REFERENCE MANUAL AND SUMMARY OF TEST FIRE, FUEL MOISTURE AND WEATHER OBSERVATIONS MADE BY FOREST FIRE RESEARCHERS BETWEEN 1931 AND 1961

by
Albert J. Simard

FOREST FIRE RESEARCH INSTITUTE
OTTAWA, ONTARIO
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CANADIAN FORESTRY SERVICE
DEPARTMENT OF FISHERIES AND FORESTRY
AUGUST, 1970

ERRATA

Page

12, No. 24, lines 2 and 3 should read:

...columns 32 to 34 for .20 inches of rain.

17, II, line 1 should read:

Fuel Type

20, headings should read:

Card Location 21-23	Tape Location 22-24

23, footnote **, line 4 should read:

...by examining the cards.

40, table 27E

Oregon Grape (15) should be listed under low shrubs.

50, para. 1, line 1, should read:

The above are generally...

91, para. 2, line 2, should read:

...previous two. Separate yearly...

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Several persons contributed to the data processing portion of the project. The test fire and fuel moisture merge and part of the fuel moisture and weather merge programs were written by J. Barnabe of the Biometrics and Computer Science Branch. The fuel moisture inventory program was written by U. Fehr. J. Valenzuela assisted with some of the small programs and utility operations. Finally, the author wishes to express his appreciation to the many programmers, too numerous to name individually, of the Biometrics and Computer Science Branch, and the Forest Management Research Institute of the Canadian Forestry Service, and the Central Data Processing Service Bureau for the many hours of consultation and assistance which were generously provided during the programming phase of this project.

Table of Contents

Reference Manual and Summary of
Test Fire, Fuel Moisture and Weather Observations
Made by Canadian Forest Fire Researchers Between 1931 and 1961

INTRODUCTION

Between 1931 and 1961 Canadian forest fire researchers gathered a vast quantity of data on weather, fuel moisture and test fire behavior. The original purpose of the data was primarily for the development of forest fire danger tables. The data was gathered at 11 field stations across Canada. Each station had several sites which were considered representative of the major timber types in the area. Some stations were kept active for several years, while others operated for only one or two seasons.

During this period, more than a million observations of various types were recorded. Over the years, much of the information has been analyzed in conjunction with specific projects which centered primarily around fire danger rating. On the other hand, much of the information has never been rigorously scrutinized, due to the sheer enormity of the amount of data. In addition, there is a considerable amount of information available which is usable in present and anticipated fire research studies.

With the advent of machine processing, it became possible to handle large quantities of information with much greater ease. For this reason, a project was started in 1960 under the direction of D. G. Fraser to transfer the pertinent information from field notes to punched cards. This has recently been completed, and the result is approximately 200,000 cards of weather, fuel moisture and fire behavior information.

Because of the complexity of the data, a 3-card format was used. There was a separate card for weather, fire behavior, and fuel moisture information. Each card was coded with reference information so that all observations made at the same place and time could be matched.

Today, with the third generation computers firmly established, even machine processing of data is relatively inefficient and slow. Physically handling 200,000 cards is somewhat difficult when the data is at some distances from the computer facility. For this reason, all of the data has been placed on magnetic tape. This was not in itself sufficient to allow for efficient computer processing however. The fuel moisture, fire behavior, and weather records had to be merged. While this would have been a relatively simple process for small batches of data on unit record equipment, the problem turned out to be quite complex when the entire body of data was considered. The data format was rearranged to allow for more efficient processing and greater ease of reading. With removal of the limitations imposed by an 80-column card, and the ability to store vast quantities of information on a single reel of tape, it was now possible to repeat portions of records several times, so that each newly created merged record was complete by itself.

Because it is felt that the information is now in a form which is useful to many persons involved in fire research, this manual has been prepared. Its purpose is to describe the data, and its format. Inventories by stations are also presented to give the reader an idea of the amount of various types of information which is available. Since the original code manuals (Fraser and Joly, 1961, 1962, 1963, 1965) which described the card format are out of print, the information contained therein is also summarized.

Throughout this paper there are many direct quotations from the above-mentioned code manuals. To reference each individually would only serve to confuse the present manual. Therefore, it may be assumed that all descriptions of card formats and data codes for other than merged or revised records contained herein were taken from the code manuals prepared by Fraser and Joly. It should be noted however that there have been a significant number of additions made to the codes listed in the aforementioned manuals. Every attempt has been made to complete the list of codes in this publication. All persons with the original manuals should either discard them and retain this report, or correct the original manuals.

This manual is in five sections. The first section describes the reference data (site, date, etc.), which is generally the same for all tapes. Then the weather, fuel moisture and test fire behaviour data are each discussed separately. The last section presents the author's views concerning potential uses for the data and the future work which should be carried out to improve the continuity and quality of the files. There are also three appendices containing inventories of the data.

In all, ten major and several smaller programs were written for this project, totalling about 3,060 lines of instructions. Total computer time required for production runs was about $3\frac{1}{2}$ hours exclusive of spooling operations which required an additional $8\frac{1}{2}$ hours. To simply list all these programs without explanatory notes would require an additional 75 pages. Since these programs are very specialized, interest in them is expected to be very limited. Therefore, anyone requiring information on the individual programs for developing alternate formats and merge operations can obtain it from the Forest Fire Research Institute. The major program titles and a flow chart for the project is shown in appendix IV.

I. Reference Data

At the beginning of every record there is reference information which identifies the location and time of observation.

The location code is a 5-digit number. The first two digits represent the province, the third the station, and the last two the site.

Table 1. Province - Station - Site Code

Province Station

Newfoundland - Rattling Brook

Site	Code	Site	Code
B_1 (Balsam Fir)	10101	S_1 (Spruce)	10104
Mixedwood	10102	C_1 (Cladonia)	10105
SB (Spruce - Fir)	10103		

New Brunswick - Fredericton

Mixedwood	26101	White Pine	26105
SB (FD) (Spruce-Fir)	26102	Cedar	26106
SB (SD) (Spruce-Fir)	26103	Grass	26107
Spruce Swamp	26104	Polytrichum	26108

Quebec - Valcartier

Balsam	30101	Mixedwood	30103
White Pine	30102	Moss	30104

Ontario - Petawawa

White Pine (Thomas Field)	40101	Misc. Site (Racehorse)	40112
Mixedwood Plot #5	40102	Petawawa Plains	40113
Poplar (Aspen)	40103	Mixed R-W Pine Plot #69W	40114
Grass (Thomas Field)	40104	Mixed R-W Pine Plot #2	40115**
Grass (Branstead)	40105	Mixed R-W Pine Plot #49	40116**
Oak Ridge	40106	Cut-over Area (Racehorse)	40117
Red Pine Plot #79	40107*	Hardwood (Site 102)	40118
Red Pine Plot #80	40108*	Spruce Swamp	40119
Jack Pine (Racehorse)	40109	Headquarters	40120
Mixed R-W-J (Racehorse)	40110		
Misc. Site (Montgomery Lake)	40111		

Manitoba - Whiteshell

JS (Pine-Spruce)	50101	H.Q.	50107
JY_2 (Pine)	50102	Poplar	50108
JY_1^2 (Pine)	50103	J_1 (Pine)	50109
PB^1 (Poplar-Birch)	50104	SB	50110
J_2 (Pine)	50105	Headquarters	50111
C_1^2 (Cladonia)	50106		

Saskatchewan - Bittern Creek

A (Aspen)	60101	Cla. (Cladonia)	60106
MW (Poplar-Spruce-Pine)	60102	P (Pine)	60107
S_1 (Spruce)	60103	PS (Pine-Spruce)	60108
S_2^1 (Spruce)	60104	Headquarters	60109
B^2 (Burned)	60105		

Alberta - Kananaskis

L_1A (Pine)	70101	S_1 (Spruce)	70108
L_1^1B (Pine)	70102	S_1^1L (Spruce-Pine)	70109
L_1^1 (Pine)	70103	Grass	70110
L_1^1C (Pine-Cladonia)	70104	L_3 (Pine)	70111
L_1^4 (Pine)	70105	P_2^3 (Poplar)	70112
L_2^4 (Pine)	70106	PL_1 (Pine - Poplar)	70113
P_1^2 (Poplar)	70107	Headquarters	70114

Alberta - Whitecourt

P_1 (Pine)	70201	S_2 (Spruce)	70207
P_1^1C (Pine-Cladonia)	70202	SC (Spruce-Cladonia)	70208
P_2^1 (Pine)	70203	SA (Spruce-Poplar)	70209
PA (Pine-Poplar)	70204	Headquarters	70210
Aspen	70205	Grass	70211
S_1 (Spruce)	70206		

British Columbia - 100 Mile House

AP (Poplar-Pine	80101	D_4 (Fir)	80107
A (Poplar)	80102	D_5^4 (Fir-grass open)	80108
G (Grass)	80103	P_1^5 (Pine)	80109
D_1 (Fir)	80104	P_2^1 (Pine-grass open)	80110
D_2^1 (Fir)	80105	S^2 (Spruce)	80111
D_3^2 (Slash-Fir-Pine-Spruce)	80106	Headquarters	80112

British Columbia - Lake Cowichan

Br_1 (Cutover-Bracken)	80201	D_7 (Fir)	80209
Br_2 (Cutover-Bracken-Salal)	80202	D_8 (Fir-Slash)	80210
D_1 (Fir regen. open)	80203	D_9 (Fir)	80211
D_2 (Fir regen. dense)	80204	D_{10} (Fir-Slash)	80212
D_3 (Fir-Young)	80205	D_{11} (Fir-slash)	80213
D_4 (Fir-Slash)	80206	D_{12} (Fir-Slash-Burned)	80214
D_5 (Fir)	80207	D_{13} (Fir-Slash-Burned)	80215
D_6 (Fir-Slash)	80208	Headquarters	80216

Northwest Territories - Fort Smith

P_1 (Jack Pine)	90101	SAP (Spruce, Aspen, Pine)	90105
P_1 (J. Pine, Aspen, Spruce)	90102	A_1 (Aspen)	90106
S^2 (Spruce)	90103	Headquarters	90107
SA (Spruce, Aspen)	90104		

* These are both on the same site - coded as 40107
** " " " " " " " " " " 40115

Table 2. Date and Time Code

Month	Code
January	01
February	02
March	03
April	04
May	05
June	06
July	07
August	08
September	09
October	10
November	11
December	12

Year - Last two digits of year, i.e. 1951 51
Day - Day of month, i.e. 12 12
Hour of Observation 0000 to 2400

Hour of Observation - The hour of observation is based on a 24-hour system, thus 8:15 a.m. becomes 0815 and 2:30 p.m. becomes 1430. However, in recording fuel moisture observations an approximate time may be entered. For example, on site 40112 a test fire was conducted at 3:15 p.m., and fuel samples (duff were gathered at 3:20 p.m., splint trays were weighed at 3:25 p.m., one weigh beam log at 3:30 p.m., duff baskets at 3:34 p.m., a second weigh beam log at 3:40 p.m. and a moss sample taken at 3:45 p.m. Since the splint tray moisture contents and duff

basket moisture content may go on the same card the hour of observation could be coded as 1525. A similar treatment could be given the duff and moss sample, (1520) and the two weigh beam logs (1530).

Table 3. Card and Tape Format for Reference Information

Name	Card Col.	Tape
Province	1-2	2-3*
Station	3	4
Site	4-5	5-6
Year	8-9	8-9
Month	6-7	10-11
Date	10-11	12-13
Time	12-15	15-18

* Column 1 is left blank

The above information and format appears on all fuel moisture and fire behavior cards and tapes at the start of every record. An example of the tape format may be seen in each of the samples given for the individual tapes in the appendices. There is a slight difference in the location information and format in the weather records, as discussed in the next section.

II. Weather Data

Standard weather observations were made at the headquarters site for each station. Headquarters sites were generally in large clearings and in locations which were considered to be representative of the surrounding area. In addition, observations of a more limited nature were often made at various sites in conjunction with fuel moisture or test fires experiments.

In addition to one tape containing all of the weather data in its original form, two other tapes were created. Because it was possible to have the same type of observation from different instruments (i.e. - temperature from a thermometer and a hygrothermograph) there was a certain amount of duplication on the weather card. Also, more information was recorded than was considered immediately useful. Therefore, a simplified version of the weather tape was created with only one location for each type of measurement.

In addition, since most fire danger indices use noon weather observations only, a third tape with this information was created from the simplified weather tape. An additional feature of the noon weather tape is an indicator for missing days.

There is a slight difference in the location codes used for the weather data. This results from the need to include station elevation information for the computation of relative humidity. Also, there are a number of stations other than those listed in the first section where weather was recorded.

Table 4. Location Code for Weather Data

Province	Station	Sub-Station	Code
Newfoundland	Rattling Brook	Headquarters	1011
Nova Scotia	Cape Breton Highland Pk.	Cape Breton	2312
		Cheticamp	2313
		Pleasant Bay	2314
New Brunswick	Acadia	Acadia	2641
	Fredericton	Headquarters	2611
	Fundy Nat. Park	Lakeview	2622
	Gagetown	Brown's Flats	2632
		Townsite	2633
		Camp Gagetown	2634
		Boyne	2635
Quebec	Valcartier	Headquarters	3011
Ontario	Petawawa	Headquarters	4011
		Thomas Field	4012
		Branstead	4013
		Racehorse	4014
		Montgomery Tower	4015
		Montgomery Cabin	4016
		Highview Tower	4017

Manitoba	Whiteshell	Headquarters	5011
	Riding Mt. Pk.	Deep Lake	5022
		Whirlpool	5023
		Moon Lake	5024
		Wasagaming	5025
Saskatchewan	Bittern Creek	Headquarters	6011
	Prince Albert Nat. Pk.	Gatehouse	6022
		Sturgeon Crossing	6023
		Waskesiu	6024
		Kingsmere	6025
Alberta	Kananaskis	Headquarters	7011
	Boundry Cabin	S_1 (Spruce)	7012
		L_1A, L_1B, L_1C, L_2, L_3	7013
		Boundary Cabin	7014
	Whitecourt	Headquarters	7021
	Jasper Nat. Pk.	Townsite	7032
		East Gate	7033
		Athabaska Falls	7034
	Banff Nat. Pk.	Lake Louise	7042
		Sask. Crossing	7043
		Banff	7044
		Ya Ha Tinda	7045
	Waterton Lakes Nat. Pk.	Waterton Lakes	7052
British Columbia	100-Mile House	Headquarters	8011
		P_2 (Pine, Grass, Open)	8012
		D_1 (Fir)	8013
		G^1 (Grass)	8014
		D_4 (Fir)	8015
		AP (Poplar Pine)	8016
		D_3 (Slash-Fir-Pine-Spruce)	8017
		D_2 (Fir)	8018
		D_5 (Fir-Grass-open)	8019
	Lake Cowichan	Headquarters	8021
	Yoho Nat. Pk.	Ottertail	8032
North West Territories	Fort Smith	Headquarters	9011

NOTE

All sub-stations named "Headquarters" were the principal weather stations in a forest fire research area. These stations have the most complete weather records available. The last code digit for these stations is 1, which makes them easy to distinguish from other weather stations.

Table 5. Station Elevation Code

0	-	Not classified
1	-	Less than 1,000 feet
2	-	1,000 feet to 2,500 feet
3	-	More than 2,500 feet

Table 6 describes the weather observations which have been recorded. The following information is listed: type of observation, unit of measurement, codes, format and column headings for the inventory tables. Following Table 6 is a remarks section which gives additional information on individual observations. Tables 7 through 10 list the codes for those observations which were too lengthy to include in Table 6.

Table 6. Description of Weather Records, Codes and Locations

Field Title	Range and Unit of Measurement	Code	Remarks	FORMAT: Card and Basic Weather	FORMAT: Revised Weather	FORMAT: Noon Weather	COLUMN HEADINGS FOR INVENTORY TABLES: Basic Weather Tape Yearly	COLUMN HEADINGS FOR INVENTORY TABLES: Basic Weather Tape Totals	COLUMN HEADINGS FOR INVENTORY TABLES: Noon Weather Tape
Location			1.	1-4	1-4	2-5			
Elevation			2.	5	5	6			
Date			3.	6-11	6-11	8-13			
Time			4.	12-15	12-15	15-18			
Card No.			5.	16	-	-			
Wind Direction			6.	17	-	-	DIR	DIR	-
Wind Speed	0 mph - 99 mph	00-99	7.	18-19	54-55	51-53	SPD	SPEED	WIND
Precipitation - Rain	0.00 in. - 9.99 in.	000-999	8.	20-22	-	-	RA	RAIN	-
Precipitation - Rain	trace	T	8.	22	-	-			
Precipitation - Snow	0.0 in. - 99.9 in.	000-999	8.	23-25	-	-	SNO	SNOW	-
Psychrometer - Dry Bulb	0.0°F. - 99.9°F.	000-999	9.	26-28	17-18	20-21	DB	DRYB	DB
Psychrometer - Wet Bulb	0.0°F. - 99.9°F.	000-999	10.	29-31	20-21	23-24	WB	WETB	WB
Psychrometer - Wet Bulb Depression	0.0°F. - 99.9°F.	000-999	11.	32-34	-	-	DIF	DIF	-
Psychrometer - Relative Humidity	0% - 99%	00-99	12.	35-36	23-24	26-27	RH	RH	RH
Dew Point Temperature	0°F. - 99°F.	00-99	11.	37-38	-	-	DP	DEWP	-
Hygrothermograph - Temp.	0°F. - 99°F.	00-99	13.	39-40	17-18	20-21	TP	Temp	DB
Hygrothermograph - Relative Humidity	0% - 99%	00-99	14.	41-42	23-24	26-27	HRH	HRH	-
Temperature - Maximum	0°F. - ±99°F.	00-±99	15.	43-45	-	-	MAX	MAX	-
Temperature - Current	0°F. - ±99°F.	00-±99	16.	46-48	17-18	20-21	CUR	CUR	DB
Temperature - Minimum	0°F. - ±99°F.	00-±99	15.	49-51	-	-	MIN	MIN	-
Cloud Cover - Direction			6.	52	-	-	CC	CC	CC
Cloud Cover - Amount			17.	53	52	47	CC	CC	CC
Evaporation - Wright pan	0 c.c. to 999.9 c.c.	0000-9999	18.	54-57	42-46	-	WRI	WRI	-
Evaporation - Piché	0 c.c. to 999.9 c.c.	0000-9999	19.	58-61	42-46	-	PIC	PICH	-
Dew	0.0 ml to 99.9 ml	000-999		62-64	37-39	40-42	DEW	DEW	DEW
Dew	trace	T	20.	64	37-40	40-43	DEW	DEW	DEW
Remarks			21.	65-66	-	-	REM	REM	-
Daily - Maximum Temperature	0°F. - ±99°F.	00-±99	22.	67-69	26-27	29-30	MAX	MAX	MAX
Daily - Minimum Temperature	0°F. - ±99°F.	00-±99	22.	70-72	29-30	32-33	MIN	MIN	MIN
Daily - Total Precipitation	0.00 in. - 9.99 in.	000-999	23.	73-75	32-34	35-37	PPT	PPT	PPT
Daily - Total Precipitation	trace	T	24.	75	32-35	35-38	PPT	PPT	PPT
Daily - Hours of Sunshine	0.0 hrs. - 24.0 hrs.	000-240	25.	76-78	48-50	45-47	SUN	SUN	SUN

Remarks

1. See Table 4 for codes.

2. See Table 5 for codes.

3. See Table 2 for codes.

4. See Table 2 for codes. On the noon weather tape some additional codes are entered in the time field. If weather has been recorded on the day, but the time is not between 1045 and 1445, a code of 4000 is entered, and one day's noon weather is considered missing. If no observations have been made for one or more days, a code of 3000 plus the number of missing days is entered. (i.e., 3003 = three missing days). See part C of Section 5 for a discussion or errors in this field.

5. See Table 7 for codes.

6. See Table 8 for codes.

7. If wind recordings have been made on the day, but not at the time of the noon observation, the average daily wind is computed and entered along with the noon weather. An (A) is entered in the next column. Velocity is in Cols. 51-52, A is in 53 if the value is an average of all observations on the given day.

8. During the interval between the current and previous observation.

9. Rounded off to the nearest degree on the revised format and noon weather tapes. This field is the primary choice for insertion into the temperature field on these tapes.

10. Rounded off to the nearest degree on the revised format and noon weather tapes.

11. Machine computed using decks of master cards (Psychrometric Tables) developed by the Meteorological Branch of the Department of Transport.

12. Machine computed using decks of master cards (Psychrometric Tables) developed by the Meteorological Branch of the Department of Transport. This field is the primary choice for insertion into the relative humidity field on the revised format and noon weather tapes.

13. The second choice for insertion into the temperature field on the revised format and noon weather tapes.

14. The second choice for insertion into the relative humidity field on the revised format and noon weather tapes.

15. During the interval between the current and previous observation. The sign (plus or minus) is normally omitted. All values are assumed to be positive on the revised format and noon weather tapes.

16. The third choice for insertion into the temperature field on the revised format and noon weather tapes. The sign is normally omitted, and all values on these tapes are assumed to be positive.

17. See Table 9 for codes. Some small amounts were coded as "T". These were not expected and no provision was made to correct this code. Therefore there are some "T"'s in this field on the final tapes.

18. Primary choice for insertion into the evaporation field on the revised format tape. Evaporation is in columns 42 to 45. Code No. 1 is inserted in Col. 46.

19. Second choice for insertion into the evaporation field on the revised format tape. Evaporation is in columns 42 to 45. Code No. 2 is inserted in Col. 46.

20. All trace observations (T in column 64) were converted to .005ml and recorded as 0005 in columns 37 to 40 of the revised weather tape.

21. See table 10 for codes.

22. Values for the calendar date (not the interval since the previous measurement). All values are assumed to be positive on the revised format and noon weather tapes.

23. (a) Values for the previous 24 hour period. The time of observation -- not the date -- is used as a base for computing the 24-hour rainfall.
(b) Inches of snow are divided by 10 to convert to inches of water.

24. All trace observations (T in column 75) are converted to .005 inches of rain and a 5 is placed in column 35, i.e. normal observation is 020 in columns 32 for .20 inches or rain. A trace is recorded as 0005 in columns 32 to 35.

25. Values for the calendar date. Some small amounts were coded as "T". These were not expected and therefore not detected until after the final tape was produced.

Table 7. Card No. Code

TIME INTERVAL	CODE
0500 - 1030	1
1031 - 1430	2
1431 - 2400	3

Table 8. Wind and Cloud Cover Direction Code

Not classified	0
North	1
Northeast	2
East	3
Southeast	4
South	5
Southwest	6
West	7
Northwest	8

Table 9. Cloud Amount Code

Sky clear	0
1/10th of sky obscured by cloud	1
2/10ths of sky obscured by cloud	2
3/10ths of sky obscured by cloud	3
4/10ths of sky obscured by cloud	4
5/10ths of sky obscured by cloud	5
6/10ths of sky obscured by cloud	6
7/10ths of sky obscured by cloud	7
8 to 9/10ths of sky obscured by cloud	8
Sky completely obscured by cloud	9

Table 10. Weather remarks code*

00	Cloud development NOT observed or NOT observable during past hour.
01	Clouds generally dissolving or becoming less developed during past hour.
02	State of sky on the whole unchanged during past hour.
03	Clouds generally forming or developing during past hour.
04	Visibility reduced by smoke.
05	Haze.
06	Widespread dust in suspension in the air, NOT raised by wind, at time of observation.
07	Dust or sand raised by wind, at time of observation.
08	Well developed dust or sand whirl (s) at time of observation or in past hour.
09	Duststorm or sandstorm in sight at time of observation or at station in past hour.
10	Mist.
11	Patches of shallow fog, or shallow ice fog, at station, NOT deeper than 6 feet on land.
12	More or less continuous shallow fog, or shallow ice fog, at station, NOT deeper than 6 feet on land.
13	Lightning visible, no thunder heard.
14	Precipitation within sight, but NOT reaching the ground.
15	Precipitation within sight, reaching ground, but distant (more than 3 miles from station).
16	Precipitation within sight, reaching the ground, near to but NOT at station.
17	Thunderstorm, but no precipitation at station.
18	Squall (s) at the station during the past hour, or at the time of observation.
19	Funnel cloud (s) within sight during the past hour or at the time of observation.
20	Drizzle (NOT freezing) snow grains during past hour but not at the time of observation.
21	Rain (NOT freezing and NOT falling as showers) during past hour, but not at time of observation.
22	Snow (NOT falling as showers) during past hour, but NOT at time of observation.
23	Rain, snow or ice pellets type (a) (NOT falling in showers) during past hour, but NOT at time of observation.
24	Freezing drizzle or freezing rain (NOT falling as showers) during past hour, but NOT at time of observation.

25 Showers of rain during past hour, but NOT at time of observation.
26 Showers of snow, or of rain and snow, but NOT at time of observation.
27 Showers of hail**, or of hail and rain, during past hour but NOT at time of observation.
28 Fog, or ice fog during the past hour, but NOT at time of observation.
29 Thunderstorm (with or without precipitation) during past hour, but NOT at time of observation.
30 Slight or moderate duststorm or sandstorm has decreased during past hour.
31 Slight or moderate duststorm or sandstorm, no appreciable change during past hour.
32 Slight or moderate duststorm or sandstorm, has begun or increased during past hour.
33 Severe duststorm or sandstorm, has decreased during past hour.
34 Severe duststorm or sandstorm, no appreciable change during the past hour.
35 Severe duststorm or sandstorm, has begun or increased during the past hour.
36 Slight or moderate drifting snow.
37 Heavy drifting snow.
38 Slight or moderate blowing snow.
39 Heavy blowing snow.
40 Fog or ice fog at distance at time of observation, but NOT at station during past hour.
41 Fog or ice fog in patches.
42 Fog or ice fog, sky discernible, has become thinner during past hour.
43 Fog or ice fog, sky NOT discernible, has become thinner during past hour.
44 Fog or ice fog, sky discernible, no appreciable change during past hour.
45 Fog or ice fog, sky NOT discernible, no appreciable change during past hour.
46 Fog or ice fog, sky discernible, has begun or become thicker during past hour.
47 Fog or ice fog, sky NOT discernible, has begun or become thicker during past hour.
48 Fog, depositing rime, sky discernible.
49 Fog, depositing rime, sky NOT discernible.
50 Intermittent drizzle (NOT freezing) slight at time of observation.
51 Continuous drizzle (NOT freezing) slight at time of observation.
52 Intermittent drizzle (NOT freezing) moderate at time of observation.
53 Continuous drizzle (NOT freezing) moderate at time of observation.
54 Intermittent drizzle (NOT freezing), heavy, (dense) at time of observation.
55 Continuous drizzle (NOT freezing), heavy, (dense) at time of observation.
56 Slight freezing drizzle.
57 Moderate or heavy freezing drizzle.
58 Drizzle and rain, slight.
59 Drizzle and rain, moderate or heavy.
60 Intermittent rain (NOT freezing) slight at time of observation.
61 Continuous rain (NOT freezing), slight at time of observation.
62 Intermittent rain (NOT freezing), moderate at time of observation.
63 Continuous rain (NOT freezing), moderate at time of observation.
64 Intermittent rain (NOT freezing), heavy at time of observation.
65 Continuous rain (NOT freezing), heavy at time of observation.
66 Slight freezing rain.
67 Moderate or heavy freezing rain.
68 Rain or drizzle and snow, slight.
69 Rain or drizzle and snow, moderate or heavy.
70 Intermittent fall of snow flakes, slight at time of observation.
71 Continuous fall of snowflakes, slight at time of observation.

72 Intermittent fall of snowflakes, moderate at time of observation.
73 Continuous fall of snowflakes, moderate at time of observation.
74 Intermittent fall of snowflakes, heavy at time of observation.
75 Continuous fall of snowflakes, heavy at time of observation.
76 Ice prisms (with or without fog).
77 Snow grains (with or without fog).
78 Isolated starlike snow crystals (with or without fog).
79 Ice pellets, type (a).
80 Slight rain shower (s).
81 Moderate or heavy rain shower (s).
82 Violent rain shower (s).
83 Slight shower (s) of rain and snow mixed.
84 Moderate or heavy shower (s) of rain and snow mixed.
85 Slight snow shower (s).
86 Moderate or heavy snow shower (s).
87 Slight shower (s) of snow pellets, or ice pellets, type (b), with or without rain or rain and snow mixed.
88 Moderate or heavy shower (s) of snow pellets or ice pellets type (b), with or without rain or rain and snow mixed.
89 Slight shower (s) of hail, with or without rain or rain and hail mixed, not associated with thunder.
90 Moderate or heavy shower (s) of hail, with or without rain or rain and snow mixed, not associated with thunder.
91 Slight rain at time of observation; thunderstorm during past hour, but NOT at time of observation.
92 Moderate or heavy rain at time of observation, thunderstorm during past hour, but NOT at time of observation.
93 Slight snow or rain and snow mixed or hail** at time of observation, thunderstorm during past hour but NOT at time of observation.
94 Moderate or heavy snow, or rain and snow mixed or hail** at time of observation, thunderstorm during past hour but NOT at time of observation.
95 Slight or moderate thunderstorm without hail**, but with rain and/or snow at time of observation.
96 Slight or moderate thunderstorm, with hail** at time of observation.
97 Heavy thunderstorm without hail** but with rain and/or snow at time of observation.
98 Thunderstorm combined with duststorm or sandstorm at time of observation.
99 Heavy thunderstorm with hail** at time of observation.

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* These are copied from the D.O.T., Met. Branch weather remarks codes and were used by fire research personnel in the field.

** Hail, ice pellets, snow pellets inclusive.

III. Fuel Moisture Data

Moisture content values were determined for light and heavy surface fuels, soils, and aerial combustibles. Included are: various duff and soil horizons, grasses, ferns, lichens, mosses, shrub foliage, tree foliage, miscellaneous fuels (twigs, branches, wood chips, bark, cones, etc.), and windfall log borings.

Two techniques of determining fuel moisture were employed at field sites. In the first -- samples of log borings, duff or other fuels were collected at the field site and oven-dried in the field laboratory to determine moisture content. The second method was to employ an indirect fuel moisture indicator such as splint trays, wood cylinders, sticks or logs of known dry weight. These were left at the field sites for the entire fire season and weighed at the site to determine changes in weight, from which moisture content could be calculated.

The great variety of fuel types encountered necessitated the use of a complex coding system for recording the necessary fuel description information. This was further complicated by the fact that in certain cases several related, but different fuel moisture observations were made at the same time. To overcome the difficulties of coding imposed by the above conditions, a separate card format was developed for each major type of fuel. Each of the formats allowed for the recording of several related measurements made at the same time. There are a total of five separate fuel moisture formats.

A multiple format system poses no difficulties with respect to processing on unit record equipment. On the other hand, it does create additional problems when processing data on a computer. For this reason, it was decided that a single uniform format would be used for all fuel moisture records placed on magnetic tape.

The initial purpose of placing fuel moisture records on magnetic tape was to allow for merging with weather records and subsequent regression analysis. It was felt that others might have use for the merged fuel moisture-weather records. For this reason, the merged tape was retained rather than the fuel moisture tape. Two weather records were joined to each fuel moisture observation. First, the weather observation at the time closest to that of the fuel moisture observation was added. Second, the noon weather for the day was added. The times of all three observations are listed.

The following section contains a list of the location of data on cards, and magnetic tape, and the codes used to describe the fuel sample and its moisture content.

Table 11. Summary of Tape Format and Location of Merged Weather Data

		Tape Location
I.	Reference:	
	Location	2-6
	Date	8-13
	Time	15-18
II.	Fuel Moisture:	
	Fuel Tape	20
	Fuel Identifier #1	22-24
	Fuel Identifier #2 (if necessary)	26-27
	Fuel Moisture	29-33
III.	Weather matched by time of observation	
	Field Description:	
	Time of weather observation	35-38
	Dry bulb temperature	40-41
	Wet bulb temperature	43-44
	Relative humidity	46-47
	Daily maximum temperature	49-50
	Daily minimum temperature	52-53
	Precipitation (past 24 hours)	55-57
	Precipitation (trace)	58
	Dew	60-62
	Dew (trace)	63
	Evaporation	65-68
	Evaporation description code	69
	Daily sunshine	71-73
	Cloud cover	75
	Wind speed	77-78
	Wind speed (average code)	79
IV.	Noon Weather:	
	Time of observation	81-84
	Dry bulb temperature	86-87
	Wet bulb temperature	89-90
	Relative humidity	92-93
	Precipitation (past 24 hours)	95-97
	Precipitation (trace)	98
	Wind speed	100-101
	Wind speed (average code)	102

Table 12. Codes for General Fuel Moisture Type

Card Location: Col. 16 Tape Location: Col. 20

Fuel Type	Code
1. Oven dried samples, other than log borings, e.g., TLD, FOL, Moss, etc.	4
2. Oven dried samples of boring or auger chips from logs	5
3. Match splint trays, duff baskets, moss baskets	6
4. Sticks: wood cylinders, flat sticks, FOL sticks, B.C. hazard sticks.	7
5. Logs: weigh beam, express scale, heavy fuel moisture indicators.	8

The specific codes for each of the above general types are discussed individually in the following sections.

1. Oven Dried Fuel Samples.

These were samples of different fuels gathered at the site of test fires or at other research sites. The samples were place in tins with tight-fitting lids and taken to a field laboratory, where the tins and contents were weighed and oven-dried to determine the moisture content of the fuel. There are eight different types of oven-dried fuel samples used, each of which is described in detail below.

Table 13. Field Description, Codes and Location Information for Oven-Dried Fuel Samples.

Field Title	Code	Card Location	Tape Location
I. A. Duff-Soil Horizon Sample	000-999	18-20	22-24
Not classified	000	"	"
Fresh leaf fall	001	"	"
Top layer duff (TLD)	002	"	"
Middle layer duff (MLD)	003	"	"
Bottom layer duff (BLD)	004	"	"
Full layer duff (FLD)	005	"	"
Full organic layer (FOL)	006	"	"
Soil	007	"	"
Peat	008	"	"

Field Title		Code	Card Location	Tape Location
B. Duff Moisture Content 0.00% to 999.9%		0000-9999	35-38	29-33
II. Tree Foliage Samples		100-199	21-23	22-24
A. Species				
P	Pine General	101	"	"
wP	Eastern white pine	102	"	"
rP	Red pine	103	"	"
jP	Jack pine	104	"	"
lP	Lodgepole pine	105	"	"
sP	Shore pine	106	"	"
pP	Ponderosa pine	107	"	"
wwP	Western white pine	108	"	"
-P	Miscellaneous pines	109	"	"
S	Spruce - general	110	"	"
bS	Black spruce	111	"	"
rS	Red spruce	112	"	"
wS	White spruce	113	"	"
eS	Englemann spruce	114	"	"
sS	Sitka spruce	115	"	"
-S	Miscellaneous spruce	119	"	"
F	Fir - general	120	"	"
bF	Balsam fir	121	"	"
alF	Alpine fir	122	"	"
gF	Grand fir	123	"	"
aF	Amabilis (Pacific Silver) fir	124	"	"
D	Douglas fir	125	"	"
L	Larch - general	130	"	"
tL	Tamarack	131	"	"
aL	Alpine larch	132	"	"
wL	Western larch	133	"	"
-L	Miscellaneous larch	139	"	"
C	Cedar - general	140	"	"
eC	Eastern white cedar	141	"	"
wC	Western red cedar	142	"	"
yC	Yellow cedar	143	"	"
rJ	Red juniper	144	"	"
roJ	Rocky Mt. juniper	145	"	"
H	Hemlock - general	150	"	"
eH	Eastern hemlock	151	"	"
wH	Western hemlock	152	"	"
mH	Mountain hemlock	153	"	"

Field	Title	Code	Card Location	Tape Location
A or Po	Aspen or Poplar - general	160	"	"
tA	Trembling aspen	161	"	"
lA	Largetooth aspen	162	"	"
bPo	Balsam poplar	163	"	"
eCo	Eastern cottonwood	164	"	"
pCo	Plains cottonwood	165	"	"
lCo	Lanceleaf cottonwood	166	"	"
nCo	Narrowleaf cottonwood	167	"	"
bCo	Black cottonwood	168	"	"
-Po	Miscellaneous poplars	169	"	"
B	Birch - general	170	"	"
wB	White birch	171	"	"
yB	Yellow birch	172	"	"
wiB	Wire (Grey) birch	173	"	"
-B	Miscellaneous birches	179	"	"
M	Maple - general	180	"	"
sM	Sugar maple	181	"	"
rM	Red maple	182	"	"
blM	Black maple	183	"	"
siM	Silver maple	184	"	"
mM	Manitoba maple	185	"	"
bM	Broadleaf maple	186	"	"
-M	Miscellaneous Maple	189	"	"
-	Tree-Size Alder	190	"	"
As	Ash	191	"	"
Ba	Basswood	192	"	"
Be	Beech	193	"	"
Ch	Cherry	194	"	"
E	Elm	195	"	"
Hi	Hickory	196	"	"
I	Ironwood	197	"	"
O	Oak	198	"	"
W	Willow	199	"	"
B. Sample Description			39-40	26-27
	Buds	01	"	"
	Leaves or needles, general (green)	02	"	"
	This year's needles only	11	"	"
	Last year's needles	12	"	"
	This year's and last year's needles	13	"	"
	This year's needles and twigs growth	14	"	"
	Last year's needles and twigs growth	15	"	"
	This year's and last year's needles and twigs growth	16	"	"

Field Title	Code	Card Location	Tape Location
Leaves and small twigs (deciduous)	21	39-40	26-27
Leaves and twigs, general (this year's and last year's growth)	22	"	"
Twigs only, living branches	31	"	"
Twigs and buds	32	"	"
Twigs, dead branches	33	"	"
C. Tree Foliage Moisture Content 0.0% to 999.9%	0000-9999	41-44	29-33
III. A. Lichen Samples	200-299	24-26	22-24
Species not classified	200	"	"
Cladonia rangeferina	211	"	"
Cladonia alpestris	212	"	"
B. Lichen Moisture Content 0.0% to 999.9%	0000-9999	47-50	29-33
IV. A. Moss Samples	300-399	27-29	22-24
Species not classified	300	"	"
Hylocomium	310	"	"
Calliergon	320	"	"
Polytrichum	330	"	"
Sphagnum (non-specific)	340	"	"
Sphagnum Capillaceum	341	"	"
Sphagnum squarrosum	342	"	"
Sphagnum palustre	343	"	"
B. Moss Moisture Content* 0.0% to 9999.9%	00000-99999	51-56	29-33
C. Corrected M.C. Indicator**			
Not corrected	Blank	80	-
Corrected	1	80	-
V. A. Ground Vegetation, Low Shrubs	400-499	30-32	22-24
Species not classified	400	"	"
Blueberry	401	"	"
Cranberry	402	"	"
Bearberry	403	"	"
Labrador Tea	404	"	"
Goldworthy	405	"	"
Sweet fern	406	"	"
Salal (Green)	407	"	"
Juniper	408	"	"
Buffalo Berry	409	"	"
Fireweed	410	"	"
Salal (Dead) Tlds	411	"	"

	Field Title	Code	Card Location	Tape Location
	High Shrub			
	Species not classified	420	30-32	22-24
	Hazel	421	"	"
	Alder	422	"	"
	Willow	423	"	"
B.	Sample Description		57-58	26-27
	Not specific	00	"	"
	Leaves only	01	"	"
	Leaves and small twigs	02	"	"
	Dead branches	03	"	"
	Twigs and buds	04	"	"
C.	Shrub Moisture Content 0.0% to 999.9%	0000-9999	59-62	29-33
VI. A.	Ferns	500-599	18-20	22-24
	Species not specified	500	"	"
	Bracken	510	"	"
	Hay scented	520	"	"
	Dead Fern on Ground (TLDF)	530	"	"
	Bracken (green)	540	"	"
B.	Fern Moisture Content 0.0% to 999.9%	0000-9999	35-38	29-33
VII. A.	Grasses Species not specified	600	21-23	22-24
B.	Grass Moisture Content 0.0% to 999.9%	0000-9999	41-44	29-33
VIII. A.	Miscellaneous Samples	900-999	30-32	22-24
	Chips of logs (Not log borings)	901	"	"
	Branches (off ground, no species designated)	902	"	"
	Bark of trees (taken from several trees, no species designated)	903	"	"
	Herbs, general (samples gathered from several species on site)	904	"	"
	Cones, general (samples gathered from several species on site)	905	"	"
	Twigs on ground (TOG)	911	"	"
	Twigs on trees (TOT) (Taken from several trees, no species designated)	912	"	"
	*** Twigs on slash	913	"	"
	Slash, general, no size (windfall, dead windfall logs)	920	"	"
	Slash, green, needles, leaves twigs, small branches	921	"	"

Field Title	Code	Card Location	Tape Location
Slash, leaves, needles and twigs to 1/4" dia. (dead)	922	30-32	22-24
*** Slash, no leaves or needles, twigs to 1/4" dia.	923		"
Slash, twigs and branches to 1/2" dia.	924	"	"
Slash, pieces 1/2" to 1" dia.	925	"	"
Needles off slash or needles from dead trees (NOS)	930	"	"
Dead vegetation	931	"	"
Vegetation not specified	932	"	"
B. Species of Slash (Last two digits of tree foliage code)	01-99	57-58	26-27
C. Miscellaneous Moisture Content 0.0% to 999.9%	0000-9999	59-62	29-33

* Note that the first column of the card field has been deleted as it was not expected that moisture contents in excess of those listed above would be encountered.

** It was discovered after the tape was produced that a code of 1 was inserted in Col. 80 if the moisture content was corrected. Col. 80 was left blank if the M.C. was not corrected. This information is not on the fuel moisture tape, but may be obtained by examinating the cards.

*** After the codes were established, it was discovered that these are actually identical. The absence of a 923 code in the data indicates that these were all coded as 913.

2. Oven-dried Log Borings

These were samples of auger chips or borings, obtained at the field site by boring holes into a windfall log. Samples were taken at various depths in the log, placed in sealed tins and later oven-dried to determine the moisture content of the wood at various depths. Samples were taken from the same log each day. Although the species of log sampled is not always shown on the field notes, it will usually remain the same for all samples taken on any one site. The depths at which samples were taken were not entirely consistent between various field stations, but for coding these have been grouped into 8 depth classes.

Table 14. Field Descriptions, Codes and Location Information for Oven-Dried Samples of Log Borings

	Field Title	Code	Card Location	Tape Location
A.	Depth Class			
	0 - 1/4" deep	1	-	27
	5/16" - 1/2" deep	2	-	"
	9/16" - 3/4" deep	3	-	"
	13/16" - 1" deep	4	-	"
	17/16" - 1 1/2" deep	5	-	"
	1-19/16" - 2" deep	6	-	"
	2-1/16" - 3" deep	7	-	"
	3-1/16" - 4" deep	8	-	"
B.	No. of Depth Classes Sampled	1-8	17	-
C.	Species of Log	100-199	21-23	22-24
	(Same as for tree foliage)			
D.	Moisture Content No. 1 (0.0%-999.9%)	0000-9999	35-38	29-33
	" " " 2	"	41-44	"
	" " " 3	"	47-50	"
	" " " 4	"	53-56	"
	" " " 5	"	59-62	"
	" " " 6	"	65-68	"
	" " " 7	"	71-74	"
	" " " 8	"	77-80	"

3. Match Splint Trays, Moss Trays and Duff Baskets

These indirect indicators of moisture content consist of wire frame baskets which support an open mesh fabric. A known oven-dry weight of match splints, duff, litter, moss or other cellulosic material was placed in the basket and the indicator left on the ground at the field site. By weighing the tray or basket each day it was possible to determine the changes in moisture content.

In the case of match splints the natural deterioration loss in the splints during the season was determined by oven-drying in the autumn. The figures for individual moisture content percentages are then corrected or adjusted to compensate for this deterioration loss. Trays were placed in the various sites in sets of 2, 4, etc., and the average M.C. of the set is punched on the card. In some cases, splint trays were covered to exclude dew, which is indicated by a single digit code.

The duff trays or baskets were usually covered with a fine wire or cloth mesh to exclude fresh needles or litter which might otherwise fall into the sample. Such a covering naturally would affect the rate of drying and its presence or absence is indicated by a single digit code.

Table 15. Field Description, Codes and Location Information for Match Splint Trays, Moss Trays and Duff Baskets

	Field Title	Code	Card Location	Tape Location
I.	A. Match Splint Trays			
	Uncovered baskets	1	17	26
	Covered with screen or cheese-cloth	2	"	"
	Covered with solid cover (dew)	3	"	"
	Uncovered Trays (Dew Project)	4	"	"
	B. No. of trays in set (1-9)	1-9	18	27
	C. Basket Description			
	Not specified	00	19-20	23-24
	Pine match splints	01	"	"
	small pine match splints	02	"	"
	large pine match splints	03	"	"
	aspen, poplar match splints	04	"	"
	D. Tray Moisture Content 0.0% to 999.9%	000-9999	33-38	29-33
	E. Dew Project Indicator	1	78	-
II.	Duff Baskets or Trays			
	A. Cover:			
	Uncovered baskets	1	17	26
	Covered baskets, screen	2	"	"

Field Title	Code	Card Location	Tape Location
B. Species			
1. One species - same code as for tree foliage	100-199	21-23	22-24
2. Two species - one dominant Tree species code of dominant species	200-299	"	"
3. Two or more species - equal amounts			
Red and white pine	611	"	"
Red and jack pine	612	"	"
Red, white and jack pine	613	"	"
Spruce, Balsam fir	621	"	"
Spruce, lodgepole pine	622	"	"
Spruce, Douglas fir	623	"	"
Spruce, Douglas fir, pine	624	"	"
Aspen (poplar), spruce	641	"	"
Aspen, white pine	642	"	"
Aspen, jack pine	643	"	"
Aspen, spruce, pine	644	"	"
Aspen, West. white pine	645	"	"
Aspen, birch	646	"	"
C. Top Layer Duff	1	32	27
Full Layer Duff	2	32	27
D. No. of trays in set (1-9)	1-9	39	-
E. Duff Moisture Content 0.0% to 999.9%	0000-9999	40-44	29-33
III. Moss and Lichen Trays			
A. Cover:			
Uncovered trays	1	17	26
Covered trays	2	"	"
Uncovered trays (Dew Project)	4	"	"
B. No. of trays in set (1-9)	1-9	24	27
C. Species: Moss Trays - last two digits of moss species code	10-43	25-26	23-24
Lichen Trays -- All species (M.C. uncorrected)	50	"	"
D. Moss or Lichen Moisture Content 0.0% to 9999.9%	00000-99999	45-50	29-33

4. Hazard Stick Indicators

These were various types of wood sticks or slats which were exposed at field sites as indirect fuel moisture indicators. The sticks were of known oven-dry weight and changes in moisture content were determined by weighing the sticks at the site each day on a portable laboratory-type balance. There were different methods of exposing the sticks depending upon the fuel moisture to be assessed. Thus the sticks might be buried in the duff or moss, held above the ground on racks, or placed at random in piles of slash.

Four main types of indicators were used at most field locations. There were single sticks, square in cross-section, usually 1/4" or 1/2" square; round sticks or cylinders, varying in diameter from 1/2" to 2 inches; flat sticks, usually 1/4" thick, 2 inches wide and about 8" in length; then there were groups of sticks made into permanent sets, such as B.C. Hazard Sticks, which were weighed as one unit.

Table 16. Field Description, Codes and Location Information for Stick Indicators

The following codes apply to all single sticks (I to V):

1. Stick Description	Code
Square in cross section, length not specified	1
Round in cross section, length not specified	2
Square in cross section, 6" long (not used for 1" and 2" sticks)	3
2. Exposure Code	
Placed vertically, in ground	1
Placed horizontally, below surface	2
On ground surface	3
Above ground on wire or rack	4
Placed in slash pile at random	5
Placed in slash pile, lower 1/3 of pile	6
Placed in slash pile, middle 1/3 of pile	7
Placed in slash pile, top 1/3 of pile on branches	8
For 2" sticks only: Sticks under duff but on top of mineral soil	9
3. No. of sticks in set (1-9)	1-9
4. Species of wood in stick - last two digits of tree species code.	

Field	Description	Code	Card Location	Tape Location
I.	1/4" Sticks	1	-	22
A.	Stick description		18	23
B.	Exposure code		19	24
C.	No. of sticks in set		20	-
D.	Species		33-34	26-27
E.	Moisture content	0000-9999	35-38	29-33
II.	1/2" Sticks	2	-	22
A.	Stick description		21	23
B.	Exposure code		22	24
C.	No. of sticks in set		23	-
D.	Species		39-40	26-27
E.	Moisture content	0000-9999	41-44	29-33
III.	3/4" Sticks	3	-	22
A.	Stick description		24	23
B.	Exposure code		25	24
C.	No. of sticks in set		26	-
D.	Species		45-46	26-27
E.	Moisture content	0000-9999	47-50	29-33
IV.	1" Sticks	4	-	22
A.	Stick description		27	23
B.	Exposure code		28	24
C.	No. of sticks in set		29	-
D.	Species		51-52	26-27
E.	Moisture content	0000-9999	53-56	29-33
V.	2" Sticks	5	-	22
A.	Stick description		30	23
B.	Exposure code		31	24
C.	No. of sticks in set		32	-
D.	Species		57-58	26-27
E.	Moisture content	0000-9999	59-62	29-33
VI.	Flat Sticks *	6	-	24 **
A.	Sticks on ground surface	1	63	26
	Sticks on rack above ground, horizontal	2	"	"
	Sticks on rack or wire, above ground, vertical	3	"	"
	Sticks on edge in moss or duff	4	"	"
	Sticks burried	5	"	"
	Sticks oven-dried at start of season:			
	Horizontal above ground	6	"	"
	Vertical in moss	7	"	"
	Horizontal in moss	8	"	"
B.	No. of sticks in set (1-9)	1-9	64	27
C.	Moisture content	0000-9999	65-68	29-33

Field Description	Code	Card Location	Tape Location
VII. B.C. Hazard Sticks	7	-	24 **
A. Exposed vertically on rack above ground	1	69	26
Exposed horizontally on rack above ground	2	"	"
Misc. fuel moisture stick sets	3	"	"
Horizontally exposed: Under forest canopy plus burlap roof 3 ft. above ground	4	"	"
Under forest canopy only	5	"	"
Under burlap roof only	6	"	"
B. No. of sets exposed (1-9)	1-9	70	27
C. Moisture content	0000-9999	71-74	29-33

---

* Only White Pine Sticks - 2" wide were used.

** It is important to note the absence of codes in Cols. 22 and 23. These numbers will read as 006 and 007 rather than 600 and 700 - a very significant fact with respect to sorting and stratification.

5. Heavy fuel moisture indicators

These were indirect indicators of the moisture content of heavier fuels. Two types of indicator were used -- a large log suspended from a Stillyard or Weighbeam scale and sets of smaller logs, about cordwood size, weighed on a platform or Express-type scale. The approximate oven-dry weight of the logs was usually determined by cutting a sample disc from each end, chipping the disc, weighing and oven-drying samples of these chips. The daily changes in weight of the logs recorded by the Weighbeam or Express scales indicated the changes in moisture content.

The Weighbeam logs were usually of different species common to the site and were numbered on each site. The Express scale logs were usually in sets of 2 or 3 of one species. Thus the moisture content of the Weighbeam logs is recorded for individual logs, while for Express scale logs, the average moisture content for a set is given.

Table 17. Field Descriptions, Codes and Location Information for Heavy Fuel Moisture Indicators

All Species Codes -- Use the last two digits of the tree foliage code.

	Field Description	Code	Card Location	Tape Location
I.	Weighbeam Logs			
	A. Log 1	1	-	24
	Species		33-34	26-27
	Moisture Content	0000-9999	35-38	29-33
	B. Log 2	2	-	24
	Species		39-40	26-27
	Moisture Content	0000-9999	41-44	29-33
	C. Log 3	3	-	24
	Species		45-46	26-27
	Moisture Content	0000-9999	47-50	29-33
	D. Log 4	4	-	24
	Species		51-52	26-27
	Moisture Content	0000-9999	53-56	29-33
	E. Log 5	5	-	24
	Species		57-58	26-27
	Moisture Content	0000-9999	59-62	29-33
II.	Express Scale Logs			
	A. Set 1	6	-	24
	Species		63-64	26-27
	Moisture Content	0000-9999	65-68	29-33

Field Description	Code	Card Location	Tape Location
B. Set 2	7	-	24
Species		69-70	26-27
Moisture Content	0000-9999	71-74	29-33
C. Set 3	8	-	24
Species		75-76	26-27
Moisture Content	0000-9999	77-80	29-33

IV. Test Fire Data

The general procedure used in the small scale test fire program was to light a small fire on the natural forest floor and allow the fire to grow for a short period of time (normally two minutes). Measurements of several characteristics of the fire's behaviour were recorded, as well as the investigator's overall subjective numerical rating of the fire.

As with the weather and fuel moisture data, a certain amount of format revision and merging was undertaken in order to make the data more suitable for computer analysis. The format revision simply consolidated the available information into three major groups: Miscellaneous, Fuel Description, and Fire Behaviour. Merging involved adding the headquarters weather to the test fire record because, in many instances, no weather information was available at the site. Also, fuel moisture information, if available, was merged with each test fire record. Since no information was deleted, only the final merged tape was kept.

This section discusses the codes used to describe the various test fire measurements, the location on cards and magnetic tape, and the location of the merged weather and fuel moisture information.

Table 18. Description of Information, Codes and Location

Field Title	Range and Unit of Measurement	Code	Remarks	Card Location	Tape Location	Column Headings for Inventory Tables
I Reference						
Location				1-5	2-6	
Date				6-11	8-13	
Time				12-15	15-18	
II Weather						
Site Relative Humidity	1% - 99%	01-99	1.	17-18	20-21	SRH
Site Temperature	1^{o} - 99^{o}F	01-99	1.	19-20	22-23	STP
Site Wind Speed	0 mph - 8 + mph		2.	21	24	SW
Time Difference Code			3.	--	25	--
Headquarters Temperature	0^{o}F - 99^{o}F	00-99		--	26-27	HTP
Headquarters R.H.	0% - 99%	00-99		--	28-29	HRH
Headquarters Wind	0 mph - 99 mph	00-99		--	30-31	HW
Headquarters Wind Average Code		A	4.	--	32	A
III Miscellaneous						
Canopy			5.	16	33	CAN
Depth Dry	0.1 in. - 9.9 in.	01-99	1.	22-23	34-35	DDY
Fire Brand			6.	24	36	FBR
Misc. Fuel Code			7.	53	37	MFU
Special Factors			8.	54-55	38-39	SFA
IV Description of Fuels Consumed						
Type of Fire			9.	25-29	41-45	FT1-FT5
Duff						
Type			10.	30	46	DTY
Mixture			11.	31	47	DMX
Species			12.	32-39	48-55	DU1-DU4
Lichen			13.	40	56	L1C
Moss			14.	41-42	57-58	M01-M02
Shrub			15.	43-46	59-62	SH1-SH2
Fern			16.	47-48	63-64	FE1-FE2
Grass			17.	49	65	GRA

V Fire Behaviour						
Flame Height (max.)	1 in. - 99 in.	01-99	1.	56-57	67-68	FHM
Flame Height (average)	1 in. - 99 in.	01-99	1.	58-59	69-70	FHA
Area Burned	0.1 sq. ft. - 99 sq. ft.	001-999	1.	60-62	71-73	AB
Burning Time	1 sec. - 999 sec.	001-999	1.	63-65	74-76	BT
Ash Depth	0.1 in. 9.9 in.	01-99	1.	66-67	77-78	AD
Vigour			18.	68	79	VIG
Smoulder			19.	69	80	SMO
Estimated Index			20.	70-71	81-82	IND
Remarks			21.	72-73	83-84	REM

Remarks

1. 0 or 00 or 000 refers to not classified. This differs from the standard weather and fuel moisture data where unclassified information is left blank.
2. See Table 20 for codes.
3. See Table 21 for explanation and codes.
4. Used if average daily wind speed is used.
5. See Table 22 for codes.
6. See Table 23 for codes.
7. See Table 24 for codes.
8. See Table 25 for codes.
9. See Table 26 for codes.
10. See Table 27A for codes.
11. See Table 27B for codes.
12. The codes used here are the last two digits of the various species codes given in Table 13, section 2 A, i.e.: Pine General is 01. There are eight columns in this field so that up to four species can be coded in order of importance.
13. See Table 27 C for codes.
14. See Table 27 D for codes.
15. See Table 27 E for codes.
16. See Table 27 F for codes.
17. See Table 27 G for codes.
18. See Table 28 for codes.
19. See Table 29 for codes.
20. See Table 30 for codes.
21. See Table 31 for codes.

Table 19. Description of Information and Location of Merged Fuel Moisture Data

Field Number	Field Description	Tape Location	Column Heading for Inventory Tables
1.	Litter Moisture Content	85-89	FM1
	Litter Sample Description Code	90*	C1
2.	Top Layer Duff Moisture Content	91-95	FM2
	Top Layer Duff Sample Description Code	96*	C2
3.	Full Duff Layer Moisture Content	97-101	FM3
4.	Lichen Moisture Content	102-106	FM4
	Lichen Sample Description Code	107*	C4
5.	Moss Moisture Content	108-112	FM5
	Moss Sample Description Code	113*	C5
6.	Grass Moisture Content	114-118	FM6
7.	Stick or Slash Moisture Content	119-123	FM7
	Stick or Slash Description Code	124-125*	C7A, C7B
8.	Match Splints, Shrubs or Fern Moisture Content	126-130	FM8
	Sample Description Code	131*	C8

* See Table 33 for description of codes.

Since there are eight fields, up to eight different fuel moisture records could be merged with a single test fire record. This is highly unlikely however as each site only recorded selected types of fuel moisture observations. The actual maximum number of mergesis between 3 and 4 fuel types per record. For some fields there is only one choice. For others, there are two or more choices, the priority of which is discussed in detail in Table 32.

Table 20. Wind Speed Code (at the site)

Description	Code
Not Classified	0
0 m.p.h.	9
1 m.p.h.	1
2 m.p.h.	2
3 m.p.h.	3
4 m.p.h.	4
5 m.p.h.	5
6 m.p.h.	6
7 m.p.h.	7
8 or more m.p.h.	8

Table 21. Time Difference Code

This code represents the difference in time between the Headquarters weather observation and the test fire.

If Test Fire is *	After Weather	Before Weather
less than 30 min.	A	B
½ to 1 hour	C	D
1 to 1½ hours	E	F
1½ to 2 hours	G	H
2 to 2½ hours	I	J
2½ to 3 hours	K	L
3 to 3½ hours	M	N
3½ to 4 hours	O	P
4 to 4½ hours	Q	R
4½ to 5 hours	S	T
5 to 5½ hours	U	V
5½ to 6 hours	W	X
6 or more hours	Y	Z

* Note if a time difference is exactly equal to one of the class boundaries the code for the upper class will be used. i.e. a test fire time of 2½ hours before the weather observation will have a code of L.

Table 22. Canopy Code

Description	Code
Not Classified	0
No cover whatsoever and well away from overhanging branches	1
High slight cover in one quadrant only	2
High slight cover in two or three quadrants	3
High general cover fairly complete	4
High very dense cover	5
Low cover (below 8 ft.) in two quadrants	6
Low cover almost complete	7
Very dense low cover	8
Combination of high and low cover excluding practically all sunlight from fuels	9

Table 23. Fire Brand Code

Description	Code
Not Classified	0
1 Match	1
2 Matches	2
3 Matches	3
4 or more Matches	4
Campfire	5
Leaf Pile (needles)	6
Twig Pile	7
Paper Spill	8
One or more cigarettes	9

Table 24. Miscellaneous Fuel Code

Description	Code
Not Classified	0
Twigs	1
Bark	2
Herbs	3
Cones	4
Rotten Logs or Branches	5
Ground Vegetation	6

Table 25. Special Factors Code

Description	Code
Not Classified	00
Grass - in the open per cent green unspecified	01
Grass - in the open 15 per cent or less green	02
Grass - in the open 16 - 25 per cent green	03
Grass - in the open 26-45 per cent green	04
Grass - in the open 46 per cent or more green	05
Grass - in a screen per cent green unspecified	10
Grass - in a screen 15 per cent or less green	11
Grass - in a screen 16 - 25 per cent green	12
Grass - in a screen 26 - 45 per cent green	13
Grass - in a screen 46 per cent or more green	14

Table 26. Type of Fire Code

There are 5 columns in this field which allows up to five general fuel types to be listed in order of importance. The most important is listed in the first column, the second most important in the second column, etc.

Description	Code
Not classified	0
Duff	1
Lichen	2
Moss	3
Shrub	4
Fern	5
Grass (general)	6
Miscellaneous	9

Table 27. Fuel Description Code

A. Type of Duff Code

Description	Code
Not Classified	0
Softwood	1
Softwood - Hardwood	2
Hardwood - Softwood	3
Hardwood	4

B. Duff Mixture Code

Description	Code
Not Classified	0
2 duffs (sub-fields 1 and 2)	2
3 duffs (sub-fields 1, 2 and 3)	3
4 duffs (sub-fields 1, 2, 3 and 4)	4

C. Lichen Code

Description	Code
Not Classified	0
Cladonia	1
Usnea	2
Peltigera (spotted Peltigera - Aphthosa)	3
Gyrophora	4

D. Moss Code

Description	Code
Not Classified	0
Hylocomium	1
Calliergon	2
Polytrichum	3
Sphagnum	4
Lycopodium - (Shining club moss)	5

E. Shrub Code

Description	Code
Low Shrubs	
Not Classified	00
Blueberry	01
Cranberry	02
Bearberry (Artos)	03
Goldworthy	04
Labrador Tea	05
Sweet Fern	06
Salal	07
Juniper	08
Buffalo Berry - Shepherdia	09
Fireweed	10
Raspberry	11
Bunchberry (Cornus Canadiana)	12
Linnae	13
Aster	14
High Shrubs	
Oregon grape	15
Hazel	20
Alder	21
Willow	22

F. Fern Code

Description	Code
Not Classified	0
Bracken	1
Hay Scented	2

G. Grass Code

Description	Code
Not Classified	0
Grass (general)	1

Table 28. Vigor Code

Description	Code
Not Classified	0.
Fire goes out before two minutes	9.
At two minutes fire is burning very weakly on one front only and goes out by itself	1.
At two minutes fire is burning slowly and poorly on two or more fronts and seems likely to go out on its own accord rather than continue indefinitely	2.
At two minutes no sign of fire going out by itself, burning fairly briskly, but not on all fronts	3.
Fire burning briskly at two minutes on all fronts with tendency to become progressively stronger, but no difficulty in putting it out with the feet	4.
As for No. 4 but difficult or impossible to put out fire with feet after two minutes	5.

Table 29. Smoulder Code

Smoulder Code	Description
Code	
0.	Not classified
9.	Sparks go out within few seconds of flames going out and smoke ceases.
1.	Light smoke continues to rise for about one minute after fire is out.
2.	Sparks observed glowing in several places, but do not persist for more than one minute.

3. - More persistent glowing than No. 2, but cannot be made to burst into flame by strong continued blowing by mouth.

4. - Smouldering strong and will burst into flame by strong continued blowing.

5. - Smouldering highly persistent: has a tendency to burst into flame by itself and will do so with light blowing or in moderate breeze.

Table 30. Estimated Index Code

Estimated Index Code

Code		Description
00	Nil	Fire will not keep on spreading from a campfire 12 inches in diameter (may spread 2 ft. or more but goes out by itself within 15 minutes). For match test only, Vigour = 0.
01 02 03	Low	Fire will not spread from match but continues to spread from a 12-ins. campfire. (Observations should last 5 to 15 minutes after start of campfire depending on fire behaviour). For match test only, Vigour 1 or 2.
05 06 07 08	Moderate	Fire will continue to spread from at least 1 out of 3 matches but rate of spread does not exceed 1 sq. ft. in 2 min. for softwood duff or moss, or 2 sq. ft. in 2 mins. for hardwood duff. (Observations should last at least 2 mins. more if fire nearly out at that time.)
09 10 11 12	High	Fire will continue to spread from match, and burns more than area specified for "moderate", but flames can be stamped out without difficulty after 2 min.
13 14 15 16	Extreme	Fires continues to spread from match, and flames are stamped out with difficulty or other means are needed to extinguish after 2 min.

Table 31. Remarks Code

Index to Remarks Code

00	Not Classified
01 - 09	Moisture - Rain - Snow
10 - 19	Wind
20 - 89	Fire Behaviour - General
90 - 99	Miscellaneous

Remarks Code

00 Not classified
01 Raining
02 Trace of rain
03 Free water on ground
04 Fuel damp
05 Snowing
06 Snow on ground
07 Too wet to burn
08 Drizzing
10 Wind gusts helped fire
11 Wind spread fire
12 Too windy, no fire attempted
13 Fire spread well until wind dropped
14 Wind chief factor for keeping fire burning
15 Dangerous wind reaction to fire
20 Fire burned rapidly
21 Fuels failed to ignite (failed to burn; match burn)
22 Fire started slowly, then burned rapidly
23 Fire started rapidly, then decreased in intensity
24 Very hot fire
25 Very slow fire
26 Fire burned surface only
27 Fire burned all FLD
28 Fire burned all TLD
29 Fire burned deep
30 Fire burned to mineral soil
31 Fire burned 1/8" twigs
32 Fire burned 1/4" twigs
33 Fire burned 1/2" twigs
34 Fire burned 3/4" twigs
35 Fire burned 1" twigs
36 Fire spread on 1 front only
37 Fire spread on 2 fronts only
38 Fire spread on 3 fronts only
39 Fire spread on all fronts
40 Fire spread a few inches from fire brand only
41 Fire failed to spread
42 All shrubs consumed by fire
43 All fuels consumed by fire
44 Rapid deep burn
45 Rapid shallow burn
46 Slow deep burn

47 Slow shallow burn
48 Fire burned with steady increase in intensity
49 Fire spread rapidly
50 Spread of fire obstructed by natural barriers (logs, trees, rocks, etc.)
51 Fuels too green to burn
52 Spread of fire stopped by least important fuel
53 Lack of fuel prevented further spread of fire
54 Consist test fire
56 Dew was present in the open
57 Fire burned slowly, went out on its own
58 Fire burned steadily
59 Fire burned well, but not on all fronts
60 Fire hard to start
61 Fire burned deep but did not continue
62 Fire burned a little less than a sq. ft. from fire brand
63 Fire only partly consumed twigs
64 All twigs consumed by fire.
65 Fire started rapidly
66 Fire burned all but small percentage of fuel
67 Slow but hot fire
68 Fire easily stamped out
69 Slight difficulty putting out with foot
70 Burned poorly when started in needles, burned slowly but well when started in moss
71 Small twigs consumed by fire
72 Test fire after autumn leaf fall
73 Twigs sustained fire
74 Spread of fire helped by least important fuel
75 Main fuels burned only (most important)
78 Twigs unburned
80 Bare ground within test fire area
90 Green tufts left (most green grass unburned)
91 Green plants left (not burned)
92 Heavy dead grass
93 Fire burned mainly grass

Table 32. Fuel Moisture Sample Description Codes

Field No.	Description	Fuel Moisture Tape Code Col: 20	22-24	26-27	Merged Tape Code	Remarks
1.	Oven dried top layer duff	4	002	-	A	
	Uncovered top layer duff tray	6	100+	11	B	
2.	Oven dried full layer duff	4	005	-	A	
	Uncovered full layer duff tray	6	100+	12	B	
3.	Oven dried full organic layer	4	006	-	-	
4.	Oven dried Lichen	4	200-299	-	A-C	1.
5.	Oven dried moss	4	300-399	-	A-H	2.
	Uncovered moss tray (any species)	6	010-099	10-19	I	
6.	Grass, any species	4	600-699		-	
7.	Oven dried slash and miscellaneous samples	4	902-925	-	A-J	3.
	Sticks	7	111-538*	-	KA-QZ	4.
8.	Match Splint Tray	6	000-004	10-29	A-E	5.
	Shrub	4	400-499	-	F-J	6.
	Fern	4	500-599	-	K-M	7.

Each line is listed in the order of priority of selection within an individual field. If more than one code is possible on a single line, the first occurrence is chosen. When multiple code letters are shown for an individual line, the code letters are arranged in ascending order corresponding to the descriptions listed in the appropriate fuel moisture field description tables. For example, a code of C in Field 4 refers to Cladonia Alpestris in Table 13, sect. IIIA.

* See note ** in Table 34.

Remarks

1. See Table 13 Sect. IIIA.
2. See Table 13 Sect. IVA.
3. See Table 33 for individual codes
4. See Table 34 for individual codes
5. See Table 15 Sect. IC.
6. See Table 13 Sect. V B -- since it was not practical to code both species and sample description of the shrubs, sample description was chosen as being more significant than species. Species identification for any particular shrub data set can be made by inspection of the fuel moisture tape.
7. See Table 13 Sect. VI A - Note - codes of 530 and 540 were added to Table 13 Sect. VI A by hand some time after the manuals were written. As the addition of these codes was not discovered until after the merged tape was produced any ferns with these codes will have a letter K associated with them. Species identification of any specific K code fern data set can be made by inspection of the fuel moisture tape.

Table 33. Individual Fuel Description Codes for the Primary Choice in Field 7*

Description	Code (Cols. 22-24) (Fuel Moisture Tape)	Code (Merged Tape)
Twigs on ground (TOG)	911	A
Slash, green, needles, leaves, twigs, small branches	921	B
Slash, leaves, needles, and twigs to $\frac{1}{4}$" dia.(dead)	922	C
Slash, no leaves or needles, twigs to $\frac{1}{4}$"	923	D
Slash, general, no size (windfall, dead windfall logs)	920	E
Twigs on slash	913	F
Branches (off ground, no species designated)	902	G
Herbs, general (samples gathered from several species on site)	904	H
Slash, twigs and branches to $\frac{1}{2}$" dia.	924	I
Slash, pieces $\frac{1}{2}$" to 1" dia.	925	J

* Listed in order of priority of selection.

Table 34. Individual Fuel Description Codes for the Secondary Choice in Field 7*

Description	Code (Col. 22) (Fuel Moisture Tape)	Merged Tape: First Letter Code	Merged Tape: 2nd Letter Code
$\frac{1}{2}$" sticks or cyclinders	2	K	1.
$\frac{1}{4}$" sticks or cylinders	1	L	1.
Flat Sticks	7**	M	2.
B.C. Hazard Sticks	6**	N	2.
3/4" Sticks or Cylinders	3	O	1.
1" Sticks or Cylinders	4	P	1.
2" Sticks or Cylinders	5	Q	1.

* Listed in order of priority of selection.

** These codes are actually in Col. 24 rather than Col. 22. Since this was not noticed until after the production run, all fuel moistures with these codes were not included on the Test fire - Fuel moisture merged tape. The codes are retained in the tape and at some future date the information can be added.

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1. Second letter code:* (Col. 23)

Square in cross section	1	A-H
Round in cross section	2	I-P
Square in cross section 6" long	3	Q-X

The specific letter within a range corresponds to the exposure code given in Table 16 sect. 0, 2. For example, D, L, or T would be "Above Ground on Wire or Rack".

Note that code No. 9 in Table 16, under the exposure code was added after the manual was prepared. Therefore, any fuel moisture observation with this code will not be included in the test fire-fuel moisture merged tape. It is however on the fuel moisture tape.

* the first occurrence is selected.

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2. Second letter code: Range of letters is A-C, corresponding to Table 16, Sect. VI A

   for flat sticks, and sect. VII A for B.C. Hazard Sticks. Note that in both cases all codes greater than 3 in the above tables were added after the manual was prepared. Therefore, any fuel moisture observations with codes greater than three will not be included in the Test Fire - Fuel Moisture Merged tape.

V. General Considerations

There are a few points of general interest which should be discussed in reference to all of the data. These are covered in this section.

A. Obtaining the Data

The data or portions thereof may be obtained through the Forest Fire Research Institute. The following is a description of each tape. All tapes are 9-track, fixed block and have standard labels. It is important that no one attempts any data processing with any of the tapes without having first carefully read part C (errors) of this section.

Data	Volume Serial No.	DS Name	Logical Rcd. Length (Bytes)	Block Size (Bytes)	Blocking Factor	Sorted By
1. Basic Weather	FØ0050	WEATHER	80	4000	50	Station, Site, Date Time
2. Revised Format Weather	FØ0052	FMDATA	80	4000	50	Station, Site, Date Time
3. Noon Weather	FØ1011	NOONW	80	4000	50	Station, Site Date
4. Merged Fuel Moisture & Weather	FR0002*	FUELM	102	2040	20	Station, Site, Fuel Type, Date, Time
5. Merged Test Fire & Fuel Moisture	FØ0057	FIREFUEL	131	6550	50	Station, Site, Date, Time

* Unlike all other tapes the external identification for this tape is not the same as the volume serial number. Whereas the volume serial number which is clipped to the tape is FR0002, this tape is physically filed under FØ0053. In other words to find the tape one should look under FØ0053, and to use the tape, the JCL must specify FR0002.

Duplicates of the original cards, listings of the data, or more detailed information on the inventories, may be obtained through the Institute. As the total amount of data is quite substantial, any requests should be limited to only as much as is required for a specific project. This is particularly true with respect to duplicate card decks or listings.

B. Uses for the Data

There are a great number and variety of studies which could benefit from the analysis of various parts of the data discussed in this report. Potential uses are presented here solely for the purpose of pointing out the wide variety of data which has been accumulated and to stimulate interest among researchers into adapting this data for their own investigations. The data has been used for computer analysis of:

1. The relationship between dew fall and fuel moisture.
2. The distribution of wind speed and directions across Canada.
3. The relationship between fuel moisture and fire behaviour parameters.

The data could be used for computer analysis of:

1. Weather fluctuations and extremes at forestry stations.
2. Fuel moisture -- weather relationships for numerous fuel types.
3. Fuel moisture -- fire behaviour relationships for numerous fuel types, and at different sites under identical weather conditions.
4. Effects of fuel type variation on fire behaviour.
5. Probability of ignition of various fuel types as a function of fuel moisture.
6. Relationships between weather observations in forest openings and at various specific sites.

The above is a very small sample of the types of analyses which could be performed with the data. There is no doubt that in the future, uses will be found for the data which will be considerably different from the purposes for which it was originally intended.

C. Errors

There are a significant number of errors which are presently on the final tapes. The error detection routines were only capable of detecting impossible values, so that the editing can only be considered as preliminary. The following is a summary of the range of acceptable values:

1. Year: More than 1924 and less than 1966
2. Month: More than 0 and less than 13
3. Day: More than 0 and less than 32
4. Hour: Less than 2401.

As can be seen, an identifier is rejected only if it is impossible. There could still be many undetected errors. Detection of these errors will require a more careful editing of that portion of the data which will be analysed. The following invalid stations and/or sites have been encountered:

Weather Tape		Fuel Moisture Tape		Test Fire Tape
0401	0411	50100	60406*	NONE
1010	4111	50606	60408*	
7017	7029	70100	60806*	
7123		80100		

The above generally at the beginning or end of a station or site listing, as the data was sorted sequentially. Any record which contained an error was not counted in the inventory.

* In as much as can be determined by inspection of the data, these should actually be station 601. The site and all other data appear to be correct. These stations were counted in the inventory. Only two fuel types are affected: 8-1-5 and 8-2-5.

There are some errors in the days missed counter (in the time field) on the noon weather tape. There were a few weather records with blanks or zeros in the date field which caused a sequence of erroneous entries in the missing days field. An example of such a sequence can be found at station 4011 between 31 May and 1 June, 1950:

40111 - 500531 - 1200
40111 - - 2968
40111 - 500500 - 4000
40111 - - 3031
40111 - 500601 - 1200

The above type of entry was counted as an error by the noon weather inventory program.

Of greater concern is the presence of non-numeric data in supposedly numeric fields. These occur on all three tapes. The first error is the presence of a T for trace in the sunshine and cloud cover fields of the weather tape. As this was unexpected it was not removed during the preliminary data processing. More specifically, T's were found in both fields at several locations at Site 7021. The second non-numeric error is on the fuel moisture tape where asterisks were inserted into the fuel moisture fields at site 70106, fuel type 7-322-3 on the 7th of August, 1949. The third non-numeric entry is on the merged test fire - fuel moisture tape. All of the records at site 40115 for the year 1940 are invalid and were not included in the inventory.

With respect to the fuel moisture tape, the wide variety of coding possibilities precluded a test for invalid code numbers. It can be assumed than any fuel type with 1 to 3 observations is probably invalid. In fact the usefulness of any fuel type with less than 10 observation is questionable. On the basis of this reasoning, there are 28 probably erroneous fuel types and 14 more fuel types which are of little use. The method of inventory precluded an exact determination of the location of these errors, so again a careful editing of that portion of the fuel moisture data to be used is advisable.

It should be noted that with respect to hazard stick indicators, the flat sticks and B.C. Hazard sticks were inadverdently coded as 006 and 007 in Cols. 22-24 rather than 600 and 700. This fact must be taken into account when attempting to sort or stratify the data. Furthermore, because of this inconsistency

in the coding system, these fuel types were not included on the merged test fire - fuel moisture tape. In addition to the above, some fuel moisture codes for the second choice in field 7 and third choice in field 8 were not included in the merged tape because it was not noted that they had been coded incorrectly until after the tape production run was finished. (See table 33 and 34).

Table 35. List of Fuel Types with a Total of Less than 10 Observations

4	1	0	4	200	1	5	400	2	7	6	63
4	1	2	4	200	3	5	400	3	7	6	66
4	3	0	4	201	0	5	400	4	7	6	67
4	4	0	4	230	0	5	400	5	7	7	10
4	7	0	4	270	0	5	400	6	7	7	60
4	13	0	4	400	0	5	400	7	7	7	91
4	20	0	4	403	0	5	600	1	7	100	0
4	26	0	4	430	0	5	600	2	7	100	22
4	30	0	4	510	0	5	600	4	7	210	0
4	37	0	4	540	0	5	600	6	7	213	8
4	50	0	4	602	0	5	600	7	7	221	3
4	55	0	4	925	0	6	1	13	7	223	8
4	90	0	5	40	1	6	2	22	7	225	3
4	91	0	5	40	2	6	3	11	7	231	3
4	100	0	5	40	3	6	3	13	7	232	3
4	100	31	5	40	4	7	6	1	7	300	0
4	101	0	5	40	5	7	6	2	7	300	3
4	101	2	5	40	6	7	6	13	7	320	8
4	104	2	5	40	7	7	6	20	7	322	0
4	105	2	5	100	2	7	6	50			
4	160	2	5	400	1	7	6	62			

D. Future Work

The completion of this report does not signify that there is no work remaining to be done with the data. There are a number of changes which could be made to improve the quality of the information found in the data bank.

1. Weather Data: There is fuel moisture data but no weather data for: Station 601 in 1957 and 1958 and 701 in 1939, and May 1949. The appropriate data should be coded, keypunched and added to the data bank to improve the completeness of the records. Also, the errors in the data and reference information should be corrected. If the errors in the reference data cannot be corrected, the record should be deleted from the tape. The T's should be deleted from the sunshine and cloud cover fields. Lastly, data should be supplied for missing days where possible.

2. Fuel Moisture Data: All of the additional weather which is derived under (1.) above should be inserted in the appropriate locations on the fuel moisture tape. Data with errors in the reference information and alphanumeric characters should be deleted. All fuel types with less than ten observations in any single year should be deleted as they are of little use. Station Nos. 604 and 608 should be changed to 601 and inserted in the appropriate location on the fuel moisture tape. Lastly, it would be very helpful if the codes of 6 and 7 for the hazard sticks indicators were revised to 600 and 700.

3. Test Fire Data: The major correction with reference to the fire data is the removal of alphanumeric data for site 40115 for the year 1940. Those fuel types not included in the merged test fire - fuel moisture tape should be added where appropriate. In addition, there are only a few errors in the reference information which should be corrected or deleted.

REFERENCES

Fraser, D.G. and E. F. Joly, 1965. Codes for I.B.M. Fuel Moisture Cards Used to Record Moisture Content of Oven-dried Fuel Samples and Fuel Moisture Indicators; Forest Research Branch, Canada Dept. of Forestry, Ottawa, Mimeo report 65-H-2.

Joly, E.F., and D. G. Fraser, 1961. Codes for I.B.M. Fire Behaviour Card used to Record Small-Scale Test Fire Results; Forest Research Branch, Canada Dept. of Forestry, Ottawa, Mimeo report 61-16.

_____, 1962a. Codes for I.B.M. Weather Cards Used to Record Fire-Weather and General Climatological Data; Forest Research Branch, Canada Dept. of Forestry, Ottawa, Mimeo Report 62-5.

_____, 1962b. Addendum to Code Manual Mimeos 61-16 and 62-5, Revisions to Fire Behaviour and Weather Card Layouts; Forest Research Branch, Canada Dept. of Forestry, Ottawa, Mimeo report HO-62-17.

APPENDIX I

Weather Inventory and Sample Data

Both the card format and revised format tapes were inventoried in the same process. A separate inventory was made for the noon weather tape. In both cases, each site was inventoried by year, and the number of records present and missing were both listed. When all the yearly data from one site had been counted, a total for the site was computed. When all sites at one station were tallied in the above manner, a yearly station inventory was computed followed by a total count for the station. Finally, a grand total of the number of records present was computed. In addition to the above, the distribution of observations by 2-hour time periods was also listed for each site and station (for the basic weather tape only).

The following is an explanation of the columns in the inventory tables which do not correspond directly to the field titles presented in Table 6:

YEAR - The year being inventoried. Note that there are two lines for each year. The first line is the number of records present. One weather observation, regardless of completness is considered as a single record. The second line is the number of records missing. The second count is increased only when a record has been made, and one or more of the items in the record are missing.

NSI - Number of sites on which weather was recorded during the year (first line only).

SITE - Total number of sites operated at the station (all years, first line only).

NR - Total number of records (first line only, and basic weather tape only) during the year.

TOTAL - Total number of records for the station (all years, first line only, basic weather tape only).

DAYS - The number of days on which a weather observation has been made (first line). For the noon weather tape, this is the number of days on which an observation lies between 10:45 and 14:45. The second line is the number of days on which no weather observation was made.

TTP - This is for the revised format tape. This is incremented by one (and only one) for each record where any one of the temperature fields contains an observation.

T - TP- The total of TTP for all years.

TRH - This is also for the revised format tape. It is incremented by one (and only one) for each record where either RH field has a value.

T - RH - Total of TRH for all years.

ERR - Number of keypunch or coding errors which were detected. See Part C, Section 5 for a detailed discussion of the checks which were made. On the noon weather tape a check is also made for invalid sequences of values in the days missing (time) column which resulted from zeros punched in the data field.

AVE - Noon weather tape only - the number of times that an average wind speed was calculated.

Because of the large amount of data involved only the basic weather tape inventory is presented in this appendix. Furthermore, only the station totals are shown by year. When more than one site was used at a station the site totals are given in a separate summary table at the end of this appendix. More detail on an individual site or on the noon weather tape is on file at the Forest Fire Research Institute.

Following the inventory is a sample listing of the weather data showing both card and tape formats.

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 101 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

YEAR	NSI	NR	DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS. 1950	1	295	104	290	290	295	295	277	276	0	0	0	172	172	187	14	171	295	119	0	0	0	249	249	295	0	289	172	24
MIS. RCDS.1950			0	5	5	0	0	18	19	295	295	295	123	123	108	281	124	0	176	295	295	295	46	46	0	295	6	123	
NO. RCDS. 1951	1	364	123	363	364	364	364	363	363	0	0	0	359	359	116	18	118	362	218	0	57	0	364	364	364	0	364	359	0
MIS. RCDS.1951			4	1	0	0	0	1	1	364	364	364	5	5	248	346	246	2	146	364	307	364	0	0	0	364	0	5	
NO. RCDS. 1952	1	378	126	369	369	378	378	369	369	0	0	0	364	364	248	202	246	378	227	0	0	0	372	372	378	144	371	364	0
MIS. RCDS.1952			0	9	9	0	0	9	9	378	378	378	14	14	130	176	132	0	151	378	378	378	6	6	0	234	7	14	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	1037	353	1022	1023	1037	1037	1009	1008	0	0	0	895	895	551
MISSING RCDS.		4	15	14	0	0	28	29	1037	1037	1037	142	142	486

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	234	535	1035	564	0	57	0	985	985	1037	144	1024	895	24
MISSING RCDS.	803	502	2	473	1037	980	1037	52	52	0	893	13	142	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 101 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1950	0	0	0	5	90	0	104	1	2	93	0	0
1951	0	0	0	0	122	3	119	0	4	115	1	0
1952	0	0	0	0	126	0	126	0	0	126	0	0

TOTALS

	0	0	0	5	338	3	349	1	6	334	1	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 261 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

	YEAR	NSI	NR DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS.	1937	1	265	96	253	260	265	265	93	92	1	1	0	104	104	0	0	0	260	0	0	0	0	264	262	265	0	104	105	0
MIS. RCDS.	1937			0	12	5	0	0	172	173	264	264	265	161	161	265	265	265	5	265	265	265	265	1	3	0	265	161	160	
NO. RCDS.	1938	1	603	175	596	596	602	602	176	174	0	0	0	258	258	0	0	0	603	302	0	0	0	600	597	603	0	259	258	0
MIS. RCDS.	1938			0	7	7	1	1	427	429	603	603	603	345	345	603	603	603	0	301	603	603	603	3	6	0	603	344	345	
NO. RCDS.	1939	1	766	171	668	685	766	766	126	126	0	0	0	421	421	0	0	0	703	321	0	0	0	757	757	766	0	423	421	0
MIS. RCDS.	1939			0	98	81	0	0	640	640	766	766	766	345	345	766	766	766	63	445	766	766	766	9	9	0	766	343	345	
NO. RCDS.	1940	1	775	156	763	763	775	775	123	123	0	0	0	451	451	283	283	283	751	236	0	0	0	762	762	774	0	734	451	0
MIS. RCDS.	1940			0	12	12	0	0	652	652	775	775	775	324	324	492	492	492	24	539	775	775	775	13	13	1	775	41	324	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	2409	598	2280	2304	2408	2408	518	515	1	1	0	1234	1234	283
MISSING RCDS.		0	129	105	1	1	1891	1894	2408	2408	2409	1175	1175	2126

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	283	283	2317	859	0	0	0	2383	2378	2408	0	1520	1235	0
MISSING RCDS.	2126	2126	92	1550	2409	2409	2409	26	31	1	2409	889	1174	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 261 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1937	0	0	0	0	90	0	11	57	26	81	0	0
1938	0	0	0	1	157	0	1	142	132	170	0	0
1939	0	0	0	0	167	0	142	146	142	168	1	0
1940	0	0	0	0	147	108	114	127	125	154	0	0

TOTALS

	0	0	0	1	561	108	268	472	425	573	1	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 301 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

YEAR	NSI	NR DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS. 1936	1	229 174	0	0	229	229	136	136	0	0	0	225	225	0	0	0	229	0	0	0	0	227	227	229	0	225	225	0
MIS. RCDS.1936		0	229	229	0	0	93	93	229	229	229	4	4	229	229	229	0	229	229	229	229	2	2	0	229	4	4	
NO. RCDS. 1937	1	201 135	0	0	201	201	80	79	0	0	0	189	189	0	0	0	201	0	0	0	0	201	200	201	0	189	189	0
MIS. RCDS.1937		0	201	201	0	0	121	122	201	201	201	12	12	201	201	201	0	201	201	201	201	0	1	0	201	12	12	
NO. RCDS. 1938	1	175 175	0	0	175	175	15	15	0	0	0	163	163	0	0	0	175	0	0	0	0	163	163	174	0	170	163	0
MIS. RCDS.1938		0	175	175	0	0	160	160	175	175	175	12	12	175	175	175	0	175	175	175	175	12	12	1	175	5	12	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	605	484	0	0	605	605	231	230	0	0	0	577	577	0
MISSING RCDS.		0	605	605	0	0	374	375	605	605	605	28	28	605

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	0	0	605	0	0	0	0	591	590	604	0	584	577	0
MISSING RCDS.	605	605	0	605	605	605	605	14	15	1	605	21	28	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 301 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1936	0	0	0	0	0	0	100	87	42	0	0	0
1937	0	0	0	0	0	0	130	8	63	0	0	0
1938	0	0	0	0	0	1	163	11	0	0	0	0

TOTALS

	0	0	0	0	0	1	393	106	105	0	0	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 401 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 6

	YEAR	NSI	NR	DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS.	1930	3	664	278	343	346	560	655	622	632	10	0	0	0	0	0	0	0	661	0	0	0	0	0	0	560	0	622	0	0
MIS. RCDS.	1930			14	321	318	104	9	42	32	654	664	664	664	664	664	664	664	3	664	664	664	664	664	664	104	664	42	664	
NO. RCDS.	1931		41023	458	498	498	10231	013	784	515	20	0	0	234	234	255	352	255	1022	0	0	0	0	352	352	1023	320	962	234	6
MIS. RCDS.	1931			6	525	525	0	10	239	508	100	310	231	023	789	789	768	671	768	1	102	310	231	023	671	671	0	703	61	789	
NO. RCDS.	1932		51879	562	875	944	1724	186	913	49	984	2	0	6	916	910	368	777	368	1858	0	0	0	0	106	610	671	543	782	1749	910	14
MIS. RCDS.	1932			411	004	935	155	10	530	895	187	187	918	731	873	963	969	151	111	021	511	211	879	187	918	791	879	813	812	336	1097	130	969	
NO. RCDS.	1933		31160	436	347	345	1160	116	011	07	742	0	0	0	283	283	366	651	366	1159	8	0	0	0	650	650	1160	650	1107	283	14
MIS. RCDS.	1933			12	813	815	0	0	53	418	116	011	601	160	877	877	794	509	794	1	115	211	601	160	510	510	0	510	53	877	
NO. RCDS.	1934		31084	417	373	373	1084	108	410	841	033	668	0	0	0	257	257	365	623	366	1084	0	0	0	0	625	625	1084	624	1033	257	20
MIS. RCDS.	1934			68	711	711	0	0	51	416	108	410	841	084	827	827	719	461	718	0	108	410	841	084	459	459	0	460	51	827	
NO. RCDS.	1935	2	734	301	363	363	734	734	663	300	0	0	0	132	132	362	493	362	734	0	0	0	0	500	498	734	492	665	132	0
MIS. RCDS.	1935			0	371	371	0	0	71	434	734	734	734	602	602	372	241	372	0	734	734	734	734	234	236	0	242	69	602	
NO. RCDS.	1936	3	806	421	358	356	806	806	691	691	0	0	0	0	0	358	0	358	776	0	0	0	0	358	358	805	358	691	0	1
MIS. RCDS.	1936			23	448	450	0	0	115	115	806	806	806	806	806	448	806	448	30	806	806	806	806	448	448	1	448	115	806	
NO. RCDS.	1937	3	757	386	357	357	757	757	616	616	0	0	0	0	0	358	0	358	757	0	0	0	62	358	358	757	358	616	0	0
MIS. RCDS.	1937			47	400	400	0	0	141	141	757	757	757	757	757	399	757	399	0	757	757	757	695	399	399	0	399	141	757	
NO. RCDS.	1938	2	644	322	357	357	644	644	520	518	0	0	0	0	0	364	364	364	644	494	0	0	0	366	366	644	362	520	0	0
MIS. RCDS.	1938			5	287	287	0	0	124	126	644	644	644	644	644	280	280	280	0	150	644	644	644	278	278	0	282	124	644	
NO. RCDS.	1939	2	766	293	341	345	766	766	519	524	6	0	0	0	0	346	2	344	766	397	0	0	0	531	534	766	516	519	0	0
MIS. RCDS.	1939			4	425	421	0	0	247	242	760	766	766	766	766	420	764	422	0	369	766	766	766	235	232	0	250	247	766	
NO. RCDS.	1940	1	537	179	357	355	537	537	357	357	0	0	0	0	0	357	0	357	537	317	0	0	0	537	537	537	534	357	0	1
MIS. RCDS.	1940			0	180	182	0	0	180	180	537	537	537	537	537	180	537	180	0	220	537	537	537	0	0	0	3	180	537	
NO. RCDS.	1941	1	368	184	0	0	368	368	367	0	0	0	0	0	0	366	367	366	368	0	0	0	0	368	368	368	368	367	0	0
MIS. RCDS.	1941			0	368	368	0	0	1	368	368	368	368	368	368	2	1	2	0	368	368	368	368	0	0	0	0	1	368	
NO. RCDS.	1942	1	306	153	0	0	306	306	153	0	0	0	0	0	0	152	153	154	305	286	0	0	0	306	306	306	298	153	0	0
MIS. RCDS.	1942			0	306	306	0	0	153	306	306	306	306	306	306	154	153	152	1	20	306	306	306	0	0	0	8	153	306	
NO. RCDS.	1943	1	184	184	153	151	184	184	184	0	0	0	0	0	0	0	0	0	184	171	0	0	0	184	184	183	178	184	0	0
MIS. RCDS.	1943			0	31	33	0	0	0	184	184	184	184	184	184	184	184	184	0	13	184	184	184	0	0	1	6	0	184	
NO. RCDS.	1944	1	336	168	168	168	336	336	173	0	0	0	0	5	5	0	0	0	334	333	0	0	0	336	336	336	334	173	5	0
MIS. RCDS.	1944			0	168	168	0	0	163	336	336	336	336	331	331	336	336	336	2	3	336	336	336	0	0	0	2	163	331	
NO. RCDS.	1945	1	552	184	33	130	552	549	93	51	0	0	0	14	14	10	32	32	550	309	0	0	0	552	552	552	522	93	14	0
MIS. RCDS.	1945			0	519	422	0	3	459	501	552	552	552	538	538	542	520	520	2	243	552	552	552	0	0	0	30	459	538	
NO. RCDS.	1946	1	552	184	66	63	552	552	237	68	0	0	0	80	80	185	184	183	552	338	0	0	0	552	552	552	552	262	80	0
MIS. RCDS.	1946			0	486	489	0	0	315	484	552	552	552	472	472	367	368	369	0	214	552	552	552	0	0	0	0	290	472	
NO. RCDS.	1947	1	494	165	478	490	494	494	148	148	0	0	0	491	491	323	473	322	494	277	0	0	0	491	488	494	435	493	491	1
MIS. RCDS.	1947			0	16	4	0	0	346	346	494	494	494	3	3	171	21	172	0	21	494	494	494	3	6	0	59	1	3	
NO. RCDS.	1948	1	548	183	515	515	548	548	165	165	0	0	0	526	523	342	506	343	548	317	0	14	0	548	548	548	521	531	523	1

MIS. RCDS.1948			0	33	33	0	0	383	383	548	548	548	22	25	206	42	205	0	231	548	534	548	0	0	0	27	17	25	
NO. RCDS. 1949	2	691	309	524	526	691	682	119	119	0	0	0	527	527	342	514	342	527	324	0	568	1	527	527	690	512	527	527	4
MIS. RCDS.1949			4	167	165	0	9	572	572	691	691	691	164	164	349	177	349	164	367	691	123	690	164	164	1	179	164	164	
NO. RCDS. 1950	2	677	319	488	488	666	661	153	153	0	0	0	452	451	298	468	298	513	269	0	545	1	507	504	665	447	473	451	4
MIS. RCDS.1950			1	189	189	11	16	524	524	677	677	677	225	226	379	209	379	164	408	677	132	676	170	173	12	230	204	226	
NO. RCDS. 1951	2	675	324	464	464	662	651	155	155	0	0	0	507	507	319	485	318	508	290	0	565	0	507	507	668	459	508	507	0
MIS. RCDS.1951			0	211	211	13	24	520	520	675	675	675	168	168	356	190	357	167	385	675	110	675	168	168	7	216	167	168	
NO. RCDS. 1952	2	663	313	478	478	663	663	119	119	0	0	0	477	477	304	455	304	495	261	0	519	0	492	492	663	456	481	477	0
MIS. RCDS.1952			0	185	185	0	0	544	544	663	663	663	186	186	359	208	359	168	402	663	144	663	171	171	0	207	182	186	
NO. RCDS. 1953	2	676	331	502	502	676	676	140	140	0	0	0	502	502	335	458	335	504	325	0	573	0	502	502	676	504	502	502	9
MIS. RCDS.1953			4	174	174	0	0	536	536	676	676	676	174	174	341	218	341	172	351	676	103	676	174	174	0	172	174	174	
NO. RCDS. 1954	2	546	261	409	409	546	545	405	405	0	0	0	409	409	270	219	270	411	246	1	456	0	411	408	546	411	409	409	7
MIS. RCDS.1954			6	137	137	0	1	141	141	546	546	546	137	137	276	327	276	135	300	545	90	546	135	138	0	135	137	137	
NO. RCDS. 1955	2	557	273	413	413	557	557	291	288	0	0	0	456	456	288	454	287	470	52	0	142	0	470	470	557	276	460	456	0
MIS. RCDS.1955			1	144	144	0	0	266	269	557	557	557	101	101	269	103	270	87	505	557	415	557	87	87	0	281	97	101	
NO. RCDS. 1956	2	405	194	272	272	405	405	260	257	0	0	0	269	269	189	136	190	312	156	0	293	0	312	312	405	264	273	269	0
MIS. RCDS.1956			0	133	133	0	0	145	148	405	405	405	136	136	216	269	215	93	249	405	112	405	93	93	0	141	132	136	
NO. RCDS. 1957	2	743	304	110	110	743	743	104	104	0	0	0	107	112	213	0	213	634	0	0	76	0	642	639	743	633	107	112	1
MIS. RCDS.1957			0	633	633	0	0	639	639	743	743	743	636	631	530	743	530	109	743	743	667	743	101	104	0	110	636	631	
NO. RCDS. 1958	1	99	93	0	0	99	99	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0	0	99	0	0	0	0
MIS. RCDS.1958			0	99	99	0	0	99	99	99	99	99	99	99	99	99	99	99	99	99	56	99	99	99	0	99	99	99	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	19126	8179	9642	9818	18843	19044	11527	8719	38	0	6	6644	6639	7435
MISSING RCDS.		236	9484	9308	283	82	7599	10407	19088	19126	19120	12482	12487	11691

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	8166	7455	17707	5170	1	3794	64	13050	13040	18664	12166	14837	6639	83
MISSING RCDS.	10960	11671	1419	13956	19125	15332	19062	6076	6086	462	6960	4289	12487	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 401 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 6

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1930	0	0	0	1	113	163	116	2	268	1	0	0
1931	0	0	1	0	246	2	122	208	270	14	160	0
1932	0	0	2	11	394	104	5	457	511	127	268	0
1933	0	0	0	0	184	0	0	399	395	0	182	0
1934	0	0	0	0	189	0	0	359	353	0	183	0
1935	0	0	0	0	184	0	0	128	237	1	184	0
1936	0	0	0	0	205	0	0	213	209	0	179	0
1937	0	1	0	0	195	0	0	191	192	0	178	0
1938	0	0	0	0	182	0	0	139	139	184	0	0
1939	0	0	0	0	181	0	179	113	113	180	0	0
1940	0	0	0	0	179	0	181	0	0	177	0	0
1941	0	0	0	185	0	0	0	0	0	183	0	0
1942	0	0	0	0	155	0	0	0	0	151	0	0
1943	0	0	0	0	184	0	0	0	0	0	0	0
1944	0	0	0	0	168	0	0	0	0	168	0	0
1945	0	0	0	0	184	0	184	0	0	184	0	0
1946	0	0	0	0	184	0	184	0	0	184	0	0
1947	0	0	0	0	165	0	165	0	0	164	0	0
1948	0	0	0	0	182	0	183	0	0	183	0	0
1949	0	0	0	80	227	0	177	23	2	182	0	0
1950	0	0	0	34	284	1	174	11	1	172	0	0
1951	0	0	0	39	284	0	169	13	0	170	0	0
1952	0	0	0	44	270	0	169	10	1	168	0	1
1953	0	0	0	29	305	1	168	7	0	165	1	0
1954	1	0	0	92	166	1	138	10	1	137	0	0
1955	0	0	0	6	267	0	178	3	1	102	0	0
1956	0	0	0	14	179	1	103	4	0	104	0	0
1957	0	0	0	8	296	17	200	2	3	217	0	0
1958	0	0	0	74	13	0	7	5	0	0	0	0
TOTALS	1	1	3	617	5765	290	2802	2297	2696	3318	1335	1

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 501 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

YEAR	NSI	NR DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS. 1948	1	481 163	472	473	460	0	456	454	479	454	454	444	443	307	0	308	475	243	0	50	1	466	466	449	460	463	461	8
MIS. RCDS.1948		0	9	8	21	481	25	27	2	27	27	37	38	174	481	173	6	238	481	431	480	15	15	32	21	18	20	
NO. RCDS. 1949	1	485 161	468	469	476	0	451	451	485	451	451	466	465	313	0	314	456	275	0	0	0	470	470	474	479	469	469	4
MIS. RCDS.1949		1	17	16	9	485	34	34	0	34	34	19	20	172	485	171	29	210	485	485	485	15	15	11	6	16	16	
NO. RCDS. 1950	1	402 134	400	401	399	0	385	385	402	385	385	387	387	256	0	261	397	268	0	91	0	384	390	397	396	400	400	1
MIS. RCDS.1950		0	2	1	3	402	17	17	0	17	17	15	15	146	402	141	5	134	402	311	402	18	12	5	6	2	2	
NO. RCDS. 1951	1	514 172	501	502	508	1	484	483	513	483	483	503	503	336	0	340	497	296	0	89	0	500	495	510	500	503	503	11
MIS. RCDS.1951		3	13	12	6	513	30	31	1	31	31	11	11	178	514	174	17	218	514	425	514	14	19	4	14	11	11	
NO. RCDS. 1952	1	469 157	457	457	463	0	442	442	469	442	442	460	460	300	0	285	454	293	0	96	0	435	412	462	460	461	461	2
MIS. RCDS.1952		0	12	12	6	469	27	27	0	27	27	9	9	169	469	184	15	176	469	373	469	34	57	7	9	8	8	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	2351	787	2298	2302	2306	1	2218	2215	2348	2215	2215	2260	2258	1512
MISSING RCDS.		4	53	49	45	2350	133	136	3	136	136	91	93	839

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	0	1508	2279	1375	0	326	1	2255	2233	2292	2295	2296	2294	26
MISSING RCDS.	2351	843	72	976	2351	2025	2350	96	118	59	56	55	57	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 501 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1948	0	0	0	1	158	0	162	0	6	154	0	0
1949	0	1	0	0	162	0	156	5	2	159	0	0
1950	0	0	0	0	134	0	133	1	0	134	0	0
1951	0	0	0	0	172	0	169	3	3	167	0	0
1952	0	0	0	0	156	0	153	5	0	155	0	0

TOTALS

	0	1	0	1	782	0	773	14	11	769	0	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 601 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

YEAR	NSI	NR DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS. 1953	1	481 161	475	475	473	0	443	442	480	442	442	481	481	320	0	319	434	276	0	83	0	480	480	478	402	481	481	0
MIS. RCDS.1953		0	6	6	8	481	38	39	1	39	39	0	0	161	481	162	47	205	481	398	481	1	1	3	79	0	0	
NO. RCDS. 1954	1	421 140	413	413	419	0	362	354	413	354	354	415	415	285	0	285	405	212	2	66	0	417	417	421	368	415	415	1
MIS. RCDS.1954		1	8	8	2	421	59	67	8	67	67	6	6	136	421	136	16	209	419	355	421	4	4	0	53	6	6	
NO. RCDS. 1955	1	503 167	497	498	503	0	481	480	503	481	481	501	501	332	0	331	496	269	0	118	0	499	499	503	501	501	501	0
MIS. RCDS.1955		0	6	5	0	503	22	23	0	22	22	2	2	171	503	172	7	234	503	385	503	4	4	0	2	2	2	
NO. RCDS. 1956	1	482 159	478	478	481	0	472	466	476	466	466	469	469	317	0	317	475	281	0	94	0	479	478	481	434	479	479	0
MIS. RCDS.1956		0	4	4	1	482	10	16	6	16	16	13	13	165	482	165	7	201	482	388	482	3	4	1	48	3	3	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	1887	627	1863	1864	1876	0	1758	1742	1872	1743	1743	1866	1866	1254
MISSING RCDS.		1	24	23	11	1887	129	145	15	144	144	21	21	633

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	0	1252	1810	1038	2	361	0	1875	1874	1883	1705	1876	1876	1
MISSING RCDS.	1887	635	77	849	1885	1526	1887	12	13	4	182	11	11	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 601 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1953	0	0	0	0	161	0	160	0	0	160	0	0
1954	0	0	0	0	139	1	139	3	0	139	0	0
1955	0	0	0	0	166	0	167	4	0	166	0	0
1956	0	0	0	0	159	0	160	3	0	160	0	0

TOTALS

	0	0	0	0	625	1	626	10	0	625	0	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 701 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 4

	YEAR	NSI	NR	DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS.	1939	1	47	44	23	23	42	42	28	28	0	0	0	47	47	31	23	31	30	0	0	0	0	47	47	46	0	47	47	0
MIS. RCDS.	1939			4	24	24	5	5	19	19	47	47	47	C	0	16	24	16	17	47	47	47	47	0	0	1	47	0	0	
NO. RCDS.	1940	3	1140	432	1CC8	1C14	1136	266	354	353	0	0	0	1127	1127	521	486	518	1102	450	C	0	0	1138	1139	1135	873	1133	1127	C
MIS. RCDS.	1940			13	132	126	4	874	786	787	1140	1140	1140	13	13	619	654	622	38	690	1140	1140	1140	2	1	5	267	7	13	
NO. RCDS.	1941	3	716	486	5C0	503	680	324	293	292	0	C	0	656	654	504	6	501	662	441	0	0	0	681	679	682	373	656	654	1
MIS. RCDS.	1941			1	216	213	36	392	423	424	716	716	716	60	62	212	710	215	54	275	716	716	716	35	37	34	343	60	62	
NO. RCDS.	1946	4	998	535	738	736	987	535	753	749	0	0	0	96C	961	481	56	480	945	556	0	0	0	98C	978	987	428	973	961	0
MIS. RCDS.	1946			7	26C	262	11	463	245	249	998	998	998	38	37	517	942	518	53	442	998	998	998	18	20	11	570	25	37	
NO. RCDS.	1947	4	1297	6C6	1C16	1C18	1293	695	956	951	0	0	0	1126	1126	526	0	526	1237	668	0	0	0	1273	1278	1297	580	1216	1126	14
MIS. RCDS.	1947			4	281	279	4	602	341	346	1297	1297	1297	171	171	771	1297	771	60	629	1297	1297	1297	24	19	0	717	81	171	
NO. RCDS.	1948	3	646	365	489	584	646	240	462	451	C	0	0	484	483	261	0	260	622	245	C	0	0	623	643	646	0	516	483	23
MIS. RCDS.	1948			23	157	62	0	406	184	195	646	646	646	162	163	385	646	386	24	401	646	646	646	23	3	0	646	130	163	
NO. RCDS.	1949	3	587	358	53C	532	585	231	423	423	0	0	0	451	449	236	1	240	566	190	0	0	0	567	566	585	0	456	449	20
MIS. RCDS.	1949			20	57	55	2	356	164	164	587	587	587	136	138	351	586	347	21	397	587	587	587	20	21	2	587	131	138	
NO. RCDS.	1950	3	571	335	534	533	445	195	405	405	0	0	0	430	429	249	1	417	560	145	0	0	0	475	467	443	0	431	429	34
MIS. RCDS.	1950			5	37	38	126	376	166	166	571	571	571	141	142	322	570	154	11	426	571	571	571	96	104	128	571	140	142	
NO. RCDS.	1951	3	548	316	479	485	457	19C	484	484	0	0	0	315	315	228	98	163	510	191	0	0	0	478	333	482	C	508	315	18
MIS. RCDS.	1951			30	69	63	91	358	64	64	548	548	548	233	233	320	450	385	38	357	548	548	548	7C	215	66	548	40	233	
NO. RCDS.	1952	3	572	335	512	531	558	215	292	289	C	C	0	3C8	307	239	417	418	552	113	C	0	0	544	553	559	0	549	3C7	1
MIS. RCDS.	1952			11	60	41	14	357	280	283	572	572	572	264	265	333	155	154	20	459	572	572	572	28	19	13	572	23	265	
NO. RCDS.	1953	3	545	312	495	497	518	209	487	487	C	0	C	483	483	371	476	472	525	69	C	0	0	481	498	519	0	515	483	1
MIS. RCDS.	1953			C	50	48	27	336	58	58	545	545	545	62	62	174	69	73	20	476	545	545	545	64	47	26	545	30	62	
NO. RCDS.	1954	3	648	381	587	587	648	250	577	577	0	0	0	635	636	260	585	456	619	126	0	0	0	627	641	645	0	637	636	10
MIS. RCDS.	1954			3	61	61	0	398	71	71	648	648	648	13	12	388	63	192	29	522	648	648	648	21	7	3	648	11	12	
NO. RCDS.	1955	3	644	37C	415	416	644	220	593	591	C	0	0	576	598	273	609	450	624	122	0	C	0	644	641	639	0	643	598	29
MIS. RCDS.	1955			3	229	228	0	424	51	53	644	644	644	68	46	371	35	194	20	522	644	644	644	0	3	5	644	1	46	
NO. RCDS.	1956	3	6C3	359	562	562	601	236	562	562	0	0	0	577	577	439	562	439	582	116	0	0	0	6CC	597	6C1	C	6C2	577	2
MIS. RCDS.	1956			2	41	41	2	367	41	41	603	603	603	26	26	164	41	164	21	487	603	603	603	3	6	2	603	1	26	
NO. RCDS.	1957	3	592	353	359	359	568	232	554	554	0	0	0	591	591	439	554	440	574	117	0	0	0	59C	592	568	0	591	591	2
MIS. RCDS.	1957			1	233	233	24	360	38	38	592	592	592	1	1	153	38	152	18	475	592	592	592	2	0	24	592	1	1	
NO. RCDS.	1958	3	611	364	569	569	590	237	57C	57C	C	0	C	6C6	606	449	572	450	592	121	C	0	0	6C7	6C7	591	C	6C8	6C6	0
MIS. RCDS.	1958			3	42	42	21	374	41	41	611	611	611	5	5	162	39	161	19	490	611	611	611	4	4	20	611	3	5	
NO. RCDS.	1959	3	547	329	515	515	541	213	515	516	0	0	0	539	539	410	515	410	532	103	C	0	0	54C	539	541	C	540	539	0
MIS. RCDS.	1959			0	32	32	6	334	32	31	547	547	547	8	8	137	32	137	15	444	547	547	547	7	8	6	547	7	8	
NO. RCDS.	1960	1	340	114	340	34C	334	0	337	337	0	C	0	3C4	3C4	227	340	227	340	119	0	0	0	346	340	334	C	340	304	0
MIS. RCDS.	1960			0	C	0	6	340	3	3	340	340	340	36	36	113	0	113	0	[illegible]	340	340	340	C	0	6	340	0	36	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	11652	6394	9671	9804	11273	4530	8645	8619	0	0	0	10215	10232	6144
MISSING RCDS.		130	1981	1848	379	7122	3007	3033	11652	11652	11652	1437	1420	5508

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	5301	6898	11174	3883	0	0	0	11235	11138	11300	2254	10961	10232	155
MISSING RCDS.	6351	4754	478	7769	11652	11652	11652	417	514	352	9398	691	1420	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 701 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 4

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1939	0	0	0	0	5	3	16	5	14	4	0	0
1940	0	0	0	1	192	183	278	196	114	175	0	1
1941	0	0	0	0	181	27	192	130	17	168	1	0
1946	0	0	0	5	295	37	312	187	46	116	0	0
1947	0	2	0	20	410	131	481	94	8	151	0	0
1948	0	0	0	0	133	1	250	127	9	124	2	0
1949	0	0	0	1	131	4	224	113	6	108	0	0
1950	0	0	0	0	131	0	156	164	2	118	0	0
1951	0	0	0	0	114	1	223	96	2	112	0	0
1952	0	0	0	2	117	1	222	109	0	121	0	0
1953	0	0	0	1	112	0	219	101	3	109	0	0
1954	0	0	0	0	131	0	295	89	2	131	0	0
1955	0	0	0	0	150	0	268	79	6	141	0	0
1956	0	0	0	0	122	0	217	142	0	122	0	0
1957	0	0	0	0	120	0	250	103	0	118	1	0
1958	0	0	0	0	124	0	259	104	0	124	0	0
1959	0	0	0	0	109	0	238	91	0	109	0	0
1960	0	0	0	0	114	0	113	0	0	113	0	0
TOTALS												
	0	2	0	30	2691	388	4213	1930	229	2164	4	1

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 702 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

YEAR	NSI	NR DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS. 1953	1	433	145	424	428	426	0	411	411	433	411	411	427	427	289	277	290	432	235	C	0	319	429	429	433	0	429	427	1
MIS. RCDS.1953			0	9	5	7	433	22	22	0	22	22	6	6	144	156	143	1	198	433	433	114	4	4	0	433	4	6	
NO. RCDS. 1954	1	480	161	466	472	477	2	433	433	480	433	433	471	467	318	317	319	471	270	0	0	461	479	474	478	315	479	477	2
MIS. RCDS.1954			0	14	8	3	478	47	47	0	47	47	9	13	162	163	161	9	210	480	480	19	1	6	2	165	1	3	
NO. RCDS. 1955	1	358	120	354	358	358	0	350	350	358	350	350	356	356	239	238	238	356	222	C	0	349	358	356	357	341	358	358	2
MIS. RCDS.1955			0	4	0	0	358	8	8	0	8	8	2	2	119	120	120	2	136	358	358	9	0	2	1	17	0	0	
NO. RCDS. 1956	1	346	116	337	346	346	0	330	329	345	329	329	318	321	220	323	220	345	197	0	0	322	333	336	346	231	343	342	11
MIS. RCDS.1956			0	9	0	0	346	16	17	1	17	17	28	25	126	23	126	1	149	346	346	24	13	10	0	115	3	4	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	1617	542	1581	1604	1607	2	1524	1523	1616	1523	1523	1572	1571	1066
MISSING RCDS.		0	36	13	10	1615	93	94	1	94	94	45	46	551

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	1155	1067	1604	924	0	0	1451	1599	1595	1614	887	1609	1604	16
MISSING RCDS.	462	550	13	693	1617	1617	166	18	22	3	730	8	13	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 702 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1953	0	0	0	0	145	0	144	0	0	144	0	0
1954	0	0	0	0	160	0	160	0	0	160	0	0
1955	0	0	0	0	119	0	119	0	0	120	0	0
1956	0	0	0	0	115	0	115	0	0	116	0	0

TOTALS

	0	0	0	0	539	0	538	0	0	540	0	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 801 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 6

YEAR	NSI	NR	DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS. 1957	2	502	210	389	389	465	62	438	436	433	411	411	471	470	287	0	289	432	257	C	67	0	470	470	467	428	488	470	15
MIS. RCDS.1957			15	113	113	37	440	64	66	69	91	91	31	32	215	502	213	70	245	502	435	502	32	32	35	74	14	32	
NO. RCDS. 1958	5	776	454	428	428	718	298	6CC	598	461	417	417	734	733	289	0	284	627	280	167	101	0	731	731	727	447	737	734	2
MIS. RCDS.1958			16	348	348	58	478	176	178	315	359	359	42	43	487	776	492	149	496	609	675	776	45	45	49	329	39	42	
NO. RCDS. 1959	6	1475	734	383	1199	1454	106	312	1812	17	409	375	375	1297	1297	335	297	435	1241	245	461	90	0	1286	1288	1458	396	1418	1297	1
MIS. RCDS.1959			141	092	276	21	412	257	258	106	611	1100	178	178	1140	1178	1040	2341	230	1014	1385	1475	189	187	171	079	57	178	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	2753	1398	1200	2016	2637	1423	2256	2251	1303	1203	1203	2502	2500	911
MISSING RCDS.		45	1553	737	116	1330	497	502	1450	1550	1550	251	253	1842

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	297	1008	2300	782	628	258	0	2487	2489	2652	1271	2643	2501	18
MISSING RCDS.	2456	1745	453	1971	2125	2495	2753	266	264	101	1482	110	252	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 801 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 6

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1957	0	0	0	0	144	1	197	16	1	143	0	0
1958	0	0	0	0	164	22	332	103	1	154	C	0
1959	1	1	0	1	365	178	493	295	5	136	0	0

TOTALS

	1	1	0	1	673	201	1022	414	7	433	C	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 802 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

YEAR	NSI	NR	DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH	MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS. 1957	1	257	88	247	251	257	257	247	238	0	0	0	255	255	163	170	163	253	131	0	0	0	246	243	257	0	255	255	2
MIS. RCDS.1957			0	10	6	0	0	10	19	257	257	257	2	2	94	87	94	4	126	257	257	257	11	14	0	257	2	2	
NO. RCDS. 1958	1	495	167	479	494	481	494	490	490	0	0	0	491	491	295	442	324	494	290	0	139	0	489	487	472	0	493	491	3
MIS. RCDS.1958			0	16	1	14	1	5	5	495	495	495	4	4	200	53	171	1	205	495	356	495	6	8	23	495	2	4	
NO. RCDS. 1959	1	463	159	456	459	463	460	432	432	0	0	0	436	436	308	455	310	459	292	0	150	0	459	459	463	0	458	436	0
MIS. RCDS.1959			0	7	4	0	3	31	31	463	463	463	27	27	155	8	153	4	171	463	313	463	4	4	0	463	5	27	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	1215	414	1182	1204	1201	1211	1169	1160	0	0	0	1182	1182	766
MISSING RCDS.		0	33	11	14	4	46	55	1215	1215	1215	33	33	449

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	1067	797	1206	713	0	289	0	1194	1189	1192	0	1206	1182	5
MISSING RCDS.	148	418	9	502	1215	926	1215	21	26	23	1215	9	33	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 802 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1957	0	0	0	0	85	0	88	0	0	84	0	0
1958	0	0	0	0	165	0	165	0	0	165	0	0
1959	0	0	0	0	158	0	149	0	0	156	0	0

TOTALS

	0	0	0	0	408	0	402	0	0	405	0	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 901 (NUMBER OF OBSERVATIONS) NUMBER OF SITES = 1

	YEAR	NSI	NR DAYS	DIR	SPD	RA	SNO	DB	WB	DIF	RH	DP	TP	RH MAX	CUR	MIN	CC	WRI	PIC	DEW	REM	MAX	MIN	PPT	SUN	TTP	TRH	ERR
NO. RCDS.	1961	1	376	126	359	361	363	0	369	368	375	368	368	372	372	252	372	250	371	227	0	33	0	371	371	367	310	376	373	2
MIS. RCDS.	1961			0	17	15	13	376	7	8	1	8	8	4	4	124	4	126	5	149	376	343	376	5	5	9	66	0	3	

TOTALS

	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
NO. OF RCDS.	376	126	359	361	363	0	369	368	375	368	368	372	372	252
MISSING RCDS.		0	17	15	13	376	7	8	1	8	8	4	4	124

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
NO. OF RCDS.	372	250	371	227	0	33	0	371	371	367	310	376	373	2
MISSING RCDS.	4	126	5	149	376	343	376	5	5	9	66	0	3	

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

STATION NO. 901 (DISTRIBUTION OF OBSERVATIONS BY TIME) NUMBER OF SITES = 1

YEAR	0000 TO 0200	0201 TO 0400	0401 TO 0600	0601 TO 0800	0801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1961	0	0	0	0	125	1	125	0	0	125	0	0

TOTALS

0	0	0	0	125	1	125	0	0	125	0	0

BASIC WEATHER TAPE AND REVISED FORMAT WEATHER TAPE INVENTORY

GRAND TOTALS FOR ALL STATIONS (NUMBER OF OBSERVATIONS)

TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRYB	WETB	DIF	RH	DEWP	TEMP	HRH	MAX
45030	19902	31100	32302	44158	30263	31226	28350	7553	7053	7058	29319	29326	20176

CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
16877	21055	42410	15535	631	5118	1516	38027	37884	44015	21034	38934	29408	333

WEATHER TAPE INVENTORY
SITE TOTALS FOR ALL YEARS*

PART 1

Site	TOTAL	DAYS	DIR	SPEED	RAIN	SNOW	DRY B	WET B	DIF	RH	DEW P	TEMP	HRH	MAX
4011	12791	4698	8498	8602	12756	12752	7939	5102	6	0	6	5887	5882	7435
4012	1350	1226	0	0	1342	0	0	0	0	0	0	0	0	0
4014	1196	325	1047	1118	1195	1167	578	580	2	0	0	757	757	0
4015	1035	553	26	26	796	1035	962	962	0	0	0	0	0	0
4016	376	198	71	72	376	376	344	344	0	0	0	0	0	0
4017	2378	1179	0	0	2378	2378	1704	1731	30	0	0	0	0	0
7011	7061	2287	6865	6962	6850	18	5386	5363	0	0	0	5961	5983	4472
7012	2164	1944	1508	1529	2010	2102	1711	1711	0	0	0	1939	1939	1164
7013	1855	1647	1227	1243	1855	1846	1489	1487	0	0	0	1774	1771	497
7014	572	516	71	70	558	564	59	58	0	0	0	541	539	11
8011	1308	435	1200	1199	1267	0	1208	1203	1303	1203	1203	1305	1304	835
8012	265	187	0	156	254	254	186	186	0	0	0	265	205	1
8013	377	299	0	154	315	367	248	248	0	0	0	322	322	7
8014	348	164	0	233	346	347	273	273	0	0	0	232	232	0
8017	169	110	0	128	169	169	141	141	0	0	0	158	158	68
8019	286	203	0	146	286	286	200	200	0	0	0	280	279	0

*Where more than one site was used for weather observations at one station.

SITE TOTALS FOR ALL YEARS

PART 2

	CUR	MIN	CC	WRI	PICH	DEW	REM	MAX	MIN	PPT	SUN	T-TP	T-RH	ERR
4011	8166	7455	12777	4781	1	3128	2	12766	12755	12761	12166	10673	5882	13
4012	0	0	0	0	0	666	0	0	0	1340	0	0	0	20
4014	0	0	1171	0	0	0	0	284	285	1195	0	1154	757	2
4015	0	0	1005	0	0	0	0	0	0	795	0	962	0	14
4016	0	0	376	0	0	0	0	0	0	195	0	344	0	34
4017	0	0	2378	389	0	0	62	0	0	2378	0	1704	0	0
7011	3606	4452	6961	2925	0	0	0	6897	6764	6853	2254	6602	5983	84
7012	931	1592	1790	590	0	0	0	2030	2029	2034	0	1983	1939	60
7013	753	844	1853	368	0	0	0	1765	1802	1854	0	1833	1771	0
7014	11	10	570	0	0	0	0	543	543	559	0	543	539	11
8011	0	833	1282	782	1	258	0	1289	1288	1262	1271	1307	1305	0
8012	69	40	237	0	214	0	0	212	212	248	0	218	205	0
8013	66	36	0	0	203	0	0	320	321	341	0	349	322	17
8014	6	8	347	0	19	0	0	232	233	346	0	320	232	0
8017	24	10	149	0	0	0	0	156	156	169	0	166	158	0
8019	132	81	285	0	191	0	0	278	279	286	0	283	279	1

BASIC WEATHER DATA - CARD FORMAT

1011106522712002206000000505490	5095	0	147145000
1011106522718003105085C00470460	4894149	14609	147145085
101110652280800120100200049048O	4994147	143090032	162143087
101110652281200210300000590530	6066	07	162143087
10111065228180034010 0T00590540	5971162	148080192	162143002
1011106522908001601000T00575540	5784162	144090072	16014400T
1011106522912002000010000550540	5697	0	160144010
1011106522918003000016000570540	5885160	157080078	160144026
1011106523008001102002000495490	4998158149	136090054	165136028
10111065230120028040000C0580545	5878	08	165136018
1011106523018003804000000630570	62661651621	48050566	165136002
1011107520108001705000000610540	61621621621	34000326	175134000
1011107520112002605000000690555	7039	03	175134000

BASIC WEATHER DATA - REVISED TAPE FORMAT

101110551301200	59	48	38	61	30	000			9	08
101110551301810	47	46	90	61	30	013		02101	9	07
101110651010805	57	57	82	68	50	028		00001	9	03
101110651011200	65	61	82	68	50	041			9	04
101110651011800	68	59		68	50	013		02201	7	08
101110651020800	55	54	90	64	45	013		00001	9	06
101110651021200	58	56	89	64	45	000		00001	8	07
101110651021800	62	52	52	64	45	013		00441	8	05
101110651030805	46	45	90	54	42	019		00841	8	06
101110651031205	54	46	53	54	42	019			7	12
101110651031800	52	44	47	54	42	006		04401	0	08
101110651040800	48	42	60	58	36	000			3	06
101110651041200	57	47	48	58	36	000			4	06
101110651041800	52	46	60	58	36	000			7	05
101110651050800	45	43	82	51	35	000	000	00581	9	01
101110651051200	48	46	83	51	35	000			9	01

NOON WEATHER DATA - TAPE FORMAT

10111	510717	1200	66	61	75	68	49	000	030	9	03
10111	510718	1200	66	59	67	71	51	000	000	8	03
10111	510719	1200	68	58	55	74	53	009		1	03
10111	510720	1200	70	59	51	72	44	000	010	3	12
10111	510721	1200	74	67	64	76	53	018		4	05
10111	510722	4000									
10111	510723	1200	76	66	54	81	49	004		7	08
10111	510724	1200	71	58	46	75	44	006	000	5	12
10111	510725	1205	70	57	47	73	44	000	000	1	10
10111	510726	1200	79	63	41	80	46	000	000	6	12
10111	510727	1200	72	65	67	75	45	000	000	9	12
10111	510728	1200	67	53	55	68	47	011	000	2	12
10111	510729	1200	72	58	42	72	43	000	020	9	06
10111	510730	1200	65	62	86	72	40	000	020	9	07
10111	510731	1200	66	57	66	65	53	0005	000	2	13
10111	510801	1200	62	55	60	65	31	0005	050	9	06
10111	510802	1200	62	61	97	73	54	000	010	9	06
10111	510803	1200	76	61	42	78	50	015	010	5	10
10111	510804	1200	76	64	51	80	42	000	040	8	10

APPENDIX II

Fuel Moisture Inventory and Sample Data

The merged fuel moisture tape inventory was somewhat more involved than the weather inventory. Separate yearly and overall totals and time distributions were computed for each fuel type at each site. This total was listed only if there were more than 10 observations for a single fuel type in a given year. The main purpose of this was to avoid tabulating keypunching errors in the fuel type description, of which there are many. Then, yearly and overall site totals and time distributions were computed. This was also done for each station. Finally, a yearly and overall grand total and time distribution was computed. In addition to the above, an index of the fuel types present and the number of observations for each fuel type was calculated. The following section discusses the meaning of each column heading of the fuel moisture inventory.

YR: year of observation

No. of Obser.[1]: No of observations (for individual fuel types only)

Number of Observations[1] - Total: Same as above for Site, Station & Grand Totals.

Number of Observations - Set of LE.10: Number of sets of less than or equal to ten observations for the Site, Station & Grand Totals.

No. of FT.: No of fuel types present at each site, station and grand total. If the same fuel type occurs at two different sites or station, each is counted as a separate occurrence, because presumably the species would be different at each location.

No. of Days[1] - TOT.: Number of separate days of observations in a year and the totals for all years.

No. of Days[1] - Miss.: Number of days missing between the first and last observations in each year. The totals are simply a summation of the individual yearly values.

Number of Observ. - Weath[1]: The number of fuel moisture records which have a merged weather observation (closest occurrence with respect to time).

Number of Obser. - Noon W[1]: The number of fuel moisture records which have merged noon weather observations.

No. of Err: Number of keypunching or coding errors detected by the program. See part C, section 5 for a detailed discussion of the checks which were made. Note that the fuel moisture codes were not checked.

Time distribution[1]: Total number of observations falling within each of the 2 hour intervals.

[1] The total for an individual year in the fuel type summary does not include any sets of less than or equal to 10 observations. The overall fuel type totals, and all other totals include all observations. The purpose of this was to preclude the printing of an entire page for one or two observations.

Note that the total number of fuel types present and No. of Fuelt. with GT. 10 observ listed at the top of the site, station and grand total summaries are not a total of the number of occurrences listed for individual years. They represent the number of different fuel types recorded at each site. A fuel type at one site is counted only once, regardless of the number of years of observations for these totals. Therefore, there are 704 distinctly different fuel types with potentially useful information.

In addition, a fuel type cross-reference index is presented so that one may find the specific stations and sites which had observations of any particular fuel type. Only those fuel types with more than 10 observations are shown in the cross-reference index.

As with the weather inventory, the complete inventory is far too lenghty to present in this paper. Only the station summaries and totals are presented by year. The site totals only for individual sites are listed separately. More detailed information on specific years at a particular site, or individual fuel types can be obtained from the Forest Fire Research Institute.

Following the inventory is a sample listing of the Fuel Moisture data showing both card and tape formats.

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 401

STATION 401

TOTAL NUMBER OF FUELTYPES PRESENT 65 NO. OF FUELT. WITH GT. 10 OBSERV. 53

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
32	117	0	1	117	10	117	113	0	0	0	0	0	0	0	0	115	2	0	0	0
33	732	0	5	443	70	732	697	0	0	0	0	163	153	1	2	291	122	0	0	0
34	1663	1	13	1162	360	1663	1590	0	0	0	0	322	199	27	0	771	344	0	0	0
35	924	1	8	731	310	924	1	0	0	0	0	0	180	25	5	691	22	0	1	0
36	1487	0	13	1229	496	1487	0	0	0	0	0	0	208	54	49	1053	123	0	0	0
37	748	4	11	679	621	748	0	0	0	0	0	1	72	4	36	575	60	0	0	0
38	554	1	8	228	171	548	0	0	0	0	0	3	126	113	26	155	112	19	0	0
39	376	0	7	316	694	372	365	0	0	0	0	0	0	0	17	204	155	0	0	0
40	535	0	12	484	1390	535	535	0	0	0	0	0	1	2	134	296	102	0	0	0
42	60	0	1	60	82	46	0	0	0	0	0	0	0	0	0	60	0	0	0	0
45	13	0	1	13	63	13	13	0	0	0	0	0	0	0	0	13	0	0	0	0
46	50	0	2	46	30	50	50	0	0	0	0	0	4	0	0	46	0	0	0	0
47	158	0	2	155	151	157	157	0	0	0	0	0	2	8	50	96	2	0	0	0
48	1666	2	16	1468	741	1666	1666	0	0	0	0	136	96	1	143	1277	13	0	0	0
49	1984	2	17	1466	673	1984	1984	0	0	0	0	504	140	2	164	1174	0	0	0	0
50	1607	1	18	1145	938	1607	1607	0	0	0	6	323	189	27	232	786	28	7	7	1
51	1290	4	16	930	604	1290	1290	2	0	0	0	399	122	6	82	681	0	0	0	0
52	989	7	19	745	736	989	989	0	0	0	0	304	70	0	113	502	0	0	0	0
53	797	3	13	635	1017	797	797	0	0	0	0	261	41	0	71	424	0	0	0	0
54	803	3	14	603	797	796	796	0	0	0	0	328	26	4	25	417	2	1	0	0
55	439	0	4	280	44	439	439	0	0	1	0	252	21	1	17	147	0	0	0	0
56	346	3	6	218	46	346	346	0	0	0	0	190	10	0	14	132	0	0	0	0
57	341	4	9	205	332	341	341	0	0	5	0	141	16	5	8	147	12	2	0	5
TOTAL FOR THE STATION																				
	17679	36		13358	10376	17647	13776	2	0	6	6	3327	1676	280	1188	10053	1099	29	8	6

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 501

STATION 501

TOTAL NUMBER OF FUELTYPES PRESENT 138 NO. OF FUELT. WITH GT. 10 OBSERV. 96

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
48	4314	42	112	3374	5157	4314	4308	0	0	1	0	77	809	18	1013	2123	18	255	0	0
49	6063	31	108	4518	5646	6063	6052	0	0	1	0	38	1337	205	1251	2707	83	441	0	0
50	5099	23	91	3749	5337	5090	5090	0	0	5	6	11	1210	176	1026	2165	43	439	7	6
51	4153	21	87	3217	5941	4153	4153	0	0	10	0	231	787	201	625	2015	244	8	0	0
52	4183	13	75	3262	4856	4183	4183	12	0	1	0	191	775	74	729	2208	205	0	0	0
58	38	31	0	38	9	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0
TOTAL FOR THE STATION																				
	23850	161		18158	26946	23803	23786	12	0	18	6	548	4918	674	4644	11256	593	1143	7	6

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 601

STATION 601

TOTAL NUMBER OF FUELTYPES PRESENT 121 NO. OF FUELT. WITH GT. 10 OBSERV. 79

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
32	10	1	0	5	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0
53	3162	22	76	2346	4170	3162	3162	0	0	0	0	0	762	8	239	2147	6	0	0	0
54	3509	12	61	2280	4074	3509	3509	0	0	0	0	356	947	14	267	1920	4	0	0	0
55	5888	23	79	3681	4602	5876	5876	0	0	0	0	570	1509	75	284	3168	275	6	0	0
56	4463	19	77	2949	3698	4453	4453	0	0	1	0	485	1093	14	140	2360	360	0	0	0
57	72	0	0	72	16	0	0	0	0	0	0	0	0	0	36	36	0	0	0	0
58	349	0	0	349	132	0	0	0	0	0	0	0	0	0	176	173	0	0	0	0
TOTAL FOR THE STATION																				
	17453	77		11682	16692	17000	17000	0	0	1	0	1411	4316	111	1142	9809	645	6	0	0

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 701

STATION 701

TOTAL NUMBER OF FUELTYPES PRESENT 291 NO. OF FUELT. WITH GT. 10 OBSERV. 157

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
28	4	2	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
39	2261	45	0	1719	1345	0	0	0	0	0	4	368	170	41	678	943	57	0	0	0
40	4340	38	100	3765	5104	4337	4337	0	0	0	0	193	302	5	2316	1360	159	5	0	0
41	3073	42	85	2908	2620	3071	2	0	0	0	0	0	174	15	1148	1101	633	0	0	0
46	3464	67	121	2637	4994	3460	3403	0	0	3	1	7	711	136	1763	780	63	0	0	0
47	3867	32	92	3041	5723	3861	3861	0	0	0	0	304	660	11	2047	807	36	0	0	0
48	1307	0	14	1241	385	1307	1307	0	0	0	0	0	0	3	272	1006	26	0	0	0
49	1217	8	16	1216	391	1173	1173	2	0	0	0	0	0	0	337	872	8	0	0	0
50	1286	0	13	1174	251	1286	1266	0	0	0	0	0	0	0	22	1159	105	0	0	0
51	872	1	14	872	464	872	872	0	0	0	0	0	0	0	157	687	28	0	0	0
52	1010	0	13	998	428	1010	1010	0	0	0	0	0	0	0	527	472	11	0	0	0
53	936	2	15	936	417	932	932	0	0	0	0	0	15	8	309	589	15	0	0	0
54	1088	3	16	1088	392	1088	1088	0	0	0	0	0	0	5	337	746	0	0	0	0
55	965	0	13	961	460	965	965	0	0	0	0	5	0	0	363	562	35	0	0	0
56	1140	0	12	1136	267	1140	1140	0	0	0	0	0	0	0	351	789	0	0	0	0
57	829	2	13	777	140	829	829	0	0	0	0	2	6	0	232	587	2	0	0	0
58	770	0	8	764	189	770	770	0	0	0	0	0	0	0	188	582	0	0	0	0
59	1041	1	13	1041	308	1037	1037	0	0	2	0	0	0	0	324	711	4	0	0	0
64	4	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
TOTAL FOR THE STATION																				
	29474	247		26327	23878	27138	23992	2	0	5	5	879	2038	224	11375	13757	1182	5	0	0

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 702

STATION 702

TOTAL NUMBER OF FUELTYPES PRESENT 99 NO. OF FUELT. WITH GT. 10 OBSERV. 80

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
53	4565	23	80	3416	2744	4563	4563	0	0	0	2	262	1293	116	689	1939	256	8	0	0
54	4111	21	78	3076	2973	4111	4111	0	0	0	0	361	1287	116	795	1239	295	15	0	2
55	4419	13	68	3309	1538	4419	4355	1	0	3	0	278	1279	68	697	1789	171	20	114	0
56	1996	4	38	1289	785	1996	1996	0	0	0	0	178	309	51	418	805	171	44	20	0
TOTAL FOR THE STATION																				
	15091	61		11090	8040	15089	15025	1	0	3	2	1079	4168	351	2599	5772	893	87	134	2

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 801

STATION 801

TOTAL NUMBER OF FUELTYPES PRESENT 219 NO. OF FUELT. WITH GT. 10 OBSERV. 166

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
57	5156	27	122	4410	5926	5020	5020	0	0	0	2	242	27	10	1296	3052	238	0	0	0
58	5561	11	79	5241	2693	5561	5561	0	0	0	0	179	60	300	1996	2865	149	5	0	0
59	10947	24	125	7730	3922	10916	10916	0	0	0	1	389	2748	1831	1640	3845	477	4	0	0
TOTAL FOR THE STATION																				
	21664	62		17381	12541	21497	21497	0	0	0	3	810	2835	2141	4932	9762	864	9	0	0

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 802

STATION 802

TOTAL NUMBER OF FUELTYPES PRESENT 47 NO. OF FUELT. WITH GT. 10 OBSERV. 35

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
48	40	0	0	21	5	0	0	0	0	0	0	20	0	0	13	7	0	0	0	0
57	1344	6	24	652	380	1343	1343	0	0	0	6	226	317	95	443	95	162	0	0	0
58	3053	7	24	1439	1229	3050	3050	0	0	2	47	716	686	64	1015	123	392	6	0	0
59	3760	5	34	2483	1160	3752	3716	0	0	0	0	569	332	71	2221	142	423	2	0	0
TOTAL FOR THE STATION																				
	8197	18		4595	2774	8145	8109	0	0	2	53	1531	1335	230	3692	367	977	8	0	0

TOTAL YEARLY INVENTORY FOR THE STATION

STATION 901

STATION 901

TOTAL NUMBER OF FUELTYPES PRESENT 44 NO. OF FUELT. WITH GT. 10 OBSERV. 32

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
61	3643	12	44	2203	1178	3635	3632	0	0	7	6	98	823	326	646	1481	180	13	0	8
TOTAL FOR THE STATION																				
	3644	13		2204	1178	3635	3632	0	0	7	6	98	824	326	646	1481	180	13	0	8

YEARLY GRAND TOTAL INVENTORY

TOTAL NUMBER OF FUELTYPES PRESENT 1030 NO. OF FUELT. WITH GT. 10 OBSERV. 704

YR	NUMBER OF OBSERVATION SET OF TOTAL	LE.10	NO. OF FT.	NO. OF DAYS TOT.	MISS	NUMBER OF OBSERV WEATH	NOONW	NO. OF ERR	TIME DISTRIBUTION 0 TO 200	201 TO 400	401 TO 600	601 TO 800	801 TO 1000	1001 TO 1200	1201 TO 1400	1401 TO 1600	1601 TO 1800	1801 TO 2000	2001 TO 2200	2201 TO 2400
1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
28	4	2	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
32	127	1	1	122	10	117	113	0	0	0	0	0	5	0	0	120	2	0	0	0
33	732	0	5	443	70	732	697	0	0	0	0	163	153	1	2	291	122	0	0	0
34	1663	1	13	1162	360	1663	1590	0	0	0	0	322	199	27	0	771	344	0	0	0
35	924	1	8	731	310	924	1	0	0	0	0	0	180	25	5	691	22	0	1	0
36	1487	0	13	1229	496	1487	0	0	0	0	0	0	208	54	49	1053	123	0	0	0
37	748	4	11	679	621	748	0	0	0	0	0	1	72	4	36	575	60	0	0	0
38	554	1	8	228	171	548	0	0	0	0	0	3	126	113	26	155	112	19	0	0
39	2637	45	7	2035	2039	372	365	0	0	0	4	368	170	41	695	1147	212	0	0	0
40	4875	38	112	4249	6494	4872	4872	0	0	0	0	193	303	7	2450	1656	261	5	0	0
41	3073	42	85	2908	2620	3071	2	0	0	0	0	0	174	15	1148	1101	633	0	0	0
42	60	0	1	60	82	46	0	0	0	0	0	0	0	0	0	60	0	0	0	0
45	13	0	1	13	63	13	13	0	0	0	0	0	0	0	0	13	0	0	0	0
46	3514	67	123	2683	5024	3510	3453	0	0	3	1	7	715	136	1763	826	63	0	0	0
47	4025	32	94	3196	5874	4018	4018	0	0	0	0	304	662	19	2097	903	38	0	0	0
48	7327	44	142	6104	6288	7287	7281	0	0	1	0	233	905	22	1441	4413	57	255	0	0
49	9264	41	141	7200	6710	9220	9209	2	0	1	0	542	1477	207	1752	4753	91	441	0	0
50	7992	24	122	6068	6526	7983	7963	0	0	5	12	334	1399	203	1280	4110	176	446	14	7
51	6315	26	117	5019	7009	6315	6315	2	0	10	0	630	909	207	864	3383	272	8	0	0
52	6182	20	107	5005	6020	6182	6182	12	0	1	0	495	845	74	1369	3182	216	0	0	0
53	9460	50	184	7333	8348	9454	9454	0	0	0	2	523	2111	132	1308	5099	277	8	0	0
54	9511	39	169	7047	8236	9504	9504	0	0	0	0	1045	2260	139	1424	4322	301	16	0	2
55	11711	36	164	8231	6644	11699	11635	1	0	4	0	1105	2809	144	1361	5666	481	26	114	0
56	7945	26	133	5592	4796	7935	7935	0	0	1	0	853	1412	65	923	4086	531	44	20	0
57	7982	39	168	6356	6838	7533	7533	0	0	5	8	611	366	110	2117	4055	414	2	0	5
58	9811	49	111	7871	4260	9381	9381	14	0	2	47	895	746	364	3375	3821	541	11	0	0
59	15748	30	172	11254	5390	15705	15669	0	0	2	1	958	3080	1902	4185	4698	904	6	0	0
61	3643	12	44	2203	1178	3635	3632	0	0	7	6	98	823	326	646	1481	180	13	0	8
64	4	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
GRAND TOTAL																				
	137332	675		105030	102477	133954	126817	31	0	42	81	9683	22110	4337	30320	62435	6433	1300	149	22

FUEL MOISTURE INVENTORY

Site Totals for all years

Station	Site	No. Obvs.	No. of Fuel Types Total	No. of Fuel Types GT.10	No. Days Total	No. Days Missing	No. of Weather	No. of Noon W	No. Err
401	01	5135	13	9	3840	2481	5134	4087	0
	02	1685	8	8	1412	878	1685	533	0
	03	130	2	2	130	254	130	130	0
	04	2239	3	3	1531	394	2239	1760	0
	07	136	1	1	79	335	135	115	0
	09	119	3	3	119	472	118	87	0
	10	132	1	1	78	374	132	106	0
	11	19	4	0	19	105	19	19	0
	14	500	3	3	441	505	484	27	0
	15	1110	6	5	788	582	1106	441	0
	18	1919	8	8	1239	506	1917	1203	0
	19	4555	13	10	4042	3490	4548	4548	2
501	01	1997	15	10	1581	3576	1986	1985	0
	02	483	5	3	483	602	479	478	0
	03	396	4	3	395	339	396	395	0
	04	2249	12	9	1815	2291	2246	2244	0
	05	2509	15	12	2059	4392	2505	2502	0
	06	1422	8	3	1021	464	1421	1420	0
	08	1581	9	7	1265	2927	1577	1576	0
	09	2027	12	9	1583	3100	2023	2021	0
	10	6233	43	33	6167	9045	6217	6216	0
	11	4953	15	7	1789	210	4953	4949	12
601	01	1543	9	8	1167	2023	1541	1541	0
	02	1771	10	8	1314	2110	1769	1769	0
	03	3293	36	21	2414	4102	3291	3291	0
	04	1675	19	7	1310	1941	1673	1673	0
	06	2547	15	9	1510	737	2359	2359	0
	07	1920	12	11	1572	2689	1910	1910	0
	08	1941	13	12	1569	2843	1704	1704	0
	09	2763	7	3	826	247	2753	2753	0
604	06	120	2	2	120	22	0	0	0
	08	120	2	2	120	22	0	0	0
608	06	40	2	2	40	8	0	0	14

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Site Totals for all years

Station	Site	No. Obvs.	No. of Fuel Types Total	No. of Fuel Types GT.10	No. Days Total	No. Days Missing	No. of Weather	No. of Noon W	No. Err
701	01	580	10	7	501	1409	543	332	0
	02	765	24	9	673	1736	727	477	0
	03	1079	21	14	937	845	703	439	0
	04	629	20	8	542	1799	593	371	0
	05	763	19	8	596	1424	759	753	0
	06	13111	60	34	12141	7316	12728	12007	2
	07	2386	30	17	2150	2326	2046	1528	0
	08	8195	69	40	7452	5550	7944	7070	0
	09	521	21	8	521	1362	521	521	0
	11	81	6	1	81	64	81	1	0
	14	1364	11	11	688	47	493	493	0
702	01	1672	13	9	1407	1183	1672	1665	0
	02	180	1	1	180	127	180	179	0
	03	1360	12	8	1097	825	1360	1354	0
	04	1603	11	10	1344	974	1603	1596	0
	05	1723	10	10	1454	1230	1723	1716	0
	06	1164	13	10	934	662	1164	1159	0
	07	1850	14	12	1596	1442	1848	1839	0
	08	149	5	2	149	150	149	149	0
	09	1359	7	7	1096	767	1359	1353	0
	10	3563	9	9	1484	397	3563	3552	0
	11	468	4	2	349	283	468	463	1
801	01	1910	22	17	1618	1311	1907	1907	0
	02	1139	20	10	1055	1084	1136	1136	0
	03	1106	9	6	902	403	1105	1105	0
	04	3036	26	23	2645	2092	3032	3032	0
	05	248	12	9	246	841	248	248	0
	06	4516	45	34	3920	2813	4372	4372	0
	07	1359	16	12	1088	821	1356	1356	0
	08	1198	21	10	947	494	1195	1195	0
	09	2161	18	17	1721	1534	2156	2156	0
	10	1000	8	7	665	308	999	999	0
	11	314	11	11	314	664	314	314	0
	12	3677	11	10	2260	176	3677	3677	0
802	01	685	5	4	475	338	685	685	0
	02	988	7	6	751	439	988	987	0
	03	909	8	7	684	641	909	908	0
	04	842	10	5	622	614	840	840	0
	05	808	7	6	586	374	807	806	0
	06	319	2	1	169	65	319	319	0
	07	477	2	1	267	179	437	436	0
	16	3169	6	5	1041	124	3160	3128	0

...cont'd

Site Totals for all years

Station	Site	No. Obvs.	No. of Fuel Types Total	No. of Fuel Types GT.10	No. Days Total	No. Days Missing	No. of Weather	No. of Noon W	No. Err
901	01	937	9	9	645	213	937	937	0
	02	701	9	6	511	134	701	701	0
	03	501	5	3	169	56	500	500	0
	04	230	4	4	160	219	229	229	0
	05	400	7	5	259	74	400	400	0
	06	580	9	4	359	480	573	572	0
	07	295	1	1	101	2	295	293	0

FUEL MOISTURE INVENTORY - CROSS REFERENCE INDEX

Fuel Type	Sta.	Sites	No. Obvs.
4 2 0	401	1-3,7,9,10,14,15,18	1248
	501	1-5,8,9	2160
	601	1,2,7,8	1416
	701	1-9	1732
	702	1,3-7,9	1594
	801	1,2,4,7,9,11	1064
	901	1,2,4-6	617
4 5 0	501	2-5,8,9	847
	601	1,2,7,8	419
	701	1,2,4-9	597
	702	1,3-5,9	898
	801	1,2,4,5,9,11	547
	802	5	23
4 6 0	401	19	101
	501	1,4,5,8,9	725
	601	1,2,4,7,8	607
	701	5-9	228
	702	1,4,5	382
	801	1,2,4,5,9,11	77
	802	1-5	588
	901	1,2,4-6	341
4 100 2	501	1,5,9,10	79
	601	3,4,7,8	67
	701	2,4,7	85
	702	1,3-5,9	73
	801	1,2,4,5,9,11	85
4 100 33	701	1,2,4,6,8	113
4 200 0	401	9	11
	501	5	165
	601	4	350
	702	2,7,8	423
	901	1,2	309
4 211 0	501	6	474
	601	6	358
4 300 0	401	9	13
	501	1,5,10	1095
	601	4,7,8	907
	701	8	199
4 300 0	702	3,6,7	206
	801	4,11	297
	802	5	82
	901	1,3,4,5	656
4 310 0	701	8	77
	702	6,7	243
4 320 0	601	3	326
	702	6,7	240
4 340 0	401	19	107
4 404 0	501	10	439
	601	3	341
4 411 0	802	2-4	230
4 530 0	802	1-3	232
4 600 0	701	1,2,4-9	609
	702	11	215
	801	1-11	1582
	901	6	158
4 901 0	801	6	195
	802	1-3	228
4 902 0	701	1,2,4,6-8	165
4 903 0	901	1	75
4 911 0	401	1	16
	501	1,4,5,8-10	570
	601	1-4,7,8	465
	701	1,2,4-9	601
	702	1,4-9	899
	801	1,2,4-7,9,11	854
	802	2,4	156
	901	1,2	156
4 912 0	501	1,5,8-10	457
	601	1-3,7,8	425
	701	5-7,9	78
	801	1,2,4-6,9,11	276
	802	4	71
	901	1,2	157
4 913 0	801	1,2,5,9,11	78
	802	3,5	153
4 920 0	701	8,11	158

Fuel Type	Sta.	Sites	No. Obvs.
4 930 0	801	6	182
4 931 0	701	7	24
4 932 0	701	7	21
5 0 1	501	10	234
	701	8	80
	801	6	189
5 0 2	501	10	235
	701	6,8	138
	801	6	187
5 0 3	501	10	233
	701	8	73
5 0 4	501	10	233
	701	6,8	137
	801	6	187
5 0 5	501	10	235
	701	8	74
5 0 6	501	10	234
	701	6,8	133
	801	6	182
5 0 7	501	10	234
	701	6,8	124
5 0 8	501	10	235
	701	8	47
5 104 1	501	10	201
	601	3	285
5 104 2	501	10	202
	601	3	286
5 104 3	501	10	202
	601	3	286
5 104 4	501	10	201
	601	3	286
5 104 5	501	10	202
	601	3	286
5 104 6	501	10	201
	601	3	284
5 104 7	501	10	202
	601	3	286
5 104 8	501	10	286
5 106 2	701	6	202
5 106 4	701	6	71
5 106 6	701	6	71
5 106 7	701	6	71
5 110 1	601	3	70
5 110 2	601	3	14
5 110 3	601	3	15
5 110 4	601	3	15
5 110 5	601	3	15
5 110 6	601	3	15
5 110 7	601	3	15
6 0 11	401	2,15	353
6 0 14	401	15	98
6 0 21	401	2,15	499
6 1 11	801	10	59
6 1 14	801	4	153
6 2 1	702	10	77
6 2 11	401	1,4	572
	501	1,4-6,8,9	150
	601	1,2,4,6-9	1045
	701	1,2,4	571
	702	1,3-5,7,9-11	1723
	801	1,3,6,7,10,12	1077
	802	3,5,16	1076
	901	3-5	182
6 2 12	401	1,2,4	2500
	501	1,4-6,8,9	1803
	601	1,4,6-8	1193
	701	2,5-7	341
	702	1,3-7,9	3444
	801	4-9,11	303
	802	1-3,5-7,16	2796
	901	1-3,5-7	859
6 2 13	401	18	95
	501	1,4	30
	702	7	11
	801	1,2,5-7	1094
	802	4	477
	901	1	112
6 2 14	401	1-3,14,15,18	3095
	501	1,4,5,9	3681
	601	1,2,7,8	2152
	701	3,5-8	2160
	702	7	562
	801	4,9,11	584
6 2 21	401	18	464

Fuel Type	Sta.	Sites	No. Obvs.
6 2 21	601	9	907
	801	12	364
	802	16	650
6 2 24	701	8	93
6 2 31	702	10	1162
	801	12	374
	802	16	384
6 2 42	601	6	231
6 3 12	401	1,2,4,14	780
6 3 16	401	1	154
6 10 11	701	8	20
6 10 12	701	8	432
6 10 21	701	8	18
6 50 11	601	6	31
6 50 12	601	6	647
6 50 42	601	6	308
7 6 11	801	6	134
7 6 12	801	1,4,6-9	668
7 6 15	702	7	152
7 6 21	801	1,3,4,6-9	497
7 6 22	702	10	13
	801	1,3,4,6-10,12	1686
7 6 23	601	9	923
7 6 23	702	10	474
7 6 24	501	11	58
7 6 25	501	11	1376
	601	3	77
7 6 26	601	3	61
	702	1	150
7 6 31	801	6	136
7 6 41	702	7	152
7 6 44	702	5,6	104
7 6 45	702	6	39
7 6 46	702	4,5	283
7 6 51	702	6	122
7 6 64	501	11	20
7 6 65	501	11	1407
7 6 76	601	7	137
7 6 79	501	10	216
7 6 89	501	10	198

Fuel Type	Sta.	Sites	No. Obvs.
7 7 20	801	6	16
7 7 21	501	11	218
	702	10	155
	801	1-4,6-10,12	1726
	802	16	986
7 7 22	701	8	78
7 7 41	702	10	113
7 7 51	702	10	111
7 7 61	702	10	113
7 113 10	701	3,6-8	784
7 114 10	701	3	21
7 119 10	701	3,6-8	562
7 131 10	701	3,6-8	124
7 132 10	701	3	35
7 191 10	701	3,6-8	122
7 192 10	701	3	31
7 213 0	801	6	51
7 213 10	701	3,6-8	765
7 214 0	801	12	103
7 214 8	801	4	66
7 214 10	701	3	21
7 217 0	801	6	68
7 219 10	701	3,6-8	933
7 220 25	701	14	21
7 222 3	401	18	151
7 223 0	801	6	58
7 223 3	401	18	151
7 224 0	702	3	21
	801	12	103
7 224 3	401	2,18	522
	701	14	138
7 224 8	801	4	66
7 227 0	801	6	68
7 241 3	701	14	80
7 243 3	701	14	80
7 245 25	701	14	79
7 246 3	701	14	80
7 313 10	701	3,8	50
7 314 25	701	14	222
7 318 10	701	3,8	53

Fuel Type	Sta.	Sites	No. Obvs.
7 320 3	701	14	21
7 321 3	401	19	499
7 322 3	401	19	455
	701	6,8	2110
7 323 0	801	1,6,8	504
7 323 3	401	19	481
	501	2,3	412
	701	6,8	2237
	801	9	88
7 323 8	801	4,7	241
7 324 0	702	3	137
	801	1,6,8,12	859
7 324 3	501	11	878
	701	14	137
	801	3,9,10	485
7 324 8	801	4,7	437
7 324 25	701	14	386
7 327 0	801	6	68
7 400 0	801	1	20
7 421 3	401	19	548
7 422 3	401	19	548
7 423 0	801	6	66
7 423 3	401	19	562
7 424 0	801	12	215
7 424 3	401	2,18	249
	701	14	138
7 427 0	801	6	68
7 500 0	801	8	25
7 500 3	702	4	68
7 521 3	701	6,8	71
7 522 3	701	6,8	1168
7 523 0	801	6	136
7 523 3	501	5,10	822
	701	6,8	1212
	702	4-6,9	512
7 523 8	801	4,6	85
7 524 0	702	1	155
	801	6,12	435
7 524 3	501	11	980
	801	8-10	446
7 524 8	801	4,6	304
7 527 0	801	6	68
7 529 3	701	6	655
8 1 0	501	10	17
8 1 2	401	1	1452
8 1 4	601	2	503
8 1 5	601	6,8	208
	604	6,8	120
	608	6	20
	701	6,8,9	2488
	801	4,6	645
8 1 11	501	4	502
8 1 71	501	4	369
8 2 0	501	10	17
8 2 5	601	6,8	213
	604	6,8	120
8 2 5	608	6	20
	701	6,8,9	2486
8 2 21	401	1	672
8 3 0	501	10	17
8 3 11	401	19	708
8 4 0	501	10	17
8 4 21	401	19	542
8 5 0	501	10	17
8 6 0	501	10	17
8 6 5	701	6	1194
8 7 0	501	10	17
8 7 5	701	6	1194
8 8 0	501	10	17

FUEL MOISTURE DATA - CARD FORMAT

FUEL TYPE 4

```
7010207401214004 002600          0078  0075
7010206411014004 002100    911   0094330067          0079
5010906480415004 005    300911   0122          000099 0112
7010210460314004 002       912   0771                 0520
```

FUEL TYPE 5

```
50110054930150057                0159 0167 0186      0210 0250 0264 0266
50110054927150058                0117 0163 0179 0195 0222 0258 0275 0258
50110054925150058                0060 0185 0188 0228 0242 0257 0278 0270
50110084910150058                0136 0160 0190 0199 0215 0223 0232 0242
```

FUEL TYPE 6

```
60106085526101064202  250   000229   000518
60106085527080064202  250   000466   000685
60106085527090064202  250   000437   000600
60106085527100064202  250   000292   000430
```

FUEL TYPE 7

```
7010607481715257        233              030200
7010607481715257        222              030697
8010108592913457   241          000122          210346210192
8010108593108307   242          000488          220305210209
```

FUEL TYPE 8

```
6010608580714508        050160050117
6010608580814458        050150050170
7010607482415008        050134050145          050216050195
7010607482415308        050218050302          050316050265
```

FUEL TYPE 9

```
7010607492814408        050154050088          050223050207
7010607492914308        050137050081          050205050190
7010607493014308        050125050077          050195050180
7010608490114058        050116050072          050187050174
```

40101	510429	1030	4	2	0	25.8	1200	57	49	50	60	47					8	16	1200	57	49	50		16
40101	510720	1330	4	2	0	20.4	1200	65	57	59	70	47	000	000		079	7	12	1200	65	57	59	000	12
40101	510805	1415	4	2	0	26.6	1200	69	56	44	72	38	000	000		135	3	05	1200	69	56	44	000	05
40101	510815	1430	4	2	0	17.2	1200	74	61	48	77	53	000	000		071	2	03	1200	74	61	48	000	03
40101	510823	1430	4	2	0	21.9	1200	66	57	57	69	44	000	000		127	1	07	1200	66	57	57	000	07
40101	510830	1400	4	2	0	18.4	1200	76	69	69	78	61	000	000		067	6	06	1200	76	69	69	000	06
40101	510907	1400	4	2	0	89.9	1200	50	45	61	57	47	032	000		059	3	17	1200	50	45	61	032	17
40101	510918	1400	4	2	0	71.2	1200	61	51	50	66	42	025	000		080	3	07	1200	61	51	50	025	07
40101	520509	1500	4	2	0	10.6	1200	63	49				000				6	07	1200	63	49		000	07
40101	520514	710	4	2	0	97.7	800	44		57	62	35	007	000		098	1	11	1200	57	46	38	007	07
40101	520514	1420	4	2	0	43.4	1200	57	46	38	62	35	007	000		098	0	07	1200	57	46	38	007	07
40101	520522	1445	4	2	0	31.3	1200	66	55	48	69	46	013	000		137	2	07	1200	66	55	48	013	07
40101	520611	700	4	2	0	18.6	800	52		76	64	49	005	000	02321	055	9	15	1200	60	54	62	005	20
40101	520611	1435	4	2	0	17.9	1200	60	54	62	64	49	005	000		055	9	20	1200	60	54	62	005	20
40101	520613	705	4	2	0	9.4	800	57		61	81	42	000	000	02301	128	3	02	1200	73	57	34	000	03
40101	520613	1435	4	2	0	17.0	1200	73	57	34	81	42	000	000		128	3	03	1200	73	57	34	000	03
40101	520620	715	4	2	0	11.9	800	53		55	67	40	001	000	02961	137	0	10	1200	62	50	41	001	10
40101	520620	1450	4	2	0	9.5	1200	62	50	41	67	40	001	000		137	3	10	1200	62	50	41	001	10
40101	520625	1450	4	2	0	73.2	1200	72	67	77	87	59	125	000		076	8	05	1200	72	67	77	125	05
40101	520710	1415	4	2	0	28.0	1200	61	56	72	65	55	008	000		007	9	11	1200	61	56	72	008	11
40101	520717	1420	4	2	0	12.9	1200	82	67	46	85	54	000	000		111	6	06	1200	82	67	46	000	06
40101	520728	1400	4	2	0	13.2	1200	83	72	56	85	61	0005	000		142	8	09	1200	83	72	56	0005	09
40101	520813	1400	4	2	0	17.0	1200	74	62	49	77	48	0005	000		111	5	08	1200	74	62	49	0005	08
40101	520826	1410	4	2	0	10.6	1200	83	69	43	89	59	000	000		125	0	04	1200	83	69	43	000	04
40101	520905	1415	4	2	0	16.1	1200	77	65	51	82	49	000	000		067	2	09	1200	77	65	51	000	09
40101	530610	1355	4	2	0	10.8	1200	62	50	44	66	44	000	000		143	0	14	1200	62	50	44	000	14
40101	530618	1430	4	2	0	58.2	1200	68	63	80	77	59	016	000		074	8	06	1200	68	63	80	016	06
40101	530626	1420	4	2	0	10.9	1200	80	63	40	83	59	002	000		109	4	13	1200	80	63	40	002	13
40101	530708	1350	4	2	0	25.7	1200	66	55	48	71	48	018	000		098	6	10	1200	66	55	48	018	10
40101	530729	1430	4	2	0	8.1	1200	82	72	62	85	62	000	000		092	0	10	1200	82	72	62	000	10
40101	530911	1415	4	2	0	15.9	1200	74	62	51	78	49	000	000		059	8	07	1200	74	62	51	000	07
40101	530914	1415	4	2	0	30.7	1200	54	46	58	59	39	002	000		078	1	13	1200	54	46	58	002	13
40101	530918	1410	4	2	0	29.8	1200	64	55	53	67	29	000	000		066	0	08	1200	64	55	53	000	08
40101	530924	1410	4	2	0	20.3	1200	66	56	50	69	31	000	000		080	1	07	1200	66	56	50	000	07
40101	530930	1400	4	2	0	27.4	1200	68	60	62	69	44	000	000		090	0	05	1200	68	60	62	000	05
40101	540521	1400	4	2	0	11.0	1200	67	52	37	69	39	000	000		113	4	06	1200	67	52	37	000	06
40101	540526	720	4	2	0	9.2	800	44	39	56	58	44	003	000	03201	139	5	16	1200	54	43	38	003	14
40101	540531	720	4	2	0	15.0	800	56	52	68	72	42	000	130	01601	060	5	01	1200	70	59	43	000	04
40101	540603	1500	4	2	0	70.7	1200	55	52	73	58	51	012	000		000	9	07	1200	55	52	73	012	07
40101	540615	1300	4	2	0	100.4	1200	66	63	83	72	59	041	000		038	9	09	1200	66	63	83	041	09
40101	540630	1515	4	2	0	18.9	1800	70	65	78	74	58	000	000	02601	021	6	11	1200	69	64	78	000	05
40101	540708	1430	4	2	0	18.2	1200	59	53	60	65	44	000	000		060	9	11	1200	59	53	60	000	11
40101	540716	720	4	2	0	16.6	800	55	51	76	69	49	000	050	02101	126	4	12	1200	66	57	58	000	11
40101	540719	1500	4	2	0	14.3	1200	72	61	58	77	58	000	000		125	6	10	1200	72	61	58	000	10
40101	540722	1500	4	2	0	16.8	1200	71	60	56	74	50	000	000		128	7	11	1200	71	60	56	000	11
40101	540726	1430	4	2	0	29.5	1200	71	66	78	81	52	025	000		440	9	02	1200	71	66	78	025	02
40101	540728	1500	4	2	0	10.9	1200	79	69	58	83	58	000	000		132	0	03	1200	79	69	58	000	03
40101	540803	1430	4	2	0	29.4	1200	67	63	80	69	59	000	000		026	9	09	1200	67	63	80	000	09
40101	540806	1500	4	2	0	28.2	1200	69	61	62	74	56	004	000		129	0	11	1200	69	61	62	004	11
40101	540809	1505	4	2	0	18.7	1800	70	65	78	73	55	002	000	03401	068	9	02	1200	71	62	56	0005	06
40101	540813	1500	4	2	0	27.9	1200	58	12	47	74	47	000	000		129	5	09	1200	58	12	47	000	09
40101	540816	1500	4	2	0	38.6	1200	60	56	78	69	58	012	000		060	9	15	1200	60	56	78	012	15
40101	540823	1300	4	2	0	15.3	1200	76	67	59	80	47	000	000		047	9	08	1200	76	67	59	000	08
40101	540827	1430	4	2	0	14.3	1200	64	53	44	71	38	000	000		104	6	04	1200	64	53	44	000	04
40101	540902	1300	4	2	0	32.3	1200	71	66	74	76	50	000	000		045	9	06	1200	71	66	74	000	06
40101	540914	730	4	2	0	51.8	800	47	44	85	68	37	001	070	00441	092	1	06	1200	57	49	53	001	04
40101	560604	1355	4	2	0	61.6	1200	57	52	74	58	48	073	000		001	9	05	1200	57	52	74	073	05

APPENDIX III

Test Fire Inventory and Sample Data

The test fire tape inventory differed from the two previous tapes in that it is not necessary to have a fairly continuous daily record to perform a good analysis. Therefore, there was no attempt made to determine the number of missing days between the first and last observation for each season. This tape presented its own difficulties, however, in that there were more than twice as many fields to be counted as there were on the weather tape. Also, the three most frequently occurring code letters for each of the six coded fuel moisture fields were determined.

Other than the above differences, the inventory was conducted in a manner similar to the previous two. Separte yearly and overall totals and time distributions were determined for each site. This was also done for each station. Lastly, an overall grand total was determined. The frequency of occurrence of code letters was omitted from the grand total as it was felt that this would not be very meaningful.

There are only two column headings in the inventory listing which are not listed in Tables 18 and 19. They are:

NR - Number of observations

ERR- Number of keypunching and coding errors detected by the program. See part C of Section 5 for a detailed discussion of the checks which were made.

As with the two previous inventories only the station yearly totals are presented in detail. The totals for each site are listed separately. More detailed information on specific years at a particular site can be obtained from the Forest Fire Research Institute.

Following the inventory is a sample listing of the test fire data showing both card and tape formats.

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS — TOTALS FOR STATION 101 NO. OF SITES = 4

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1950	187	5	5	155	187	187	187	2	160	144	163	69	0	167	70	3	0	0	51	0	52	0	0	0	4	15	2	6	0
1951	425	0	0	360	418	418	418	0	364	312	343	198	0	375	307	67	2	0	126	0	109	0	0	0	109	190	131	110	8
1952	517	1	0	408	517	517	517	1	398	297	402	158	0	410	300	49	2	0	85	0	80	0	0	0	161	191	146	163	0

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1950	0	0	0	125	125	122	132	118	164	166	79	95	0		0		0	0		0		0	0			0		1
1951	0	0	0	236	232	244	282	224	371	374	231	207	0		0		0	0		0		0	0			0		0
1952	0	0	0	273	273	271	319	270	404	411	250	298	0		0		0	0		0		0	0			0		8

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
1129	6	5	923	1122	1122	1122	3	922	753	908	425	0	952	677	119	4	0	262

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
0	241	0	0	0	274	396	279	279	8	0	0	0	634	630	637	733	612	939

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
951	560	600	0		0		0	0		0		0	0			0		9

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME — TOTALS FOR STATION 101 NO. OF SITES = 4

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1950	0	1	0	1	1	0	98	82	0	3	1	0
1951	1	0	1	2	38	3	196	180	2	1	0	1
1952	0	0	0	0	69	4	276	155	13	0	0	0

TOTALS

1	1	1	3	108	7	570	417	15	4	1	1

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS TOTALS FOR STATION 401 NO. OF SITES = 12

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1932	245	189	191	201	246	239	249	242	94	0	20	0	23	247	0	0	0	0	94	0	94	94	94	94	0	0	0	94	94
1933	192	100	100	104	192	179	189	176	58	0	83	50	82	192	51	0	0	0	102	0	102	58	58	58	0	0	0	58	58
1934	338	100	99	171	338	333	338	332	169	0	236	181	95	338	191	4	4	4	237	0	237	174	88	88	0	0	0	10	4
1935	231	109	109	132	231	199	231	199	131	0	79	131	100	231	131	0	0	0	131	0	131	131	131	131	0	0	0	71	71
1936	394	0	0	87	393	393	393	2	205	0	276	299	95	394	299	76	75	75	299	60	299	205	70	70	0	0	0	24	99
1937	336	0	0	143	336	336	336	0	222	0	246	269	66	336	269	49	44	42	271	67	271	215	105	94	0	1	1	29	69
1938	141	0	0	108	133	133	133	7	121	0	140	141	0	141	141	34	18	18	141	21	141	106	67	0	0	0	0	0	18
1939	168	0	0	149	113	113	162	38	168	0	168	168	0	168	168	60	1	0	168	0	168	134	134	4	13	13	11	4	3
1940	257	0	0	154	147	147	249	105	222	0	199	226	0	257	226	55	27	27	257	24	257	148	97	42	0	0	0	12	39
1942	71	0	0	69	1	0	0	0	71	0	71	71	0	71	71	71	71	71	71	0	71	71	0	0	0	0	0	0	71
1944	41	0	0	30	2	2	41	41	41	0	41	26	0	41	26	0	0	0	41	41	41	41	0	0	0	0	0	0	0
1945	101	0	0	26	11	11	90	30	101	0	74	78	0	101	81	3	0	0	101	28	101	56	28	0	0	0	0	0	0
1950	119	25	17	117	119	115	119	0	92	92	96	92	25	119	92	0	0	0	92	0	92	0	0	0	0	0	0	0	0
1952	15	0	0	15	15	15	15	0	15	15	15	1	0	15	14	13	3	1	15	0	15	0	0	0	0	0	0	1	11
1957	15	0	0	13	6	6	15	9	15	15	15	15	0	15	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1932	0	0	144	0	190	176	193	151	0	0	36	86	0		0		0	0		0		0	0			0		0
1933	1	0	90	39	147	147	149	131	0	0	39	68	0		0		0	0		0		0	0			123	C	0
1934	4	0	105	90	215	232	219	210	59	0	97	174	84	A	0		0	0		0		0	79	K	LJK	248	CA	0
1935	0	0	100	52	217	217	221	152	58	3	94	143	35	A	0		0	0		0		0	69	K	L	124	CA	0
1936	76	0	170	259	376	358	380	140	176	2	224	283	120	A	0		0	0		0		0	0			356	CD	0
1937	48	0	107	234	320	319	334	157	194	0	219	263	190	A	0		0	0		0		0	0			157	C	0
1938	34	0	18	130	130	129	134	80	116	0	119	123	118	A	0		0	0		0		0	0			7	C	0
1939	35	0	0	155	156	153	160	134	156	0	138	131	162	A	0		0	44	A	50	A	0	0			3	C	0
1940	55	0	27	191	237	234	245	195	160	0	181	190	254	A	0		0	0		0		0	0			52	C	49
1942	71	0	71	69	69	70	70	65	70	1	70	61	59	A	0		0	0		0		0	0			0		0
1944	0	0	0	39	38	40	40	27	41	0	35	41	0		0		0	0		0		0	0			0		0
1945	6	0	0	27	87	91	100	54	18	6	61	97	65	A	0		0	0		0		0	0			0		0
1950	0	0	27	90	108	90	115	111	71	94	101	70	5	A	0		0	0		0		0	0			111	C	0
1952	12	0	7	14	13	12	14	12	14	13	9	13	4	A	5	A	0	0		0		0	4	A		0		0
1957	0	0	0	12	12	11	12	11	11	11	11	10	13	A	0		0	0		0		0	13	A		15	C	0

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
2668	523	516	1519	2283	2221	2560	1181	1725	122	1759	1748	486	2666	1775	365	243	238	2035

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
241	2035	1433	872	581	13	14	12	303	537	342	0	866	1401	2315	2279	2386	1630	1144

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
130	1434	1753	1109	A	5	A	0	44	A	50	A	0	165	KA	LJK	1196	CAD	49

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME TOTALS FOR STATION 401 NO. OF SITES = 12

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1932	0	0	0	0	0	0	28	206	15	0	0	0
1933	0	0	0	0	0	0	2	172	18	0	0	0
1934	0	0	0	0	0	0	4	268	66	0	0	0
1935	0	0	3	1	1	5	0	166	52	1	1	1
1936	0	0	0	0	0	2	4	322	66	0	0	0
1937	0	0	0	0	0	0	7	282	47	0	0	0
1938	0	0	0	0	0	0	10	84	47	0	0	0
1939	0	0	0	0	0	0	4	155	9	0	0	0
1940	0	0	0	0	0	0	59	148	50	0	0	0
1942	0	0	0	0	0	0	0	43	28	0	0	0
1944	0	0	0	0	0	0	0	24	14	3	0	0
1945	0	0	0	0	0	0	3	76	22	0	0	0
1950	0	0	2	2	16	23	10	31	16	10	3	6
1952	0	0	0	0	0	0	5	10	0	0	0	0
1957	2	0	0	3	0	1	0	5	0	3	0	1
TOTALS	2	0	5	6	17	31	136	1992	450	17	4	8

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS — TOTALS FOR STATION 501 NO. OF SITES = 8

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1948	786	0	0	617	786	786	786	5	629	538	620	52	0	653	187	32	0	0	380	0	380	142	0	0	127	2	0	104	1
1949	1046	47	47	752	1040	1040	1046	10	747	689	919	50	0	819	386	67	5	1	572	0	571	185	0	0	166	0	0	193	2
1950	674	33	34	586	672	672	674	0	589	508	564	218	0	592	349	161	35	0	464	0	463	142	0	0	170	0	1	108	4
1951	704	20	20	632	703	703	704	1	640	555	626	53	0	645	366	208	36	2	533	0	533	180	0	0	145	2	0	234	1
1952	659	7	7	616	659	659	659	1	621	551	615	128	0	625	396	311	94	11	521	0	521	182	0	0	135	4	0	326	1
1957	1	0	0	1	0	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1948	1	0	68	543	509	499	595	499	573	545	458	296	493	A	197	A	164	145	BA	163	A	1	105	A		726	CK	0
1949	0	0	114	718	710	719	765	712	741	736	738	344	724	A	265	A	264	196	BA	199	A	0	210	AOQ	K	882	C	0
1950	0	0	110	470	451	442	495	450	517	516	419	273	435	A	207	A	135	125	BA	122	A	0	146	AOQ	K	495	C	0
1951	0	0	73	420	413	407	599	419	436	437	396	335	360	A	145	A	118	102	BA	103	A	0	68	AOQ	K	550	C	0
1952	2	0	55	567	510	520	607	573	600	599	412	292	419	A	140	A	174	133	BA	135	A	0	94	AQ	K	633	C	0
1957	0	0	1	1	1	1	1	1	1	1	1	0	0		0		0	0		0		0	0			0		0

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
3870	107	108	3204	3860	3860	3869	17	3227	2842	3345	501	0	3335	1684	779	170	14	2470

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
0	2468	831	0	0	743	8	1	965	9	3	0	421	2719	2594	2588	3062	2654	2868

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
2834	2424	1540	2431	A	954	A	855	701	BA	722	A	1	623	AOQ	K	3286	CK	0

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME — TOTALS FOR STATION 501 NO. OF SITES = 8

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1948	0	0	0	0	0	0	353	421	12	0	0	0
1949	0	0	0	0	0	59	276	589	122	0	0	0
1950	0	0	0	0	0	67	151	352	104	0	0	0
1951	0	2	0	2	3	1	125	468	95	3	3	2
1952	0	8	0	7	8	0	132	449	28	11	8	8
1957	0	0	0	0	0	0	1	0	0	0	0	0

TOTALS

0	10	0	9	11	127	1038	2279	361	14	11	10

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS — TOTALS FOR STATION 601 NO. OF SITES = 6

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1953	1259	37	37	1176	1259	1259	1259	1	1179	1124	1151	392	0	1227	530	129	15	1	472	0	472	113	0	0	358	0	0	100	2
1954	1108	0	0	887	1105	1108	1108	3	902	762	878	238	0	1020	234	36	1	0	260	0	260	75	0	0	413	0	0	6	0
1955	1994	0	0	1891	1986	1986	1994	1	1917	1746	1900	437	0	1953	483	39	0	0	582	0	582	146	0	0	663	0	0	43	0
1956	1123	0	0	947	1123	1123	1123	0	952	898	951	405	0	1007	657	86	1	0	263	0	263	60	0	0	419	0	0	181	6

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1953	0	0	48	717	644	708	1157	744	1156	794	544	477	889	A	289	A	344	326	AB	673	AI	0	188	A		1242	C	0
1954	0	0	28	504	487	483	886	497	860	504	465	407	689	A	148	A	319	346	AB	713	AI	0	168	A		1097	C	0
1955	0	0	116	1702	1627	1132	1914	1293	1907	1842	1106	383	1275	A	411	A	559	575	AB	1183	AI	0	253	A		1616	C	0
1956	0	0	78	896	795	757	926	786	930	912	680	542	546	A	157	A	230	298	BA	582	AIC	0	127	A		943	C	0

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
5484	37	37	4901	5473	5473	5484	30	4949	4530	4880	1472	0	5207	1904	290	17	1	1577

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
0	1577	394	0	0	1853	0	0	330	8	0	0	270	3819	3553	3080	4883	3320	4853

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
4052	2795	1809	3399	A	1005	A	1452	1545	AB	3151	AIC	0	736	A		4898	C	0

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME — TOTALS FOR STATION 601 NO. OF SITES = 6

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1953	0	0	0	0	0	12	300	877	70	0	0	0
1954	0	0	0	0	83	41	326	624	34	0	0	0
1955	0	0	0	0	128	62	583	994	227	0	0	0
1956	0	0	0	0	76	43	213	736	55	0	0	0

TOTALS

0	0	0	0	287	158	1422	3231	386	0	0	0

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS TOTALS FOR STATION 701 NO. OF SITES = 8

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1939	195	0	0	60	0	0	0	0	0	1	194	81	0	195	116	41	13	3	149	0	149	12	0	0	7	9	0	13	1
1940	1000	0	0	345	1000	1000	1000	0	0	15	993	530	0	990	660	284	61	15	708	1	709	100	0	0	54	86	9	90	2
1941	480	8	0	78	476	476	476	0	41	2	467	143	4	470	278	94	15	0	364	0	364	4	0	0	4	38	0	81	1
1946	668	0	0	358	668	668	668	0	494	515	654	338	0	654	486	264	49	6	540	1	540	32	0	0	8	1	0	107	2
1947	481	0	0	322	481	481	481	0	459	437	466	210	2	470	315	129	9	0	451	0	451	123	0	0	0	1	0	39	1

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1939	0	0	105	104	85	117	132	102	99	81	102	122	159	A	48	A	0	2	A	20	AI	128	131	AGK	C	103	C	0
1940	0	0	516	577	502	638	712	575	540	481	570	634	937	A	424	A	0	2	A	150	BAI	659	634	AGE	C	485	C	1
1941	0	0	221	259	142	329	343	29	225	56	316	251	362	A	55	A	0	0		48	A	6	201	AK	C	460	C	0
1946	0	0	392	565	531	458	620	539	569	514	291	325	497	A	215	A	91	0		117	AI	134	153	AQ	JKI	650	C	0
1947	0	0	213	439	437	420	454	421	452	438	384	153	280	A	216	A	125	0		14	AI	90	88	AOQ	KJ	355	C	0

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
2824	8	0	1163	2625	2625	2625	0	994	970	2774	1302	6	2779	1855	812	147	24	2212

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
2	2213	271	0	0	73	135	9	330	7	0	0	1447	1944	1697	1962	2261	1666	1885

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1570	1663	1485	2235	A	958	A	216	4	A	349	ABI	1017	1207	AGK	CKJ	2053	C	1

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME TOTALS FOR STATION 701 NO. OF SITES = 8

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1939	0	0	0	0	0	0	52	124	19	0	0	0
1940	0	0	0	0	0	0	226	708	66	0	0	0
1941	0	0	0	0	0	0	12	221	247	0	0	0
1946	0	0	0	0	0	0	195	414	59	0	0	0
1947	0	1	0	18	138	0	143	171	10	0	0	0

TOTALS

0	1	0	18	138	0	628	1638	401	0	0	0

NUMBER OF OBSERVATIONS TOTALS FOR STATION 702 NO. OF SITES = 10

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1953	1007	C	0	717	1007	717	1007	0	743	550	731	306	0	760	605	270	53	5	564	0	564	162	1	0	168	148	74	327	27
1954	813	16	17	390	813	813	813	0	398	318	391	205	0	404	362	281	111	18	328	0	328	61	0	0	145	56	17	254	82
1955	1070	C	0	812	1070	1070	1070	0	831	781	825	354	0	850	678	418	93	7	560	1	561	148	1	0	178	155	38	495	95
1956	781	C	0	469	776	776	781	0	481	417	485	202	0	496	420	248	47	0	362	2	361	78	3	0	134	75	32	265	49

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AC	VIC	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1953	0	0	169	479	478	474	612	446	509	489	474	711	645	A	255	A	266	108	A	182	ACB	0	275	AQO	KL	787	C	0
1954	0	0	166	311	310	308	346	287	347	316	293	571	320	A	236	A	102	96	A	62	ACB	0	295	AQO	LK	523	C	0
1955	0	0	122	620	620	599	667	571	707	658	546	675	598	A	505	A	95	153	A	169	ACB	0	508	AOQ	LK	817	C	1
1956	0	C	160	357	357	346	388	314	412	369	315	532	282	A	113	A	0	91	A	38	ABC	0	114	A		438	C	1

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
3671	16	17	2388	3666	3666	3671	0	2453	2066	2432	1067	0	2510	2065	1217	304	30	1814

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AC	VIG
3	1814	449	5	0	625	434	161	1341	253	0	0	617	1767	1765	1727	2013	1618	1975

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1832	1628	2489	1845	A	1109	A	463	448	A	451	ACB	0	1192	AQO	LK	2565	C	2

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME TOTALS FOR STATION 702 NO. OF SITES = 10

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1953	0	0	0	0	0	0	466	517	23	0	1	0
1954	1	1	1	1	1	1	511	289	1	4	1	1
1955	0	1	0	3	1	1	511	548	3	3	2	0
1956	0	0	2	0	0	0	429	293	57	0	0	0
TOTALS												
	1	2	3	4	2	2	1917	1647	81	7	4	1

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS TOTALS FOR STATION 801 NO. OF SITES = 10

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1957	811	86	85	758	811	811	811	2	774	698	811	380	211	811	517	160	5	0	466	0	466	102	0	0	0	0	0	9	0
1958	602	80	80	580	602	602	602	0	601	562	602	475	95	602	541	285	53	2	343	0	343	77	0	0	0	1	0	25	0
1959	481	134	135	472	481	481	481	0	479	449	481	412	375	481	443	307	78	7	308	0	308	66	0	0	1	0	0	28	0

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1957	0	0	569	728	701	496	731	530	737	707	566	432	425	A	109	A	115	0		210	A	696	305	AFK	D	705	CB	1
1958	0	0	536	593	593	548	594	581	594	591	563	173	382	A	255	A	0	0		64	A	497	341	AD	L	492	CB	0
1959	0	0	454	453	453	431	480	414	477	380	430	129	258	A	147	A	0	0		57	A	383	430	AO	LK	394	C	0

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
1894	300	300	1810	1894	1894	1894	2	1854	1709	1894	1267	681	1894	1501	752	136	9	1117

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MC2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
0	1117	245	0	0	1	1	0	62	0	0	0	1559	1774	1747	1475	1805	1525	1808

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1678	1559	734	1065	A	511	A	115	0		331	A	1576	1076	AOF	LDK	1591	CB	1

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME TOTALS FOR STATION 801 NO. OF SITES = 10

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1957	0	0	0	0	0	2	412	387	9	1	0	0
1958	0	0	0	0	0	6	260	301	35	0	0	0
1959	0	0	0	0	10	5	176	271	19	0	0	0

TOTALS

	0	0	0	0	10	13	848	959	63	1	0	0

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS TOTALS FOR STATION 802 NO. OF SITES = 2

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1957	65	0	0	63	65	65	65	0	65	9	63	4	0	65	27	1	0	0	0	0	0	0	0	0	0	0	0	21	0
1958	111	0	0	104	111	111	111	0	107	62	111	28	0	111	110	28	0	0	0	0	0	0	0	0	0	0	0	110	1
1959	153	0	0	150	153	153	153	0	153	83	153	12	0	153	152	12	0	0	0	0	0	0	0	0	0	0	0	152	1

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1957	65	0	0	58	57	57	60	57	59	55	52	53	0		0		17	0		0		0	0			61	C	0
1958	111	0	0	109	108	109	107	108	109	110	84	96	0		0		47	0		0		0	0			103	C	0
1959	153	0	0	150	150	152	152	150	152	149	143	143	0		0		127	0		0		0	136	AF		145	C	0

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
329	0	0	317	329	329	329	0	325	154	327	44	0	329	289	41	0	0	0

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
0	0	0	0	0	0	0	0	283	2	329	0	0	317	315	318	319	315	320

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
314	279	292	C		0		191	0		0		0	136	AF		309	C	0

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME TOTALS FOR STATION 802 NO. OF SITES = 2

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1957	0	0	0	0	0	1	64	0	0	0	0	0
1958	0	0	0	0	0	0	106	5	0	0	0	0
1959	0	0	0	0	0	0	151	2	0	0	0	0
TOTALS	0	0	0	0	0	1	321	7	0	0	0	0

MERGED TEST FIRE TAPE INVENTORY

NUMBER OF OBSERVATIONS TOTALS FOR STATION 901 NO. OF SITES = 6

YEAR	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY	DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2
1960	10	9	9	10	0	0	0	0	10	8	10	6	0	10	9	7	4	1	8	0	8	8	7	0	4	4	3	8	1
1961	1488	1396	1398	1457	1488	1488	1484	17	1485	1245	1487	838	18	1487	1251	1060	485	144	1195	1	1196	551	465	0	491	445	388	706	242

YEAR	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1960	0	0	1	5	5	4	8	4	8	8	4	9	0		0		0	0		0		0	0			0		0
1961	1	0	422	1018	1018	1019	1123	1003	1311	1048	998	998	1231	A	0		1230	773	A	871	A	226	443	AF		1356	C	0

STATION TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
1498	1405	1407	1467	1488	1488	1484	17	1495	1253	1497	844	18	1497	1260	1067	489	145	1203

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
1	1204	559	472	0	495	449	391	714	243	1	0	423	1023	1023	1023	1131	1007	1319

SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
1056	1002	1007	1231	A	0		1230	773	A	871	A	226	443	AF		1356	C	0

MERGED TEST FIRE TAPE INVENTORY

DISTRIBUTION OF OBSERVATIONS BY TIME TOTALS FOR STATION 901 NO. OF SITES = 6

YEAR	0001 TO 0159	0200 TO 0359	0400 TO 0559	0600 TO 0759	0800 TO 0959	1000 TO 1159	1200 TO 1359	1400 TO 1559	1600 TO 1759	1800 TO 1959	2000 TO 2159	2200 TO 2400
1960	0	0	0	0	0	0	0	7	3	0	0	0
1961	6	0	6	7	334	206	192	643	82	6	0	6

TOTALS

6	0	6	7	334	206	192	650	85	6	0	6

MERGED TEST FIRE TAPE INVENTORY

GRAND TOTALS

NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
23367	2402	2390	17692	22740	22678	23038	1250	17944	14399	19816	8670	1191	21169	13010	5442	1510	461	12690

DMX	DU1	DU2	DU3	DU4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
247	12665	4182	1349	581	4077	1437	853	4607	1067	675	0	5603	15398	15639	15089	18593	14347	17111

SMO	IND	REM	FM1	FM2	FM3	FM4	FM5	FM6	FM7	FM8	ERR
14417	13344	11709	13315	4542	4522	3515	5925	2820	5578	17254	62

MERGED TEST FIRE TAPE INVENTORY SITE TOTALS FOR ALL YEARS

PART I

Site	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FBR	MFU	SFA	FT1	FT2	FT3	FT4	FT5	DTY
10101	283	0	0	223	283	283	283	0	228	152	224	223	0	234	214	2	0	0	222
03	257	1	0	213	256	256	256	0	205	173	210	84	0	217	88	6	0	0	20
04	270	5	5	227	268	268	268	3	234	200	228	84	0	239	117	18	0	0	16
05	319	0	0	260	315	315	315	0	255	228	246	34	0	262	258	93	4	0	4
40101	417	8	0	119	375	372	414	151	107	107	417	417	0	417	417	0	0	0	417
02	281	0	0	169	265	256	281	156	281	0	281	281	0	281	281	1	0	0	281
03	119	0	0	0	43	43	112	30	119	0	46	72	0	119	75	3	0	0	119
04	431	236	238	254	430	419	429	233	0	0	9	0	420	431	11	0	0	0	0
05	202	170	172	181	201	188	202	189	0	0	4	0	65	200	0	0	0	0	0
07	81	0	0	76	67	67	78	11	81	0	80	81	0	81	81	81	0	0	81
09	194	0	0	192	119	119	187	62	194	0	194	194	0	194	194	30	3	0	194
10	80	0	0	63	61	61	77	15	80	0	80	80	0	80	80	0	0	0	80
11	15	0	0	15	15	15	15	0	15	15	15	1	0	15	14	13	3	1	15
14	237	0	0	216	163	162	163	7	237	0	237	237	1	237	237	237	237	237	237
15	245	0	0	118	180	180	237	52	245	0	245	221	0	245	221	0	0	0	245
18	366	109	106	116	364	339	365	275	366	0	151	164	0	366	164	0	0	0	366
50101	594	0	0	506	593	593	594	3	513	478	525	134	0	530	384	168	30	1	435
02	183	19	19	152	181	181	182	1	154	139	137	21	0	161	124	40	5	0	157
03	117	61	61	95	117	117	117	0	83	78	89	23	0	93	79	29	4	0	88
04	542	0	0	386	540	540	542	3	392	376	433	26	0	404	51	7	1	1	400
05	620	0	0	551	620	620	620	2	557	512	566	88	0	579	483	246	60	6	427
06	558	0	0	538	557	557	558	2	540	360	535	4	0	541	32	4	0	0	0
08	435	0	1	254	433	433	435	2	259	245	318	13	0	274	30	1	0	0	272
60101	836	4	4	699	835	835	836	7	708	653	697	316	0	708	429	69	1	0	697
02	853	2	2	733	850	850	853	9	738	698	724	353	0	736	444	55	0	0	40
04	967	10	10	845	964	964	967	3	857	745	833	282	0	963	232	32	2	0	112
06	822	3	3	803	821	821	822	3	820	731	813	7	0	821	186	31	0	0	6
07	998	9	9	919	998	998	998	0	920	877	915	281	0	992	349	58	11	1	348
08	1008	9	9	902	1005	1005	1008	8	906	826	898	233	0	987	264	45	3	0	374
70101	215	0	0	0	192	192	192	0	12	24	207	55	0	208	97	27	3	0	167
02	253	0	0	0	241	241	241	0	33	55	244	64	0	242	153	51	6	0	204
04	225	0	0	0	197	197	197	0	16	27	222	51	0	225	129	38	8	0	166
05	268	0	0	247	268	268	268	0	239	227	268	244	0	268	250	149	18	0	255

PART 2

Site	DMX	DV1	DV2	DV3	DV4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
10101	0	220	0	0	0	0	2	0	0	0	0	0	0	103	103	105	142	97	221
03	0	1	0	0	0	2	168	130	0	0	0	0	0	132	132	133	167	127	222
04	0	16	0	0	0	10	167	142	29	0	0	0	0	162	160	164	183	159	233
05	0	0	0	0	0	262	59	7	250	8	0	0	0	237	235	235	241	229	263
40101	0	417	6	0	0	0	0	0	0	0	0	0	0	392	383	353	399	255	65
02	0	281	281	281	281	0	0	0	0	0	1	0	0	202	202	226	209	78	245
03	0	119	28	28	0	0	0	0	0	0	6	0	0	0	100	98	112	64	0
04	0	0	0	0	0	0	0	0	10	0	1	0	431	0	416	397	418	406	18
05	0	0	0	0	0	0	0	0	0	00	0	0	191	0	179	175	180	162	0
07	0	81	0	0	0	0	0	0	0	0	81	0	0	80	80	80	81	69	81
09	0	194	194	194	11	13	14	12	3	0	4	0	0	184	184	183	186	151	186
10	0	80	80	80	0	0	0	0	0	0	0	0	0	72	72	73	74	57	73
11	0	15	0	0	0	0	0	0	1	11	12	0	7	14	13	12	14	12	14
14	0	237	237	0	0	0	0	0	0	237	237	0	237	229	229	233	233	123	234
15	241	245	241	0	0	0	0	0	0	0	0	0	0	228	225	231	236	112	228
18	0	366	366	289	289	0	0	0	289	289	0	0	0	0	232	218	244	141	0
50101	0	435	431	0	0	9	8	0	170	0	0	0	65	426	405	402	492	416	436
02	0	157	0	0	0	1	0	0	24	0	0	0	61	118	112	111	132	115	155
03	0	88	0	0	0	0	0	0	7	0	0	0	38	76	71	71	79	73	94
04	0	399	399	0	0	0	0	0	1	0	3	0	16	272	246	253	348	269	304
05	0	427	0	0	0	146	0	0	449	9	0	0	106	501	487	484	548	487	507
06	0	0	0	0	0	540	0	0	0	0	0	0	7	524	512	525	534	523	535
08	0	272	0	0	0	0	0	0	0	0	0	0	20	158	149	141	213	150	187
60101	0	697	6	0	0	0	0	0	83	2	0	0	93	382	286	107	697	183	690
02	0	39	15	0	0	0	0	0	20	0	0	0	105	425	410	210	730	264	727
04	0	112	0	0	0	379	0	0	42	2	0	0	0	682	647	591	837	623	826
06	0	6	0	0	0	821	0	0	140	4	0	0	62	751	745	726	802	698	806
07	0	349	0	0	0	367	0	0	35	0	0	0	0	828	805	780	920	813	916
08	0	374	373	0	0	286	0	0	16	0	0	0	10	751	660	666	897	739	888
70101	0	167	0	0	0	3	0	0	27	0	0	0	79	102	45	120	138	81	14
02	0	204	0	0	0	2	0	0	63	0	0	0	119	159	75	166	194	121	50
04	0	166	0	0	0	1	0	0	58	2	0	0	123	135	60	154	166	94	41
05	1	255	13	0	0	0	0	0	31	1	0	0	155	241	241	217	256	233	252

PART 3

Site	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
10101	231	72	180	0	-	0	-	0	0	-	0	-	0	0	-	-	0	-	0
03	221	109	159	0	-	0	-	0	0	-	0	-	0	0	-	-	0	-	0
04	237	148	126	0	-	0	-	0	0	-	0	-	0	0	-	-	0	-	0
05	262	231	135	0	-	0	-	0	0	-	0	-	0	0	-	-	0	-	0
40101	87	320	245	53	A	0	-	0	0	-	0	-	0	13	A	-	292	CD	0
02	5	142	255	229	A	0	-	0	0	-	0	-	0	81	K	L	193	CA	0
03	0	55	110	110	A	0	-	0	0	-	0	-	0	0	-	-	29	C	0
04	18	22	104	0	-	0	-	0	0	-	0	-	0	0	-	-	318	C	0
05	0	0	44	0	-	0	-	0	0	-	0	-	0	0	-	-	0	-	0
07	0	74	67	78	A	0	-	0	0	-	0	-	0	0	-	-	0	-	0
09	0	167	151	191	A	0	-	0	44	A	50	A	0	0	-	-	0	-	0
10	0	61	67	78	A	0	-	0	0	-	0	-	0	0	-	-	0	-	0
11	13	9	13	4	A	5	A	0	0	-	0	-	0	4	A	-	0	-	0
14	1	222	202	201	A	0	-	0	0	-	0	-	0	0	-	-	75	C	0
15	6	199	235	153	A	0	-	0	0	-	0	-	0	0	-	-	143	C	49
18	0	163	260	12	A	0	-	0	0	-	0	-	0	67	K	LJK	146	C	0
50101	433	378	215	347	A	1	A	166	4	A	439	A	0	88	A	-	556	CK	0
02	154	108	85	136	A	130	A	1	0	-	0	-	0	78	Ø	K	0	-	0
03	94	76	59	93	A	87	A	2	0	-	0	-	0	63	Ø	K	0	-	0
04	295	218	317	496	A	177	A	154	0	-	0	-	0	92	A	-	500	CK	0
05	495	458	158	297	A	176	A	177	192	AB	278	A	0	107	AQ	K	593	C	0
06	534	527	34	1	A	0	-	0	505	BA	1	A	0	1	A	-	504	C	0
08	181	113	326	375	A	115	A	122	0	-	0	-	1	69	A	-	401	C	0
60101	419	71	342	786	A	262	A	252	0	-	0	-	0	135	A	-	803	C	0
02	484	140	271	794	A	255	A	263	0	-	0	-	0	136	A	-	495	C	0
04	729	515	344	9	A	4	A	302	918	A	890	A	0	153	A	-	897	C	0
06	759	735	184	0	-	0	-	0	627	BA	736	IC	0	0	-	-	793	C	0
07	852	744	278	885	A	306	A	311	0	-	900	A	0	156	A	-	936	C	0
08	809	590	390	925	A	178	A	324	0	-	625	A	0	156	A	-	974	C	0
70101	14	93	113	185	A	75	A	0	0	-	0	-	85	90	AG	-	88	C	0
02	37	138	104	223	A	87	A	0	2	A	0	-	79	87	AG	-	152	C	0
04	22	126	98	180	A	76	A	0	0	A	3	A	81	90	AG	-	96	C	0
05	229	172	94	193	A	119	A	34	0	-	2	A	38	41	A	-	257	C	0

MERGED TEST FIRE TAPE INVENTORY SITE
TOTALS FOR ALL YEARS -- CONT'D

PART I

Site	NR	SRH	STP	SW	HTP	HRH	HW	A	CAN	DDY	FRB	MFU	STA	FT1	FT2	FT3	FT4	FT5	DTY
70106	764	0	0	24	698	698	698	0	244	242	736	202	0	738	436	114	27	2	654
07	544	0	0	473	495	495	495	0	178	169	544	476	4	544	491	326	32	0	483
08	431	8	0	303	410	410	410	0	148	112	429	196	0	430	241	104	53	22	160
09	124	0	0	116	124	124	124	0	124	114	124	14	2	124	58	3	0	0	123
70201	498	14	14	414	498	498	498	0	418	364	410	222	0	421	416	304	76	3	417
02	326	0	0	272	325	325	326	0	273	260	267	43	0	278	255	174	49	7	201
03	416	1	1	217	415	415	416	0	225	176	221	143	0	230	220	153	40	5	221
04	450	0	1	328	449	449	450	0	330	263	333	198	0	340	336	228	51	1	325
05	452	1	1	313	451	451	452	0	318	238	317	170	0	326	321	225	55	2	323
06	145	0	0	125	145	145	145	0	145	130	145	16	0	145	61	17	4	2	14
07	383	0	0	148	383	383	383	0	158	144	162	17	0	167	54	24	3	0	36
08	381	0	0	274	380	380	381	0	276	256	266	36	0	280	156	67	24	10	42
09	391	0	0	224	391	391	391	0	233	162	231	218	0	241	223	17	1	0	235
10	229	0	0	73	229	229	229	0	77	73	80	4	0	82	23	8	1	0	0
80101	279	0	0	257	279	279	279	0	272	251	279	198	52	279	249	166	25	0	246
02	201	0	0	193	201	201	201	0	200	186	201	136	51	201	187	114	8	0	186
03	243	55	56	241	243	243	243	0	242	196	243	99	158	243	100	0	0	0	0
04	252	1	0	236	252	252	252	0	241	221	252	151	98	252	194	102	36	7	127
05	104	0	0	94	104	104	104	0	94	92	104	50	29	104	55	12	0	0	44
07	138	0	0	137	138	138	138	0	137	133	138	128	69	138	135	107	39	1	110
08	143	136	136	143	143	143	143	0	143	137	143	119	84	143	130	58	7	0	53
09	323	0	0	310	323	323	323	2	323	307	323	248	71	323	302	129	13	1	272
10	121	90	90	121	121	121	121	0	121	112	121	106	67	121	111	57	8	0	28
11	90	18	18	78	90	90	90	0	81	74	90	32	2	90	38	7	0	0	51
80202	291	0	0	283	291	291	291	0	287	142	289	44	0	291	251	41	0	0	0
03	38	0	0	34	38	38	38	0	38	12	38	0	0	38	38	0	0	0	0
90101	432	413	415	425	432	432	429	2	432	394	432	317	0	432	405	381	282	104	397
02	372	354	354	365	362	362	362	7	370	327	372	146	0	372	344	305	155	37	325
03	183	174	174	181	183	183	182	0	182	147	182	68	0	183	70	43	2	1	3
04	75	33	33	63	75	75	75	3	75	64	75	26	0	74	55	33	5	0	64
05	196	194	194	194	196	196	196	0	196	159	196	99	0	196	167	120	36	2	174
06	240	237	237	239	240	240	240	5	240	162	240	188	18	240	219	185	9	1	240

PART 2

Site	DMX	DV1	DV2	DV3	DV4	LIC	MO1	MO2	SH1	SH2	FE1	FE2	GRA	FHM	FHA	AB	BT	AD	VIG
70106	0	656	1	0	0	0	0	0	107	2	0	0	347	607	608	590	665	517	690
07	1	483	4	0	0	0	1	0	33	1	0	0	380	425	412	444	468	372	458
08	0	159	130	0	0	67	133	9	10	0	0	0	198	155	137	156	252	133	259
09	0	123	123	0	0	0	1	0	1	0	0	0	46	120	119	115	122	115	121
70201	0	417	5	0	0	30	24	3	408	73	0	0	73	364	365	363	391	358	419
02	0	201	0	0	0	275	17	2	194	43	0	0	18	262	262	259	264	230	274
03	0	221	30	1	0	0	17	1	114	17	0	0	98	166	166	159	189	158	182
04	2	324	212	1	0	2	2	0	222	53	0	0	187	232	232	228	273	222	247
05	0	323	0	0	0	13	1	0	247	58	0	0	167	219	218	208	252	205	229
06	1	15	0	0	0	5	144	51	43	1	0	0	4	62	63	64	94	51	92
07	0	36	6	3	0	16	138	80	3	0	0	0	10	45	45	42	67	42	66
08	0	42	0	0	0	280	29	2	84	6	0	0	47	260	259	257	266	217	271
09	0	235	196	0	0	0	2	1	7	0	0	0	8	101	101	97	158	87	132
10	0	0	0	0	0	4	60	21	19	2	0	0	5	56	54	50	59	48	63
80101	0	246	245	0	0	0	1	0	7	0	0	0	232	249	231	193	260	199	258
02	0	186	0	0	0	0	0	0	2	0	0	0	175	188	184	130	191	141	191
03	0	0	0	0	0	0	0	0	0	0	0	0	243	238	238	232	238	231	240
04	0	127	0	0	0	0	0	0	10	0	0	0	206	233	232	197	236	199	235
05	0	44	0	0	0	0	0	0	2	0	0	0	74	88	88	64	90	64	94
07	0	110	0	0	0	1	0	0	5	0	0	0	133	136	136	134	137	129	137
08	0	53	0	0	0	0	0	0	10	0	0	0	143	142	142	142	143	139	143
09	0	272	0	0	0	0	0	0	11	0	0	0	224	311	309	232	318	264	318
10	0	28	0	0	0	0	0	0	15	0	0	0	120	119	119	119	121	117	121
11	0	51	0	0	0	0	0	0	0	0	0	0	9	70	68	32	71	42	71
80202	0	0	0	0	0	0	0	0	245	2	291	0	0	280	278	281	282	278	282
03	0	0	0	0	0	0	0	0	38	0	38	0	0	37	37	37	37	37	38
90101	0	397	4	0	0	276	69	272	300	118	1	0	45	351	351	352	372	350	417
02	0	325	324	300	0	192	39	104	329	123	0	0	100	279	279	275	303	274	331
03	0	3	0	0	0	14	165	6	1	0	0	0	0	123	123	123	136	122	134
04	0	64	60	0	0	5	42	1	9	0	0	0	19	40	40	42	47	36	61
05	1	175	171	172	0	8	133	8	60	2	0	0	46	93	93	93	118	91	174
06	0	240	0	0	0	0	1	0	15	0	0	0	213	137	137	138	155	134	202

PART 3

Site	SMO	IND	REM	FM1	C1	FM2	C2	FM3	FM4	C4	FM5	C5	FM6	FM7	C7A	C7B	FM8	C8	ERR
70106	567	554	292	665	A	276	A	42	2	A	3	A	302	369	AKG	CKJ	679	C	0
07	367	369	351	516	A	188	A	15	0	-	0	-	220	230	AGK	C	456	C	0
08	212	100	382	208	A	82	A	97	0	-	340	ABI	191	289	AEQ	CJK	325	C	1
09	122	111	51	65	A	55	A	28	0	-	1	A	21	11	A	-	0	-	0
70201	368	355	403	358	A	187	A	198	2	A	0	-	0	285	AQ	L	436	C	0
02	274	253	69	0	-	0	-	0	185	A	0	-	0	0	-	-	0	-	0
03	183	150	317	294	A	218	A	1	0	-	210	AB	0	67	ØAK	L	357	C	0
04	233	214	344	316	A	246	A	133	0	-	0	-	0	204	AQ	K	398	C	0
05	224	202	240	310	A	250	A	131	0	-	0	-	0	253	AQ	K	381	C	0
06	62	46	137	30	A	1	A	0	0	-	33	ABC	0	0	-	-	118	C	0
07	48	31	351	262	A	0	-	0	175	A	208	CBA	0	154	A	-	329	C	0
08	271	251	123	3	A	0	-	0	86	A	0	-	0	56	A	-	0	-	2
09	114	82	317	272	A	207	A	0	0	-	0	-	0	173	AQ	K	336	C	0
10	55	44	188	0	-	0	-	0	0	-	0	-	0	0	-	-	210	C	0
80101	255	215	136	262	A	159	A	21	0	-	0	-	128	183	AFØ	KL	230	C	0
02	188	146	100	187	A	84	A	20	0	-	0	-	190	47	AFØ	L	166	C	0
03	153	231	53	0	-	0	-	0	0	-	0	-	225	64	Ø	L	206	C	0
04	230	194	95	124	A	20	A	20	0	-	235	A	230	230	AKF	DL	216	BC	1
05	93	70	52	0	-	22	A	16	0	-	6	A	102	38	FA	-	102	C	0
07	136	131	32	119	A	0	-	0	0	-	0	-	120	120	AØ	K	107	C	0
08	121	141	21	0	-	1	A	2	0	-	0	-	135	63	ØAF	LK	106	C	0
09	318	259	141	310	A	213	A	20	0	-	0	-	311	239	AFØ	KL	286	C	0
10	113	118	37	0	-	0	-	0	0	-	0	-	108	63	Ø	L	98	CB	0
11	71	54	67	63	A	12	A	16	0	-	90	A	27	30	AF	-	74	C	0
80202	277	248	256	0	-	0	-	176	0	-	0	-	0	114	A	-	273	C	0
03	37	31	36	0	-	0	-	21	0	-	0	-	0	22	FA	-	36	C	0
90101	353	349	299	392	A	0	-	397	421	A	421	A	0	220	A	-	373	C	0
02	297	271	190	357	A	0	-	341	349	A	0	-	0	221	AF	-	347	C	0
03	124	122	123	0	-	0	-	10	0	-	181	A	0	0	-	-	166	C	0
04	49	39	57	63	A	0	-	60	0	-	69	A	0	0	-	-	55	C	0
05	96	90	141	189	A	0	-	184	0	-	193	A	0	0	-	-	193	C	0
06	137	131	197	230	A	0	-	238	3	A	7	A	226	2	A	-	222	C	0

TEST FIRE DATA - CARD FORMAT

1010109501313104000010719100010210000000000000000	100020100112001120500
1010109501313104000010719100010210000000000000000	100030200112002140500
1010109501412554000060719100010210000000000000000	100100400512004350700
1010109501413004000000731000000210000000000000000	000000000000000990021
1010109501413054000040719100010210000000000000000	100040200112004150200
1010109501512554000030719100010210000000000000000	100060300112004140500
1010109501513004000030731900010210000000000000000	100020100106001920000
1010105511913304000060139100010210000000000000000	100050300215001140600
1010105512014004000090139100010210000000000000000	100000000000000990021
1010105512014054000090159100010210000000000000000	100010100148001940000
1010105512113304000020239100010210000000000000000	100000000000000990021
1010105512113454000020159100010210000000000000000	100040200175001940000
1010105512413100000000000000000000000000000000000	000000000000000000007
1010105512613450000000000000000000000000000000000	000000000000000000007
1010105512813253000010519100010210000000000000000	100040301512002150500
1010105512813253000030519100010210000000000000000	100100402912002341039
1010105512813454000030529100010210000000000000000	100070300212002110500
1010105512912404000020039100010210000000000000000	100000000000000990041
1010105512912454000010039100010210000000000000000	100000000000000990021
1010105512912554000010059000000000000000000000000	100000000000000990032
1010105513013004000020139100010210000000000000000	100000000000000990041
1010105513013053000020129100010210000000000000000	100080300512004350600
1010106510113000000000000000000000000000000000000	000000000000000000007
1010106510216400000000000000000000000000000000000	000000000000000000007
1010106510410350000000000000000000000000000000000	000000000000000000007
1010106510600000000000000000000000000000000000000	000000000000000000007
1010106510713104000040539100010210000000000000000	100000000000000990041
1010106510713263000040259100010210000000000000000	100000000000000990041
1010106510813154000090239100010210000000000000000	100000000000000990021
1010106510813254000090259100010210000000000000000	100000001130000990000
1010106510912500000000000000000000000000000000000	000000000000000000007

501	5	48	727	1300	00000C	736607	0000000	00000000000000000000000000	00000000000000007	393A		1520					354C
501	5	48	728	1340	00006E	784805	2081000	40000000000000000000100000	12070061200533070O					1716A			67C
501	5	48	728	1355	00006F	784805	2071000	14000100400000000000100000	09040021200533060O					1716A			67C
501	5	48	728	1400	00007G	784805	4031000	40000000000000000000100000	11030051200533070O					1716A			67C
501	5	48	729	1320	00000E	758104	0000000	00000000000000000000000000	00000000000000007	952A						929A	772C
501	5	48	730	1355	00000G	694818	0000000	00000000000000000000000000	00000000000000007		949A		446A	2360A			900C
501	5	48	731	1300	00000C	636809	0000000	00000000000000000000000000	00000000000000007	598A		2070	1656A				1115C
501	5	48	8	2	1320	00000E	656602	0000000	00000000000000000000000000	00000000000000007					2625A			340C
501	5	48	8	3	1325	00004F	666404	2023000	40000000000000000000100000	03010011200119050O	317A		1652					167C
501	5	48	8	3	1330	00003E	666404	2051000	41000100400000000000100000	24120271200544110O	317A		1652					167C
501	5	48	8	4	1335	00002E	714505	2051000	14000100400000000000100000	06020006000900000					884A			53C
501	5	48	8	4	1335	00001E	714505	2051000	14000100400000000000100000	02010000650090000O					884A			53C
501	5	48	8	4	1340	00009E	714505	2073000	14000100400000000000100000	06010011200322050O					884A			53C
501	5	48	8	5	1345	00001E	725303	2101000	14000100400000000000100000	02010010850199000O	166A						127A	83C
501	5	48	8	5	1345	00001E	725303	2101000	41000100400000000000100000	12060031200231060O	166A						127A	83C
501	5	48	8	6	1340	00001E	735105	2101000	14000100400000000000100000	10030031450299002J		461A		136A	2023A			62C
501	5	48	8	6	1340	00001E	735105	2081000	14000100400000000000100000	03010010700599000O		461A		136A	2023A			62C
501	5	48	8	6	1345	00002E	735105	2105000	14000100400000000000100000	20050735401599024O		461A		136A	2023A			62C
501	5	48	8	7	1430	00003I	745405	3071000	41000100400000000000100000	08040061200531060O	167A		1985	98A				61C
501	5	48	8	7	1430	00004I	745405	3071000	41000100400000000000100000	03010000350099000O	167A		1985	98A				61C
501	5	48	8	9	1415	00005G	736108	2081000	14000100400000000000100000	03000011000191010O		244A			124A			76C
501	5	48	8	9	1415	00005G	736108	3071000	41000100400000000000100000	12080051200831060O		244A			124A			76C
501	5	48	812	1230	00000A	716801	0000000	00000000000000000000000000	00000000000000007	529A						641A	822C
501	5	48	813	1415	00003G	764706	2034000	14000100400000000000100000	10020050600599010O		207A		202B	2640A			94C
501	5	48	813	1425	00002I	764706	2035000	14000100400000000000100000	10030354850899010O		207A		202B	2640A			94C
501	5	48	814	1320	00003E	775807	2021000	10000100400000000000000000	12060111200844090O	144A	975A		116A				86C
501	5	48	814	1330	00005E	775807	7051000	10000100400000000000000000	06030011200133060O	144A	975A		116A				86C
501	5	48	816	1315	00003C	658202	3024000	64100100400000000000100001	04010010400192040O	741A				1921A			225C
501	5	48	816	1315	00002C	658202	1001000	20000000000000001000000000	02010010600112050O	741A				1921A			225C
501	5	48	817	1310	00007C	717109	1051100	24900000000000001000300000	08050220600544103J	275A		1238					315C
501	5	48	817	1320	00005E	717109	2023000	64000000000000000000100001	08020010550299000O	275A		1238					315C
501	5	48	817	1330	00006E	717109	3021000	40000000000000000000100000	15080341200844110O	275A		1238					315C
501	5	48	818	1230	00003A	745704	3031000	40000000000000000000100000	10020011200511050O					1326A			66C
501	5	48	818	1230	00004A	745704	3023000	40000000000000000000100000	03010000450099000O					1326A			66C
501	5	48	819	1330	00004E	835209	3051000	40000000000000000000100000	05020011200221050O	168A						114A	61C
501	5	48	819	1335	00004E	835209	3051000	40000000000000000000100000	33100591200844110O	168A						114A	61C
501	5	48	820	1345	00000E	747708	0000000	00000000000000000000000000	00000000000000007		661A		1037A	2990A			483C
501	5	48	821	1230	00008A	784213	2101000	40000000000000000000100000	13060141201034100O	149A		1152	191A				52C
501	5	48	821	1230	00004A	784213	2100800	40000000000000000000100000	40120351201043110O	149A		1152	191A				52C
501	5	48	823	1430	00003I	848304	3025000	40000000000000000000100000	25030445700891012J		1576A			488A			82C
501	5	48	823	1445	00003I	848304	3024000	40000000000000000000100000	08000001000000000O		1576A			488A			82C
501	5	48	824	1335	00000E	826906	2004000	24000000000000001000100000	00000000000000021	220A		837					170C
501	5	48	824	1335	00004E	826906	2055000	40000000000000000000100000	20030486007910000	220A		837					170C
501	5	48	825	1340	00004E	764103	3051000	40000000000000000000100000	12060071200721060O								40C

APPENDIX IV

List of Computer Programs and Project Flow Diagram

The programs listed below are all written in Fortran IV and were run on the IBM 360, models 40, 50 and 65. Due to equipment changes during the course of the project, it is not possible to determine which programs were run on each of the various models. The significance of this is that run times vary considerably from one model to another.

Program Name	Program Lines	Run Time (Minutes)
1. Rearrange Weather Format	49	11.04
2. Rearrange Fuel Moisture Format	106	24.00 (Approx.)
3. Create Noon Weather Tape	139	5.69
4. Fuel Moisture and Weather Merge	214	10.44
5. Test Fire Format Revision & Weather Merge	241	6.87
6. Test Fire and Fuel Moisture Merge	370	17.75 (Approx.)
7. Basic Weather Tape Inventory	387	5.59
8. Noon Weather Tape Inventory	226	3.13
9. Merged Fuel Moisture Tape Inventory	613	11.15
10. Merged Test Fire Tape Inventory	424	6.93
11. Miscellaneous small programs[1/] (13)	292	110.74
12. Card to tape, tape to tape, and tape to printer spools (utilities)	-	510 (approx.)
TOTALS	3061	213.33[2/]

[1/] All sorting was done with utility routines.

[2/] Not including utility runs other than sorting.

A listing of every program referred to above is on file at, and can be obtained from the Forest Fire Research Institute, Ottawa, Canada.

PROJECT FLOW CHART