

CHAPTER 8

SURFACE WEATHER RECORD

FORMS 63-2322, 63-2330, and 63-2325

8.1 **PURPOSE.** Form 63-2322 provides space for recording and coding surface weather observations in both the Hourly and Synoptic formats, as well as space for recording observed data and computations, climatological data, and other information such as notes on unusual weather and instrument changes.

NOTE: All references in this manual to Form 63-2322 apply equally to the French language version of the form, that is, Form 63-2330.

8.1.1 Form 63-2325 provides a monthly summary of the station observing program regarding:

- (a) the number of daily scheduled observations
- (b) the type of equipment used in the measurement of wind, humidity, snowfall, and rainfall
- (c) instrument installations, changes, relocations and defects
- (d) any changes in, or other pertinent detail relating to the scheduled observing program.

8.1.1.1 The heading of form 63-2325 should be completed as in the example of para 8.1.2. A computer printed gummed label on which is printed the station name, province, and listing number shall be affixed to the upper right hand corner of the original copy sent to AES Downsview.

Amend. No. 11, Dec. 1991

8.1.2 Typical Entries - Form 63-2325 (diagram on distinct diskette).

14567 YOT 120 6590-410 NS
YARPOUTH A

MONTHLY SUMMARY OF INSTRUMENT MALFUNCTIONS,
CHANGES AND NEW INSTALLATIONS

STATION YARPOUTH A (Y94) PROV. NOVA SCOTIA MONTH AUGUST 1972

FOR AES DOWNVIEW USE ONLY		DAILY SUMMARIES		REMARKS
ACTION COMPLETED		DAY 11	DAY 21	
NO. 1 CARDS PUNCHED	NO. 2 CARDS PUNCHED	DAY 12	DAY 22	
				DAY 21 EPLEY PYRHELIOMETER SOLAR RADIATION INSTRUMENT WITH HONEYWELL RECORDER INSTALLED AND OPERATIONAL 1400Z.
				DAY 22 CIG PROJECTOR INOPY 0650-0808Z, DEFECTIVE SOCKET.
				DAY 23 U2A WIND SPEED DETECTOR OUT OF SERVICE 1530-1952Z DUE TO FAULTY CABLE. WIND SPEEDS ESTIMATED.
				DAY 24
				DAY 25 MAX THERMOMETER BROKEN, SPARE INSTALLED 1852Z.
				DAY 26
				DAY 27
				DAY 28 EVAPORATION MEASUREMENTS DISCONTINUED 1930Z. PAN DAMAGED - REPLACEMENT REQUISITIONED.
				DAY 29 BAROMETER CRT REPLACED BY CT9 1720Z NEW STATION PRESSURE CORRECTION CARD 365-36-A9 IN USE.
				DAY 30
				DAY 31

Environment Canada
Environnement Canada
Environment Environment
Environnement Environnement

NO. 1 CARDS PUNCHED
NO. 2 CARDS PUNCHED
MICROFILMED

FOR STATION USE
OBSERVING PROGRAM
(a) Number of scheduled observations taken
daily and entered in Section II of Form
(b) Was the observing program during this month
carried out as published in the current issue of
NESTLÉ? Meteorological Stations in
Canada? If "no", give details in Remarks

WIND RECORDERS (Graph or Chart)
MSK Anemograph (step recorder)
U2A Miano (flat recorder)
Bendix-Friez (flat recorder)
Dines (flat recorder)
Other (specify)

WIND INDICATORS (No graph or Chart)
MSC Flashing Light
U2A (direct dual reading)
Bendix-Friez (direct dual reading)
Other (specify)

WIND ESTIMATED
No wind equipment operational

PSYCHROMETER
Ventilated - Moinx or Shing
Non-Ventilated
Dewul

SNOW GAUGES
Standard (copper)
Standard, Type B (large capacity)
Recording (MSC)
Other (specify)

INSTRUCTIONS
1. All entries shall complete three copies of Form 0063-2325, the original
for AES Downview, one carbon copy for the AES Regional Headquarters and
the other carbon copy for the station record.

2. If the top copy of Form 0063-2325 is not a plain copy, it shall be
reproduced with a plain copy. The plain copy shall be made by
photocopying the original. The plain copy shall be made by
typing the station name, province, and listing number to the upper right hand
corner of the original sent to AES Downview.

3. Whenever it is necessary to make entries on major changes to the observing
program in Column 1 of Form 0063-2325, identical entries shall be made in
the appropriate space under "Daily Summary" of this form. Entries on instruments
and programs shall be considered major. Major entries, such as "work change",
should not be transferred to this form. Use the "Daily" space which corresponds to
the "Daily" entry in Col. 1a of Form 0063-2325.

4. Do not make entries in the Section entitled "For AES Downview Use Only".

0063-2325 (8/79)

8.2 GENERAL INSTRUCTIONS - FORM 63-2322

8.2.1 Form 63-2322 is divided into four sections which are completed in whole or in part at all stations, depending on the type of observing program. Detailed instructions for completing the various sections are given in Parts B and C. A brief description of each section is given below.

8.2.2 Section 1 - Observed Data and Computations. This section shall contain a record of:

- (a) Notes and Instrument Changes and Defects
- (b) Duration of Weather and/or Obstructions to Vision
- (c) Observed Data and Computations at the time of each main and intermediate Synoptic report.

8.2.2.1 Section 1 shall be completed in full by all stations which transmit Synoptic reports.

8.2.2.2 When two or more sheets are required for a 24-hour period, all data for Sections I, III and IV shall be recorded on the first sheet; i.e., only Hourly, Special, and Check Observations in Section II shall appear on the additional sheet(s).

8.2.3 Section II - Hourly Observations. Section II shall contain a record, in chronological order, of all Hourly Observations, i.e., Regular, Regular Special, Special and Check.

8.2.3.1 Stations designated to transmit observations in the Synoptic code only shall record the observations in Section II in accordance with the instructions in Chapter 13.

8.2.3.2 Stations which transmit Hourly Observations shall record the observations in Section II in accordance with the instructions in Chapter 10.

8.2.4 Section III - Coded Synoptic Reports. This section provides space for coded Synoptic reports. It shall be completed by all stations designated to transmit observations in the Synoptic code.

Amendment n° 13 October 1994

8.2.5 Section IV. Summary for the Climatological Day. This section is provided for data required in the "Summary for the Climatological Day Ending at 0600 UTC". All stations shall complete this section unless otherwise instructed.

8.2.6 Headings. A new sheet (Form 63-2322) shall be used for the record of each day's weather beginning at 0601 UTC. The headings for each new sheet shall include:

- (a) Station name as listed in METSTAT, followed by the three-character identifier in brackets.
- (b) The province, encoded as follows: British Columbia-BC, Alberta-ALTA, Saskatchewan-SASK, Manitoba-MAN, Ontario,-ONT, Quebec-QUE, New Brunswick-NB, Nova Scotia-NS, Prince Edward Island-PEI, Newfoundland-NFLD, Yukon Yerritory-YT, and Northwest Territories-NWT. (Compatible with the AES computerized Station Information System (SIS))
- (c) A 4-figure group for the hour, two figures for the date (UTC in both cases), and the first three letters of the month, indicating the beginning of the period for which observations are recorded on that sheet.
- (d) A 4-figure group for the hour, two figures for the date (UTC in both cases), and the first three letters of the month, indicating the end of the period for which observations are recorded on that sheet.

8.2.6.1 When the entire 24 hour observing period can be recorded on one sheet, the 4-figure hour groups shall be 0601 and 0600 respectively.

8.2.6.2 When two or more sheets are required for a 24-hour period the following procedures apply:

- (a) The 4-figure hour groups for each additional sheet shall be determined by adding one minute to the time of the last observation on the previous sheet to obtain the beginning of the period.
- (b) The 4-figure hour group for the end of the period of observations shall be the time of the last observation as recorded in Column 29.

8.2.6.3 Stations which do not operate 24 hours/day and are not equipped with a wind recorder, shall enter the times of the first and last observations for that day.

8.2.7 Duplicate Copies. Two copies of Form 63-2322 are required; the original and one carbon copy. Carbon paper cut to size may be obtained by ordering "Carbon for Form 63-2322".

8.2.8 Legibility. Black ball point pens shall be used to provide a permanent record on the top copy and at the same time to provide a clean carbon copy. Writing must be clear and legible so that copies, suitable for legal purposes, can be obtained. When not in use, the record should be kept in a drawer or otherwise protected so that the sheets will not be soiled, creased or crumpled.

8.2.9 Missing Data. An "M" entry shall be used to indicate missing data where entries would ordinarily be made in an Hourly observation (or "X" in the case of a Synoptic observation), except when a scheduled observation is not taken, the words "observation missing" shall be entered for the appropriate hour.

NOTE: In METAR communication of Hourly observations, the "M" is not transmitted, the element will be missing in the report. However, in the transmission of Synoptic observations, a solidus "/" is used in place of the "X".

8.2.10 Correction of entries form 63-2322 - at originating station:

When a correction is made before the report is transmitted, draw one horizontal line through all the characters in the original and record the correction neatly above.

8.2.10.1 If a correction is made to a Regular (SA) entry, in any column 28 to 40 inclusive or 42a, after the report is transmitted, but before the next Regular (SA) is transmitted, make the corrections according to paragraph 8.2.10.

8.2.10.1.1 If a correction is made to any of the above entries (8.2.10.1) after the next Regular, (SA) is transmitted, the corrections shall be made in red. In addition, the date in column 28 shall be circled, in red, for each SA that contains a "red" change. Also, an asterisk shall be scribed, in "red", in the lower right hand corner of the form 63-2322.

8.2.10.1.2 If an SA is transmitted incorrectly, but recorded correctly, and it is too late to transmit a correction when the error is discovered, circle the date and place a red asterisk as above.

8.2.10.1.3 If a correction is made to a Special (SP) after the next Special or Regular (SP or SA) is transmitted, the correction shall be made in red.

8.2.10.2. For synoptic reports (SM or SI), corrections to Synoptic messages shall be transmitted within one hour and fifteen minutes (1:15 h) after the synoptic hour. Corrections made (and transmitted) within this time period (syno + 1:15 h) shall be made according to paragraph 8.2.10.

8.2.10.2.1 Any correction made in section III form 63-2322, after the 1:15 h time allowance, shall be made in red.

8.2.10.3 When the records are reviewed at a field office other than the originating station, corrections shall be made in a colour other than red or green. Red is reserved for corrections at the originating station; green is reserved for corrections made at AES Downsvew.

8.2.11 Priority. At stations which take both Hourly and Synoptic Observations, the instructions given in part "B" shall be followed when making entries in Sections I and II of Form 63-2322. Where additional observed data are needed to complete the coded Synoptic, e.g., a 10-minute mean wind, these observations shall be recorded in the Observer's Notebook, Form 63-2321.

8.2.12 Limited Observing Program. Stations taking fewer daily Synoptic observations than for the times indicated on Form 63-2322, shall complete the entries only for the appropriate times and the other lines shall be left blank.

Amend. No. 9
Sept. 1987

8.2.13 Disposal. The original/s of Form 63-2322 for each day of the month shall be arranged with the first day of the month on top and succeeding days underneath, in order, down to the last day of the month at the bottom. These forms with the original of Form 63-2325 attached as a cover page for Forms 63-2322 shall be forwarded promptly at the beginning of each month, (no later than the 5th) through designated channels to AES Downsvew.

8.2.13.1 Complete Record. When forwarding Forms 63-2322 to the ADMA, it is essential that the record for the entire climatological month be included. It is also essential that a complete record of the observations be included for the calendar month, based on LST. To provide the complete record for the calendar month (LST) an extra Form 63-2322 is required from all stations other than those using MST.

8.2.13.2 At stations using NST, AST, EST and CST, Form 63-232 2 for the first day of the month will not contain in Section II, the record of all observations for the first calendar day of the new month (LST). The observations which are not included on the sheet for the first day of the new month have previously been recorded with the observations for the last day of the month just completed. They are as follows:

Time Zone	Observations UTC
NST, AST	0400, 0500, 0600
EST	0500, 0600
CST	0600

Before sending Form 63-2322 to AES Downsvew, the observations for the above times shall be copied on a separate Form 63-2322 which is dated the first day of the new month. This Form shall be held at the station until the end of the new month, when it shall be forwarded as the top sheet of the records.

8.2.13.3 At stations using PST, Form 63-2322 for the last day of the month will not contain in Section II, a record of all observations for the last calendar day of the month (LST). The observation needed to complete the calendar day will be recorded with the observations for the first day of the new month as follows:

Time Zone	Observations UTC
PST	0700

The observation for the above time shall be copied on a separate Form 63-2322, which is dated the first day of the month just beginning, and it shall be forwarded as the last sheet of the records for the month which has just ended.

Examples: When forwarding Form 63-2322 for June (24 Hourly Observations daily):

- (a) A station located in the PST Zone would forward at least 30 sheets, each with 24 hourly Observations (0700 UTC - 0600 UTC inclusive) AND one additional Form 63-2322 dated July 01 containing the 0700 UTC observation (2300 PST of June 30th).
- (b) A station located in the MST Zone would forward at least 30 sheets, each with 24 Hourly Observations (0700 UTC - 0600 UTC inclusive).
- (c) A station located in the AST Zone would forward at least 30 sheets, each with 24 Hourly Observations (0700 UTC - 0600 UTC inclusive) AND one additional Form 63-2322 (top sheet) dated June 1 containing the 0400, 0500 and 0600 UTC observations, (0000, 0100 and 0200 AST).

8.2.14 Retention. The carbon copies of Forms 63-2322 shall be retained at the observing site for a period of at least five years.

8.2.14.1 At observing sites where it has been determined that there is no local or regional requirement for reference to the older records, the documents which are more than five years old may be destroyed, providing a request, listing in detail all records to be destroyed, has been submitted to AES Downsview through the appropriate channels and permission has been granted. This procedure is necessary to ensure complete micro-film records at AES Downsview.