2	20.7	24.3	27.8	32.0	34.9	39.8	45.4	50.6	55.0	58.9	62.8	65.2	67.2	69.3	71.2	73.6	75.0	75.5	75.5
30.0 to 33.9	2.03	5.35	7.97	10.8	13.2	14.7	16.5	20.0	24.2	28.3	32.4	37.3	40.6	46.4	52.9	58.9	64.0	68.5	73.0	75.8	78.1	80.6	82.8	85.6	87.2	87.8	87.8
34.0 to 39.9	2.33	6.12	9.11	12.3	15.1	16.8	18.8	22.8	27.6	32.3	36.9	42.4	46.2	52.7	60.1	66.9	72.7	77.8	82.9	86.0	88.7	91.6	94.1	97.3	99.0	99.8	99.8
40.0 to 43.9	2.64	6.90	10.2	13.8	16.9	18.8	21.0	25.6	30.9	36.1	41.2	47.3	51.6	58.9	67.1	74.7	81.1	86.8	92.5	96.0	99.0	102	105	108	110	111	111
44.0 to 49.9	2.93	7.65	11.3	15.3	18.7	20.8	23.2	28.3	34.1	39.9	45.5	52.2	56.9	64.9	74.0	82.3	89.3	95.6	102	106	109	112	115	119	122	123	123
50.0 to 53.9	3.23	8.40	12.4	16.7	20.4	22.7	25.4	30.9	37.2	43.5	49.6	56.8	62.0	70.7	80.6	89.7	97.3	104	111	115	119	122	126	130	132	133	133
54.0 to 59.9	3.53	9.13	13.5	18.2	22.2	24.6	27.5	33.5	40.3	47.1	53.6	61.4	67.0	76.4	87.0	96.8	105	112	120	124	128	132	136	140	143	144	144
60.0 to 69.0	3.96	10.2	15.0	20.2	24.7	27.4	30.6	37.2	44.8	52.3	59.5	68.0	74.3	84.6	96.4	107	116	124	132	137	142	146	150	155	158	159	159
70.0 to 79.0	4.54	11.6	17.1	23.0	27.0	31.0	34.6	42.0	50.6	58.9	67.0	76.5	83.5	95.1	108	120	130	149	149	154	159	164	169	174	177	179	179
80.0 to 89.0	5.11	13.0	19.0	25.6	31.1	34.5	38.5	46.6	56.1	65.3	74.2	84.5	92.3	105	120	133	144	154	164	170	175	181	186	192	196	197	197
90.0 to 99.0	5.67	14.3	20.9	28.2	34.1	37.7	42.0	50.9	61.2	71.0	80.6	91.8	100	114	130	144	156	167	178	184	190	196	202	208	212	213	213
100 to 119	6.50	16.2	23.6	32.2	38.4	42.5	47.3	57.3	68.8	79.7	90.4	103	112	127	145	161	174	186	198	205	212	219	225	232	237	238	238
120 to 139	7.61	18.8	27.2	36.4	44.0	48.8	54.1	65.4	78.4	90.7	103	116	127	144	164	182	196	210	223	231	238	246	253	262	267	269	269
140 to 159	8.68	21.2	30.5	40.8	49.2	54.4	60.3	72.7	87.1	100	113	128	140	159	180	200	216	230	245	253	262	271	278	288	293	295	295
160 to 200	10.3	24.7	35.2	47.0	56.4	62.3	68.8	82.9	99.1	114	128	144	157	178	202	224	241	257	273	283	292	302	311	321	327	330	330

[1] SLASH FUEL LOADING = 3.0 LBS /FT^2, ORGANIC LOADING = 2.0 LBS/FT^2

Enter Table 3-6 with 5:1 ADMC (Column 6) and SPREAD RATE (Column 5). Record today's PROPAGATION INTENSITY OF THE FIRE FRONT IN COLUMN 7.

The propagation intensity from Table 3-6 is in units of BTU/SEC/FT OF FRONT X .01; therefore actual intensity requires moving the decimal two places to the right. This measure of intensity attempts to define that portion of the frontal energy that influences further propagation of the fire front and is therefore a measure of the difficulty of control. In general, table values greater than 15 will require indirect attack. These General Burning Index Table values should be plotted on a seasonal disply sheet using the Fire Weather Index numbers on the vertical axis.

Specific Burning Index

The Specific Index is designed for occasional use when a prediction of fire behavior on a designated area of Spruce-fir slash is required. The specific index is designed to provide fire behavior information for known wildfires and prescribed burns where fuel and other conditions can be ascertained. The background information in columns 8 to 14 on the Monthly Record for Spruce-fir Slash Burning Index is required to calculate a Specific Index. In addition, current wind speed and the moisture codes in columns 15 to 18 are adjusted for time of day and the specific location unless a weather station is located on a comparable site.

Organic layer loading is determined by converting the average depth of the organic layer to fuel loading using the adjacent columns at the left of Table 3-5a; slash fuel loading is measured according to the instructions in Appendix 3-1. These values are entered in columns 13 and 14 of the Monthly Record Sheet.

TABLE 3-5b - SLASH FUEL AVAILABLE ENERGY

INITIAL SLASH LOADING (LB/FT^2)	TODAY'S 5:1 ADMC																										
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 to 67	68 to 76	77 to 85	86 to 94	95 to 103	104 to 112	113 to 121	122 to 130	131 to 140	141 to 150	151 to 160	161 to 170	171 to 180	181 to 190	191 to 200
	ENERGY AVAILABLE FROM SLASH FUEL (BTU/FT^{2}X.01)																										
1.00	3	7	10	13	16	18	18	19	20	20	20	20	20	20	21	22	22	22	22	22	23	24	24	25	25	26	27
1.50	3	7	10	13	16	18	19	23	26	27	28	30	31	32	34	37	37	40	42	44	46	48	50	52	54	55	55
2.00	3	7	10	14	16	18	20	24	26	28	30	33	36	41	45	49	53	57	61	64	66	70	73	76	79	79	79
2.50	3	7	10	14	17	19	20	24	27	31	35	39	44	50	58	64	69	76	79	84	87	91	94	99	102	103	103
3.00	3	7	10	14	17	19	21	26	32	37	42	47	53	61	71	80	87	94	101	105	109	114	118	123	126	127	127
3.50	3	7	10	14	18	20	27	35	41	47	53	59	68	78	90	97	105	112	119	124	129	136	141	146	148	149	149
4.00	3	7	10	15	18	26	33	43	49	57	64	73	82	93	49	115	124	132	139	143	149	156	161	166	168	171	172
4.50	3	7	10	15	22	30	39	50	59	70	80	89	99	112	125	134	143	150	156	163	168	175	180	184	187	189	190

Enter Table 3-5a with today's 5:1 ADMC (Column 20) and the estimated ORGANIC FUEL LOADING (Column 13) determined from the average depth. Record the energy available from the organic layer in Column 21.

This is an estimate of the energy available from the organic layer as a function of loading and long term drying.

TABLE 3-5a - ORGANIC LAYER AVAILABLE ENERGY

INITIAL ORGANIC LAYER		TODAY'S 5:1 ADMC																										
		0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 to 67	68 to 76	77 to 85	86 to 94	95 to 103	104 to 112	113 to 121	122 to 130	131 to 140	141 to 150	151 to 160	161 to 170	171 to 180	181 to 190	191 to 200
DEPTH (IN)	LOADING (LB/FT^2)	ENERGY AVAILABLE FROM ORGANIC LAYER (BTU/FT^{2}X.01)																										
0.8	0.50	2	8	14	18	23	25	26	27	28	28	28	29	29	30	30	30	31	32	32	33	35	36	36	36	37	37	37
1.2	0.75	2	8	14	18	23	25	27	29	29	30	31	33	33	35	37	40	44	46	49	50	52	53	53	54	55	55	55
1.6	1.00	2	8	14	18	23	25	27	29	30	32	35	40	41	45	50	55	58	62	64	66	67	69	70	71	73	74	74
2.0	1.25	2	8	14	18	23	25	27	30	33	36	39	47	48	50	62	70	77	82	84	87	89	90	90	91	92	92	92
2.4	1.50	2	8	14	18	23	25	28	31	37	43	50	60	63	73	81	88	92	96	100	102	104	105	107	109	110	111	111
3.2	2.00	2	8	14	18	23	26	30	36	43	52	61	74	77	88	98	108	118	125	132	137	140	141	143	146	147	148	148
4.0	2.50	2	8	14	18	24	27	34	44	53	65	77	93	100	113	127	141	149	158	167	173	176	179	181	182	183	185	185
4.8	3.00	2	8	14	18	24	28	38	51	62	77	92	114	123	140	155	168	180	191	199	204	209	213	216	219	220	222	222
5.6	3.50	2	8	14	18	24	29	41	56	69	86	102	125	136	157	173	190	204	216	226	235	241	248	251	255	257	259	259
6.4	4.00	2	8	14	18	24	29	45	60	75	93	113	142	153	176	195	214	229	242	254	264	270	278	285	289	293	296	296

Enter Table 3-5b with today's 5:1 ADMC (Column 20) and the estimated SLASH FUEL LOADING (Column 14). Record the energy available from the slash fuel complex in Column 22.

This is an estimate of the energy available from the slash fuel complex as a function of loading and long term drying.

The sum of Column 21 and 22 is entered in Column 23 and is the amount of energy that is produced during combustion of the specified fuel complex.

TABLE 3-6a - INTENSITY INDEX FOR ORGANIC LAYERS

RATE OF SPREAD (FT/MIN) — ORGANIC LAYER INTENSITY (BTU/FT/SEC X .01)

AVAILABLE ORGANIC ENERGY (BTU/FT²X.01)	LESS THAN 0.1	.11 to .30	.31 to .50	.51 to .70	.71 to .90	.91 to 1.00	1.01 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.50	3.51 to 4.50	4.51 to 5.50	5.51 to 6.50	6.51 to 7.50	7.51 to 8.90	8.91 to 10.1	10.1 to 13.9	14.0 to 15.9	16.0 to 19.9	20.0 to 23.9
0-.99	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.04	.05	.06	.08
1.0-2.9	.01	.01	.01	.01	.01	.01	.02	.02	.03	.04	.06	.07	.09	.10	.12	.14	.18	.22	.26	.31
3.0-4.9	.01	.01	.01	.01	.02	.03	.04	.05	.07	.09	.12	.15	.18	.21	.25	.28	.35	.44	.52	.62
5.0-6.9	.01	.01	.01	.02	.03	.04	.06	.08	.10	.14	.18	.23	.27	.32	.37	.42	.53	.65	.77	.92
7.0-8.9	.01	.01	.02	.03	.05	.06	.08	.11	.14	.18	.24	.30	.36	.42	.49	.56	.70	.86	1.02	1.22
9.0-10.9	.01	.01	.03	.04	.06	.07	.10	.13	.17	.23	.31	.38	.45	.53	.61	.70	.88	1.08	1.27	1.52
11.0-14.9	.01	.02	.04	.06	.08	.09	.13	.18	.23	.30	.40	.50	.59	.68	.79	.91	1.13	1.39	1.64	1.97
15.0-19.9	.01	.02	.05	.08	.11	.13	.17	.24	.31	.41	.54	.67	.79	.92	1.07	1.27	1.52	1.86	2.20	2.62
20.0-24.9	.01	.03	.07	.10	.14	.17	.22	.36	.39	.52	.69	.86	1.02	1.18	1.37	1.57	1.95	2.38	2.81	3.35
25.0-29.9	.01	.04	.08	.13	.17	.21	.27	.38	.48	.64	.84	1.04	1.24	1.44	1.67	1.91	2.37	2.90	3.41	4.07
30.0-34.9	.01	.05	.10	.15	.20	.24	.32	.45	.57	.75	1.00	1.23	1.47	1.69	1.96	2.25	2.79	3.42	4.02	4.79
35.0-39.9	.01	.06	.12	.18	.24	.28	.37	.52	.61	.87	1.15	1.42	1.69	1.95	2.26	2.59	3.21	3.93	4.62	5.20
40.0-44.9	.01	.07	.13	.20	.27	.32	.42	.58	.75	.99	1.30	1.61	1.91	2.21	2.56	2.93	3.63	4.44	5.22	6.21
45.0-49.9	.01	.07	.15	.23	.30	.36	.47	.65	.83	1.10	1.45	1.80	2.13	2.47	2.86	3.27	4.05	4.95	5.82	6.92
50.0-54.9	.02	.08	.17	.25	.33	.40	.52	.72	.92	1.22	1.60	1.98	2.36	2.72	3.15	3.61	4.47	5.46	6.41	7.63
55.0-59.9	.02	.09	.18	.27	.37	.43	.57	.79	1.01	1.33	1.76	2.17	2.58	2.98	3.45	3.95	4.89	5.97	7.01	8.83
60.0-64.9	.02	.10	.20	.30	.40	.47	.62	.86	1.10	1.45	1.91	2.36	2.30	3.23	3.79	4.29	5.30	6.48	7.60	9.03
65.0-69.9	.02	.11	.21	.32	.43	.51	.67	.93	1.18	1.56	2.06	2.54	3.02	3.49	4.04	4.67	5.72	6.98	8.19	9.73
70.0-74.9	.03	.11	.23	.35	.46	.55	.72	1.00	1.27	1.68	2.21	2.73	3.24	3.74	4.33	4.96	6.13	7.49	8.79	10.4
75.0-79.9	.03	.12	.25	.37	.50	.59	.77	1.07	1.36	1.79	2.36	2.92	3.46	4.00	4.63	5.30	6.50	7.99	9.37	11.1
80.0-84.9	.03	.13	.26	.40	.53	.62	.82	1.13	1.45	1.91	2.51	3.10	3.68	4.25	4.92	5.64	6.91	8.49	9.96	11.8
85.0-89.9	.03	.14	.28	.42	.56	.66	.87	1.20	1.53	2.02	2.66	3.29	3.90	4.51	5.22	5.97	7.38	8.99	10.5	12.5
90.0-94.9	.03	.15	.30	.44	.59	.70	.92	1.27	1.62	2.14	2.81	3.48	4.12	4.76	5.51	6.31	7.79	9.50	11.1	13.2
95.0-100	.04	.15	.31	.47	.62	.74	.96	1.34	1.71	2.25	2.97	3.66	4.34	5.02	5.80	6.64	8.20	10.0	11.7	13.9
101-105	.04	.16	.33	.49	.65	.77	1.01	1.41	1.80	2.37	3.12	3.85	4.56	5.27	6.10	6.98	8.61	10.5	12.3	14.5
106-111	.04	.17	.35	.52	.69	.82	1.07	1.49	1.90	2.51	3.30	4.07	4.83	5.57	6.45	7.38	9.11	11.1	13.0	15.4
112-118	.04	.18	.37	.55	.73	.87	1.13	1.57	2.01	2.64	3.48	4.29	5.09	5.88	6.80	7.78	9.60	11.7	13.7	16.2
119-126	.05	.19	.39	.59	.78	.92	1.21	1.62	2.14	2.82	3.70	4.57	5.42	6.26	7.24	8.28	10.2	12.4	14.5	17.7
127-135	.05	.21	.42	.63	.83	.99	1.29	1.79	2.28	3.01	3.96	4.89	5.80	6.69	7.73	8.84	10.9	13.2	15.5	18.4
136-145	.05	.22	.45	.67	.84	1.06	1.38	1.92	2.45	3.23	4.24	5.24	6.21	7.17	8.29	9.48	11.6	14.2	16.6	19.7
146-155	.06	.24	.48	.72	.96	1.13	1.48	2.06	2.62	3.46	4.54	5.61	6.65	7.67	8.87	10.1	12.5	15.2	17.8	21.1
156-165	.06	.26	.51	.77	1.02	1.21	1.58	2.19	2.80	3.69	4.84	5.98	7.09	8.17	9.45	10.8	13.3	16.2	18.9	22.4
166-175	.07	.27	.55	.82	1.09	1.29	1.68	2.33	2.92	3.91	5.15	6.35	7.52	8.68	10.0	11.4	14.1	17.2	20.1	23.8
176-185	.07	.29	.58	.87	1.15	1.36	1.78	2.47	3.14	4.14	5.45	6.72	7.92	9.18	10.5	12.1	14.9	18.1	21.2	25.1
186-200	.07	.31	.62	.93	1.23	1.46	1.90	2.64	3.36	4.43	5.82	7.18	8.51	9.81	11.3	12.9	15.9	19.4	22.7	26.7
201-215	.08	.33	.67	1.00	1.33	1.57	2.05	2.84	3.62	4.77	6.27	7.73	9.16	10.5	12.2	13.9	17.1	20.8	24.4	28.8
216-230	.09	.36	.72	1.07	1.42	1.68	2.20	3.05	3.88	5.11	6.72	8.28	9.81	11.3	13.0	14.9	18.4	22.3	26.1	30.9
231-245	.09	.38	.77	1.14	1.52	1.80	2.35	3.25	4.14	5.46	7.17	8.83	10.5	12.0	13.9	15.9	19.6	23.8	27.8	32.9
246-260	.10	.41	.81	1.22	1.61	1.91	2.50	3.46	4.40	5.80	7.61	9.39	11.1	12.8	14.8	16.9	20.8	25.3	29.5	34.9

AVAILABLE ORGANIC ENERGY (BTU/FT²X.01)	24.0 to 29.9	30.0 to 33.9	34.0 to 39.9	40.0 to 43.9	44.0 to 49.9	50.0 to 53.9	54.0 to 59.9	60.0 to 69.0	70.0 to 79.0	80.0 to 89.0	90.0 to 99.0	100 to 119	120 to 139	140 to 159	160 to 200
0-.99	.10	.11	.13	.15	.16	.18	.19	.22	.25	.28	.30	.34	.40	.45	.51
1.0-2.9	.38	.44	.51	.57	.63	.68	.74	.82	.92	1.02	1.11	1.25	1.41	1.56	1.76
3.0-4.9	.75	.87	.99	1.10	1.22	1.32	1.43	1.53	1.77	1.95	2.11	2.35	2.64	2.88	3.20
5.0-6.9	1.11	1.29	1.46	1.63	1.79	1.95	2.10	2.31	2.59	2.84	3.06	3.40	3.79	4.12	4.52
7.0-8.9	1.47	1.70	1.93	2.15	2.36	2.56	2.75	3.53	3.38	3.71	3.99	4.41	4.90	5.30	5.71
9.0-10.9	1.82	2.11	2.39	2.66	2.91	3.16	3.40	3.74	4.16	4.05	4.55	5.30	5.96	6.43	6.95
11.0-14.9	2.35	2.72	3.08	3.42	3.74	4.05	4.35	4.78	5.31	5.80	6.21	6.83	7.51	8.50	8.63
15.0-19.9	3.14	3.62	4.09	4.54	4.96	5.37	5.76	6.32	7.00	7.62	8.14	8.91	9.75	10.4	11.1
20.0-24.9	4.00	4.62	5.21	5.77	6.30	6.81	7.30	7.99	8.83	9.60	10.2	11.2	12.2	12.9	13.5
25.0-29.9	4.85	5.60	6.31	6.98	7.62	8.23	8.81	9.63	10.6	11.5	12.2	13.3	14.5	15.2	15.9
30.0-34.9	5.71	6.58	7.40	8.19	8.93	9.64	10.3	11.2	12.4	13.4	14.2	15.5	16.7	17.5	18.1
35.0-39.9	6.50	7.55	8.49	9.38	10.2	11.0	11.7	12.8	14.1	15.3	16.2	17.6	18.9	19.7	20.3
40.0-44.9	7.40	8.51	9.52	10.5	11.5	12.4	13.2	14.4	15.8	17.1	18.1	19.6	21.6	21.9	22.3
45.0-49.9	8.23	9.47	10.6	11.7	12.8	13.7	14.7	16.0	17.5	18.9	20.0	21.7	23.2	24.0	24.4
50.0-54.9	9.07	10.4	11.7	12.9	14.0	15.1	16.1	17.5	19.3	20.7	21.9	23.6	25.2	26.1	26.3
55.0-59.9	9.90	11.3	12.7	14.0	15.2	16.5	17.6	19.1	20.9	22.5	23.7	25.6	27.3	23.2	28.2
60.0-64.9	10.7	12.3	13.8	15.2	16.5	17.8	19.0	20.5	22.6	24.3	25.6	27.6	29.3	30.1	30.1
65.0-69.9	11.5	13.2	14.8	16.4	17.8	19.1	20.4	22.2	24.3	26.1	27.5	29.5	31.3	32.1	32.1
70.0-74.9	12.3	14.2	15.9	17.5	19.0	20.5	21.8	23.7	25.9	27.8	29.2	31.4	33.2	34.0	34.0
75.0-79.9	13.2	15.1	16.9	18.7	20.3	21.8	23.2	25.2	27.5	29.6	31.1	33.3	35.1	36.0	36.0
80.0-84.9	14.0	16.0	18.0	19.8	21.5	23.1	24.6	26.7	29.2	31.3	32.9	35.2	37.1	37.8	37.8
85.0-89.9	14.8	17.0	19.0	21.0	22.8	24.5	26.0	28.2	30.8	33.0	34.6	37.0	39.0	38.6	39.1
90.0-94.9	15.6	17.9	20.1	22.1	24.0	25.8	27.4	29.7	32.4	34.7	36.4	38.9	40.8	41.5	41.5
95.0-100	16.4	18.8	21.1	23.2	25.2	27.1	28.8	31.2	34.5	36.4	38.1	40.7	42.7	43.2	43.2
101-105	17.2	19.8	22.1	24.4	26.4	28.4	30.2	32.7	35.6	38.1	39.9	42.5	44.5	45.0	45.0
106-111	18.2	20.9	23.4	25.7	27.9	29.9	31.8	34.5	37.5	40.1	41.9	44.7	46.7	47.1	47.1
112-118	19.2	22.0	24.6	27.1	29.3	31.5	33.5	36.2	39.4	42.1	44.0	46.8	48.8	49.2	49.1
119-126	20.4	23.4	26.1	28.7	31.2	33.4	35.5	38.4	41.8	44.6	46.6	49.5	51.5	51.7	51.7
127-135	21.8	24.9	27.9	30.6	33.2	35.6	37.8	40.9	44.4	47.4	49.4	52.4	54.4	54.6	54.6
136-145	23.3	26.7	29.8	32.0	35.5	38.0	40.4	43.6	47.4	50.5	52.6	55.7	57.7	57.7	57.7
146-155	24.9	28.5	31.8	35.0	37.9	40.6	43.1	46.5	50.4	53.7	55.9	59.2	61.1	61.1	61.1
156-165	26.5	30.3	32.9	37.2	40.3	43.1	45.8	49.4	53.5	56.9	59.1	62.5	64.5	64.5	64.5
166-175	28.1	32.1	35.9	39.4	42.6	45.6	48.4	52.2	56.5	60.1	62.4	65.9	67.8	67.8	67.8
176-185	29.7	33.9	37.9	41.6	45.0	48.1	51.1	55.0	58.6	63.3	65.7	69.3	71.0	71.0	71.0
186-200	31.7	36.2	40.4	44.3	47.9	51.3	54.4	58.6	63.3	67.2	69.7	73.4	75.0	75.0	75.0
201-215	34.1	38.9	43.4	47.6	51.4	55.0	58.3	62.8	72.8	71.9	74.5	78.3	79.9	79.9	79.9
216-230	36.4	41.6	46.4	50.8	54.9	58.7	62.2	66.9	77.2	76.5	79.1	83.1	84.5	84.5	84.5
231-245	38.8	44.3	49.4	54.1	58.4	62.4	66.1	71.1	76.7	81.1	83.8	87.9	89.1	89.1	89.1
246-260	41.2	47.0	52.3	57.3	61.9	66.1	70.0	75.2	81.0	85.7	88.5	92.6	93.7	93.7	93.7

Enter Table 3-6a with the ADJUSTED SPREAD RATE (Column 19) and the AVAILABLE ORGANIC LAYER ENERGY (Column 21). Record ORGANIC LAYER INTENSITY X .01 in Column 24.

TABLE 3-6b - INTENSITY INDEX FOR SLASH FUELS

RATE OF SPREAD (FT/MIN) — SLASH FUEL INTENSITY (BTU/SEC/FT X .01)

AVAILABLE SLASH ENERGY (BTU/FT²X.01)	LESS THAN 0,1	.11 to .30	.31 to .50	.51 to .70	.71 to .90	.91 to 1.00	1.01 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.50	3.51 to 4.50	4.51 to 5.50	5.51 to 6.50	6.51 to 7.50	7.51 to 8.90	8.91 to 10.1	10.1 to 13.9	14.0 to 15.9	16.0 to 19.9	20.0 to 23.9
0-.99	.01	.01	.01	.01	.01	.01	.01	.01	.01	.02	.03	.04	.04	.05	.06	.07	.09	.11	.13	.16
1.0-2.9	.01	.01	.01	.01	.02	.03	.04	.05	.07	.09	.12	.15	.18	.21	.25	.29	.36	.45	.54	.65
3.0-4.9	.01	.01	.02	.03	.05	.06	.08	.11	.14	.19	.25	.31	.37	.43	.50	.58	.72	.89	1.06	1.28
5.0-6.9	.01	.01	.03	.05	.07	.09	.12	.16	.21	.28	.37	.46	.55	.64	.75	.86	1.08	1.33	1.58	1.91
7.0-8.9	.01	.02	.05	.07	.10	.12	.16	.22	.28	.37	.50	.62	.74	.86	1.00	1.15	1.43	1.77	2.10	2.53
9.0-10.9	.01	.03	.06	.09	.12	.15	.20	.28	.35	.47	.62	.77	.92	1.07	1.24	1.43	1.79	2.20	2.61	3.15
11.0-14.9	.01	.04	.08	.12	.16	.19	.26	.36	.46	.61	.81	1.00	1.20	1.39	1.61	1.86	2.31	2.85	3.38	4.07
15.0-19.9	.01	.05	.11	.17	.22	.26	.35	.48	.62	.82	1.09	1.35	1.61	1.86	2.16	2.49	3.10	3.82	4.52	5.44
20.0-24.9	.01	.07	.14	.21	.29	.34	.45	.62	.80	1.05	1.39	1.73	2.06	2.39	2.77	3.19	3.97	4.89	5.79	6.95
25.0-29.9	.02	.09	.17	.26	.35	.42	.55	.76	.97	1.29	1.70	2.11	2.51	2.91	3.38	3.89	4.84	5.95	7.04	8.45
30.0-34.9	.02	.10	.21	.31	.41	.49	.65	.90	1.15	1.52	2.01	2.49	2.97	3.43	3.99	4.58	5.70	7.01	8.29	9.95
35.0-39.9	.03	.12	.24	.36	.48	.57	.75	1.04	1.33	1.75	2.32	2.87	3.42	3.96	4.60	5.28	6.57	8.07	9.54	11.4
40.0-44.9	.03	.13	.27	.41	.54	.64	.84	1.18	1.50	1.99	2.62	3.25	3.87	4.48	5.20	5.97	7.43	9.13	10.8	13.0
45.0-49.9	.03	.15	.30	.46	.61	.72	.94	1.31	1.68	2.22	2.93	3.63	4.32	5.00	5.80	6.66	8.29	10.2	12.0	14.4
50.0-54.9	.04	.17	.34	.50	.67	.80	1.04	1.45	1.85	2.45	3.23	4.01	4.77	5.52	6.41	7.35	9.14	11.2	13.3	15.9
55.0-59.9	.04	.18	.37	.55	.74	.87	1.14	1.59	2.03	2.68	3.54	4.38	5.22	6.04	7.01	8.04	10.0	12.3	14.5	17.4
60.0-64.9	.05	.20	.40	.60	.80	.95	1.24	1.73	2.21	2.91	3.85	4.76	5.66	6.55	7.61	8.73	10.9	13.3	15.7	18.8
65.0-69.9	.05	.22	.43	.65	.86	1.02	1.34	1.86	2.38	3.15	4.15	5.14	6.11	7.07	8.21	9.42	11.7	14.4	17.0	20.3
70.0-74.9	.05	.23	.47	.70	.93	1.10	1.44	2.00	2.56	3.38	4.46	5.52	6.56	7.59	8.81	10.1	12.6	15.4	18.2	21.8
75.0-79.9	.06	.25	.50	.75	.99	1.18	1.54	2.14	2.73	3.61	4.76	5.89	7.01	8.11	9.41	10.8	13.4	16.5	19.4	23.2
80.0-84.9	.06	.27	.53	.80	1.06	1.25	1.64	2.28	2.91	3.84	5.06	6.27	7.45	8.62	10.0	11.5	14.3	17.5	20.6	24.7
85.0-89.9	.07	.28	.56	.84	1.12	1.33	1.74	2.41	3.08	4.07	5.37	6.64	7.90	9.14	10.6	12.2	15.1	18.5	21.9	26.2
90.0-94.9	.07	.30	.60	.89	1.18	1.40	1.84	2.55	3.26	4.30	5.67	7.02	8.35	9.65	11.2	12.9	16.0	19.6	23.1	27.6
95.0-100	.08	.31	.63	.94	1.25	1.48	1.94	2.69	3.43	4.53	5.98	7.40	8.79	10.2	11.8	13.5	16.8	20.6	24.3	29.1
101-105	.08	.33	.66	.99	1.31	1.55	2.03	2.83	3.61	4.76	6.28	7.77	9.24	10.7	12.4	14.2	17.7	21.6	25.5	30.5
106-111	.08	.35	.70	1.05	1.39	1.65	2.15	2.99	3.82	5.04	6.64	8.22	9.77	11.3	13.1	15.0	18.7	22.9	27.0	32.3
112-118	.09	.37	.74	1.10	1.47	1.74	2.27	3.16	4.03	5.32	7.01	8.67	10.3	11.9	13.8	15.9	19.7	24.1	28.4	34.0
119-126	.10	.39	.79	1.18	1.56	1.85	2.42	3.36	4.29	5.66	7.46	9.23	11.0	12.7	14.7	16.9	21.0	25.7	30.3	36.2
127-135	.10	.42	.84	1.26	1.67	1.98	2.59	3.59	4.59	6.05	7.98	9.87	11.7	13.6	15.7	18.0	22.4	27.4	32.3	38.6
136-145	.11	.45	.90	1.35	1.79	2.12	2.78	3.85	4.92	6.49	8.55	10.6	12.6	14.5	16.9	19.3	24.0	29.4	34.6	41.4
146-155	.12	.49	.97	1.45	1.92	2.27	2.97	4.13	5.27	6.95	9.16	11.3	13.5	15.6	18.1	20.7	25.7	31.4	37.0	44.2
156-165	.13	.52	1.03	1.54	2.05	2.42	3.17	4.40	5.62	7.41	9.76	12.1	14.4	16.6	19.2	22.1	27.3	33.5	39.4	47.1
166-175	.14	.55	1.10	1.64	2.18	2.58	3.37	4.68	5.97	7.87	10.4	12.8	15.2	17.6	20.4	23.4	29.0	35.5	41.9	50.0
176-185	.14	.58	1.16	1.74	2.30	2.73	3.57	4.95	6.31	8.33	11.0	13.6	16.1	18.6	21.6	24.8	30.7	37.6	44.3	52.8
186-200	.15	.62	1.24	1.86	2.46	2.92	3.81	5.29	6.75	8.91	11.7	14.5	17.2	19.9	23.1	26.5	32.8	40.1	47.3	56.4
201-215	.17	.67	1.34	2.00	2.65	3.14	4.11	5.70	7.27	9.59	12.6	15.6	18.6	21.4	24.9	28.5	35.3	43.2	50.9	60.7
216-230	.18	.72	1.44	2.15	2.85	3.37	4.41	6.11	7.79	10.3	13.5	16.7	19.9	23.0	26.6	30.5	37.8	46.3	54.4	65.0
231-245	.19	.77	1.53	2.29	3.04	3.60	4.70	6.52	8.32	11.0	14.5	17.9	21.2	24.5	28.4	32.5	40.3	49.3	58.0	69.2
246-260	.20	.82	1.63	2.43	3.23	3.82	5.00	6.93	8.84	11.7	15.4	19.0	22.5	26.0	30.2	34.6	42.8	52.4	61.6	73.5

AVAILABLE SLASH ENERGY (BTU/FT²X.01)	24.0 to 29.9	30.0 to 33.9	34.0 to 39.9	40.0 to 43.9	44.0 to 49.9	50.0 to 53.9	54.0 to 59.9	60.0 to 69.9	70.0 to 79.0	80.0 to 89.0	90.0 to 99.0	100 to 119	120 to 139	140 to 159	160 to 200
0-.99	.20	.24	.27	.31	.34	.38	.41	.46	.52	.59	.65	.74	.87	.98	1.15
1.0-2.9	.79	.92	1.06	1.19	1.31	1.44	1.56	1.75	1.99	2.22	2.43	2.76	3.18	3.58	4.14
3.0-4.9	1.55	1.81	2.07	2.32	2.57	2.81	3.05	3.40	3.85	4.28	4.68	5.29	6.07	6.79	7.81
5.0-6.9	2.31	2.69	3.07	3.44	3.80	4.15	4.50	5.01	5.66	6.29	6.87	7.73	8.85	9.87	11.3
7.0-8.9	3.05	3.56	4.06	4.54	5.01	5.48	5.93	6.59	7.44	8.26	9.01	10.1	11.6	12.9	14.7
9.0-10.9	3.79	4.42	5.04	5.63	6.22	6.79	7.34	8.15	9.20	10.2	11.1	12.5	14.2	15.8	18.0
11.0-14.9	4.90	5.71	6.49	7.26	8.00	8.73	9.44	10.5	11.8	13.1	14.2	16.0	18.1	20.1	22.7
15.0-19.9	6.54	7.62	8.66	9.67	10.7	11.6	12.6	13.9	15.7	17.3	18.8	21.0	23.8	26.3	29.7
20.0-24.9	8.36	9.72	11.1	12.3	13.6	14.8	16.0	17.7	19.9	21.9	23.8	26.6	30.0	33.1	37.1
25.0-29.9	10.2	11.8	13.4	15.0	16.5	17.9	19.3	21.4	24.0	26.5	28.7	32.0	36.1	39.7	44.4
30.0-34.9	12.0	13.9	15.8	17.6	19.3	21.0	22.7	25.1	28.1	31.0	33.6	37.4	42.1	46.2	51.6
35.0-39.9	13.7	16.0	18.1	20.2	22.2	24.1	26.0	28.7	32.2	35.5	38.4	42.7	48.0	52.6	58.6
40.0-44.9	15.5	18.0	20.4	22.8	25.0	27.2	29.3	32.4	36.2	39.9	43.1	48.0	53.9	58.9	65.4
45.0-49.9	17.3	20.1	22.7	25.3	27.8	30.3	32.6	36.0	40.3	44.3	47.8	53.2	59.6	65.2	72.2
50.0-54.9	19.1	22.1	25.1	27.9	30.6	33.3	35.9	39.6	44.3	48.7	52.5	58.3	65.3	71.3	78.9
55.0-59.9	20.8	24.1	27.4	30.4	33.4	36.3	39.1	43.2	48.2	53.0	57.2	63.5	71.0	77.4	85.5
60.0-64.9	22.6	26.2	29.6	33.0	36.2	39.3	42.4	46.7	52.2	57.3	61.8	68.5	76.6	83.5	92.0
65.0-69.9	24.3	28.2	31.9	35.5	39.0	42.4	45.6	50.3	56.1	61.6	66.4	73.6	82.2	89.4	98.5
70.0-74.9	26.1	30.2	34.2	38.1	41.8	45.3	48.8	53.8	60.0	65.9	71.0	78.6	87.7	95.4	105
75.0-79.9	27.8	32.2	36.5	40.6	44.5	48.3	52.0	57.3	63.9	70.1	75.5	83.6	93.2	101	111
80.0-84.9	29.6	34.3	38.8	43.1	47.3	51.3	55.2	60.8	67.8	74.4	80.1	88.6	98.7	107	117
85.0-89.9	31.3	36.3	41.0	45.6	50.0	54.3	58.4	64.3	71.7	78.6	84.6	93.5	104	113	124
90.0-94.9	33.1	38.3	43.3	48.1	52.8	57.2	61.6	67.8	75.5	82.8	89.1	98.5	110	119	130
95.0-100	34.8	40.3	45.5	50.6	55.5	60.2	64.7	71.2	79.4	87.0	93.5	103	115	124	136
101-105	36.5	42.3	47.8	53.1	58.2	63.1	67.9	74.7	83.2	91.1	98.0	108	120	130	142
106-111	38.6	44.7	50.5	56.1	61.5	66.7	71.7	78.8	87.8	96.1	103	114	127	137	149
112-118	40.7	47.1	53.2	59.1	64.7	70.2	75.4	83.0	92.4	101	109	120	133	144	156
119-126	43.2	50.0	56.5	62.8	68.8	74.6	80.1	88.1	98.1	107	115	127	141	152	165
127-135	46.2	53.4	60.3	67.0	73.4	79.5	85.5	93.9	104	114	123	135	150	162	175
136-145	49.4	57.2	64.6	71.7	78.5	85.1	91.4	100	112	122	131	144	160	172	186
146-155	52.9	61.1	69.0	76.6	83.9	90.9	97.6	107	119	130	140	154	170	183	197
156-165	56.3	65.0	73.4	81.5	89.2	96.6	104	114	127	138	148	163	180	194	209
166-175	59.7	69.0	77.9	86.4	94.6	102	110	121	134	146	157	172	190	204	221
176-185	63.1	72.9	82.3	91.3	99.9	108	116	127	141	154	165	182	200	215	232
186-200	67.3	77.8	87.8	97.3	107	115	124	136	151	164	176	193	213	228	246
201-215	72.4	83.6	94.4	105	114	124	133	146	162	176	189	207	228	244	262
216-230	77.5	89.5	101	112	122	132	142	156	173	188	201	221	243	260	278
231-245	82.6	95.3	107	119	130	141	151	166	184	200	214	234	257	275	294
246-260	87.6	101	114	126	138	149	160	175	194	212	226	247	272	290	310

Enter Table 3-6b with the ADJUSTED SPREAD RATE (Column 19) and the AVAILABLE SLASH FUEL ENERGY (Column 22). Record SLASH FUEL INTENSITY X .01 in Column 25.

The sum of Column 24 and 25 is the PROPAGATION INTENSITY (BTU/SEC/FT OF FRONT X .01) of a fire front burning in the specified fuel complex and is recorded in Column 26. Similar to the General Burning Index, actual intensity requires moving the decimal two places to the right.

GUIDELINE 3-1 - FIRE IMPACT IN TERMS OF ORGANIC LAYER REDUCTION

INITIAL ORGANIC DEPTH (INCHES)	5:1 ADMC ON DAY OF BURN																										
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 to 67	68 to 76	77 to 85	86 to 94	95 to 103	104 to 112	113 to 121	122 to 130	131 to 140	141 to 150	151 to 160	161 to 170	171 to 180	181 to 190	191 to 200
	REDUCTION OF ORGANIC LAYER DEPTH (INCHES)																										
0.8	0.0	0.2	0.3	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8
1.2	0.0	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
1.6	0.0	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6
2.0	0.0	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.5	1.7	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2.4	0.0	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.9	1.0	1.2	1.3	1.5	1.7	1.9	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4
3.2	0.0	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.7	1.8	2.1	2.3	2.6	2.7	2.9	3.0	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2
4.0	0.0	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.7	3.1	3.3	3.5	3.7	3.8	3.9	3.9	3.9	4.0	4.0	4.0	4.0	4.0
4.8	0.0	0.2	0.3	0.4	0.5	0.6	0.9	1.2	1.4	1.8	2.1	2.5	2.9	3.3	3.7	4.0	4.2	4.4	4.5	4.6	4.7	4.7	4.7	4.8	4.8	4.8	4.8
5.6	0.0	0.2	0.3	0.4	0.5	0.7	0.9	1.3	1.6	2.0	2.4	2.8	3.3	3.8	4.1	4.5	4.8	5.0	5.2	5.3	5.4	5.5	5.5	5.6	5.6	5.6	5.6
6.4	0.0	0.2	0.3	0.4	0.5	0.7	1.0	1.4	1.7	2.1	2.6	3.1	3.7	4.2	4.7	5.1	5.3	5.6	5.8	5.9	6.1	6.2	6.3	6.3	6.3	6.3	6.3

Enter GUIDELINE 3-1 with today's 5:1 ADMC (Column 20) and the INITIAL ORGANIC DEPTH to determine the reduction in organic layer depth. To determine the conditions required to achieve a specified reduction, find the desired reduction along the INITIAL ORGANIC DEPTH line and read the 5:1 ADMC at the top of the column required to achieve the specified reduction.

GUIDELINE 3-2 - FIRE IMPACT IN TERMS OF SLASH FUEL REDUCTION

INITIAL SLASH LOADING (LB/FT^2)	5:1 ADMC ON DAY OF BURN																										
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 to 67	68 to 76	77 to 85	86 to 94	95 to 103	104 to 112	113 to 121	122 to 130	131 to 140	141 to 150	151 to 160	161 to 170	171 to 180	181 to 190	191 to 200
	REDUCTION OF SLASH FUEL LOADING (LB/FT^2)																										
1.00	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
1.50	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
2.00	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1
2.50	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.9	.9	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5
3.00	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.1	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.8	1.9	1.9
3.50	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.3	1.4	1.5	1.7	1.7	1.8	1.9	2.0	2.1	2.1	2.1	2.2	2.2
4.00	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.9	0.9	1.1	1.2	1.4	1.5	1.7	1.8	1.9	2.1	2.1	2.2	2.3	2.4	2.4	2.5	2.5	2.5
4.50	0.1	0.1	0.1	0.2	0.3	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.6	2.7	2.7	2.7	2.8

Enter GUIDELINE 3-2 with today's 5:1 ADMC (Column 20) and the INITIAL SLASH LOADING to determine THE REDUCTION IN SLASH LOADING. To determine the conditions required to achieve a specified reduction, find the desired reduction along the INITIAL SLASH FUEL LOADING line and read the 5:1 ADMC at the top of the column required to achieve the specified reduction.

GUIDELINE 3-3 - FIRE IMPACT IN TERMS OF REDUCTION OF SLASH FUEL DIAMETERS

INITIAL SLASH FUEL DIAMETER (Inch)	5:1 ADMC ON DAY OF TREATMENT														
	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 to 99	100 to 109	110 to 119	120 to 129	130 to 139	140 to 149
	REDUCTION OF SLASH FUELS (PERCENT)														
< 1.0	Depletion of fuel under these conditions are							86	89	92	95	98	100	100	100
< 3.0	highly sensitive to				57	65	71	75	79	82	85	87	89	90	90
< 5.0	rate	15	27	37	45	51	55	58	61	64	66	68	70	73	75
< 7.0	of	11	20	27	33	37	41	44	46	48	50	52	54	55	56
< 9.0	spread	6	12	18	23	27	31	34	36	38	40	42	44	45	47
<11.0		6	12	18	23	27	31	34	36	38	40	42	44	45	47

Enter GUIDELINE 3-3 with today's 5:1 ADMC (Column 20) and read the percentage reduction of fuel smaller than the diameter of concern. To determine the conditions required to achieve a specified reduction of slash fuels smaller thanaa certain diameter, find the desired reduction under the diameter of concern and read the required 5:1 ADMC at the left of the Guideline.

This guideline predicts the proportion of initial fuel smaller than the indicated diameters that will be eliminated by the treatment.

GUIDELINE 3-4 - FIRE IMPACT IN TERMS OF MINERAL SOIL EXPOSURE

TOTAL AVAILABLE ENERGY (BTU/FT²X.01)	TODAY'S 5:1 ADMC																										
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 to 67	68 to 76	77 to 85	86 to 94	95 to 103	104 to 112	113 to 121	122 to 130	131 to 140	141 to 150	151 to 160	161 to 170	171 to 180	181 to 190	191 to 200
	EXPOSED MINERAL SOIL (PERCENT OF AREA)																										
0 - 2	1	4	6	8	12	14	17	19	21	24	26	29	31	36	40	44	49	53	58	62	66	72	77	81	86	91	96
2.1 - 6.0	2	4	7	9	11	14	17	19	22	24	27	29	32	36	40	45	49	54	58	62	67	72	77	82	87	92	97
6.1 - 10.0	2	5	7	10	12	15	18	20	23	25	27	30	33	37	41	46	50	54	59	63	68	73	78	83	88	93	98
10.1 - 20.0	4	6	9	11	14	16	19	21	24	26	29	31	34	38	42	47	51	56	60	65	69	74	79	84	89	94	99
20.1 - 30.0	6	8	11	13	15	18	21	23	26	28	31	33	36	40	44	49	53	58	62	66	71	76	81	86	88	96	100
30.1 - 40.0	8	10	12	15	17	20	23	25	28	30	33	35	38	42	46	51	55	60	64	68	73	78	83	88	93	98	100
40.1 - 50.0	9	12	17	17	19	22	25	27	30	32	34	37	40	44	48	53	57	61	66	70	75	80	85	90	95	100	100
50.1 - 60.0	11	14	16	19	21	24	27	29	31	34	36	39	42	46	50	54	59	63	68	72	77	82	87	92	97	100	100 2/
60.1 - 70.0	13	16	18	21	23	26	28	31	33	36	38	41	44	48	52	56	61	65	70	74	78	84	89	94	99	100	100
70.1 - 80.0	15	18	20	23	25	27	30	33	35	38	40	43	46	49	54	58	63	67	72	76	80	86	91	96	100	100	100
80.1 - 90.0	17	20	22	24	27	29	32	35	37	40	42	45	47	51	56	60	65	69	73	78	82	88	93	97	100	100	100
90.1 - 100	19	21	24	26	29	31	34	37	39	42	44	46	49	53	58	62	67	71	75	80	84	90	94	99	100	100	100
101 - 120	22	24	27	29	32	34	37	39	42	44	47	49	52	56	61	65	69	74	78	83	87	92	97	100	100	100	100
121 - 140	26	28	31	33	35	38	41	43	46	48	51	53	56	60	64	69	73	78	82	86	91	96	100	100	100	100	100
141 - 160	29	32	34	37	39	42	45	47	50	52	54	57	60	64	68	73	77	81	86	90	95	100	100	100	100	100	100
161 - 180	33	36	38	41	43	45	48	51	53	56	58	61	64	68	72	76	81	85	90	94	98	100	100	100	100	100	100
181 - 200	37	39	42	44	47	49	52	55	57	60	62	64	67	71	76	80	85	89	93	98	100	100	100	100	100	100	100
201 - 220	41	45	46	48	51	53	56	58	61	63	66	68	71	75	80	84	88	93	97	100	100	100	100	100	100	100	100
221 - 240	45	47	50	52	54	57	60	62	65	67	70	72	75	70	83	88	92	97	100	100	100	100	100	100	100	100	100
241 - 260	48	51	53	56	58	61	64	66	69	71	73	76	79	83	87	92	96	100	100	100	100	100	100	100	100	100	100
261 - 280	52	55	57	60	62	64	67	70	72	75	77	80	83	87	91	95	100	100	100	100	100	100	100	100	100	100	100
281 - 300	56	58	61	63	66	68	71	74	76	79	81	83	86	90	95	99	100	100	100	100	100	100	100	100	100	100	100

1/

1/ ENERGY AVAILABLE FROM MAXIMUM FUEL LOADING, 4.5 AND 4.0 LBS/FT² FOR SLASH AND ORGANIC LAYER RESPECTIVELY.

2/ ENERGY AVAILABLE FROM MINIMUM FUEL LOADING, 1.0 AND 0.5 LBS/FT² FOR SLASH AND ORGANIC LAYER RESPECTIVELY.

Enter GUIDELINE 3-4 with TOTAL ENERGY (Column 23) and today's 5:1 ADMC (Column 20), to determine the proportion of area on which mineral soil will be exposed by the burn.

To prescribe the weather conditions required to achieve a desired exposure of mineral soil: select the desired exposure between the diagonal lines and note the range of available energy at the left of GUIDELINE 3-4. Enter Table 3-5a and 3-5b with ORGANIC FUEL LOADING, (Column 13) and SLASH FUEL LOADING, (Column 14) and the common 5:1 ADMC that provides the energy noted in GUIDELINE 3-4.

APPENDIX 3-1 - PROCEDURE FOR ESTIMATING SLASH FUEL LOADING

NO. OF PIECES PER 100 FT	DIAMETER CLASS OF FUELS (INCHES)											
	2	4	6	8	10	12	14	16	18	20	22	24
	(CLASS LIMITS)											
	1.1 to 3.0	3.1 to 5.0	5.1 to 7.0	7.1 to 9.0	9.1 to 11.0	11.1 to 13.0	13.1 to 15.0	15.1 to 17.0	17.1 to 19.0	19.1 to 21.0	21.1 to 23.0	23.1 to 25.0
	SLASH FUEL LOADING (LB/FT^2)											
1	0.008	0.033	0.07	0.13	0.20	0.30	0.40	0.53	0.67	0.82	1.0	1.2
2	0.016	0.066	0.15	0.26	0.41	0.60	0.81	1.1	1.3	1.6	2.0	2.4
3	0.025	0.099	0.22	0.39	0.61	0.89	1.2	1.6	2.0	2.5	3.0	3.6
4	0.033	0.132	0.30	0.53	0.81	1.2	1.6	2.1	2.7	3.3	4.0	4.8
5	0.041	0.165	0.37	0.66	1.00	1.5	2.0	2.6	3.3	4.1	5.0	5.9
6	0.049	0.198	0.44	0.79	1.2	1.8	2.4	3.2	4.0	4.9	6.0	7.1
7	0.058	0.231	0.51	0.92	1.4	2.1	2.8	3.7	4.7	5.8	7.0	8.3
8	0.066	0.264	0.59	1.0	1.6	2.4	3.2	4.2	5.3	6.6	8.0	9.5
9	0.074	0.297	0.67	1.2	1.8	2.7	3.6	4.7	6.0	7.4	9.0	10.7
10	0.082	0.330	0.74	1.3	2.0	3.0	4.0	5.3	6.7	8.2	10.0	11.9

TO ESTIMATE SLASH FUEL LOADING:

(1) ESTABLISH TWO BASELINES EACH 50 FEET LONG AND AT RIGHT ANGLES TO EACH OTHER FROM RANDOMLY SELECTED POINTS.
(2) COUNT THE NUMBER OF FUEL COMPONENTS INTERSECTING THE BASELINE ACCORDING TO THE DIAMETER OF THE FUEL AT THE POINT OF INTERSECTION.
(3) READ THE APPROPRIATE WEIGHT FOR EACH CLASS AND NUMBER OF PIECES AND SUM THE RESULTS.
(4) ADD .25 LBS. FOR FOLIAGE AND FUELS LESS THAN 1.0 INCHES DIAMETER.
(5) THE TOTAL IS SLASH FUEL LOADING IN LBS/FT^2; TO CONVERT TO TONS/ACRE, MULTIPLY BY 21.8.

APPENDIX 3-2 - CUMULATIVE SLASH FUEL LOADING AND PROPORTION OF TOTAL FUEL BY FUEL DIAMETER IN SPRUCE-FIR LOGGING SLASH

FUEL DIAMETER	PROPORTION (%)			LOADING LB/FT^2		
	LIGHT	MOD.	HEAVY	LIGHT	MOD.	HEAVY
LESS THAN 1.0"	10	8	6	.25	.25	.25
LESS THAN 3.0"	17	12	11	.41	.42	.43
LESS THAN 5.0"	25	20	17	.57	.63	.67
LESS THAN 7.0"	41	35	32	.95	1.13	1.29
LESS THAN 9.0"	59	56	48	1.38	1.73	1.91
LESS THAN 11.0"	75	75	64	1.76	2.25	2.55
TOTAL FUEL	100	100	100	2.33 ±.25	3.15 ±.30	4.00 ±.18

APPENDIX 3-3 - METRIC CONVERSION FACTORS

CONVERSION TO METRIC UNITS

Constants to convert units in these tables to the metric system are as follows:

Quantity	English Unit		Constant	Metric Unit	Metric Abbreviation
Fuel depth	Inches	x	2.54	= centimetres	cm
Fuel loading	Lb/ft^2	x	4.88	= kilogram/square metre	Kg/m^2
	Ton/acre	x	2.24	= metric ton/hectare	MT/ha
Rate of spread	Ft/min	x	0.305	= metres/minute	M/min
Available energy	Btu/ft^2	x	0.0271	= kilogram-calories/square metre	Kcal/m^2
	Btu/ft^2 x .01	x	2.71	= kilogram-calorie/square metre x .01	Kcal/sec/m
Fire intensity	Btu/sec/ft	x	0.826	= kilogram-calorie/sec/metre	Kcal/sec/m
	Btu/sec/ft x .01	x	82.6	= kilogram-calorie/sec/metre x .01	Kcal/sec/m

Monthly Record

SPRUCE - FIR SLASH BURNING INDEX

STATION MACLEOD LAKE

MONTH JUNE YEAR 1969

SPECIFIC INDEX LOCATION KEY

LOCATION 1 TSX 89854 MACLEOD LK.

2 _____

3 _____

4 _____

5 _____

CODES ADJUSTED FOR ELEVATION YES☐ NO☒

	ADJUSTMENT				GENERAL BI FOR SPRUCE - FIR SLASH			BACKGROUND INFORMATION REGARDING THE SPECIFIC AREA OF CONCERN							DAILY VALUES FROM FWI RECORD ADJUSTED TO SPECIFIC LOCATION				BURNING INDEX FOR SPECIFIC AREA OF SPRUCE-FIR LOGGING SLASH							
	DAILY VALUES FROM FWI RECORD ADJUSTED TO GENERAL CLIMATE OF TYPE				TABLE 4	TABLE 3-5	TABLE 3-6														TABLE 3-5a	TABLE 3-5b		TABLE 3-6a	TABLE 3-6b	
DATE	WIND SPD.	FFMC	DMC	DC	Spread RATE Ft/min	5:1 ADMC	FRONT. INTENS. 01 x BTU/Sec/Ft.	DATE	TIME	LOCATION	Slope / Aspect	AGE OF SLA. YR.	LOADING LB/FT² ORG.	LOADING LB/FT² SLA.	WIND SPD.	FFMC	DMC	DC	ADJUS. SPREAD Ft/min	5:1 ADMC	ORGANIC ENERGY	+ SLASH ENERGY	= TOTAL ENERGY	ORGAN INTENS.	+ SLASH INTENS.	= TOTAL INTENSITY
																					BTU/FT² x.01			BTU/SEC/FT x .01		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	2	39	20	158	0	43	.04																			
2	6	60	21	165	0	46	.05																			
3	6	74	22	172	.7	49	.62																			
4	4	84	24	180	2.8	52	3.46																			
5	10	93	30	188	39	57	42.4																			
6	9	52	19	181	0	49	.05																			
7	8	72	20	189	.7	49	.62																			
8	14	87	24	196	19	52	19.2																			
9	2	82	25	202	1.7	58	2.37																			
10	8	79	26	210	2.0	58	2.37																			
11	14	88	30	217	25	61	34.9																			
12	10	87	32	224	9.8	64	13.2	13	HAN	1	10/5	2	2.0	4.0	4	82	33	230	2.1	68	88	93	181	1.53	3.26	4.79
13	5	82	33	230	2.3	68	3.78																			
14	10	37	17	216	0	47	.05																			
15	14	68	12	214	.7	36	.43																			
16	10	83	14	221	4.5	42	3.38																			
17																										
18																										
19																										
20																										
21																										
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30																										
31																										

GENERAL INDEX ONLY

SPECIFIC INDEX ONLY

Monthly Record

SPRUCE ~ FIR SLASH BURNING INDEX

STATION _____

MONTH _____ YEAR _____

CODES ADJUSTED FOR ELEVATION YES☐ NO☐

SPECIFIC INDEX LOCATION KEY

LOCATION 1 _____

2 _____

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	ADJUSTMENT				GENERAL BI FOR SPRUCE-FIR SLASH			BACKGROUND INFORMATION REGARDING THE SPECIFIC AREA OF CONCERN							DAILY VALUES FROM FWI RECORD ADJUSTED TO SPECIFIC LOCATION				BURNING INDEX FOR SPECIFIC AREA OF SPRUCE-FIR LOGGING SLASH								
	DAILY VALUES FROM FWI RECORD ADJUSTED TO GENERAL CLIMATE OF TYPE				TABLE 3-4	TABLE 3-5	TABLE 3-6														TABLE 3-5a	TABLE 3-5b		TABLE 3-6a	TABLE 3-6b	
DATE	WIND SPD.	FFMC	DMC	DC	Spread RATE Ft/min	5:1 ADMC	FRONT. INTENS. .01 x BTU/Sec /Ft	DATE	TIME	LOCATION	Slope / Aspect	AGE OF SLA. YR.	LOADING LB/FT² ORG.	LOADING LB/FT² SLA.	WIND SPD.	FFMC	DMC	DC	ADJUS. SPREAD Ft/min	5:1 ADMC	ORGANIC ENERGY +	SLASH ENERGY =	TOTAL ENERGY	ORGAN. INTENS. +	SLASH INTENS. =	TOTAL INTENSITY
																					BTU / FT² x .01			BTU / FT² x .01		
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GENERAL INDEX ONLY

SPECIFIC INDEX ONLY