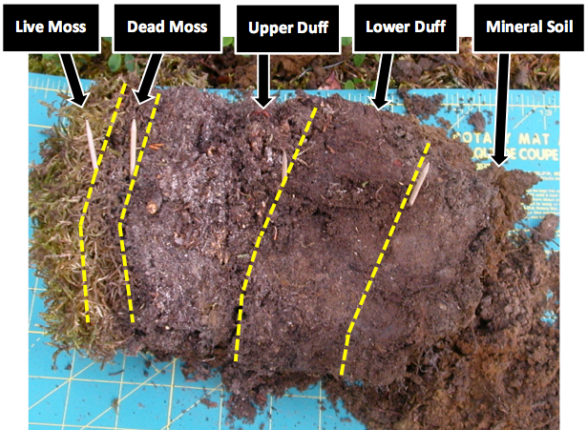

ALASKA FIELD GUIDE FOR CFFDRS FIRE WEATHER INDEX (FWI) SYSTEM

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Committees

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ABSTRACT
Based primarily on the Canadian Forest Fire Danger Rating System (CFFDRS) component parts, the Fire Weather Index (FWI) System and the Fire Behavior Prediction (FBP) System

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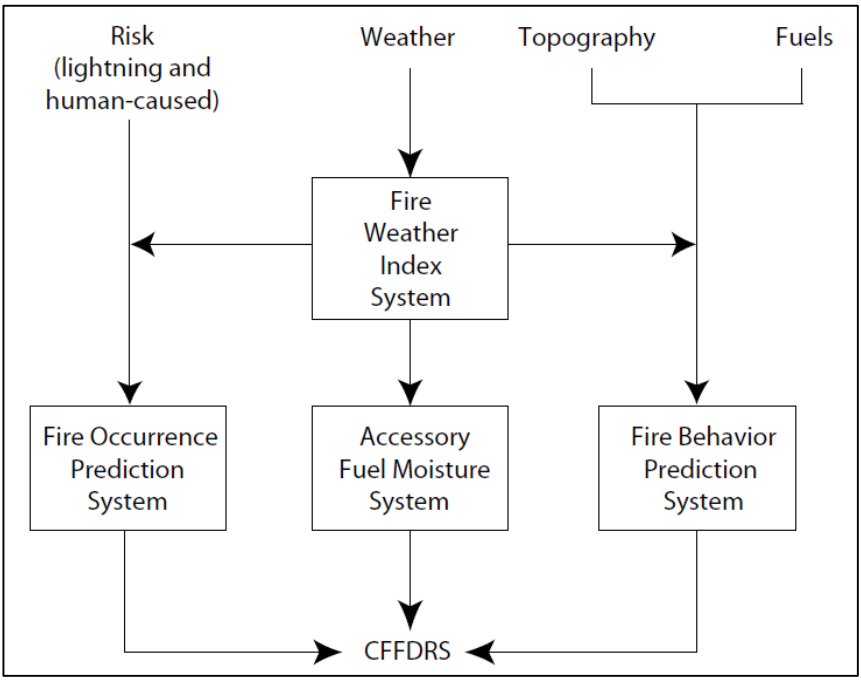
1 CFFDRS System Overview

This guide is intended as a reference for US users who may have reason to work with the system in the United States, where English units are primarily used. Keep in mind that the Canadian Forest Service has produced the definitive selection of reference publications and tools.

The Canadian Forest Fire Danger Rating System (CFFDRS) was first conceived in 1968. The Fire Weather Index (FWI) system was developed and introduced across Canada in 1970. The Fire Behavior Prediction (FBP) system was released in 1984. The Fire Occurrence Prediction (FOP) system and Accessory Fuel Moisture system are still in development, with several regional modules operational at this time



Though this guide attempts to be faithful to the models embedded in CFFDRS, there are a number of adaptations to the standard depictions found in materials produced by the Canadian Forest Service

- Most important among these is the use of English units instead of the standard metric units employed in the system internationally
- CFFDRS models and tools do not expressly identify the relationship between standard wind measurements (10 meters sensor height) used and field measurements at eye level. The relationship between “airport”, “forestry” and winds measured at other heights (e.g. 6 ft for eye level) is taken from Lawson & Armitage (2008). Users are encouraged to interpret the winds as measured and apply them appropriately for the model used

1.1 Key References & Training Resources

The content included in this reference is based largely on these references with several graphics and flow charts drawn directly from them.

Most of these references, resources, and tools can be found at http://www.frames.gov/cffdrs

Lawson, B.D.; Armitage, O.B. 2008. Weather guide for the Canadian Forest Fire Danger Rating System. Nat. Resources Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Van Wagner, C.E. 1987. Development and structure of the Canadian Forest Fire Weather Index System. Canadian Forest Service, Ottawa, Ont. Forest Technical Report 35.

Taylor, Steve, Lawson, Bruce, and Sherman, Karen. Introduction to the Canadian Forest Fire Weather Index System, online video. Canadian Forest Service. 22 min.

Understanding the Fire Weather Index System Interactive Training and Reference, CD

Forestry Canada Fire Danger Group. 1992. Development and structure of the Canadian Forest Fire Behavior Prediction System. Information Report ST-X-3. Ottawa, Ontario, Canada: Forestry Canada, Science and Sustainable Development Directorate. 63 p.

Hirsch, K.G. 1996. Canadian Forest Fire Behavior Prediction (FBP) System User's Guide. Natural Resources Canada, Canadian Forest Service, Northern Forestry Centre Special Report 7. Edmonton, Alberta.

De Groot, W.J., 1993, Examples of Fuel Types in the Canadian Forest Fire Behavior Prediction (FBP) System, Forestry Canada. Poster.

Canadian Forest Fire Behavior Prediction System Interactive Training and Reference, CD,

Tymstra, C.; Bryce, R.W.; Wotton, B.M.; Taylor, S.W.; Armitage, O.B. 2010. Development and structure of Prometheus: the Canadian Wildland Fire Growth Simulation Model. Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-417

Wotton, B.M.; Alexander, M.E.; Taylor, S.W. 2009. Updates and Revisions to the 1992 Canadian Forest Fire Behavior Prediction System. Natural Resources Canada, Canadian Forest Service, Great Lakes Forestry Centre, Sault Ste. Marie, Ontario, Canada. Information Report GLC-X-10, 45p.

Canadian Forestry Service. 1984. Tables for the Canadian Forest Fire Weather Index System. Environment Canada, Canadian Forestry Service, Forest Technical Report 25.

Taylor, S.W., Pike, R.G., Alexander, M.E. 1997. Field Guide to the Canadian Forest Fire Behavior Prediction (FBP) System. Fire Management Network, Canadian Forest Service, Northern Forestry Centre. Special Report 11.

Kidnie, S.M., Wotton, M.M., Droog, W.N. 2010. Field Guide for Predicting Fire Behaviour in Ontario's Tallgrass Prairie.

RunCFFDRS.exe is a stand-alone executable file produced by the Canadian Forest Service that includes documentation and references for the entire system as well as basic calculators for the FWI and FBP systems.

Prometheus, the CFFDRS Geospatial Fire Growth Model, is supported by the Canadian Interagency Forest Fire Center (CIFFC) and its members. It includes a separate FWI/FBP calculator as part of its installation.

1.2 Important Conversions

Metric Unit	Multiply by	English Unit	Multiply by	Metric Unit
Meters/min	3.28084	Ft/min	0.3048	Meters/min
Meters/min	2.982582	Ch/hr	0.33528	Meters/min
Meters/min	0.03728	Miles/hr	26.8224	Meters/min
Kg/m^3	4.460897	Tons/ac	0.22417	Kg/m^3
Kg/m^3	0.062	lb/ft^3	16.129	Kg/m^3
Tonnes/ha	0.44609	Tons/ac	2.2417	Tonnes/ha
Kw/m	0.28909	BTU/ft/sec	3.4592	Kw/m
Meters	0.049709	Chains	20.117	Meters
Meters	0.3048	Feet	3.28084	Meters
Millimeters	0.0393701	Inches	25.4	Millimeters
kilometers	0.62137	miles	1.6093	kilometers
hectares	2.4711	acres	0.40469	hectares

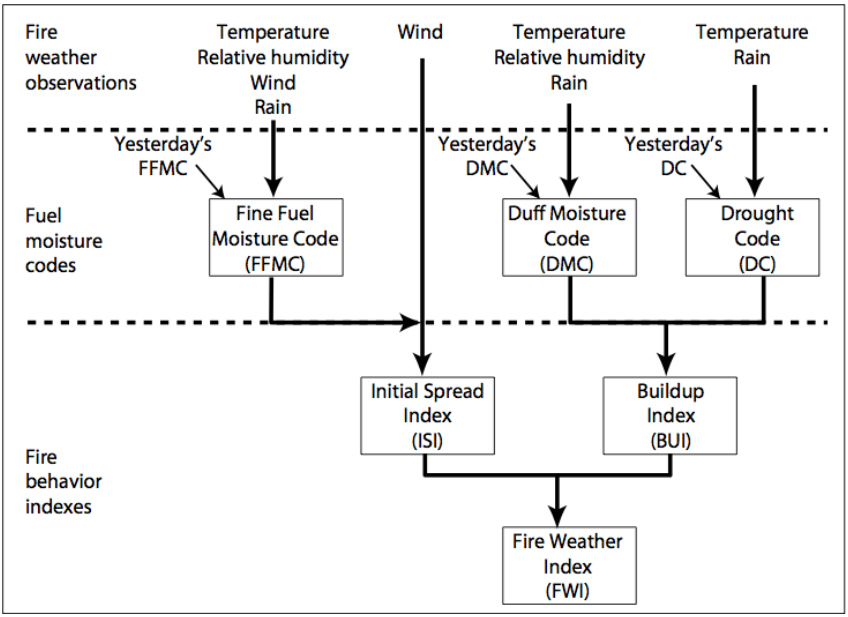
2 Fire Weather Index (FWI) System

2.1 System Overview

Analogous in concept to the National Fire Danger Rating System (NFDRS), the Fire Weather Index System depends solely on weather readings

CFFDRS calculates FWI codes and indices based on a single "standard" fuel type that can be described as a generalized pine forest, most nearly jack pine and lodgepole pine

The Fire Weather Index System calls for weather observations to be collected from a standard observation site and time. Location standards can be found in the "Weather Guide for the Canadian Forest Fire Danger Rating System" (Lawson and Armitage, 2008). The system calls for observations to be taken at "solar" noon, when the sun is at its peak directly overhead.



There are three (3) ***fuel moisture codes*** calculated from these basic weather observations. Unlike the NFDRS fuel moistures, the FWI fuel moisture codes increase as fuels get drier. Like other accounting systems, the FWI system combines knowledge of yesterday's (or last hour's) fuel moisture conditions with the influence of air temperature, atmospheric moisture, wind, and precipitation since then.

- The ***Fine Fuel Moisture Code (FFMC)*** represents fuel moisture of forest litter fuels under the shade of a forest canopy. It is intended to represent moisture conditions for shaded litter fuels, the equivalent of 16-hour timelag. It ranges from 0-101. Subtracting the FFMC value from 100 can provide an estimate for the equivalent (approximately 10h) fuel moisture content, most accurate when FFMC values are roughly above 80.

- The ***Duff Moisture Code (DMC)*** represents fuel moisture of decomposed organic material underneath the litter. System designers suggest that it is represents moisture conditions for the equivalent of 15-day (or 360 hr) timelag fuels. It is unitless and open ended. It may provide insight to live fuel moisture stress.
- The ***Drought Code (DC)***, much like the Keetch-Byrum Drought Index, represents drying deep into the soil. It approximates moisture conditions for the equivalent of 53-day (1272 hour) timelag fuels. It is unitless, with a maximum value of 1000. Extreme drought conditions in the Eastern Upper Peninsula have produced DC values near 650.

Similarly, there are three (3) ***fire behavior indices*** intended to represent spread, fuel consumption/heat release, and fire intensity.

- The ***Initial Spread Index (ISI)*** is analogous to the NFDRS Spread Component (SC). It integrates fuel moisture for fine dead fuels and surface windspeed to estimate a spread potential. ISI is a key input for fire behavior predictions in the FBP system. It is unitless and open ended.
- The ***Buildup Index (BUI)*** is analogous to the NFDRS Energy Release Component (ERC). It combines the current DMC and DC to produce an estimate of potential heat release in heavier fuels. It is unitless and open ended. In Alaska and the Lake States, it is the primary indicator of season severity during the growing season.
- The ***Fire Weather Index (FWI)*** integrates current ISI and BUI to produce a unitless index of general fire intensity potential. It is analogous to NFDRS Burning Index. With dry fuel conditions, it is a key indicator of extreme fire behavior potential. Again, unitless and open ended.

Diurnal Variations

There is an hourly implementation for the ***Fine Fuel Moisture Code*** that reflects the variability in fine fuel moisture as influenced by temperature and humidity changes. Using the corresponding, locally observed windspeed, updated values for ***Initial Spread Index*** and ***Fire Weather Index*** may also be produced.

Additionally, research in Ontario (Kidnie et.al, 2010) quantified the fuel moisture trends for grass fuels and established a grass fuel moisture model that is produced only with hourly data.

Seasonal Start-up and Resumption after Interruption in Observations

Daily records are generally started as soon as there is measurable fire danger in the spring. In Alaska, this is defined as the third day after snow has essentially left the area to which the fire danger rating applies.

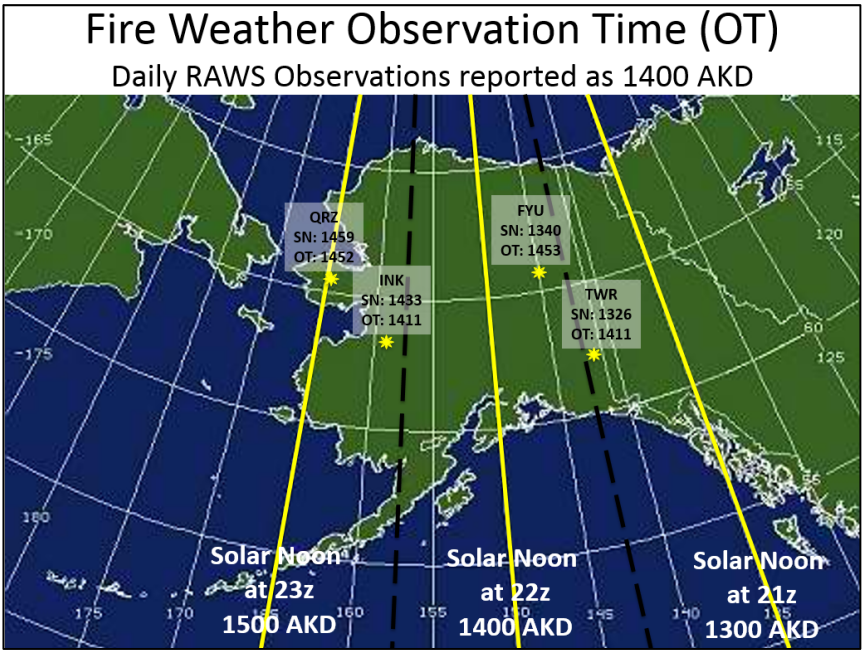
Default seasonal start-up values are 85 for FFMC, 6 for DMC, and 15 for DC.

If daily observations are interrupted during the season and missing observations cannot be estimated, fuel moisture codes must be estimated for the last day of missing observations and used as “yesterday” fuel moisture codes for the newly resumed weather observation.

Observation Time in Alaska

All Alaska RAWS stations, regardless of their actual observation time, have their official observation time established as the last whole hour before the observation. In reality, each automated weather station is assigned a specific time (minute and second) to transmit its current observation. Examples of different actual observation times (OT) are shown on the map below.

Even with Alaska's large size, all daily Fire Weather Index values in the state are calculated from observations established as 1400 Alaska Daylight Savings Time (AKDT). As mentioned earlier, the FWI system is based on standard observations collected at "solar" noon, when the sun is directly overhead. The following graphic shows the relationship between the actual "solar noon" (SN) time and the actual observation time for several RAWS locations in the state.



Though there has been much discussion about the observation time for RAWS locations in western Alaska, the examples shown here indicate that the biggest gaps may exist in eastern Alaska. The Fort Yukon example shows that the observation time of 1453 AKDT is 1 hour and 13 minutes after "solar" noon (1340) at that location.

Van Wagner (1987) documented the effects of latitude on the fuel moisture codes, identifying significant discrepancies in FFMC that "occur because the time of maximum temperature and minimum relative humidity in *high summer* is progressively later as latitude increases." At that time, he suggested that daily observations could be delayed in the far north to eliminate much of the difference that occurs.

2.2 Alaska Interagency FWI Interpretation Thresholds

These thresholds are used on the Alaska Interagency Coordination Center web space to provide interpretations to FWI observations and forecasts each day. Though they give insight to overall potential across landscapes and areas of responsibility, they need to be combined with specific fuels and terrain for the site using the Fire behavior Prediction (FBP) System to produce fire behavior interpretations when evaluating a specific fire situation.

Class	LOW	MOD	HIGH	VHIGH	EXT	Interpretation
Max Temp	<50°	50° to 59.9°	60° to 69.9°	70° to 79.9°	80°+	Fire intensity and crown fire potential
Min RH	51% to 100%	41% to 50%	31% to 40%	21% to 30%	<20%	Fine fuel moisture and ignition potential
FFMC	0 to 79.9	80 to 85.9	86 to 88.9	89 to 91.9	92+	Below 74, little chance of ignition or surface fire spread with an open flame. Active spread in light fuels at 80. Ignition potential high at 90 and extreme fire behavior expected at 92.
DMC	0 to 39.9	40 to 59.9	60 to 79.9	80 to 99.9	100+	Duff layer not involved below 20. Influence of duff on surface fire noticeably increases at 40. Extreme fire behavior becomes possible above 60.
DC	0 to 149.9	150 to 349.9	350 to 399.9	400 to 449.9	450+	Minimal significant ground fire below 300.
ISI	0 to 1.9	2 to 4.9	5 to 7.9	8 to 10.9	11+	Expected spread potential. Used in fire behavior predictions.
BUI	0 to 39.9	40 to 59.9	60 to 89.9	90 to 109.9	110+	Fuel availability and flammability. Seasonal severity. Used in Fire Behavior Predictions.
FWI	0 to 8.9	9 to 17.9	18 to 27.9	28 to 34.9	35+	Fire intensity and extreme fire potential.
Daily Severity Rating (DSR)						A transformation of the FWI that emphasizes its higher values. Can be cumulated through the season to represent overall conditions.

2.3 Monthly Fire Weather Index (FWI) Record

Month Year Station/Zone Elevation Observer

Day	Dry Bulb Temp	Wet Bulb Temp	Relative Humidity	Wind Direction	Windspeed	Precipitation, 24h	FFMC, Raincode	Today's FFMC	DMC. Raincode	DMC, Drying Factor	Today's DMC	DC, Raincode	DC, Drying Factor	Today's DC	Initial Spread Index	Buildup Index	Fire Weather Index
Last Month's Fuel Moisture Codes																	
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
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31																	

Total Rainfall for Month

2.4 Tables for the Fire Weather Index (FWI) System

2.4.1 Instructions

Daily CFFDRS Weather Observations

Manual observations may be taken with a belt weather kit, as long as the eye-level windspeed observation is adjusted to 10m Forestry/RAWS windspeed before the codes and indices are estimated.

Observed 1400 ADT weather elements include:

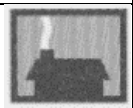
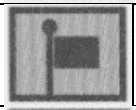
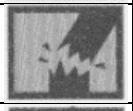
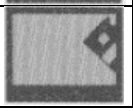
- Dry Bulb Temperature
- Relative Humidity
- 10m "Forestry" or RAWS windspeed and direction
- 24 hour accumulated precipitation total.

Sudden Weather Changes during the Afternoon may be accounted for by collecting a new set of observations and calculating a revised set of system codes and indices up to 1700 ADT.Do not include any of the rainfall that fell after the normal collection time of 1400 ADT.

The following table, adapted from the metric version in the Field Guide for Predicting Fire Behavior in Ontario's Tallgrass Prairie (Kidnie et.al.2010), shows the relationship among wind measurement or forecasts based on both the instrument height, the size of the opening, the variability of the terrain, and vegetation around the sensor. "Airport" locations are much larger and flatter openings than most found in wildland, or "Forestry" settings.

Forestry, RAWS 10m (mph)	Height of Wind Measurement/Estimate (in feet)									Airport or Fcst 10m (mph)	Fire Shape Length:Width	
	3	**6**	10	13	16	**20**	23	26	30		Open O-1,	Closed C,M,D,S
1	1	**1**	1	1	1	**1**	1	1	1	2	1.4	1.0
2	1	**2**	2	2	2	**2**	2	2	2	3	1.9	1.1
3	2	**2**	2	3	3	**3**	3	3	3	5	2.3	1.1
4	3	**3**	3	3	4	**4**	4	4	4	7	2.6	1.2
5	3	**4**	4	4	5	**5**	5	5	5	8	2.9	1.3
6	4	**5**	5	5	5	**5**	6	6	6	10	3.2	1.4
7	5	**5**	6	6	6	**6**	7	7	7	12	3.4	1.6
8	5	**6**	7	7	7	**7**	8	8	8	13	3.6	1.8
9	6	**7**	7	8	8	**8**	9	9	9	15	3.8	1.9
10	7	**8**	8	9	9	**9**	10	10	10	17	4.0	2.1
12	8	**9**	10	10	11	**11**	12	12	12	20	4.3	2.5
14	9	**11**	11	12	13	**13**	14	14	14	23	4.7	2.9
16	11	**12**	13	14	14	**14**	16	16	16	27	5.0	3.3
18	12	**14**	15	16	16	**16**	17	17	18	30	5.2	3.7
20	14	**15**	16	17	18	**18**	19	19	20	33	5.5	4.1
25	17	**19**	20	22	23	**23**	24	24	25	42	6.1	5.1
30	20	**23**	25	26	27	**27**	29	29	30	50	6.6	5.9
35	24	**27**	29	30	32	**32**	34	34	34	58	7.1	6.6
40	27	**31**	33	34	36	**36**	39	39	39	67	7.6	7.2
45	30	**34**	37	39	41	**41**	44	44	44	75	8.0	7.7
50	34	**38**	41	43	45	**45**	49	49	49	83	8.4	8.1

Visual Surface (10m) Wind Estimate - Modified Beaufort scale

Class	Windspeed	Terminology		Visible Effect
0	Less than 1 mph	Calm		Calm, Smoke rises vertically
1	1 to 3 mph	Very Light Breeze		Leaves of quaking aspen in constant motion; small branches sway, tall grasses and weeds sway and bend with wind, wind vane barely moves
2	4 to 7 mph	Light Breeze		Trees of pole size in the open sway gently, Wind felt distinctly on face; leaves rustle; loose scraps of paper move, wind flutters small flag
3	8 to 12 mph	Gentle Breeze		Leaves, small twigs in constant motion; Tops of trees in dense stands sway; light flags extended
4	13 to 18 mph	Moderate Breeze		Trees of pole size in the open sway violently; whole trees in dense stands sway noticeably; dust is raised in the road.
5	19 to 24 mph	Fresh Breeze		Branchlets are broken from trees; inconvenience is felt in walking against wind
6	25 to 31 mph	Strong Breeze		Tree damage increases with occasional breaking of exposed tops & branches; progress impeded when walking against wind.
7	32 to 38 mph	Moderate Gale		Severe damage to tree tops; very difficult to walk into wind; significant structural damage occurs.
8	39 to 46 mph	Fresh Gale		Surfaced strong Santa Ana; intense stress on all exposed objects, vegetation, buildings; canopy offers virtually no protection
9	47 to 54 mph	Strong Gale		Slight structural damage occurs; slate blown from roofs
10	55 to 63 mph	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs
11	64 to 72 mph	Storm		Very rarely experienced on land; usually with widespread damage
12	73 mph or more	Hurricane Force		Violence and destruction

Seasonal Startup of Calculations

Daily FWI system calculations also require fuel moisture codes (FFMC, DMC, DC) from the previous day. At the start of each fire season, values for these codes must be assigned according to procedures established by the system managers. At least one of these three "startup" situation will be encountered and needs to be addressed properly:

- At the beginning of the fire season, "begin calculations on the third day after snow has essentially left the area to which the fire danger rating applies."(Lawson and Armitage, 2008). In these cases, assign a value of 85 for FFMC, a value of 6 for DMC, and a value of 15 for DC except in situations where system managers wish to adjust the DC value for carryover drought from the previous season and/or precipitation deficits over the winter.
- For late-starting stations, the initial values for these three moisture codes must consider the weather influences that have already accumulated since the beginning of the season. Examine fuel moisture code values for several nearby stations and assign appropriate startup values for the late-starting station based on interpretation of current conditions at the startup location.
- If, during the season, weather observations are interrupted, either missing weather data will need to be provided or fuel moisture codes must be assigned for the day prior to the next weather observation.

Determine Daily Fine Fuel Moisture Code (FFMC)

- Obtain yesterday's (or startup) FFMC.
- Determine if it rained at least 0.03inches in the 24 hours since yesterday's observation. If sufficient rainfall is measured, determine FFMC Raincode (Table 1) using the FFMC value from yesterday (or assigned at startup) and the rainfall amount recorded. This value is called the FFMC *Raincode*.
- Use either FFMC Raincode or yesterday's FFMC (if rainfall was insufficient) with DB Temp, RH and Wind recorded for today to determine today's daily FFMC (Table 2.a-k).

Estimate Duff Moisture Code (DMC)

- Obtain yesterday's (or startup) DMC.
- Determine if it rained at least 0.06 inches in the 24 hours since yesterday's observation. If sufficient rainfall is measured, determine DMC Raincode (Table 3) using the DMC value from yesterday (or assigned at startup) and the rainfall amount recorded. This value is called the DMC *Raincode*.)
- With the DB Temp and RH recorded for today, use Table 4 to determine the [DMC] drying factor based on the current month. Add this drying factor value to either the DMC Raincode or yesterday's DMC (if rainfall was insufficient) to produce today's daily DMC.

Estimate Drought Code (DC)

- Obtain yesterday's (or startup) DC.
- Determine if it rained at least 0.11 inches in the 24 hours since yesterday's observation. If sufficient rainfall is measured, determine DC Raincode (Table 5) using the DC value from yesterday (or assigned at startup) and the rainfall amount recorded. This value is called the DC *Raincode*.)
- With the DB Temp recorded for today, use Table 6 to determine the [DC] drying factor based on the current month. Add this drying factor value to either the DC Raincode or yesterday's DC (if rainfall was insufficient) to produce today's daily DC.

Determine Daily Initial Spread Index (ISI)

- Use Table 7
- Lookup the daily ISI based on the FFMC and 10m windspeed determined earlier.

Estimate Buildup Index (BUI) for site conditions

- Use Table 8.
- Lookup the BUI based on the DMC and DC determined earlier.

Determine Daily Fire Weather Index (FWI)

- Use Table 9.
- Lookup the daily FWI based on the ISI and BUI determined earlier.

isture Code (FFMC); Rain Code Estimation

24 HOUR RAINFALL TOTAL, INCHES (if 24 hour rainfall is less than 0.03 inches, Rain Code = Yesterday's

05	0.06	0.07	0.08	0.09	0.10 0.12	0.13 0.17	0.18 0.22	0.23 0.27	0.28 0.32	0.33 0.37	0.38 0.42	0.43 0.47	0.48 0.54	0.55 0.64	0.65 0.74	0.75 0.84	0.85 0.94	0.95 1.24
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8	7	7	7	6	5	4	3	3	2	2	1	1	1	0	0	0	0
7	16	15	14	13	12	9	7	6	5	4	3	3	3	2	2	1	1	1
5	24	22	21	19	18	14	11	9	7	6	5	5	4	3	3	2	2	2
3	31	29	27	26	24	18	15	12	10	9	8	7	7	6	5	4	4	3
1	39	36	34	32	30	23	18	15	13	12	11	10	9	8	7	6	6	5
5	42	40	37	35	33	25	20	17	15	13	12	11	10	9	8	7	7	6
9	46	43	40	38	36	27	22	19	16	14	13	12	11	10	9	8	8	7
3	50	46	43	41	38	29	24	20	18	16	14	13	12	11	10	9	9	8
7	53	50	47	44	41	31	26	22	19	17	16	14	13	12	11	10	10	9
1	57	53	50	46	44	33	27	23	20	18	17	16	15	13	12	11	11	10
2	57	54	50	47	44	34	28	23	21	19	17	16	15	13	12	11	11	10
2	58	54	51	48	45	34	28	24	21	19	17	16	15	13	12	12	11	10
3	59	55	51	48	45	35	28	24	21	19	17	16	15	14	13	12	11	11
4	60	56	52	49	46	35	29	24	21	19	18	16	15	14	13	12	11	11
5	60	56	53	49	46	35	29	25	22	20	18	17	16	14	13	12	11	11
5	61	57	53	50	47	36	29	25	22	20	18	17	16	14	13	12	12	11
5	62	57	54	50	47	36	30	25	22	20	18	17	16	14	13	12	12	11
7	62	58	54	51	48	37	30	26	22	20	19	17	16	15	14	13	12	11
3	63	59	55	51	48	37	30	26	23	21	19	18	16	15	14	13	12	12
3	64	59	55	52	49	37	30	26	23	21	19	18	17	15	14	13	12	12
9	64	60	56	52	49	38	31	26	23	21	19	18	17	15	14	13	13	12
0	65	61	57	53	50	38	31	27	24	21	20	18	17	15	14	13	13	12
1	66	61	57	54	50	38	31	27	24	21	20	18	17	16	14	14	13	12
1	66	62	58	54	51	39	32	27	24	22	20	19	17	16	15	14	13	12
2	67	63	58	55	51	39	32	27	24	22	20	19	18	16	15	14	13	13
3	68	63	59	55	52	40	32	28	24	22	20	19	18	16	15	14	13	13
4	68	64	60	56	52	40	33	28	25	22	21	19	18	16	15	14	14	13
4	69	64	60	56	53	40	33	28	25	23	21	19	18	17	15	14	14	13
5	70	65	61	57	53	41	33	29	25	23	21	20	18	17	16	15	14	13
5	70	66	61	57	54	41	34	29	25	23	21	20	19	17	16	15	14	13
7	71	66	62	58	54	41	34	29	26	23	21	20	19	17	16	15	14	14

ing Tables, Temperature 0º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
4.7	34.5	43.8	52.7	61.2	69.3	73.2	77.0	80.8	84.4	85.9	87.3	88.7	90.2	91.6
7.6	37.3	46.4	55.0	63.1	70.9	74.6	78.2	81.7	85.2	86.5	87.9	89.2	90.5	91.8
9.5	39.1	48.0	56.5	64.4	71.9	75.4	78.9	82.3	85.6	86.9	88.2	89.5	90.7	91.9
1.0	40.5	49.3	57.6	65.4	72.6	76.1	79.5	82.8	86.0	87.2	88.4	89.7	90.9	92.1
4.2	33.8	43.0	51.7	60.0	68.0	71.8	75.6	79.2	82.8	84.3	85.7	87.0	88.4	90.0
6.9	36.4	45.3	53.8	61.8	69.3	72.9	76.5	79.9	83.3	84.6	85.9	87.2	88.5	90.0
8.7	38.1	46.9	55.1	62.9	70.2	73.7	77.1	80.4	83.6	84.8	86.1	87.3	88.5	90.0
0.2	39.4	48.1	56.2	63.7	70.8	74.2	77.5	80.7	83.8	85.0	86.2	87.4	88.6	90.0
3.8	33.4	42.5	51.1	59.4	67.2	71.0	74.8	78.4	81.9	83.3	84.7	86.1	87.9	89.6
6.5	35.9	44.7	53.1	61.0	68.5	72.0	75.5	78.9	82.2	83.5	84.8	86.1	87.9	89.5
8.2	37.5	46.2	54.4	62.0	69.2	72.7	76.0	79.3	82.4	83.7	84.9	86.1	87.9	89.4
9.7	38.8	47.4	55.4	62.8	69.8	73.2	76.4	79.5	82.6	83.8	85.0	86.1	87.9	89.3
3.5	33.1	42.1	50.7	58.9	66.7	70.5	74.2	77.8	81.3	82.7	84.1	85.9	87.5	89.0
6.2	35.5	44.3	52.6	60.4	67.8	71.4	74.8	78.2	81.5	82.8	84.1	85.9	87.3	88.8
7.9	37.1	45.7	53.8	61.4	68.5	71.9	75.3	78.5	81.6	82.8	84.1	85.9	87.2	88.6
9.3	38.4	46.9	54.8	62.2	69.1	72.4	75.6	78.7	81.7	82.9	84.1	85.8	87.2	88.5
3.2	32.6	41.6	50.2	58.3	66.0	69.8	73.4	77.0	80.5	82.0	83.7	85.2	86.7	88.2
5.7	35.0	43.7	51.9	59.7	67.0	70.6	74.0	77.3	80.6	82.0	83.7	85.1	86.4	87.8
7.4	36.6	45.1	53.1	60.6	67.7	71.0	74.3	77.5	80.6	82.0	83.6	84.9	86.2	87.5
8.8	37.8	46.2	54.0	61.3	68.2	71.4	74.6	77.7	80.6	82.0	83.6	84.9	86.1	87.3
2.8	32.2	41.1	49.6	57.7	65.4	69.1	72.7	76.3	80.0	81.6	83.0	84.4	85.8	87.2
5.2	34.4	43.1	51.3	59.0	66.3	69.7	73.2	76.5	80.0	81.5	82.8	84.1	85.4	86.7
6.8	35.9	44.4	52.3	59.8	66.8	70.2	73.4	76.6	80.0	81.5	82.7	84.0	85.2	86.4
8.1	37.0	45.4	53.2	60.4	67.2	70.5	73.6	76.7	80.0	81.4	82.6	83.8	85.0	86.1
2.4	31.7	40.6	49.1	57.2	64.8	68.6	72.2	75.7	79.6	81.0	82.4	83.8	85.1	86.5
4.6	33.8	42.4	50.6	58.3	65.6	69.1	72.5	75.8	79.6	80.9	82.1	83.4	84.6	85.9
6.0	35.1	43.6	51.5	59.0	66.1	69.4	72.7	75.9	79.5	80.8	82.0	83.2	84.3	85.5
7.2	36.2	44.5	52.3	59.6	66.4	69.7	72.9	75.9	79.5	80.7	81.8	83.0	84.1	85.2
1.6	30.9	39.8	48.3	56.4	64.1	67.8	71.4	75.0	78.9	80.2	81.6	82.9	84.2	85.5
3.3	32.5	41.2	49.4	57.2	64.6	68.1	71.6	75.0	78.7	79.9	81.2	82.4	83.6	84.8
4.5	33.6	42.1	50.2	57.8	64.9	68.4	71.7	75.0	78.6	79.8	80.9	82.1	83.2	84.4
5.4	34.4	42.8	50.8	58.2	65.2	68.6	71.8	75.0	78.5	79.6	80.7	81.9	82.9	84.0
0.0	29.3	38.3	46.8	54.9	62.7	66.5	70.2	74.2	77.5	78.8	80.1	81.4	82.7	83.9
0.8	30.1	38.9	47.3	55.3	62.9	66.6	70.2	74.0	77.1	78.3	79.5	80.7	81.8	83.0
1.3	30.5	39.3	47.6	55.5	63.0	66.7	70.2	73.9	76.9	78.0	79.1	80.2	81.3	82.4
1.7	30.9	39.6	47.8	55.7	63.1	66.7	70.2	73.9	76.7	77.8	78.8	79.9	81.0	82.0

ing Tables, Temperature 10º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
28.1	37.7	46.8	55.4	63.5	71.2	74.9	78.5	82.0	85.4	86.7	88.1	89.4	90.7	92.0
31.6	41	49.8	58.1	65.8	73.0	76.5	79.8	83.1	86.2	87.5	88.7	89.9	91.1	92.3
33.9	43.2	51.8	59.8	67.2	74.2	77.5	80.7	83.7	86.7	87.9	89.1	90.2	91.3	92.5
35.7	44.9	53.3	61.1	68.3	75.1	78.2	81.3	84.3	87.1	88.3	89.4	90.5	91.5	92.6
27.4	36.9	45.8	54.2	62.2	69.7	73.3	76.8	80.3	83.6	84.9	86.2	87.5	88.8	90.0
30.7	40	48.6	56.7	64.2	71.3	74.7	77.9	81.1	84.2	85.4	86.6	87.7	88.9	90.0
32.9	42	50.4	58.3	65.5	72.3	75.5	78.6	81.6	84.5	85.6	86.8	87.9	89.0	90.0
34.6	43.6	51.9	59.5	66.5	73.0	76.1	79.1	82.0	84.8	85.8	86.9	88.0	89.0	90.0
26.9	36.4	45.2	53.5	61.4	68.9	72.4	75.9	79.3	82.6	83.9	85.2	86.4	88.0	89.7
30.2	39.4	47.9	55.9	63.3	70.3	73.6	76.8	79.9	83.0	84.2	85.3	86.5	88.0	89.6
32.3	41.3	49.7	57.4	64.5	71.2	74.3	77.4	80.3	83.2	84.3	85.4	86.5	88.0	89.5
34	42.9	51.0	58.5	65.4	71.9	74.9	77.8	80.7	83.4	84.5	85.5	86.5	88.0	89.5
26.6	36	44.7	53.0	60.8	68.2	71.8	75.2	78.6	81.8	83.1	84.4	86.0	87.6	89.1
29.8	38.9	47.4	55.3	62.6	69.5	72.8	76.0	79.1	82.1	83.3	84.4	86.0	87.5	88.8
31.9	40.8	49.1	56.7	63.8	70.4	73.5	76.5	79.4	82.3	83.4	84.5	86.0	87.4	88.7
33.5	42.3	50.4	57.8	64.6	71.0	74.0	76.9	79.7	82.4	83.4	84.5	86.0	87.4	88.6
26.2	35.4	44.2	52.4	60.1	67.4	70.9	74.3	77.6	80.9	82.1	84.0	85.3	86.7	88.1
29.3	38.3	46.7	54.5	61.8	68.6	71.8	75.0	78.0	81.0	82.2	83.9	85.2	86.5	87.7
31.3	40.1	48.3	55.8	62.8	69.3	72.4	75.4	78.3	81.1	82.2	83.9	85.1	86.3	87.5
32.9	41.6	49.5	56.9	63.6	69.9	72.9	75.7	78.5	81.1	82.2	83.9	85.0	86.2	87.3
25.7	34.9	43.5	51.7	59.4	66.6	70.1	73.5	76.8	80.0	81.8	83.1	84.4	85.7	87.0
28.6	37.6	45.9	53.6	60.9	67.7	70.9	74.0	77.0	80.0	81.8	83.0	84.1	85.3	86.5
30.5	39.3	47.4	54.9	61.8	68.3	71.4	74.3	77.2	80.0	81.7	82.9	84.0	85.1	86.2
32	40.7	48.6	55.9	62.6	68.8	71.7	74.6	77.3	80.0	81.7	82.8	83.8	84.9	85.9
25.1	34.3	42.9	51.1	58.7	66.0	69.5	72.8	76.1	79.9	81.2	82.4	83.7	84.9	86.2
27.8	36.8	45.1	52.8	60.1	66.9	70.1	73.2	76.3	79.8	81.0	82.2	83.3	84.4	85.6
29.6	38.4	46.5	54.0	60.9	67.4	70.5	73.5	76.4	79.8	80.9	82.0	83.1	84.1	85.2
31	39.6	47.5	54.8	61.6	67.9	70.8	73.7	76.5	79.8	80.9	81.9	82.9	83.9	84.9
24.2	33.3	42.0	50.1	57.8	65.0	68.5	71.9	75.2	79.0	80.2	81.4	82.7	83.9	85.1
26.3	35.3	43.6	51.5	58.8	65.7	69.0	72.2	75.3	78.8	79.9	81.1	82.2	83.2	84.3
27.7	36.5	44.7	52.3	59.4	66.1	69.3	72.3	75.3	78.7	79.8	80.8	81.8	82.9	83.9
28.8	37.5	45.6	53.0	59.9	66.4	69.5	72.4	75.3	78.6	79.6	80.6	81.6	82.6	83.5
22.3	31.4	40.1	48.3	56.1	63.4	67.0	70.5	74.3	77.3	78.5	79.7	80.9	82.1	83.2
23.2	32.3	40.8	48.9	56.5	63.7	67.1	70.5	74.2	76.9	78.0	79.1	80.2	81.2	82.2
23.9	32.9	41.3	49.2	56.7	63.8	67.2	70.5	74.1	76.7	77.7	78.7	79.7	80.7	81.7
24.4	33.3	41.7	49.6	57.0	63.9	67.3	70.5	74.1	76.5	77.5	78.4	79.4	80.3	81.2

ing Tables, Temperature 20º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
32.1	41.6	50.3	58.5	66.2	73.4	76.8	80.2	83.4	86.5	87.7	88.9	90.1	91.3	92.5
36.3	45.5	53.9	61.7	68.8	75.5	78.6	81.7	84.6	87.4	88.6	89.7	90.7	91.8	92.8
39.1	48	56.2	63.6	70.5	76.8	79.8	82.6	85.4	88.0	89.1	90.1	91.1	92.1	93.1
41.2	50	57.9	65.1	71.7	77.8	80.6	83.3	85.9	88.5	89.4	90.4	91.4	92.3	93.2
31.3	40.6	49.2	57.2	64.7	71.7	75.1	78.3	81.5	84.5	85.7	86.9	88.1	89.2	90.4
35.3	44.3	52.5	60.1	67.1	73.6	76.6	79.6	82.4	85.2	86.3	87.3	88.4	89.4	90.4
37.9	46.7	54.6	61.9	68.5	74.7	77.6	80.3	83.0	85.6	86.6	87.6	88.5	89.5	90.5
40	48.5	56.3	63.3	69.7	75.5	78.3	80.9	83.4	85.9	86.8	87.8	88.7	89.6	90.5
30.8	39.9	48.5	56.4	63.8	70.8	74.1	77.3	80.4	83.4	84.5	85.7	86.9	88.0	89.8
34.7	43.5	51.7	59.1	66.0	72.4	75.4	78.3	81.1	83.8	84.9	85.9	87.0	88.0	89.8
37.2	45.8	53.7	60.8	67.4	73.4	76.3	79.0	81.6	84.1	85.1	86.1	87.0	88.0	89.7
39.2	47.6	55.2	62.1	68.4	74.2	76.9	79.5	82.0	84.4	85.3	86.2	87.1	88.0	89.7
30.3	39.5	47.9	55.8	63.1	70.0	73.3	76.4	79.5	82.5	83.6	84.8	86.0	87.8	89.2
34.2	43	51.0	58.4	65.2	71.5	74.5	77.4	80.2	82.8	83.9	84.9	86.0	87.7	89.0
36.7	45.2	53.0	60.0	66.5	72.5	75.3	78.0	80.5	83.0	84.0	85.0	86.0	87.7	88.8
38.6	46.9	54.5	61.3	67.5	73.2	75.8	78.4	80.8	83.2	84.1	85.0	86.0	87.7	88.7
29.8	38.8	47.2	55.0	62.2	69.0	72.3	75.4	78.4	81.4	82.5	84.0	85.5	86.8	88.1
33.5	42.2	50.1	57.4	64.2	70.4	73.3	76.2	78.9	81.6	82.6	84.0	85.4	86.6	87.7
35.9	44.4	52.0	59.0	65.4	71.3	74.0	76.7	79.2	81.7	82.6	84.0	85.4	86.4	87.5
37.8	46	53.5	60.2	66.3	71.9	74.5	77.0	79.4	81.8	82.7	84.0	85.3	86.3	87.3
29.2	38.1	46.4	54.2	61.4	68.1	71.3	74.4	77.4	80.3	82.0	83.3	84.5	85.7	86.8
32.7	41.3	49.2	56.4	63.1	69.3	72.2	75.0	77.7	80.4	82.0	83.2	84.2	85.3	86.3
35	43.3	50.9	57.9	64.2	70.0	72.8	75.4	78.0	80.4	82.0	83.1	84.1	85.1	86.0
36.8	44.9	52.3	59.0	65.0	70.6	73.2	75.7	78.1	80.4	82.0	83.0	84.0	84.9	85.8
28.5	37.4	45.7	53.4	60.6	67.3	70.5	73.6	76.6	80.0	81.3	82.5	83.6	84.8	85.9
31.7	40.3	48.2	55.5	62.2	68.4	71.3	74.1	76.9	80.0	81.2	82.3	83.3	84.3	85.3
33.8	42.2	49.8	56.8	63.1	69.0	71.8	74.4	77.0	80.0	81.2	82.1	83.1	84.0	84.9
35.5	43.6	51.0	57.8	63.9	69.5	72.1	74.7	77.1	80.0	81.1	82.0	82.9	83.8	84.6
27.3	36.2	44.5	52.2	59.5	66.2	69.4	72.6	75.6	79.1	80.3	81.4	82.5	83.6	84.6
29.9	38.5	46.5	53.8	60.6	67.0	70.0	72.9	75.7	79.0	80.0	81.0	82.0	82.9	83.9
31.6	40	47.7	54.8	61.4	67.4	70.3	73.0	75.7	78.9	79.9	80.8	81.7	82.6	83.4
32.9	41.2	48.7	55.6	62.0	67.8	70.5	73.2	75.7	78.9	79.7	80.6	81.4	82.3	83.1
25	33.9	42.3	50.1	57.4	64.3	67.6	70.8	74.5	77.2	78.3	79.4	80.4	81.5	82.5
26.2	35	43.1	50.8	57.9	64.6	67.8	70.8	74.4	76.9	77.8	78.8	79.7	80.6	81.5
26.9	35.6	43.7	51.2	58.2	64.8	67.9	70.9	74.4	76.6	77.5	78.4	79.2	80.1	80.9
27.5	36.2	44.2	51.6	58.5	64.9	67.9	70.9	74.3	76.5	77.3	78.1	78.9	79.7	80.5

ing Tables, Temperature 30º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
37.0	46.1	54.5	62.2	69.3	75.9	79.1	82.1	85.0	87.8	88.9	90.0	91.0	92.1	93.1
42.0	50.7	58.6	65.8	72.3	78.3	81.1	83.8	86.3	88.8	89.8	90.7	91.7	92.6	93.5
45.2	53.6	61.2	68.0	74.1	79.7	82.3	84.8	87.2	89.4	90.3	91.2	92.1	92.9	93.7
47.7	55.9	63.2	69.6	75.5	80.7	83.2	85.5	87.8	89.9	90.7	91.6	92.4	93.1	93.9
36.0	45.0	53.2	60.7	67.7	74.1	77.1	80.1	82.9	85.6	86.7	87.8	88.8	89.8	90.8
40.8	49.3	57.0	64.0	70.3	76.1	78.9	81.5	84.0	86.4	87.3	88.2	89.1	90.0	90.9
43.9	52.1	59.4	66.0	72.0	77.4	79.9	82.3	84.6	86.8	87.7	88.5	89.4	90.2	91.0
46.2	54.2	61.2	67.5	73.2	78.3	80.7	82.9	85.1	87.2	88.0	88.7	89.5	90.3	91.0
35.4	44.2	52.3	59.8	66.6	73.0	76.0	78.8	81.6	84.3	85.4	86.4	87.4	88.4	90.0
40.0	48.4	56.0	62.9	69.1	74.8	77.5	80.1	82.5	84.9	85.8	86.7	87.6	88.5	90.0
43.0	51.1	58.3	64.8	70.6	75.9	78.4	80.8	83.1	85.2	86.1	86.9	87.7	88.5	90.0
45.3	53.1	60.1	66.2	71.8	76.8	79.1	81.3	83.4	85.5	86.3	87.0	87.8	88.5	90.0
34.8	43.6	51.6	59.0	65.8	72.1	75.0	77.9	80.6	83.3	84.3	85.4	86.4	88.0	89.3
39.4	47.7	55.2	62.0	68.2	73.8	76.4	79.0	81.4	83.7	84.6	85.5	86.4	88.0	89.2
42.3	50.3	57.4	63.8	69.6	74.8	77.3	79.6	81.8	84.0	84.8	85.6	86.4	88.0	89.1
44.6	52.3	59.1	65.2	70.7	75.6	77.9	80.1	82.2	84.2	84.9	85.7	86.4	88.0	89.0
34.2	42.8	50.8	58.0	64.7	70.9	73.9	76.7	79.4	82.0	83.0	84.0	85.8	87.0	88.1
38.6	46.8	54.2	60.8	66.9	72.5	75.1	77.6	80.0	82.3	83.2	84.0	85.8	86.8	87.8
41.4	49.2	56.3	62.6	68.3	73.4	75.8	78.1	80.3	82.4	83.2	84.0	85.7	86.7	87.6
43.5	51.2	57.9	63.9	69.3	74.1	76.4	78.5	80.6	82.5	83.3	84.0	85.7	86.6	87.4
33.4	42.0	49.8	57.0	63.7	69.8	72.7	75.5	78.2	80.8	82.0	83.6	84.6	85.7	86.7
37.5	45.7	53.0	59.6	65.7	71.2	73.8	76.2	78.6	80.9	82.0	83.5	84.4	85.3	86.3
40.2	48.0	55.0	61.2	66.9	72.0	74.4	76.7	78.9	80.9	82.0	83.5	84.3	85.1	86.0
42.3	49.8	56.5	62.5	67.8	72.6	74.9	77.0	79.0	81.0	82.0	83.4	84.2	85.0	85.7
32.6	41.1	49.0	56.2	62.8	68.9	71.8	74.6	77.3	80.0	81.6	82.7	83.7	84.7	85.7
36.4	44.5	51.9	58.5	64.6	70.1	72.7	75.2	77.6	80.0	81.6	82.5	83.4	84.2	85.1
38.8	46.7	53.7	60.0	65.6	70.8	73.2	75.5	77.7	80.0	81.5	82.4	83.2	83.9	84.7
40.7	48.3	55.0	61.1	66.5	71.4	73.6	75.8	77.9	80.0	81.5	82.3	83.0	83.7	84.5
31.1	39.7	47.5	54.8	61.4	67.6	70.5	73.3	76.1	79.4	80.4	81.4	82.3	83.3	84.2
34.2	42.4	49.8	56.6	62.8	68.5	71.1	73.7	76.2	79.3	80.2	81.0	81.9	82.7	83.5
36.1	44.1	51.3	57.7	63.6	69.0	71.5	73.9	76.2	79.3	80.0	80.8	81.6	82.3	83.1
37.7	45.4	52.4	58.6	64.3	69.4	71.8	74.1	76.3	79.2	80.0	80.7	81.4	82.1	82.7
28.3	36.9	44.8	52.2	59.0	65.3	68.3	71.2	74.8	77.2	78.2	79.1	80.0	80.9	81.8
29.7	38.1	45.9	53.0	59.6	65.7	68.5	71.3	74.8	76.9	77.7	78.5	79.3	80.1	80.8
30.6	38.9	46.5	53.5	59.9	65.9	68.7	71.4	74.7	76.7	77.4	78.1	78.8	79.5	80.2
31.3	39.5	47.0	53.9	60.2	66.0	68.8	71.4	74.7	76.5	77.2	77.9	78.5	79.2	79.8

ing Tables, Temperature 40º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
2.7	51.4	59.2	66.3	72.8	78.7	81.5	84.2	86.7	89.2	90.1	91.1	92.0	92.9	93.8
8.5	56.7	63.8	70.3	76.0	81.3	83.7	86.0	88.2	90.3	91.1	91.9	92.7	93.5	94.2
2.2	59.9	66.7	72.7	78.0	82.8	85.0	87.1	89.1	91.0	91.7	92.4	93.1	93.8	94.5
5.1	62.4	68.8	74.5	79.4	83.9	85.9	87.8	89.7	91.4	92.1	92.8	93.4	94.1	94.7
0.9	49.4	57.2	64.2	70.6	76.4	79.2	81.8	84.4	86.8	87.7	88.7	89.6	90.5	91.4
6.5	54.5	61.6	67.9	73.6	78.7	81.1	83.4	85.6	87.6	88.4	89.2	90.0	90.8	91.5
0.0	57.6	64.2	70.1	75.4	80.1	82.2	84.3	86.3	88.1	88.9	89.6	90.3	90.9	91.6
2.7	60.0	66.3	71.8	76.7	81.1	83.1	85.0	86.8	88.5	89.2	89.8	90.4	91.1	91.7
9.0	47.5	55.3	62.4	68.8	74.7	77.5	80.2	82.7	85.2	86.2	87.1	88.0	88.9	90.0
4.5	52.5	59.6	65.9	71.7	76.9	79.3	81.6	83.8	85.9	86.7	87.5	88.3	89.1	90.0
8.0	55.5	62.2	68.1	73.4	78.1	80.3	82.4	84.4	86.3	87.0	87.7	88.4	89.1	90.0
0.6	57.9	64.2	69.7	74.7	79.1	81.1	83.0	84.8	86.6	87.2	87.9	88.5	89.2	90.0
6.8	45.5	53.3	60.5	67.1	73.1	76.0	78.7	81.4	83.9	84.9	85.9	86.8	88.0	89.6
2.3	50.4	57.6	64.1	69.9	75.2	77.7	80.1	82.3	84.5	85.3	86.1	87.0	88.0	89.5
5.8	53.4	60.2	66.2	71.6	76.4	78.7	80.8	82.9	84.8	85.6	86.3	87.0	88.0	89.5
8.5	55.8	62.2	67.8	72.8	77.3	79.4	81.4	83.3	85.0	85.7	86.4	87.1	88.0	89.4
3.1	42.0	50.1	57.5	64.4	70.8	73.9	76.8	79.6	82.3	83.4	84.5	86.0	87.2	88.3
8.6	46.9	54.3	61.1	67.2	72.8	75.5	78.0	80.4	82.7	83.6	84.5	86.0	87.1	88.0
2.1	50.0	57.0	63.2	68.9	74.0	76.4	78.7	80.9	83.0	83.8	84.6	86.0	87.0	87.8
4.8	52.3	59.0	64.9	70.1	74.9	77.1	79.2	81.2	83.1	83.9	84.6	86.0	87.0	87.7
8.7	37.7	46.2	54.1	61.5	68.4	71.7	74.9	78.0	81.0	82.2	84.0	84.9	85.8	86.7
4.0	42.6	50.5	57.6	64.2	70.3	73.2	76.0	78.6	81.2	82.2	84.0	84.7	85.5	86.3
7.5	45.7	53.1	59.8	65.9	71.5	74.1	76.6	79.0	81.3	82.2	83.9	84.6	85.3	86.0
0.1	48.0	55.1	61.4	67.1	72.3	74.8	77.1	79.3	81.4	82.2	83.9	84.6	85.2	85.8
5.0	34.3	43.0	51.3	59.1	66.5	70.1	73.6	76.9	80.2	82.0	82.9	83.8	84.7	85.5
0.0	38.9	47.1	54.7	61.8	68.3	71.5	74.5	77.4	80.3	82.0	82.8	83.5	84.3	85.0
3.3	41.8	49.6	56.8	63.4	69.4	72.3	75.1	77.7	80.3	82.0	82.7	83.4	84.0	84.7
5.8	44.1	51.5	58.3	64.6	70.2	72.9	75.5	77.9	80.3	82.0	82.7	83.3	83.8	84.4
0.3	29.9	39.0	47.8	56.2	64.3	68.2	72.0	75.8	79.8	80.6	81.5	82.3	83.1	83.9
4.4	33.7	42.4	50.6	58.4	65.7	69.3	72.7	76.1	79.7	80.5	81.2	81.9	82.5	83.2
7.1	36.1	44.5	52.4	59.7	66.6	69.9	73.1	76.2	79.7	80.4	81.0	81.6	82.2	82.8
9.2	38.0	46.2	53.7	60.7	67.3	70.4	73.4	76.3	79.7	80.3	80.9	81.4	82.0	82.5
4.0	23.9	33.5	43.0	52.3	61.4	66.0	70.4	75.0	77.3	78.1	78.9	79.7	80.4	81.2
5.9	25.6	35.1	44.3	53.3	62.1	66.4	70.6	75.0	77.0	77.6	78.3	79.0	79.6	80.2
7.2	26.8	36.1	45.2	53.9	62.5	66.6	70.7	75.0	76.8	77.4	78.0	78.6	79.1	79.7
8.1	27.7	36.9	45.9	54.5	62.8	66.8	70.8	75.0	76.6	77.2	77.7	78.3	78.8	79.3

ng Tables, Temperature 50º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
9.4	57.5	64.6	71.0	76.7	81.8	84.2	86.5	88.6	90.7	91.5	92.3	93.1	93.8	94.6
6.1	63.3	69.7	75.2	80.1	84.5	86.5	88.4	90.2	91.9	92.5	93.2	93.8	94.4	95.1
0.1	66.9	72.7	77.7	82.1	86.0	87.8	89.4	91.0	92.5	93.1	93.7	94.2	94.8	95.3
3.2	69.5	74.9	79.5	83.5	87.1	88.7	90.2	91.6	93.0	93.5	94.0	94.5	95.0	95.5
7.3	55.3	62.3	68.6	74.3	79.4	81.7	84.0	86.1	88.2	89.0	89.8	90.6	91.3	92.1
3.7	60.9	67.1	72.6	77.5	81.8	83.8	85.6	87.4	89.1	89.8	90.4	91.0	91.7	92.3
7.6	64.3	70.0	75.0	79.3	83.2	84.9	86.6	88.1	89.6	90.2	90.8	91.3	91.9	92.4
0.6	66.8	72.1	76.7	80.7	84.1	85.7	87.2	88.7	90.0	90.5	91.0	91.5	92.0	92.5
5.1	53.1	60.2	66.5	72.3	77.4	79.8	82.1	84.3	86.4	87.3	88.1	88.8	89.6	90.4
1.4	58.6	64.9	70.4	75.4	79.7	81.7	83.7	85.5	87.2	87.9	88.5	89.2	89.8	90.4
5.3	62.0	67.7	72.7	77.1	81.0	82.8	84.5	86.1	87.6	88.2	88.8	89.3	89.9	90.4
8.2	64.5	69.8	74.4	78.4	82.0	83.6	85.1	86.6	87.9	88.5	89.0	89.5	90.0	90.5
2.5	50.7	57.9	64.4	70.3	75.7	78.1	80.5	82.8	85.0	85.8	86.7	87.5	88.3	90.0
8.9	56.2	62.7	68.3	73.4	77.9	80.0	82.0	83.8	85.6	86.3	87.0	87.7	88.3	90.0
2.8	59.6	65.5	70.6	75.2	79.2	81.0	82.8	84.4	86.0	86.6	87.2	87.8	88.4	90.0
5.7	62.1	67.6	72.3	76.4	80.1	81.8	83.3	84.8	86.3	86.8	87.3	87.9	88.4	90.0
8.2	46.5	54.1	61.0	67.3	73.0	75.7	78.3	80.8	83.2	84.1	85.0	86.0	87.6	88.5
4.5	52.2	59.0	65.0	70.4	75.2	77.5	79.6	81.7	83.6	84.4	85.1	86.0	87.6	88.3
8.5	55.6	61.8	67.3	72.2	76.5	78.5	80.4	82.2	83.9	84.6	85.2	86.0	87.5	88.1
1.5	58.2	64.0	69.0	73.5	77.4	79.2	80.9	82.6	84.1	84.7	85.3	86.0	87.5	88.1
2.8	41.6	49.6	57.0	63.8	70.2	73.2	76.1	78.9	81.6	82.6	84.0	85.3	86.1	86.8
9.2	47.2	54.5	61.0	67.0	72.4	74.9	77.3	79.6	81.9	82.7	84.0	85.2	85.8	86.4
3.1	50.7	57.5	63.4	68.8	73.7	75.9	78.0	80.1	82.0	82.8	84.0	85.1	85.7	86.2
6.2	53.4	59.7	65.2	70.2	74.6	76.6	78.6	80.4	82.2	82.8	84.0	85.1	85.6	86.1
8.4	37.4	45.9	53.7	61.1	68.0	71.3	74.5	77.6	80.6	82.0	83.3	84.1	84.8	85.5
4.4	42.9	50.6	57.7	64.1	70.1	72.9	75.6	78.2	80.7	82.0	83.2	83.8	84.4	85.0
8.2	46.3	53.5	60.0	65.9	71.3	73.8	76.3	78.6	80.8	82.0	83.2	83.7	84.2	84.7
1.2	48.8	55.7	61.8	67.3	72.2	74.5	76.7	78.8	80.9	82.0	83.2	83.6	84.1	84.5
2.7	32.1	41.0	49.5	57.6	65.3	69.0	72.6	76.2	80.0	81.0	81.7	82.4	83.0	83.7
7.7	36.7	45.0	52.9	60.2	67.0	70.3	73.5	76.5	80.0	80.9	81.4	82.0	82.5	83.1
0.9	39.6	47.5	54.9	61.7	68.1	71.1	74.0	76.8	80.0	80.8	81.3	81.8	82.2	82.7
3.4	41.8	49.5	56.5	62.9	68.8	71.6	74.3	76.9	80.0	80.8	81.2	81.6	82.0	82.5
5.0	24.8	34.3	43.7	52.9	61.8	66.2	70.6	75.0	77.4	78.1	78.8	79.4	80.0	80.6
7.3	26.9	36.3	45.3	54.1	62.6	66.8	70.9	75.0	77.2	77.7	78.2	78.8	79.3	79.8
8.8	28.3	37.5	46.4	54.9	63.1	67.1	71.0	75.0	77.0	77.5	78.0	78.4	78.8	79.3
0.0	29.5	38.5	47.2	55.5	63.5	67.3	71.1	75.0	76.9	77.3	77.8	78.2	78.5	78.9

ing Tables, Temperature 60º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
7.1	64.3	70.5	76.0	80.8	85.1	87.0	88.9	90.6	92.3	93.0	93.6	94.2	94.8	95.4
4.3	70.5	75.8	80.3	84.2	87.7	89.3	90.8	92.2	93.5	94.0	94.5	95.0	95.4	95.9
8.5	74.1	78.8	82.7	86.2	89.2	90.5	91.8	93.0	94.1	94.5	95.0	95.4	95.8	96.2
1.6	76.7	80.9	84.5	87.5	90.2	91.4	92.5	93.6	94.5	94.9	95.3	95.7	96.0	96.4
4.7	61.8	68.0	73.4	78.2	82.5	84.5	86.3	88.1	89.8	90.4	91.0	91.7	92.3	92.9
1.7	67.8	73.1	77.6	81.5	84.9	86.5	88.0	89.4	90.7	91.2	91.7	92.2	92.7	93.1
5.8	71.3	76.0	79.9	83.3	86.3	87.6	88.9	90.1	91.2	91.6	92.1	92.5	92.9	93.3
8.8	73.8	78.0	81.6	84.6	87.2	88.4	89.5	90.6	91.6	91.9	92.3	92.7	93.0	93.4
2.1	59.3	65.6	71.1	76.0	80.4	82.4	84.3	86.1	87.8	88.5	89.2	89.8	90.4	91.0
9.0	65.3	70.6	75.2	79.2	82.7	84.4	85.9	87.3	88.6	89.2	89.7	90.2	90.7	91.1
3.2	68.8	73.5	77.5	81.0	84.0	85.4	86.7	87.9	89.1	89.5	90.0	90.4	90.8	91.2
6.2	71.3	75.5	79.2	82.3	84.9	86.2	87.3	88.4	89.4	89.8	90.2	90.5	90.9	91.2
9.2	56.6	63.0	68.8	73.8	78.4	80.5	82.5	84.4	86.2	86.9	87.6	88.3	89.0	90.0
6.2	62.6	68.1	72.9	77.1	80.7	82.4	84.0	85.5	86.9	87.5	88.0	88.5	89.1	90.0
0.4	66.1	71.0	75.2	78.8	82.0	83.5	84.8	86.1	87.3	87.8	88.2	88.7	89.1	90.0
3.4	68.7	73.1	76.9	80.1	82.9	84.2	85.4	86.5	87.6	88.0	88.4	88.8	89.1	90.0
4.0	51.8	58.7	64.9	70.4	75.4	77.8	80.0	82.1	84.1	84.9	85.7	86.4	88.0	88.9
1.3	58.1	64.0	69.2	73.8	77.8	79.7	81.4	83.1	84.7	85.3	85.9	86.5	88.0	88.7
5.6	61.8	67.1	71.6	75.6	79.1	80.7	82.2	83.6	85.0	85.5	86.0	86.5	88.0	88.6
8.8	64.5	69.3	73.4	76.9	80.0	81.4	82.8	84.0	85.2	85.7	86.1	86.5	88.0	88.6
7.7	46.0	53.5	60.3	66.6	72.2	74.9	77.5	79.9	82.3	83.2	84.1	85.8	86.4	87.0
5.1	52.5	59.1	64.8	70.0	74.7	76.8	78.9	80.8	82.7	83.4	84.1	85.7	86.2	86.7
9.6	56.4	62.3	67.4	72.0	76.0	77.9	79.6	81.3	82.9	83.5	84.1	85.7	86.1	86.6
2.9	59.2	64.6	69.3	73.4	77.0	78.6	80.2	81.6	83.0	83.6	84.1	85.7	86.1	86.4
2.4	41.2	49.2	56.6	63.4	69.7	72.7	75.6	78.4	81.1	82.1	83.8	84.4	85.0	85.6
9.6	47.5	54.6	61.0	66.8	72.1	74.5	76.9	79.1	81.3	82.1	83.8	84.3	84.7	85.2
4.0	51.4	57.9	63.6	68.8	73.4	75.6	77.6	79.6	81.4	82.2	83.8	84.2	84.6	85.0
7.3	54.2	60.2	65.5	70.2	74.4	76.3	78.1	79.9	81.5	82.2	83.8	84.1	84.5	84.8
5.6	34.8	43.4	51.6	59.3	66.5	70.0	73.4	76.7	80.0	81.4	82.0	82.6	83.1	83.6
1.6	40.2	48.2	55.5	62.3	68.6	71.5	74.4	77.2	80.0	81.4	81.8	82.2	82.7	83.1
5.4	43.6	51.1	57.9	64.1	69.8	72.4	75.0	77.4	80.0	81.4	81.7	82.1	82.4	82.8
8.3	46.2	53.3	59.6	65.4	70.6	73.1	75.4	77.6	80.0	81.3	81.7	82.0	82.3	82.6
6.1	25.8	35.3	44.5	53.5	62.3	66.6	70.9	75.0	77.7	78.2	78.8	79.3	79.8	80.3
8.9	28.5	37.7	46.5	55.0	63.3	67.3	71.2	75.1	77.5	77.9	78.3	78.7	79.1	79.5
0.8	30.2	39.2	47.8	56.0	63.9	67.7	71.4	75.1	77.4	77.8	78.1	78.4	78.7	79.1
2.3	31.6	40.4	48.8	56.7	64.3	68.0	71.6	75.1	77.3	77.6	77.9	78.2	78.5	78.8

ing Tables, Temperature 70º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
5.4	71.5	76.7	81.1	85.0	88.3	89.9	91.3	92.7	94.0	94.5	94.9	95.4	95.9	96.3
2.7	77.7	81.8	85.3	88.3	90.8	92.0	93.1	94.1	95.0	95.4	95.8	96.1	96.4	96.8
6.8	81.1	84.6	87.5	90.0	92.1	93.1	94.0	94.8	95.6	95.9	96.2	96.5	96.7	97.0
9.7	83.5	86.5	89.1	91.2	93.0	93.8	94.6	95.3	96.0	96.2	96.5	96.7	96.9	97.2
2.7	68.8	74.0	78.5	82.4	85.7	87.3	88.7	90.1	91.4	91.9	92.4	92.9	93.3	93.8
0.0	74.9	79.0	82.5	85.5	88.1	89.2	90.3	91.3	92.3	92.7	93.0	93.4	93.7	94.1
4.0	78.3	81.8	84.7	87.2	89.3	90.3	91.2	92.0	92.8	93.1	93.4	93.7	93.9	94.2
6.8	80.6	83.6	86.2	88.3	90.1	90.9	91.7	92.4	93.1	93.3	93.6	93.8	94.1	94.3
9.8	66.1	71.4	76.0	80.0	83.5	85.1	86.6	88.0	89.4	89.9	90.4	90.9	91.4	91.9
7.1	72.2	76.4	80.0	83.1	85.8	87.0	88.1	89.2	90.2	90.6	90.9	91.3	91.6	92.0
1.2	75.6	79.2	82.2	84.8	87.0	88.0	88.9	89.8	90.6	90.9	91.2	91.5	91.8	92.1
4.1	77.9	81.1	83.7	85.9	87.8	88.6	89.4	90.2	90.9	91.1	91.4	91.6	91.9	92.1
6.6	63.0	68.6	73.4	77.6	81.3	83.0	84.6	86.2	87.6	88.1	88.7	89.2	89.7	90.3
4.0	69.3	73.8	77.6	80.8	83.6	84.9	86.1	87.2	88.3	88.7	89.1	89.5	89.9	90.3
8.2	72.8	76.6	79.8	82.5	84.8	85.9	86.9	87.8	88.7	89.0	89.3	89.7	90.0	90.3
1.2	75.2	78.5	81.3	83.7	85.7	86.6	87.4	88.2	88.9	89.2	89.5	89.8	90.0	90.3
0.8	57.8	63.8	69.2	73.9	78.1	80.0	81.8	83.6	85.2	85.9	86.5	87.1	88.0	89.4
8.7	64.5	69.4	73.6	77.3	80.5	82.0	83.3	84.6	85.9	86.3	86.8	87.2	88.0	89.3
3.2	68.2	72.5	76.0	79.1	81.8	83.0	84.1	85.2	86.2	86.6	86.9	87.3	88.0	89.3
6.4	70.9	74.6	77.7	80.3	82.6	83.7	84.6	85.5	86.4	86.7	87.0	87.3	88.0	89.3
3.5	51.2	58.0	64.1	69.6	74.5	76.8	79.0	81.1	83.1	83.9	84.6	86.0	86.9	87.4
1.8	58.4	64.0	69.0	73.3	77.1	78.9	80.5	82.1	83.6	84.2	84.7	86.0	86.8	87.2
6.7	62.5	67.4	71.6	75.3	78.5	79.9	81.3	82.6	83.8	84.3	84.8	86.0	86.8	87.1
0.2	65.4	69.7	73.5	76.6	79.4	80.7	81.9	83.0	84.0	84.4	84.8	86.0	86.7	87.0
7.3	45.5	53.0	59.8	66.0	71.7	74.3	76.9	79.3	81.7	82.6	84.0	85.0	85.4	85.8
5.5	52.8	59.2	64.8	69.8	74.3	76.4	78.4	80.2	82.0	82.7	84.0	84.9	85.2	85.5
0.5	57.0	62.6	67.6	71.9	75.7	77.5	79.1	80.7	82.2	82.8	84.0	84.8	85.1	85.3
4.1	60.1	65.1	69.5	73.3	76.7	78.2	79.7	81.0	82.3	82.8	84.0	84.8	85.0	85.2
9.1	38.0	46.3	54.0	61.2	68.0	71.2	74.3	77.3	80.2	82.0	82.5	82.9	83.3	83.7
6.2	44.4	51.8	58.6	64.7	70.3	73.0	75.5	77.9	80.3	82.0	82.4	82.7	83.0	83.3
0.6	48.3	55.1	61.2	66.7	71.7	74.0	76.2	78.3	80.3	82.0	82.3	82.5	82.8	83.0
4.0	51.2	57.5	63.1	68.1	72.6	74.7	76.6	78.5	80.3	82.0	82.3	82.5	82.7	82.9
7.5	27.2	36.5	45.6	54.4	62.9	67.1	71.2	75.2	78.1	78.5	78.9	79.3	79.7	80.0
1.0	30.4	39.4	48.0	56.2	64.1	67.9	71.6	75.3	78.0	78.3	78.6	78.8	79.1	79.4
3.2	32.5	41.2	49.5	57.4	64.8	68.4	71.9	75.3	77.9	78.2	78.4	78.6	78.8	79.1
5.0	34.1	42.7	50.7	58.2	65.4	68.8	72.1	75.3	77.9	78.1	78.3	78.5	78.7	78.8

ng Tables, Temperature 80º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
3.9	78.7	82.7	86.1	89.0	91.5	92.6	93.6	94.6	95.5	95.9	96.2	96.6	96.9	97.2
0.9	84.5	87.4	89.8	91.9	93.6	94.4	95.1	95.8	96.5	96.7	96.9	97.2	97.4	97.6
4.5	87.4	89.8	91.7	93.3	94.7	95.3	95.9	96.4	96.9	97.1	97.3	97.5	97.7	97.8
6.9	89.3	91.3	92.9	94.3	95.4	95.9	96.4	96.8	97.2	97.4	97.5	97.7	97.8	98.0
1.1	76.0	80.1	83.5	86.4	88.9	90.1	91.1	92.1	93.1	93.4	93.8	94.1	94.5	94.8
8.1	81.7	84.7	87.2	89.2	91.0	91.8	92.5	93.2	93.9	94.1	94.4	94.6	94.8	95.1
1.7	84.6	87.0	89.0	90.6	92.0	92.7	93.2	93.8	94.3	94.5	94.7	94.9	95.0	95.2
4.1	86.6	88.5	90.2	91.5	92.7	93.2	93.7	94.1	94.5	94.7	94.9	95.0	95.1	95.3
8.0	73.1	77.3	80.9	83.9	86.6	87.8	88.9	90.0	91.0	91.3	91.7	92.1	92.4	92.8
5.1	78.9	82.0	84.6	86.8	88.7	89.5	90.3	91.0	91.7	92.0	92.2	92.5	92.7	93.0
8.8	81.9	84.4	86.5	88.2	89.7	90.3	91.0	91.5	92.1	92.3	92.5	92.7	92.9	93.0
1.3	83.9	86.0	87.7	89.1	90.4	90.9	91.4	91.9	92.3	92.5	92.6	92.8	92.9	93.1
4.5	69.9	74.3	78.2	81.5	84.3	85.6	86.8	88.0	89.1	89.5	89.9	90.3	90.7	91.0
1.9	76.0	79.3	82.1	84.4	86.5	87.4	88.2	89.0	89.7	90.0	90.3	90.6	90.8	91.1
5.8	79.1	81.8	84.0	85.9	87.5	88.2	88.9	89.5	90.1	90.3	90.5	90.7	90.9	91.1
8.4	81.2	83.5	85.3	86.9	88.2	88.8	89.3	89.8	90.3	90.5	90.7	90.8	91.0	91.2
8.2	64.2	69.3	73.7	77.5	80.9	82.4	83.8	85.2	86.5	87.0	87.5	87.9	88.4	90.0
6.3	71.0	74.8	78.1	80.8	83.2	84.3	85.3	86.2	87.1	87.4	87.8	88.1	88.4	90.0
0.7	74.5	77.7	80.3	82.5	84.3	85.2	86.0	86.7	87.4	87.7	87.9	88.2	88.4	90.0
3.7	76.9	79.5	81.7	83.5	85.1	85.8	86.4	87.0	87.6	87.8	88.0	88.2	88.4	90.0
0.1	57.0	63.0	68.2	72.9	77.0	78.9	80.7	82.5	84.1	84.7	85.3	86.0	87.6	87.9
9.1	64.6	69.3	73.2	76.7	79.7	81.0	82.3	83.5	84.6	85.1	85.5	86.0	87.5	87.8
4.1	68.7	72.6	75.8	78.6	81.0	82.0	83.1	84.0	84.9	85.2	85.6	86.0	87.5	87.7
7.5	71.5	74.8	77.5	79.8	81.8	82.7	83.6	84.3	85.1	85.4	85.6	86.0	87.5	87.7
2.9	50.6	57.4	63.5	69.0	73.9	76.2	78.4	80.4	82.4	83.2	84.0	85.6	85.9	86.2
2.2	58.6	64.1	68.8	73.0	76.7	78.4	79.9	81.4	82.9	83.4	84.0	85.6	85.8	86.0
7.5	63.0	67.7	71.7	75.1	78.1	79.5	80.7	81.9	83.1	83.5	84.0	85.6	85.7	85.9
1.3	66.1	70.1	73.6	76.5	79.0	80.2	81.3	82.3	83.2	83.6	84.0	85.6	85.7	85.8
3.2	41.8	49.7	56.9	63.5	69.7	72.6	75.4	78.1	80.6	82.0	83.1	83.4	83.7	83.9
1.6	49.2	56.0	62.0	67.4	72.3	74.6	76.8	78.8	80.8	82.0	83.0	83.2	83.4	83.6
6.7	53.6	59.6	64.9	69.6	73.7	75.7	77.5	79.2	80.9	82.0	83.0	83.2	83.3	83.5
0.4	56.7	62.2	66.9	71.1	74.7	76.4	78.0	79.5	80.9	82.0	83.0	83.1	83.2	83.4
9.2	28.8	38.0	46.9	55.4	63.6	67.6	71.6	75.4	78.7	79.0	79.2	79.5	79.8	80.0
3.5	32.7	41.5	49.8	57.6	65.1	68.7	72.2	75.6	78.6	78.8	79.0	79.2	79.3	79.5
6.2	35.2	43.7	51.6	59.0	65.9	69.3	72.5	75.7	78.6	78.7	78.9	79.0	79.1	79.3
8.4	37.2	45.4	52.9	60.0	66.6	69.7	72.8	75.7	78.5	78.7	78.8	78.9	79.0	79.1

ng Tables, Temperature 90º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
2.0	85.5	88.3	90.6	92.6	94.3	95.0	95.7	96.4	97.0	97.2	97.4	97.7	97.9	98.1
7.9	90.2	92.1	93.6	94.9	96.0	96.5	96.9	97.3	97.7	97.9	98.0	98.1	98.3	98.4
0.7	92.5	93.9	95.0	96.0	96.8	97.1	97.5	97.8	98.1	98.2	98.3	98.4	98.5	98.6
2.5	93.9	95.0	95.9	96.6	97.3	97.5	97.8	98.0	98.3	98.3	98.4	98.5	98.6	98.7
9.3	82.8	85.7	88.1	90.2	91.9	92.7	93.4	94.1	94.7	94.9	95.2	95.4	95.6	95.8
5.3	87.7	89.6	91.2	92.5	93.6	94.1	94.5	95.0	95.4	95.5	95.7	95.8	96.0	96.1
8.1	89.9	91.4	92.6	93.5	94.4	94.7	95.1	95.4	95.7	95.8	95.9	96.0	96.1	96.2
9.9	91.4	92.5	93.4	94.2	94.8	95.1	95.4	95.6	95.9	95.9	96.0	96.1	96.2	96.3
6.1	79.9	83.0	85.5	87.7	89.6	90.4	91.2	91.9	92.6	92.8	93.1	93.3	93.6	93.8
2.4	84.9	87.0	88.7	90.1	91.3	91.8	92.3	92.8	93.2	93.4	93.5	93.7	93.8	94.0
5.4	87.3	88.9	90.1	91.2	92.1	92.5	92.8	93.2	93.5	93.6	93.7	93.8	93.9	94.0
7.3	88.8	90.0	91.0	91.9	92.6	92.9	93.1	93.4	93.7	93.7	93.8	93.9	94.0	94.1
2.5	76.6	80.0	82.8	85.2	87.2	88.1	89.0	89.8	90.6	90.8	91.1	91.4	91.7	91.9
9.2	82.0	84.3	86.2	87.7	89.0	89.6	90.2	90.7	91.2	91.4	91.5	91.7	91.9	92.0
2.5	84.6	86.3	87.7	88.9	89.9	90.3	90.7	91.1	91.4	91.6	91.7	91.8	92.0	92.1
4.5	86.2	87.6	88.7	89.6	90.4	90.7	91.0	91.3	91.6	91.7	91.8	91.9	92.0	92.1
6.0	70.8	74.8	78.2	81.1	83.7	84.8	85.9	86.9	87.8	88.2	88.5	88.9	89.2	90.0
3.8	77.2	79.9	82.2	84.1	85.8	86.5	87.2	87.8	88.4	88.6	88.9	89.1	89.3	90.0
7.6	80.2	82.3	84.1	85.5	86.7	87.3	87.8	88.2	88.7	88.8	89.0	89.2	89.3	90.0
0.1	82.2	83.8	85.2	86.3	87.3	87.7	88.1	88.5	88.8	89.0	89.1	89.2	89.3	90.0
7.3	63.2	68.3	72.6	76.4	79.7	81.2	82.6	83.9	85.2	85.7	86.1	86.6	88.0	88.6
6.6	70.9	74.5	77.4	80.0	82.2	83.2	84.1	84.9	85.8	86.1	86.4	86.7	88.0	88.5
1.3	74.7	77.5	79.8	81.7	83.3	84.1	84.8	85.4	86.0	86.3	86.5	86.7	88.0	88.5
4.3	77.1	79.4	81.2	82.8	84.1	84.7	85.2	85.7	86.2	86.4	86.5	86.7	88.0	88.4
9.4	56.3	62.3	67.5	72.2	76.3	78.2	80.0	81.7	83.3	84.0	84.6	86.0	86.6	86.8
9.4	64.7	69.2	73.0	76.3	79.1	80.4	81.6	82.8	83.8	84.3	84.7	86.0	86.5	86.7
4.8	69.1	72.7	75.7	78.3	80.5	81.5	82.4	83.3	84.1	84.4	84.7	86.0	86.5	86.6
8.4	72.0	75.0	77.4	79.5	81.3	82.1	82.9	83.6	84.2	84.5	84.7	86.0	86.5	86.5
8.2	46.3	53.6	60.2	66.2	71.6	74.2	76.6	79.0	81.2	82.1	83.8	84.0	84.2	84.4
7.8	54.6	60.6	65.8	70.4	74.5	76.4	78.2	79.9	81.5	82.1	83.8	83.9	84.0	84.1
3.4	59.3	64.4	68.8	72.6	76.0	77.5	78.9	80.3	81.6	82.1	83.8	83.9	84.0	84.0
7.3	62.6	67.0	70.8	74.1	77.0	78.2	79.5	80.6	81.7	82.1	83.8	83.8	83.9	84.0
1.3	30.8	39.8	48.4	56.6	64.5	68.3	72.1	75.7	79.3	79.5	79.7	79.9	80.0	80.2
6.5	35.5	44.0	51.9	59.3	66.2	69.6	72.8	76.0	79.3	79.4	79.5	79.6	79.7	79.8
9.8	38.5	46.5	54.0	60.9	67.3	70.3	73.3	76.1	79.3	79.4	79.5	79.5	79.6	79.7
2.4	40.8	48.5	55.6	62.1	68.0	70.9	73.6	76.2	79.3	79.3	79.4	79.5	79.5	79.6

ing Tables, Temperature 100º F

Rain Code or Yesterday's Fine Fuel Moisture Code (FFMC)														
-13	17-23	27-33	37-43	47-53	57-62	63-67	68-72	73-77	78-81	82	84	86	88	90
8.9	91.1	92.9	94.4	95.6	96.6	97.1	97.5	97.9	98.2	98.4	98.5	98.6	98.8	98.9
3.3	94.7	95.7	96.5	97.2	97.8	98.1	98.3	98.5	98.8	98.8	98.9	99.0	99.1	99.1
5.2	96.1	96.9	97.4	97.9	98.3	98.5	98.7	98.8	99.0	99.0	99.1	99.1	99.2	99.2
6.3	97.0	97.5	98.0	98.3	98.6	98.8	98.9	99.0	99.1	99.1	99.2	99.2	99.2	99.3
6.5	88.8	90.6	92.2	93.4	94.5	95.0	95.4	95.8	96.2	96.4	96.5	96.6	96.8	96.9
1.0	92.4	93.5	94.4	95.1	95.7	96.0	96.3	96.5	96.7	96.8	96.9	97.0	97.0	97.1
3.0	94.0	94.7	95.3	95.8	96.3	96.4	96.6	96.8	96.9	97.0	97.0	97.1	97.1	97.2
4.1	94.8	95.4	95.9	96.2	96.5	96.7	96.8	96.9	97.0	97.1	97.1	97.2	97.2	97.2
3.4	86.0	88.0	89.6	91.0	92.2	92.7	93.2	93.7	94.1	94.3	94.4	94.6	94.7	94.9
8.3	89.9	91.1	92.0	92.8	93.5	93.8	94.1	94.3	94.6	94.7	94.8	94.8	94.9	95.0
0.5	91.5	92.4	93.0	93.6	94.0	94.3	94.4	94.6	94.8	94.8	94.9	95.0	95.0	95.1
1.7	92.5	93.1	93.6	94.0	94.4	94.5	94.6	94.8	94.9	94.9	95.0	95.0	95.1	95.1
9.9	82.8	85.1	87.0	88.5	89.9	90.5	91.0	91.6	92.0	92.2	92.4	92.6	92.8	92.9
5.4	87.1	88.5	89.6	90.5	91.3	91.6	92.0	92.3	92.5	92.6	92.7	92.8	92.9	93.0
7.8	89.0	90.0	90.7	91.4	91.9	92.1	92.3	92.5	92.7	92.8	92.9	92.9	93.0	93.1
9.2	90.1	90.8	91.4	91.8	92.2	92.4	92.6	92.7	92.8	92.9	93.0	93.0	93.1	93.1
3.6	77.2	80.1	82.5	84.6	86.3	87.1	87.8	88.5	89.2	89.4	89.6	89.9	90.1	90.3
0.4	82.6	84.4	85.8	87.0	88.1	88.5	88.9	89.3	89.7	89.8	90.0	90.1	90.2	90.3
3.4	85.0	86.2	87.2	88.1	88.8	89.1	89.4	89.6	89.9	90.0	90.1	90.2	90.3	90.4
5.2	86.4	87.3	88.1	88.7	89.2	89.4	89.6	89.8	90.0	90.1	90.2	90.2	90.3	90.4
4.9	69.7	73.6	77.0	79.8	82.3	83.4	84.5	85.5	86.4	86.7	87.1	87.4	88.0	89.4
3.7	76.8	79.3	81.3	83.1	84.6	85.2	85.8	86.4	86.9	87.1	87.3	87.5	88.0	89.3
7.7	80.0	81.8	83.2	84.5	85.5	86.0	86.4	86.8	87.2	87.3	87.4	87.6	88.0	89.3
0.2	81.9	83.2	84.4	85.3	86.1	86.4	86.7	87.0	87.3	87.4	87.5	87.6	88.0	89.3
6.5	62.4	67.4	71.8	75.5	78.8	80.3	81.7	83.1	84.3	84.8	85.3	86.0	87.4	87.5
6.7	70.9	74.2	77.1	79.5	81.5	82.4	83.3	84.1	84.9	85.2	85.5	86.0	87.3	87.4
1.7	74.8	77.4	79.5	81.2	82.7	83.4	84.0	84.6	85.1	85.3	85.5	86.0	87.3	87.4
4.8	77.3	79.3	80.9	82.3	83.4	83.9	84.4	84.8	85.3	85.4	85.6	86.0	87.3	87.4
4.0	51.4	58.0	63.8	69.1	73.8	76.0	78.0	80.0	81.9	82.6	84.0	84.7	84.8	85.0
4.6	60.5	65.5	69.8	73.5	76.8	78.3	79.7	81.0	82.3	82.7	84.0	84.7	84.8	84.8
0.4	65.3	69.3	72.7	75.7	78.2	79.4	80.5	81.5	82.4	82.8	84.0	84.7	84.7	84.8
4.3	68.4	71.8	74.7	77.1	79.2	80.1	81.0	81.8	82.5	82.8	84.0	84.7	84.7	84.7
3.9	33.2	42.0	50.3	58.1	65.6	69.2	72.7	76.1	80.0	80.2	80.3	80.4	80.5	80.6
0.1	38.9	46.9	54.3	61.2	67.6	70.7	73.6	76.5	80.0	80.1	80.2	80.3	80.3	80.4
4.1	42.4	49.9	56.8	63.0	68.8	71.5	74.2	76.7	80.0	80.1	80.2	80.2	80.2	80.3
7.1	45.0	52.1	58.6	64.4	69.7	72.2	74.5	76.8	80.0	80.1	80.1	80.2	80.2	80.2

STURE CODE (DMC); Rain Code Estimation

24 HOUR RAINFALL TOTAL, INCHES

if 24 hour rainfall is less than 0.06 inches, Rain Code = Yesterday's DMC

3	0.10	0.12	0.14	0.16	0.18	0.20	0.23-0.27	0.28-0.32	0.33-0.37	0.38-0.42	0.43-0.47	0.48-0.62	0.63-0.87	0.88-1.24	1.25-1.74	1.75-2.2
	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2
	7	7	6	6	6	6	5	5	5	5	5	4	4	4	4	4
	12	11	10	10	9	9	8	8	8	7	7	7	6	6	6	6
	16	15	14	14	13	12	11	11	10	10	9	9	8	8	7	7
	21	19	18	17	16	16	14	14	13	12	12	11	10	9	9	8
	25	23	22	21	20	19	17	16	15	14	14	13	12	11	10	9
	29	27	26	24	23	22	20	19	18	17	16	15	13	12	11	10
	33	31	30	28	27	26	24	22	21	20	19	18	16	15	13	13
	38	35	34	32	31	29	27	25	24	23	22	21	19	17	16	15
	42	39	37	36	34	33	30	28	27	26	25	24	21	20	18	17
	46	43	41	39	37	36	33	31	29	28	27	26	23	22	20	19
	50	47	44	42	41	39	36	34	32	31	29	29	25	24	22	21
	54	51	48	46	44	42	39	36	34	33	32	31	27	26	24	23
	58	54	51	49	47	45	42	40	38	36	35	34	31	29	27	26
	62	58	55	52	50	49	45	43	41	39	38	37	34	32	30	29
	65	61	58	55	53	52	48	45	43	42	41	40	36	35	33	32
	69	65	61	59	56	54	51	48	46	44	43	42	39	37	35	34
	72	68	64	61	59	57	53	51	49	47	46	45	41	40	38	37
	76	71	67	64	62	60	56	53	51	49	48	47	44	42	40	39
	79	74	70	67	64	62	58	55	53	52	50	49	46	44	42	41
	82	77	73	69	67	64	60	57	55	54	52	51	48	46	44	43
	85	79	75	72	69	67	62	59	57	56	54	53	50	48	46	45
	88	82	77	74	71	69	64	61	59	57	56	55	52	50	48	47
	90	84	80	76	73	71	66	63	61	59	58	57	53	51	50	49
	93	87	82	78	75	73	68	65	63	61	59	58	55	53	51	50
	95	89	84	80	77	74	70	66	64	62	61	60	56	54	53	52
	98	91	85	82	78	76	71	68	66	64	62	61	58	56	54	53
	100	93	87	83	80	77	73	69	67	65	64	63	59	57	55	54
	102	94	89	85	81	79	74	71	68	66	65	64	60	58	57	56
	104	96	90	86	83	80	75	72	69	68	66	65	61	60	58	57

Table 4. DUFF MOISTURE CODE; Drying Factor

RH %	Temp ° F	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
5%-14%	65	3	4	5	5	4	4	3	3
	70	3	5	5	5	5	4	4	3
	75	4	5	6	6	5	5	4	3
	80	4	6	7	7	6	5	4	4
	85	5	7	7	7	6	6	5	4
	90	5	7	8	8	7	6	5	5
	95	6	8	9	9	8	7	6	5
15%-24%	45	1	2	2	2	2	1	1	1
	50	2	2	2	2	2	2	2	1
	55	2	3	3	3	3	2	2	2
	60	2	3	4	4	3	3	2	2
	65	3	4	4	4	4	3	3	2
	70	3	4	5	5	4	4	3	3
	75	3	5	5	5	5	4	4	3
	80	4	5	6	6	5	5	4	3
	85	4	6	6	6	6	5	4	4
	90	5	6	7	7	6	6	5	4
	95	5	7	8	8	7	6	5	4
	100	5	8	8	8	7	6	6	5
25%-34%	40	1	1	1	1	1	1	1	1
	45	1	1	2	2	1	1	1	1
	50	1	2	2	2	2	2	1	1
	55	2	2	3	3	2	2	2	1
	60	2	3	3	3	3	2	2	2
	65	2	3	4	4	3	3	2	2
	70	3	4	4	4	4	3	3	2
	75	3	4	5	5	4	4	3	3
	80	3	5	5	5	5	4	3	3
	85	4	5	6	6	5	4	4	3
	90	4	6	6	6	5	5	4	4
	95	4	6	7	7	6	5	4	4
	100	5	7	7	7	6	6	5	4
35%-44%	40	1	1	1	1	1	1	1	1
	45	1	1	1	1	1	1	1	1
	50	1	2	2	2	2	1	1	1
	55	1	2	2	2	2	2	1	1
	60	2	2	3	3	2	2	2	2
	65	2	3	3	3	3	2	2	2
	70	2	3	4	4	3	3	2	2
	75	3	4	4	4	4	3	3	2
	80	3	4	4	4	4	3	3	3
	85	3	4	5	5	4	4	3	3
	90	3	5	5	5	5	4	4	3
	95	4	5	6	6	5	4	4	3
	100	4	6	6	6	5	5	4	4

*** Use the last listed RH and DBTemp that is less than or equal to the expected RH and DBTemp. There is no need to interpolate between rows.**

RH %	Temp ° F	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
45%-54%	40	0	1	1	1	1	1	0	0
	50	1	1	1	1	1	1	1	1
	55	1	2	2	2	2	1	1	1
	60	1	2	2	2	2	2	1	1
	65	2	2	3	3	2	2	2	1
	70	2	3	3	3	3	2	2	2
	75	2	3	3	3	3	3	2	2
	80	2	3	4	4	3	3	2	2
	85	3	4	4	4	4	3	3	2
	90	3	4	4	4	4	3	3	3
	95	3	4	5	5	4	4	3	3
	100	3	5	5	5	5	4	3	3
55%-64%	40	0	1	1	1	1	0	0	0
	45	1	1	1	1	1	1	1	1
	55	1	1	1	1	1	1	1	1
	60	1	2	2	2	2	1	1	1
	65	1	2	2	2	2	2	1	1
	70	2	2	2	2	2	2	2	1
	75	2	2	3	3	2	2	2	2
	80	2	3	3	3	3	2	2	2
	85	2	3	3	3	3	3	2	2
	90	2	3	4	4	3	3	2	2
	95	2	4	4	4	3	3	3	2
	100	3	4	4	4	4	3	3	2
65%-74%	45	0	1	1	1	1	1	0	0
	50	1	1	1	1	1	1	1	1
	60	1	1	1	1	1	1	1	1
	65	1	1	2	2	1	1	1	1
	70	1	2	2	2	2	1	1	1
	75	1	2	2	2	2	2	1	1
	80	1	2	2	2	2	2	1	1
	85	2	2	2	2	2	2	2	1
	90	2	2	3	3	2	2	2	2
	95	2	3	3	3	3	2	2	2
75%-84%	50	0	1	1	1	1	0	0	0
	55	0	1	1	1	1	1	0	0
	60	1	1	1	1	1	1	1	1
	65	1	1	1	1	1	1	1	1
	85	1	1	2	2	1	1	1	1
	90	1	2	2	2	2	1	1	1
85%-94%	65	0	0	1	1	0	0	0	0
	70	0	1	1	1	1	0	0	0
	75	0	1	1	1	1	1	0	0
	85	1	1	1	1	1	1	1	0
	90	1	1	1	1	1	1	1	1
	95	1	1	1	1	1	1	1	1
	100	1	1	1	1	1	1	1	1

CODE; Rain Code Estimation

24 HOUR RAINFALL, INCHES

if 24 hour rainfall is less than 0.11 inches, Rain Code = Yesterday's DC

0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.2	2.4	2.6	2.8	3.0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	11	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	20	16	12	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	30	25	21	17	12	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	39	35	30	26	21	17	13	9	4	0	0	0	0	0	0	0	0	0	0	0	0
54	49	44	40	35	31	26	22	17	13	9	4	0	0	0	0	0	0	0	0	0	0
63	58	54	49	44	40	35	30	26	22	17	13	9	4	0	0	0	0	0	0	0	0
73	68	63	58	53	49	44	39	35	30	26	21	17	13	8	4	0	0	0	0	0	0
82	77	72	67	62	58	53	48	43	39	34	30	25	21	17	12	8	0	0	0	0	0
101	96	91	86	81	76	71	66	61	56	51	47	42	37	33	28	24	15	7	0	0	0
120	115	109	104	99	93	88	83	78	73	68	63	58	53	49	44	40	30	22	13	4	0
139	134	128	122	117	111	106	100	95	90	85	80	74	70	65	60	55	46	36	27	19	10
158	152	146	140	135	129	123	117	112	106	101	96	91	85	80	75	70	61	51	42	33	24
177	171	165	158	152	146	140	135	129	123	117	112	106	101	96	91	85	75	65	56	46	37
201	194	188	181	174	168	162	156	150	144	138	132	126	120	115	109	104	93	83	73	63	54
224	217	210	203	196	190	183	177	170	164	158	152	146	140	134	128	122	111	100	90	80	70
248	240	233	225	218	211	204	197	191	184	177	171	165	158	152	146	140	129	117	106	96	85
271	263	255	247	240	232	225	218	211	204	197	190	183	177	171	164	158	146	134	123	112	101
294	286	277	269	261	253	246	238	231	223	216	209	202	195	188	182	175	163	150	139	127	116
318	308	300	291	282	274	266	258	250	242	235	227	220	213	206	199	192	179	166	154	142	130
341	331	322	312	303	295	286	278	269	261	253	246	238	231	223	216	209	195	182	169	157	145
363	353	343	334	324	315	306	297	289	280	272	264	256	248	240	233	225	211	197	184	171	158
386	375	365	355	345	335	326	316	307	298	290	281	273	265	257	249	241	227	212	198	185	172
409	397	386	376	365	355	345	335	326	317	307	299	290	281	273	265	257	242	227	212	198	185
431	419	408	396	385	374	364	354	344	334	325	316	307	298	289	281	272	256	241	226	212	198
454	441	429	417	405	394	383	372	362	352	342	332	323	314	305	296	287	271	255	239	224	210
476	462	449	437	425	413	401	390	379	369	358	348	339	329	320	311	302	284	268	252	237	222
498	484	470	457	444	432	420	408	397	385	375	364	354	344	334	325	316	298	281	264	249	233
520	505	490	476	463	450	437	425	413	402	391	380	369	359	349	339	330	311	293	276	260	245
541	526	510	496	482	468	455	442	430	418	406	395	384	373	363	353	343	324	306	288	271	255
563	546	530	515	500	486	472	459	446	434	422	410	398	387	377	366	356	336	317	299	282	266
584	567	550	534	518	503	489	475	462	449	436	424	412	401	390	379	368	348	329	310	293	276

Table 6. DROUGHT CODE; Drying Factor

DRY BULB TEMPERATURE, ° F	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
15	-2	-2	-2	-1	1	2	2	1	0	-1	-2	-2
18	-2	-2	-2	0	1	2	2	2	0	-1	-2	-2
20	-1	-1	-1	0	1	2	3	2	1	0	-1	-1
23	-1	-1	-1	0	2	3	3	2	1	0	-1	-1
25	-1	-1	-1	0	2	3	3	2	1	0	-1	-1
28	-1	-1	-1	1	2	3	3	3	1	0	-1	-1
30	0	0	0	1	2	3	4	3	2	1	0	0
33	0	0	0	1	3	4	4	3	2	1	0	0
35	0	0	0	1	3	4	4	3	2	1	0	0
38	0	0	0	2	3	4	4	4	2	1	0	0
40	1	1	1	2	3	4	5	4	3	2	1	1
43	1	1	1	2	4	5	5	4	3	2	1	1
47	1	1	1	2	4	5	5	5	3	2	1	1
48	1	1	1	3	4	5	5	5	3	2	1	1
50	2	2	2	3	4	5	6	5	4	3	2	2
51	2	2	2	3	4	5	6	5	4	3	2	2
53	2	2	2	3	5	6	6	5	4	3	2	2
55	2	2	2	3	5	6	6	5	4	3	2	2
58	2	2	2	4	5	6	6	6	4	3	2	2
60	3	3	3	4	5	6	7	6	5	4	3	3
63	3	3	3	4	6	7	7	6	5	4	3	3
67	3	3	3	4	6	7	7	7	5	4	3	3
69-71	4	4	4	5	6	7	8	7	6	5	4	4
72-75	4	4	4	5	7	8	8	7	6	5	4	4
76-78	4	4	4	5	7	8	8	8	6	5	4	4
79-81	5	5	5	6	7	8	9	8	7	6	5	5
82-85	5	5	5	6	8	9	9	8	7	6	5	5
86-89	5	5	5	7	8	9	9	9	7	6	5	5
90-91	6	6	6	7	8	9	10	9	8	7	6	6
92-94	6	6	6	7	9	10	10	9	8	7	6	6
95-97	6	6	6	7	9	10	10	10	8	7	6	6
98	6	6	6	8	9	10	10	10	8	7	6	6
99	6	6	6	8	9	10	10	10	8	7	6	6
100	7	7	7	8	9	10	11	10	9	8	7	7

*** Use the last listed temperature that is less than or equal to the expected DB Temperature. There is no need to interpolate between rows.**

Table 7. INITIAL SPREAD INDEX

	Open Windspeed (10m = Fcst x 0.7, 10m = 20 ft * 1.12, 10 m = Eye Level Open [EL Op] * 1.54), Use only 10m For Effective Windspeed																				
FCST	**0**	**1**	**4**	**6**	**9**	**10**	**13**	**16**	**17**	**20**	**21**	**24**	**26**	**29**	**30**	**33**	**34**	**37**	**39**	**41**	**44**
10m	**0**	**1**	**3**	**4**	**6**	**7**	**9**	**11**	**12**	**14**	**15**	**17**	**18**	**20**	**21**	**23**	**24**	**26**	**27**	**29**	**31**
20ft	**0**	**1**	**3**	**4**	**5**	**6**	**8**	**10**	**11**	**13**	**13**	**15**	**16**	**18**	**19**	**21**	**21**	**23**	**24**	**26**	**28**
EL Op	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
FINE FUEL MOISTURE CODE																					
70	0.6	0.7	0.8	0.9	1.0	1.1	1.3	1.5	1.7	1.9	2.1	2.5	2.7	3.2	3.4	4.0	4.4	5.1	5.4	5.9	6.3
71	0.6	0.7	0.8	0.9	1.1	1.1	1.3	1.6	1.7	2.0	2.2	2.6	2.8	3.3	3.5	4.2	4.5	5.3	5.6	6.1	6.5
72	0.7	0.7	0.9	0.9	1.1	1.2	1.4	1.6	1.8	2.1	2.3	2.7	2.9	3.4	3.7	4.3	4.7	5.4	5.8	6.3	6.7
73	0.7	0.8	0.9	1.0	1.1	1.2	1.4	1.7	1.8	2.2	2.3	2.8	3.0	3.5	3.8	4.5	4.9	5.7	6.0	6.5	7.0
74	0.7	0.8	0.9	1.0	1.2	1.3	1.5	1.8	1.9	2.3	2.5	2.9	3.1	3.7	4.0	4.7	5.1	5.9	6.3	6.8	7.3
75	0.8	0.8	1.0	1.1	1.2	1.4	1.6	1.9	2.0	2.4	2.6	3.0	3.3	3.9	4.2	4.9	5.4	6.2	6.6	7.2	7.7
76	0.8	0.9	1.0	1.1	1.3	1.4	1.7	2.0	2.2	2.5	2.7	3.2	3.5	4.1	4.5	5.2	5.7	6.6	7.0	7.6	8.1
77	0.9	0.9	1.1	1.2	1.4	1.5	1.8	2.1	2.3	2.7	2.9	3.5	3.7	4.4	4.8	5.6	6.1	7.1	7.5	8.2	8.7
78	0.9	1.0	1.2	1.3	1.5	1.7	2.0	2.3	2.5	2.9	3.2	3.7	4.1	4.8	5.2	6.1	6.6	7.7	8.1	8.8	9.4
79	1.0	1.1	1.3	1.4	1.7	1.8	2.1	2.5	2.7	3.2	3.5	4.1	4.4	5.2	5.7	6.6	7.2	8.4	8.9	9.7	10.3
80	1.1	1.2	1.5	1.6	1.8	2.0	2.4	2.8	3.0	3.5	3.8	4.5	4.9	5.8	6.2	7.3	8.0	9.2	9.8	10.7	11.4
81	1.3	1.4	1.6	1.8	2.1	2.2	2.6	3.1	3.4	3.9	4.3	5.0	5.5	6.4	7.0	8.2	8.9	10.3	10.9	11.9	12.7
82	1.4	1.5	1.8	2.0	2.3	2.5	3.0	3.5	3.8	4.4	4.8	5.7	6.1	7.2	7.8	9.2	10.0	11.6	12.3	13.4	14.3
83	1.6	1.8	2.1	2.2	2.6	2.8	3.4	3.9	4.3	5.0	5.4	6.4	7.0	8.2	8.9	10.4	11.3	13.1	13.9	15.2	16.1
84	1.8	2.0	2.3	2.5	3.0	3.2	3.8	4.5	4.9	5.7	6.2	7.3	7.9	9.3	10.1	11.9	12.9	15.0	15.8	17.3	18.4
85	2.1	2.3	2.7	2.9	3.4	3.7	4.4	5.1	5.6	6.6	7.1	8.4	9.1	10.7	11.6	13.6	14.8	17.1	18.1	19.8	21.1
86	2.4	2.6	3.1	3.3	3.9	4.3	5.0	5.9	6.4	7.5	8.2	9.6	10.4	12.3	13.3	15.6	17.0	19.7	20.8	22.7	24.2
87	2.8	3.0	3.6	3.9	4.5	4.9	5.8	6.8	7.4	8.7	9.4	11.1	12.0	14.1	15.3	18.0	19.5	22.7	24.0	26.2	27.9
88	3.2	3.5	4.1	4.5	5.2	5.7	6.7	7.9	8.5	10.0	10.9	12.8	13.9	16.3	17.7	20.8	22.5	26.2	27.7	30.2	32.2
89	3.7	4.0	4.7	5.1	6.0	6.6	7.7	9.1	9.8	11.6	12.5	14.7	16.0	18.8	20.4	24.0	26.0	30.2	32.0	34.9	37.1
90	4.3	4.6	5.5	5.9	7.0	7.6	8.9	10.5	11.3	13.3	14.5	17.0	18.5	21.7	23.5	27.7	30.0	34.9	36.9	40.3	42.9
91	4.9	5.4	6.3	6.8	8.0	8.7	10.3	12.1	13.1	15.4	16.7	19.6	21.3	25.0	27.2	31.9	34.6	40.2	42.6	46.5	49.4
92	5.7	6.2	7.3	7.9	9.3	10.1	11.8	13.9	15.1	17.7	19.2	22.6	24.5	28.9	31.3	36.8	39.9	46.4	49.1	53.5	57.0
93	6.6	7.1	8.4	9.1	10.7	11.6	13.6	16.0	17.4	20.4	22.1	26.0	28.2	33.2	36.0	42.4	45.9	53.4	56.5	61.6	65.6
94	7.5	8.2	9.6	10.4	12.3	13.3	15.6	18.4	20.0	23.5	25.5	29.9	32.5	38.2	41.4	48.7	52.8	61.3	64.9	70.9	75.4
95	8.7	9.4	11.0	12.0	14.1	15.3	18.0	21.1	22.9	26.9	29.2	34.4	37.3	43.8	47.5	55.9	60.6	70.4	74.5	81.3	86.5
96	9.9	11	12.7	13.7	16.1	17.5	20.6	24.2	26.2	30.9	33.5	39.4	42.7	50.2	54.5	64.0	69.5	80.7	85.4	93.2	99.2

Table 8. BUILDUP INDEX

	BUI	DROUGHT CODE (DC)																								
		0-12	13-37	38-62	63-87	88-112	113-137	138-162	163-187	188-212	213-237	238-262	263-287	288-312	313-337	338-362	363-387	388-412	413-437	438-462	463-487	488-512	513-537	538-562	563-587	588-612
DUFF MOISTURE CODE (DMC)	0-2	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
	3-7	5	7	8	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	8-12	10	10	13	15	16	17	17	18	18	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19
	13-17	15	15	17	20	22	23	24	25	25	26	26	26	27	27	27	27	27	28	28	28	28	28	28	28	28
	18-22	20	20	20	24	27	29	30	31	32	33	33	34	34	35	35	35	36	36	36	36	36	37	37	37	37
	23-27	25	25	25	27	31	33	35	37	38	39	40	41	41	42	42	43	43	44	44	44	44	45	45	45	45
	28-32	30	30	30	30	34	38	40	42	44	45	46	47	48	49	49	50	51	51	51	52	52	53	53	53	53
	33-37	35	35	35	35	37	41	44	47	49	50	52	53	54	55	56	57	57	58	59	59	60	60	60	61	61
	38-42	40	40	40	40	40	44	48	51	53	55	57	59	60	61	62	63	64	65	65	66	67	67	68	68	69
	43-47	45	45	45	45	45	47	51	55	58	60	62	64	65	67	68	69	70	71	72	73	73	74	75	75	76
	48-52	50	50	50	50	50	50	55	58	62	64	67	69	71	72	74	75	76	77	78	79	80	81	81	82	83
	53-57	55	55	55	55	55	55	57	62	65	68	71	73	75	77	79	80	82	83	84	85	86	87	88	89	89
	58-62	60	60	60	60	60	60	60	65	69	72	75	78	80	82	84	86	87	89	90	91	92	93	94	95	96
	63-67	65	65	65	65	65	65	65	67	72	75	79	82	84	87	89	91	92	94	96	97	98	99	100	101	102
	68-72	70	70	70	70	70	70	70	70	75	79	82	86	88	91	93	95	97	99	101	102	104	105	106	107	108
	73-77	75	75	75	75	75	75	75	75	77	82	86	89	92	95	98	100	102	104	106	108	109	111	112	113	114
	78-82	80	80	80	80	80	80	80	80	80	85	89	93	96	99	102	104	107	109	111	113	114	116	117	119	120
	83-87	85	85	85	85	85	85	85	85	85	87	92	96	100	103	106	109	111	113	115	117	119	121	123	124	126
	88-92	90	90	90	90	90	90	90	90	90	90	95	99	103	106	110	113	115	118	120	122	124	126	128	129	131
	93-97	95	95	95	95	95	95	95	95	95	95	97	102	106	110	113	116	119	122	124	127	129	131	133	134	136
	98-102	100	100	100	100	100	100	100	100	100	100	100	105	109	113	117	120	123	126	129	131	133	135	138	139	141
	103-107	105	105	105	105	105	105	105	105	105	105	105	107	112	116	120	124	127	130	133	135	138	140	142	144	146
	108-112	110	110	110	110	110	110	110	110	110	110	110	110	115	119	123	127	130	134	137	139	142	144	147	149	151
	113-117	115	115	115	115	115	115	115	115	115	115	115	115	117	122	126	130	134	137	140	143	146	149	151	153	155
	118-122	120	120	120	120	120	120	120	120	120	120	120	120	120	125	129	133	137	141	144	147	150	153	155	158	160
	123-127	125	125	125	125	125	125	125	125	125	125	125	125	125	127	132	136	140	144	148	151	154	157	159	162	164
	128-132	130	130	130	130	130	130	130	130	130	130	130	130	130	130	135	139	143	147	151	154	158	161	163	166	169
	133-137	135	135	135	135	135	135	135	135	135	135	135	135	135	135	137	142	146	150	154	158	161	164	167	170	173
	138-142	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	145	149	154	158	161	165	168	171	174	177

Table 9. FIRE WEATHER INDEX

FWI	BUILDUP INDEX (BUI)																									
INITIAL SPREAD INDEX (ISI)	1	5	8-12	13-17	18-22	23-27	28-32	33-37	38-42	43-37	48-52	53-57	58-62	63-67	68-72	73-77	78-84	85-94	95-104	105-114	115-124	125-134	135-144	145-154	155-164	165-174
1	0.3	0.4	0.6	0.8	0.9	1.2	1.6	2.0	2.3	2.6	2.8	3.1	3.3	3.6	3.8	4.0	4.2	4.6	5.0	5.3	5.6	5.9	6.1	6.3	6.4	6.6
2	0.5	0.9	1.7	2.5	3.1	3.7	4.2	4.7	5.2	5.6	6.0	6.4	6.8	7.2	7.6	7.9	8.2	8.9	9.5	10.0	10.5	10.9	11.2	11.5	11.7	11.9
3	0.8	1.9	3.1	4.0	4.9	5.6	6.3	7.0	7.6	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.6	12.4	13.2	13.9	14.5	15.0	15.4	15.8	16.1	16.3
4	1.3	2.9	4.3	5.5	6.5	7.4	8.2	9.0	9.7	10.4	11.1	11.7	12.3	12.9	13.5	14.0	14.5	15.5	16.5	17.3	18.0	18.6	19.1	19.5	19.9	20.2
5	2.0	3.8	5.4	6.8	7.9	9.0	10.0	10.9	11.7	12.5	13.3	14.0	14.7	15.4	16.0	16.6	17.2	18.4	19.4	20.3	21.2	21.9	22.4	22.9	23.4	23.7
6	2.6	4.6	6.5	8.0	9.3	10.5	11.6	12.6	13.5	14.4	15.3	16.1	16.9	17.6	18.3	19.0	19.7	21.0	22.1	23.2	24.1	24.8	25.5	26.1	26.5	26.9
7	3.2	5.4	7.4	9.1	10.6	11.9	13.1	14.2	15.2	16.2	17.2	18.0	18.9	19.7	20.5	21.3	22.0	23.4	24.7	25.8	26.8	27.6	28.4	29.0	29.5	29.9
8	3.7	6.2	8.4	10.2	11.8	13.2	14.5	15.7	16.9	17.9	18.9	19.9	20.8	21.7	22.6	23.4	24.2	25.7	27.1	28.3	29.4	30.3	31.0	31.7	32.2	32.7
9	4.2	6.9	9.3	11.2	12.9	14.5	15.9	17.2	18.4	19.5	20.6	21.7	22.7	23.6	24.5	25.4	26.3	27.9	29.3	30.6	31.8	32.8	33.6	34.3	34.9	35.3
10	4.7	7.6	10.1	12.2	14.1	15.7	17.2	18.6	19.9	21.1	22.2	23.3	24.4	25.4	26.4	27.3	28.2	29.9	31.5	32.9	34.1	35.1	36.0	36.7	37.4	37.9
11	5.2	8.2	11.0	13.2	15.1	16.9	18.4	19.9	21.3	22.6	23.8	25.0	26.1	27.1	28.2	29.2	30.1	31.9	33.6	35.0	36.3	37.4	38.3	39.1	39.7	40.3
12	5.7	8.9	11.8	14.1	16.2	18.0	19.7	21.2	22.6	24.0	25.3	26.5	27.7	28.8	29.9	30.9	31.9	33.8	35.6	37.1	38.4	39.6	40.5	41.4	42.0	42.6
13	6.1	9.5	12.5	15.0	17.2	19.1	20.8	22.4	24.0	25.4	26.7	28.0	29.2	30.4	31.5	32.6	33.7	35.7	37.5	39.1	40.5	41.7	42.7	43.5	44.2	44.8
14	6.6	10.1	13.3	15.9	18.1	20.1	22.0	23.7	25.2	26.7	28.1	29.5	30.7	32.0	33.1	34.3	35.4	37.4	39.3	41.0	42.5	43.7	44.8	45.6	46.4	47.0
15	7.0	10.7	14.0	16.7	19.1	21.2	23.1	24.8	26.5	28.0	29.5	30.9	32.2	33.5	34.7	35.9	37.0	39.2	41.1	42.9	44.4	45.7	46.8	47.7	48.4	49.1
16	7.4	11.3	14.8	17.6	20.0	22.2	24.1	26.0	27.7	29.3	30.8	32.2	33.6	34.9	36.2	37.4	38.6	40.8	42.9	44.7	46.2	47.6	48.7	49.7	50.4	51.1
17	7.8	11.9	15.5	18.4	20.9	23.1	25.2	27.1	28.8	30.5	32.1	33.6	35.0	36.3	37.7	38.9	40.1	42.4	44.5	46.4	48.0	49.4	50.6	51.6	52.4	53.1
18	8.2	12.4	16.1	19.2	21.8	24.1	26.2	28.2	30.0	31.7	33.3	34.8	36.3	37.7	39.1	40.4	41.6	44.0	46.2	48.1	49.8	51.2	52.4	53.4	54.3	55.0
19	8.6	13.0	16.8	19.9	22.6	25.0	27.2	29.2	31.1	32.9	34.5	36.1	37.6	39.1	40.5	41.8	43.1	45.6	47.8	49.8	51.5	53.0	54.2	55.3	56.1	56.8
20	9.0	13.5	17.5	20.7	23.4	25.9	28.2	30.2	32.2	34.0	35.7	37.3	38.9	40.4	41.8	43.2	44.6	47.1	49.4	51.4	53.2	54.7	56.0	57.0	57.9	58.7
21	9.4	14.0	18.1	21.4	24.3	26.8	29.1	31.2	33.2	35.1	36.9	38.6	40.2	41.7	43.2	44.6	46.0	48.5	50.9	53.0	54.8	56.4	57.7	58.8	59.7	60.4
22	9.8	14.5	18.7	22.1	25.1	27.7	30.0	32.2	34.3	36.2	38.0	39.7	41.4	43.0	44.5	45.9	47.3	50.0	52.4	54.5	56.4	58.0	59.3	60.5	61.4	62.2
23	10.1	15.0	19.4	22.8	25.9	28.5	31.0	33.2	35.3	37.3	39.1	40.9	42.6	44.2	45.7	47.2	48.7	51.4	53.9	56.1	58.0	59.6	61.0	62.1	63.1	63.9
24	10.5	15.5	20.0	23.5	26.6	29.4	31.9	34.2	36.3	38.3	40.2	42.0	43.7	45.4	47.0	48.5	50.0	52.8	55.3	57.5	59.5	61.2	62.6	63.8	64.7	65.5
25	10.9	16.0	20.6	24.2	27.4	30.2	32.7	35.1	37.3	39.3	41.3	43.1	44.9	46.6	48.2	49.8	51.3	54.1	56.7	59.0	61.0	62.7	64.1	65.3	66.3	67.2
26	11.2	16.5	21.2	24.9	28.1	31.0	33.6	36.0	38.3	40.4	42.3	44.2	46.0	47.8	49.4	51.0	52.6	55.5	58.1	60.4	62.5	64.2	65.7	66.9	67.9	68.8
27	11.6	17.0	21.7	25.6	28.9	31.8	34.5	36.9	39.2	41.4	43.4	45.3	47.1	48.9	50.6	52.2	53.8	56.8	59.5	61.8	63.9	65.7	67.2	68.4	69.5	70.4
28	11.9	17.4	22.3	26.2	29.6	32.6	35.3	37.8	40.1	42.3	44.4	46.4	48.2	50.0	51.8	53.4	55.0	58.0	60.8	63.2	65.3	67.1	68.7	70.0	71.0	71.9
29	12.3	17.9	22.9	26.9	30.3	33.3	36.1	38.7	41.1	43.3	45.4	47.4	49.3	51.1	52.9	54.6	56.2	59.3	62.1	64.6	66.7	68.6	70.1	71.4	72.5	73.4
30	12.6	18.4	23.4	27.5	31.0	34.1	36.9	39.5	42.0	44.2	46.4	48.4	50.4	52.2	54.0	55.8	57.4	60.5	63.4	65.9	68.1	70.0	71.6	72.9	74.0	74.9