UNITED STATES DEPARTMENT OF COMMERCE

U.S. WEATHER BUREAU

Washington

CIRCULAR LETTERS

1948

National Oceanic and Atmospheric Administration
Weather Bureau Circular Letters

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

AO-1.2

February 14, 1949

NUMBERED CIRCULAR LETTERS

Following is a list of the numbered Circular Letters issued and mailed to all first-order stations, January 1, 1948 -- December 31, 1948.

Serial No.	Date of Issue	Issued by	Subject	File No.
1-48	1/ 7/48	SR&F-Al	Requests for Trip Forecasts	620.11
2-48	1/12/48	Mat.-THE: Re	Memorandum Bill of Lading, Standard Form No. 1103a - overprinted "This Copy Must be Returned to the Chief, U. S. Weather Bureau, Washington 25, D. C."	260.1
3-48	1/13/48	MPO/GDN/ lmb	Fees for Services Furnished the Public.	700.7 410.4 903.1
4-48	1/23/48	C&HS/FS/ Mo	Instructions for Preparing Pages 2-5 of Forms 1001 and 1001-A	750
5-48	1/26/48	Pers.-Fo	Changes in Efficiency Rating System and Instructions for Rating Period Ending March 31, 1948.	150.5
6-48	1/26/48	SR&F-HEW	Distribution of Weather Information by Radio.	622.5
7-48	1/27/48	MPO/JB/ lmb	Private Business Activities of Employees.	100 153
8-48	2/10/48	SR&F-Hew	Specialized Forecasts for Agriculture	620.43
9-48	2/11/48	Mat.-THE: Re	Radio Broadcast Receivers	420.3
10-48	2/11/48	Pers.-Fo.	Annual Leave	130.1
11-48	2/11/48	Opr-A	Meteorological Program on Ice Patrol Vessels.	030.4 604
12-48	2/12/48	MPO/JB/ lmb	Mailing Lists	901 700.6 700.7
13-48	2/19/48	SR&F-Hew	Television	622.5

Serial No.	Date of Issue	Issued by	Subject	File No.
14-48	2/19/48	SR&F/cjc	Revision of Manuscript Maps	730.4 610.4
15-48	2/25/48	Opr:We	Transmission of Height of 700 mb. Surface with Hourly Airway Observations	610
16-48	2/26/48	SR&F/cjc	New Location Identifiers	610.4
17-48	2/27/48	LPH:Mu	New Definitions of "Field Elevation" and "Elevation of the 8-foot Plane" to be used by airport stations.	500.1
18-48	2/27/48	SR&F-Mu	Communications Expenditures Chargeable to Allotment 0182309.	615 610 210.2
19-48	3/1/48	Opr:We	International Aerological Days, April 1-10, 1948	043 601.2
20-48	3/8/48	Opr:We	Scheduled Times of Upper Air Observations	601.4 601.3 600.1
21-48	3/8/48	Mat.-Re	Use of W.B. Form 1429 (Revised), Requisition for Telephone, TWX, and Private Line Service.	750
22-48	3/9/48	Office of Chief/Oc	Policy With Respect to Private Practice of Meteorology and Instructions Regarding Cooperation with Private Meteorologists.	070.2 000 420.3 620.8 622.1
23-48	3/11/48	C&HS/wy	Discontinuance of Snow and Ice Bulletin.	724.2
24-48	3/11/48	Syn-lv	Relay of observations during periods of teletype failure.	610
25-48	3/15/48	Mat.-DYC: Re	Federal Supply Schedule Index	400
26-48	3/17/48	Accts.-lms	Annual leave [illegible]	130.1
27-48	3/18/48	Budget-Ha	Annual Station Estimates	212
28-48	3/19/48	SR&F-Al	2-Hour Terminal Forecast Program	620.11
29-48	3/30/48	Pers.-Ma.	Personnel Information	100 130.4 120

Serial No.	Date of Issue	Issued by	Subject	File No.
30-48	3/30/48	Pers:Tr-Lo	Evaluation of Scores in Graduate Record Examination for Equivalence of College Education.	031.2 151
31-48	4/6/48	SR&F-Ch	Schedule of Transmissions of State and Airway Forecasts on Service "C".	610 622.1
32-48	4/8/48	Office of Chief/Oc.	Preparation of Weather Information for Radio Broadcast.	622.5
33-48	4/9/48	SR&F/cjc	Revision of Manuscript Maps.	730.4
34-48	4/9/48	SR&F/C&HS/We	Special Warning Service to American Red Cross Area Headquarters Offices.	621.1 621.5
35-48	4/13/48	SR&F/cjc	Code for Weather Analysis Transmissions (W.B.No. 1345); Amendment to.	610.3 600.00
36-48	4/30/48	AsstChO:Ko	Telephone Facilities at Weather Bureau Stations.	340.3 622.1 622.11
37-48	5/3/48	FIP;La	New positions in the Regional Field Inspection Section.	050.2 120.4
38-48	5/4/48	SR&F/Syn-fw	Revised State Forecast Distribution Pattern on Service "C".	622.1 620.2 610
39-48	5/11/48	Budget-Ha	Time Distribution Report	750 102.4 202
40-48	5/12/48	SR&F/Al	Responsibility for Trip Forecasts	620.11
41-48	5/18/48	Instr-R/S	Use of Neoprene Pilot Balloons	451.6
42-48	5/20/48	Opr:kbl	Circular N, 5th Edition, Chapter 31 Revised; and Form WBAN 10, Revised	740.5
43-48	5/24/48	C&HS/ACC/Da	Weather Records Filing and Storage Survey.	080 080.02
44-48	5/27/48	Pers.-Lo	Applications for Meteorological Training at Universities.	031.2
45-48	6/1/48	Syn-lv	Standard headings for weather collectives.	610 610.4
46-48	6/2/48	Mat.-DYE:Re	Purchase of Typewriters - May 1, 1948 to June 30, 1948.	410.3

Serial No.	Date of Issue	Issued by	Subject	File No.
47-48	6/4/48	Libr/RCA	Foreign exchange of station publications.	700.6 070.2
48-48	6/4/48	Mat.-DYE/Fo	Specifications on continuing service (drayage)	260.2 240
49-48	6/7/48	Mat:JJD:bv	Purchase of Rubber Stamps	410.3
50-48	6/9/48	AsstChO:Fl	Supervision of Supplementary Aeronautical Weather Reporting Stations (Cooperative)	535.1
51-48	6/11/48	Opr:We	Control Tower Visibility Program	601.2 603.5
52-48	6/11/48	Pers.-jp	Within-grade Promotions for "Temporary Indefinite" Employees.	120.1
53-48	6/22/48	Opr:Lu	Consolidation of WB Forms 4302 and 4304	750 531.2 532.2
54-48	6/22/48	Pers:Tr-Lo	Examinations Administered by Field Aides.	151
55-48	6/23/48	Mat:THE:Re	Discontinuance of Transmission of Copies of purchase Orders to Bureau of Federal Supply, Washington, D. C.	400.2
56-48	6/28/48	Accts.-Nch	Preparation and submission of vouchers covering communication services.	200.4 615
57-48	6/29/48	Opr:We	Inflation of 100-gram Pilot Balloons	451.6 601.3
58-48	6/30/48	Office of Chief/Wd	Cooperation with Amateur Weathermen of America	070.2
59-48	6/30/48	Adm.-Vo	Accident Reporting and the Processing of Claims under the Federal Tort Claims Act.	480 155
60-48	7/2/48	Opr:kbl	Special Aerological Observations during Hurricanes.	621.6 601.3 601.4
61-48	7/2/48	Pers:er	Periodic Pay Increases	120.1 202
62-48	7/6/48	Opr-A	Atlantic Weather Stations	604

Serial No.	Date of Issue	Issued by	Subject	File No.
63-48	7/15/48	SR&F/CRE/WE	30-Day Outlook	620.7
64-48	7/26/48	Asst.ChO:Fl	Central Office Organizational Changes	000
65-48	8/3/48	Anl-mlh	Changes in analysis transmissions on Service C.	610 600.00
66-48	8/4/48	SR&F-Hu	Emergency Responsibilities of Weather Bureau Offices.	102.4 080
67-48	8/4/48	Mat:JJD:bv	Disposition of surplus property.	410.4
68-48	8/5/48	SR&F-Hu	Economy in Communication Expenditures.	610
69-48	8/5/48	Pers:Tr-Lo	Civil Service Announcement for P-1 Meteorologist Examination.	102.2
70-48	8/5/48	C&HS/FS/Mo	"Instructions for Preparing Pages 2-5 WB Form 1C01" Printed on Page 3a Form 1C01.	750
71-48	8/6/48	Pers:Tr-Lo	Civil Service Examinations for Meteorologist P-2 Through P-5.	102.2
72-48	8/6/48	SR&F-Hew	Warning Service to American Red Cross	621.1 621.5
73-48	8/6/48	SF&MO/kbl	Additional requirements for special airway observations.	601.2 603.51
74-48	8/27/48	SF&MO/S	Circular N, 11th Amendment, Paragraphs 20161 and 20162	740.5
75-48	8/30/48	SF&MO:A	Discontinuance of preparation of Form 1083 at certain stations.	750
76-48	8/30/48	C&HS/Inf/Wy	Releasing Weather Information Associated with Aircraft Accidents.	600.23
77-48	8/31/48	P&PMO	Subscription Lists for Climatological Data.	700.7 723.3
78-48	9/10/48	C&HS/FS/Mo	Earthquake Reports, WB Form 5000	047 750
79-48	9/16/48	AO-1.2	Organizational Numbering System	000 080
80-48	9/17/48	SR&F-Ch	Distribution of Pilot Weather Reports	600.22 610
81-48	9/20/48	SF&MO:We	Winds-aloft observations at high altitudes.	601.3

Serial No.	Date of Issue	Issued by	Subject	File No.
82-48	9/21/48	SF&MO:A	Additional Ocean Weather Ship Stations	604
83-48	9/27/48	SF&MO:A	Differing weather observations.	601.2 600.22
84-48	9/28/48	O-5.23	Standard Headings for Weather Collectives	610 610.4
85-48	10/1/48	O-5.21	Furnishing Copies of Manuscript Maps to Other Agencies.	730.4 700.6
86-48	10/4/48	O-5.31	Change in Teletype Schedules and Forecasts.	610 622.1
87-48	10/6/48	P&PMO-Lu	Administration of Hydroclimatic Network Stations.	532.21
88-48	10/6/48	O-5.32	Local Public Service Weather Teletype Circuits.	622.1 420.3
89-48	10/11/48	O-4.2	Second Period of International Aerological Days in 1948.	043 601.2
90-48	10/15/48	SR&F/CBC Hew	Alert for Winter Weather Service	621.3 622.1
91-48	10/20/48	O-4x2	Special Airway Observations at Supplementary Aeronautical Weather Reporting Stations (Cooperative)	603.51
92-48	10/20/48	O-3.4	Use of Natural Latex Pilot Balloons	451.6
93-48	10/21/48	O-5.23	Rawin reports from Strategic Air Command (SAC) installations.	601.4 610
94-48	10/21/48	O-5.32	Report on Localized Forecasts	620.2
95-48	10/27/48	A-3	Penalty Mail Act of 1948	901
96-48	10/29/48	O-5.32	Winter Sports Code.	610.3 724.3
97-48	10/29/48	CWB/Oc	Fiscal Outlook and Weather Bureau Operating Plans	000 210
98-48	11/15/48	O-2.11	Resumption of Snow and Ice Bulletin	724.2 610 602
99-48	11/16/48	A-3.7	Disposal of Records	080.02 080
100-48	11/18/48	O-5.23	Teletype identifications for locations in Mexico	610.4

Serial No.	Date of Issued	Issued by	Subject	File No.
101-48	11/30/48	O-4.3	Dew point conversion scales, WB Forms 1187A and 1187B	750 601
102-48	11/30/48	R-3	Clearance of text for publication, talks or for local radio broadcasts.	030.6 700.1
103-48	12/6/48	O-4.2	6th Edition of Circular N, Manual of Surface Observations	740.5
104-48	12/6/48	A-4	Reemployment Rights of Employees Following Military Service Under the Selective Service Act of 1948	130.4 153.2 160
105-48	12/6/48	O-4.2	Revised Observational Records.	750 903.1 601
106-48	12-6-48	O-5.31	Changes in Codes and Procedures, January 1, 1949.	740.1 610.3 601
107-48	12/8/48	O-4.2	Second Edition of Circular S, Manual of Cloud Forms and Codes for States of the Sky.	740 601
108-48	12/13/48	A-3.3	Half-Holiday on December 24, 1948	080.04
109-48	12/16/48	O-5.23	Teletype Identifications Issued by the Canadian Meteorological Service	610.4
110-48	12/17/48	O-5.31	New Form of Writing Aviation Weather Forecasts.	620.11
111-48	12/17/48	Office of Chief Oc.	Emergency Warnings (Phrased in Dispatch Form) :	621
112-48	12/21/48	O-4.2	Transmission of Code Group $8N_sCh_sh_s$ from designated stations	610 610.3 740.1
113-48	12/23/48	A-4.5	Ceilometer Maintenance Training	451.2
114-48	12/23/48	O-2.24	Amendments to River Data Code 1944	603.21 610.3
115-48	12/27/48	O-2.13	Conversion of Dewpoint and Relative Humidity Records to an "Over Water" Basis for Comparative Data	601 903

Serial No.	Date of Issue	Issued by	Subject	File No.
116-48	12/27/48	O-5.21	Reporting Wind and Weather Data from sub-stations on the Great Lakes.	610.3
117-48	12/29/48	O-5.21	Mexican Synoptic Code; 1949 Edition.	740.1 610.3 601
118-48	12/31/48	A-4.31	Leave Without Pay.	130.3

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

SR&F-A1
(File No. 620.11

January 7, 1948

CIRCULAR LETTER NO. 1-48
(To All First-Order Stations)

Subject: Requests for Trip Forecasts.

Requests received at airway forecast centers for trip forecasts frequently neglect to include data required by the forecaster concerning the details of the proposed trip. Listing of the information required in such a request will be found in Paragraph II of Circular Letter No. 61-43. To this list should be added a notation requesting information concerning the type of aircraft and air speed. Stations requesting trip forecasts should exercise care to insure that the forecaster receives this information.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Mat.-THE:Re
(File No. 260.1)

January 12, 1948

CIRCULAR LETTER NO. 2-48
(To All First-Order Stations)

Subject: Memorandum Bill of Lading, Standard Form No. 1103a - overprinted "This Copy Must be Returned to the Chief, U. S. Weather Bureau, Washington 25, D. C."

Reference: Next to last paragraph of Circular Letter No. 57-46, dated June 24, 1946 (Mat:DYE:Re).

Attention is invited to the referenced paragraph of Circular Letter No. 57-46 regarding the Memorandum Bill of Lading, Standard Form No. 1103a, overprinted, "This copy must be returned to the Chief, U. S. Weather Bureau, Washington 25, D. C.," which should be promptly forwarded by the consignor direct to the Central Office.

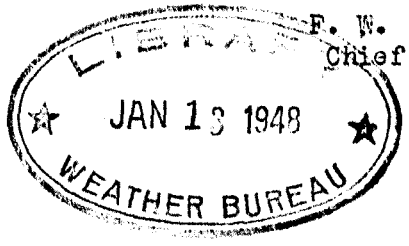
During the past six months, approximately 105 form letters have been sent to consignors requesting memorandum bills of lading. About half of these resulted in no reply, and of the other half, many memo copies were received so late that dummy copies had already been prepared.

The importance of promptly sending memorandum bills to the Central Office should be brought to the attention of all personnel. Also, when a bill of lading is issued to cover transportation charges in connection with a purchase order, the contractor should be advised to promptly forward the memorandum bill of lading direct to the Central Office. A pre-addressed franked envelope may be furnished for this purpose.

Failure to forward memorandum bills of lading results in unnecessary clerical work with consequent delay in settlement of transportation vouchers and of other accounts involving bills of lading.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.



UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

MPO/GDM/lmb
(File No. 700.7,
410.4, 903.1)

January 13, 1948

CIRCULAR LETTER NO 3-48
(To All First Order Stations)

Subject: Fees for Services Furnished the Public.

Department Order No. 71 sets forth the Department's policy relative to charging fees for publications and services furnished by the Department. The Order reads in part:

> "It is the policy of the Department of Commerce to relieve the general public from bearing the cost of services to individuals or groups by charging fees for publications and services that are for special use and benefit of private groups and individuals".

In accordance with this policy the Bureau has established, with the approval of the Secretary of Commerce, a schedule of fees to be charged for services which are in frequent demand. This schedule is shown in the attachment to this letter.

Various interpretations could be made of the above stated policy in its application. This is inevitable since in the case of each request the decision must be made as to whether the services requested are for special use and benefit of a "private group" or an "individual". The decision arrived at will be special for each situation.

To obtain the maximum uniformity in the application of the policy of the Department and Bureau it will be necessary that the criterion, "Is this service for public benefit or for special use and benefit of private groups or individuals", be conscientiously applied. If the service is for public benefit, which would generally be true when furnished to the press, radio stations or government agencies, it should be free of charge. However, if the service is to airlines, aviation and railroad companies, public utilities or other industrial or commercial concerns, universities, lawyers and other professional people, or to private individuals for their own special use, the cost should be borne by them.

Whenever services are provided on a fee basis the payment therefor should be made payable to the Treasurer of the United States. All fees collected should be forwarded immediately after receipt to the Fiscal Section in the Central Office, together with a report of the specific services for which the money was paid.

Questions arising in organizational units of the Central Office relative to this Circular Letter should be referred to Chief of the Division of Administrative Services. Questions arising in the field should be referred to the regional office. Unusual problems will be referred by the regional office to the Central Office with recommendation as to what action should be taken.

Attachment

F. W. Reichelderfer,
Chief of Bureau.

Attachment to Circular Letter No. 3-48 dated January 13, 1948.

SCHEDULE OF FEES FOR SERVICES

Note: Services obtainable only through the Central Office are indicated by (*).

1. *Prints, black and white, enlargements from microfilms.

7 x 9	$0.14	11 x 14	$0.28
8 x 10	0.16	14 x 17	0.35
8½ x 11	0.18	16 x 20	0.65
10 x 10	0.20	18 x 22	0.90
10 x 12	0.21	20 x 24	1.20
		24 x 30	1.50

2. *Prints, Photostat.

	# Small Exposure	# Large Exposure
Negatives	$0.35	$0.55
Positives (not including cost of negative)	0.35	0.55
Each enlargement or reduction	0.10	0.10
Grouping negatives on one print	0.10	0.10
Minimum charge	1.00	1.00

#Small exposure will reproduce material not exceeding 11½" x 17½".
Large exposure will reproduce material not exceeding 17½" x 23½".

3. *Microfilms (35 mm).

Negative film (one or two pages to exposure on panchromatic film) per exposure	$0.03
Minimum charge per order	1.00
Minimum charge per volume or item handled	0.50
Positive film copy (silver emulsion) (when negative is of uniform density), per foot (not including cost of negative).	0.06
Aniline dye emulsion film copy, per foot	0.03
Minimum charge for any strip	1.00
Metal spool and box (for 35mm microfilm)	0.25

4. *Photographs.

Negatives		$1.50
Contact prints	Single weight glossy paper	Double weight matte paper
4" x 5"	$0.10	$0.15
5" x 7"	0.20	0.25
8" x 10"	0.35	0.40
Enlargements		
5" x 7"	0.35	0.35
8" x 10"	0.60	0.60
9" x 12"	0.80	0.80
11" x 14"	1.00	1.00
14" x 17"	1.60	1.60
16" x 20"	2.00	2.00

5. *Lantern Slides.

Slide, including negative	$1.75
Slide only (when negatives are available)	.75
Minimum charge	1.00

6. Ozalid prints (up to 44" wide) per foot 0.07

Minimum charge 1.00

(Note: Special arrangements may be made with airline offices for providing ozalid prints of weather maps on a recurrent or regular basis at no cost if materials are provided, or at a rate different than specified above depending upon the circumstance. Such arrangements should be effected through the Central Office.)

7. Hand transcription of official meteorological records, per hour $1.25

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

C&HS/FS/Mo
File No. 750

January 23, 1948

CIRCULAR LETTER NO.4-48
(To All First Order Stations)

Subject: Instructions for Preparing Pages 2-5 of Forms 1001 and 1001-A

Reference: Page 3a of Forms 1001 and 1001-A for 1948

All column numbers on the reference page were based on a proposed revised Form 1130-A, which we expected to place into effect as of January 1, 1948. Since the adoption of the proposed form has been unavoidably delayed, all references to Form 1130-A column numbers should be disregarded until further notice.

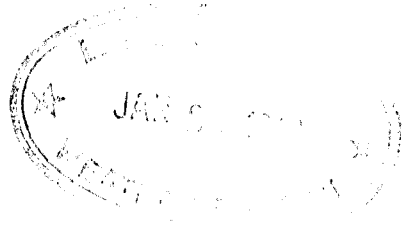
Instructions on Page 3a of the 1947 Forms 1001 and 1001-A are therefore still in effect, except for the following two changes:

1. In paragraph 4 '5000 feet' should be changed to '850 millibars'.

2. In paragraph 19 '1 to 5 clouds' should be changed to '1- to 5 clouds'; meaning, "Less than 1, to 5 clouds".

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau



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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

File: 150.5
Pers.-Fo.

January 26, 1948

CIRCULAR LETTER NO. 5-48
(TO ALL FIRST ORDER STATIONS)

JAN 3

Subject: Changes in Efficiency Rating System and Instructions for Rating Period Ending March 31, 1948.

1. The Civil Service Commission has issued a revision of its efficiency rating regulations. The revised regulations became effective January 15, 194 and provide for only 2 types of official ratings: Entrance and Regular Ratin

2. ENTRANCE RATINGS. An Entrance Rating is an efficiency rating given an employee when first assigned to a position. A new employee without previo Government experience is given an entrance rating of "Good" on the effective date of his appointment. If the new employee is transferred from another Government establishment, his last official rating in that establishment beco his Entrance Rating in the Weather Bureau. If he has no official rating of record in his former position, his Entrance Rating in the Weather Bureau is "Good". If a present employee assigned to a new position has a current offic rating, he shall be given such rating as his entrance rating except that if "Unsatisfactory" his Entrance Rating shall be "Fair". If the employee has no current official rating his Entrance Rating shall be "Good". Entrance Rating must be recorded on employees' Personnel History Sheet or other service recor form. Effective date must also be shown.

3. REGULAR RATINGS. A regular rating is an efficiency rating based on at least 90 calendar days of service required to be made 6 months after the appointment or change in position of an employee and annually thereafter in accordance with procedure prescribed by the Department.

4. WHEN MADE. A regular rating shall be made for every employee 6 month after probationary appointment, 6 months after each change to a position of different service, grade or class, and annually thereafter on March 31. Records must be established and maintained to insure the submission of efficiency rating Form 51 when the regular rating is due. The following procedure is suggested. When a new employee is appointed, the Regional Office responsible for securing the rating (or the Central Office if responsible) will prepare a Standard Form 51 (heading only) showing name, title, section c station, and salary of the employee. The period covered will be from the dat of appointment to the date the regular rating is due 6 months later. The For 51 will be placed in a pending file for attention 5 months from date of appoi ment. At that time it will be forwarded to the employee's supervisor. The supervisor will rate the employee. The rating will be reviewed by the proper official and returned to the Central Office, Personnel Division, or the Regic Office, Personnel Unit, as the case may require. The same procedure is applicable for employees who receive entrance ratings because of transfer from other Government establishments or through assignment to positions in a different class, service, or grade.

5. PERIODS OF SERVICE CONSIDERED. The periods of service to be considered in the preparation of regular ratings shall be as follows:

A. Service from the date of the last regular rating on record or from the date the employee entered on duty in the primary organization unit in the service, class, and grade of the position held at the time of rating, whichever is later, shall be considered;

B. If the employee moved during the rating period from one position to another position of the same service, class, and grade in the same primary organization unit, service rendered in both positions during the rating period shall be considered;

C. If the employee was assigned on detail to the position and the detail was followed by official action moving the employee into the position during the rating period, service during the rating period while the employee was on detail shall be considered;

D. If a change in service, class, or grade did not involve any current change in duties or responsibilities but arose out of a reallocation of the position, prior service shall be considered without regard to the date of the change in service, class or grade;

E. If the employee is on leave without pay or furlough at the time of the rating, service to the last date of active duty shall be considered;

F. If it is not practicable or feasible to consider the period of service indicated in the above paragraphs, service rendered during the rating period while the employee was under the supervision of the rating official shall be considered; and

G. In no case shall the rating cover more than one year's service immediately prior to the date of the rating or a rating period of less than 90 calendar days. Whenever a substantial amount of leave, with or without pay, has been taken so that the minimum 90 day period required for a rating does not provide an efficient basis of actual performance upon which a rating can be made with a feeling of confidence in its correctness, the regular rating shall not be made until a sufficient additional period has elapsed to provide an adequate basis of performance.

6. FAIR AND UNSATISFACTORY RATINGS. No "Fair" or "Unsatisfactory" regular efficiency rating should be made unless there is substantial evidence that the employee concerned was given a warning (in writing), not less than three months and not more than six months prior to the date when the regular rating is due, specifically informing him (a) how his performance fails to meet requirements, (b) how he may improve his performance, (c) that he has the opportunity to bring about such improvement, and (d) that he will receive a "Fair" or "Unsatisfactory" rating if his performance does not improve to meet required standards. If the warning was not given within the prescribed time period, with the result that the regular rating of "Fair" or "Unsatisfactory" should not be assigned, the warning should be given immediately, if it has not already

been given, and an efficiency rating made not less than three months nor more than six months after such warning. Such a rating could be below "Good" or, if the employee's performance has improved to that extent, "Good" or better. If the employee's performance has not improved and he receives a "Fair" or "Unsatisfactory" rating a copy of the warning should be attached to Efficiency Rating Form 51.

Whenever a favorable certificate of satisfactory service and conduct for periodic within-grade salary advancement is issued for an employee who previously has been given the warning, such certificate in effect cancels the warning, and no rating of "Fair" or "Unsatisfactory" shall be assigned in connection with such warning.

7. APPROPRIATE CURRENT RATING. For any official action the appropriate current rating is the latest official rating on record.

8. CHARACTERISTICS OF OFFICIAL RATINGS. The following requirements apply to official ratings:

A. Notice of regular ratings must be received by each employee.

B. The rating form of each employee must be available to him for inspection.

C. The final rating of each employee is subject to inspection by all employees of the department.

D. The ratings are subject to appeal by the employees in accordance with regulations.

E. The ratings are required to be considered for periodic within-grade salary increases.

F. In case of "Fair" rating, where the salary rate is above the middle of the grade, within-grade salary reduction is required in accordance with regulations.

G. In case of an "Unsatisfactory" rating, reassignment, demotion, or separation is required in accordance with regulations.

H. Ratings are required to be considered in determing retention preference in reduction in force.

9. ADMINISTRATIVE-UNOFFICIAL RATINGS. Administrative-unofficial ratings are ratings which, while permissible under the efficiency rating system, are required only by administrative authority of the department or agency.

They have none of the characteristics of official ratings enumerated above and are not subject to Civil Service Commission requirements.

They may be made to provide supplementary or other records of performance in such cases as when supervision changes, when an employee leaves the service, or when ratings are desired more frequently than once a year, as during pro-

bationary periods. They shall not be used as a basis for within-grade salary advancement, or for salary reduction, demotion, or separation for unsatisfactory service. Neither shall they be used for any purposes outside of the agency such as requests for reference.

10. TRANSITIONAL PROCEDURE - NEW EMPLOYEES. The Commission's revised regulations became effective January 15, 1948. Accordingly, probational employees or employees serving a trial period on that date will be given the first regular rating on March 31, 1948 if six months have elapsed between the entrance on duty date and March 31, and provided they did not receive a probationary rating between January 1 and January 15, 1948. If six months have not elapsed by March 31, 1948, they will be given the first regular rating six months after the entrance on duty date and annually thereafter.

Employees who were given probationary ratings prior to January 1, 1948 should be given regular ratings on March 31, 1948. Employees who received probationary ratings during the period January 1 to January 15, 1948 will not be rated on March 31, 1948. The probationary ratings will become their regular ratings and will continue in effect until March 31, 1949.

11. Transitional Procedure - Reassigned or Transferred Employees. Employees who have no official rating on record as of January 15, 1948 because of assignment to new duties or other administrative action such as transfer from another government establishment will on that date automatically acquire their previous official rating as an entrance rating in their new assignments. These ratings will support actions for administrative within-grade promotions and special ratings for that purpose will not be required after January 15, 1948. Employees who were given new assignments or who transferred from another government agency prior to January 1, 1948 will be given regular ratings on March 31, 1948. Employees who were given new assignments or who transferred from other government agencies after January 1, 1948 will not be given regular ratings on March 31, 1948 but 6 months after such change in assignment or transfer, and annually thereafter.

12. POLICY STATEMENT. Efficiency ratings are required by law. The making of efficiency ratings is a direct management responsibility, shared by every administrator of the Department, down to first-line supervisors. The efficiency rating is an appraisal by competent authority of the effectiveness of an employee in performing his official duties. Both the public interest and employee's interest require that the ratings be fairly and honestly made to reflect the true facts of work performance. The public interest must come first, but this need not detract from full consideration of employee interest, since it is distinctly in the public interest for every employee to be treated fairly. Performance should be appraised honestly. No employee should be penalized by a rating which fails to give due credit for performance rendered. On the other hand, a rating which leads an employee to believe that his performance is better than it actually is may be harmful rather than beneficial. The standard against which an employee's work should be compared is the performance which can reasonably be expected in the kind and level of work involved.

13. WHO SHALL BE RATED ON MARCH 31, 1948. Efficiency ratings are required for all paid employees of the Bureau except the following:

A. Intermittant employees whose total service does not exceed 90 days per annum.

B. "Fee" employees as defined in Section 11.02 of Administrative Order 202-24.

C. Alien native employees outside the Continental United States.

D. New probational employees who have not served 6 months since appointment; and

E. Employees who have served less than 90 days since change in assignment or transfer from other government agency.

14. RATING AND REVIEWING OFFICIALS. The rating official shall be a supervisor closely acquainted with the performance of the employee during the period for which the rating is made. Officials in Charge will be rated by members of the Regional Staff; Division Chiefs, Regional Directors, and Assistant Chiefs by the Chief of Bureau. The reviewing official shall be a supervisor higher in line of authority than the rating official but one who also has personal knowledge of the general performance of the employee. Department and field administrative officials should designate as rating and reviewing officials supervisors who in their opinion are best equipped to make factual and impartial ratings.

15. RATING PATTERNS. Standard rating patterns covering most Bureau positions are attached. If none of the patterns are applicable to a particular position, a special pattern will be prepared by the proper administrative official. The number of the pattern used should be indicated on the rating form immediately following the word "Standard" which appears toward the bottom of the page. If a special pattern is used that fact will be indicated by the words "Adapted from Number _____", inserting the number of the standard pattern most nearly resembling that used.

16. STANDARD FORM 51, REPORT OF EFFICIENCY RATING. Before any ratings are made, Form 51 should be prepared for each employee by entering the pertinent information required in the heading of the form and designating the standard rating pattern applicable to the employee's position. The form should be prepared in duplicate for regional employees to provide one copy for the Regional Office and one for the Central Office. The employee's name should be entered as it appears on the payroll, title of position, service, grade and salary should be shown. In addition, Central Office supervisors should indicate whether the employee is in the Departmental or D. C. Field Service. All ratings made as of March 31, 1948 will be regular ratings. A check mark should be entered in the space provided to indicate whether the position is administrative, supervisory, planning or other.

17. INSTRUCTIONS TO RATING AND REVIEWING OFFICIALS. Before making any ratings, the Rating Manual, the Rating Officers Guide, and this Circular Letter should be carefully studied. In making the ratings, the following points should be remembered:

1. An employee should be rated on performance of those duties for which

his classification and grade make him responsible as stated in his official job description.

2. A plus mark denotes outstanding performance in the items so marked.

3. Conversely, a minus mark indicates performance less than satisfactory and must be supported by statement on the reverse of the rating form by the person giving the minus rating. Such statements must be explicit and factual in indicating how the performance has been defective with respect to the requirements of the element as defined in the Rating Officers Guide.

4. A rating of Excellent must be supported by a statement on the reverse of the rating form.

5. A check mark means adequate performance. It implies no criticism but rather indicates to the employee those areas in which there is an opportunity to improve his performance.

6. The rating should be discussed with the employee by the rating official. In this way, the deficient employee is informed of his weaknesses and the supervisor is given an opportunity to commend an employee who has done good work. As stated elsewhere in this Circular Letter, an employee must not be given a regular rating of "Fair" or "Unsatisfactory" on March 31 unless he was warned of such possibility not less than 3 months nor more than 6 months prior to that date (see Paragraph 6).

18. MEANINGS OF RATINGS.

Excellent	Very outstanding performance on all important phases of the job, should not be confused with 'perfect', but means rather, that the performance is distinctly superior. No weaknesses.
Very Good	Better than adequate performance on all phases of the job and superior performance on some. No weaknesses.
Good	Fully satisfactory performance; that is, doing what is expected in your job, but no more, the good points in some phases outweighing the bad points in others (permits classified employee to receive periodic within-grade advancement up to and including the maximum of the grade, and ungraded employee (printer) up to and including middle of grade).
Fair	Barely acceptable performance. Good points in some phases not outweighing bad points in other phases. (Within-grade demotion necessary, if employee is above the middle rate of his grade.)
Unsatisfactory	Unacceptable performance on the more important phases of the job. (Requires either change to a lower grade, re-

assignment, or dismissal.)

19. REGIONAL EFFICIENCY RATING REVIEW COMMITTEE. The Regional Efficiency Rating Review Committee will review the ratings submitted by the field stations to ascertain whether or not comparable standards have been applied. Any set of ratings clearly out of line with acceptable standards should be returned to the field station concerned with suitable instructions, if time permits, or adjustments may be made by the Regional Committee if it has sufficient information in its possession to do so, in which case the changes will be reported back to the field station concerned, with explanatory comment.

Copies of all correspondence or exchanges of memoranda reflecting protests by employees regarding their ratings will in all cases be attached to the Form 51 concerned when it is forwarded to the Division of Personnel Management.

The procedure heretofore followed will be used for notification of Officials in Charge regarding (a) rating marks assigned by the Regional Office Committee, and (b) changes made at the regional office in any initial ratings made at station but necessarily "reviewed" at the regional office, (second line supervisors for whom there is only one first line rating supervisor present at the station to act as "rating officer").

20. INSPECTION LISTS. The procedure adopted last year will be continued, that is, Standard Form 68, Notice to Employee, will be prepared in duplicate and one set filed by classification, grade and rating to provide an inspection list for those employees who may wish to appeal their ratings.

21. MATERIAL TO BE FORWARDED TO CENTRAL OFFICE, PERSONNEL DIVISION. After all ratings have been completed and reviewed, one copy of Standard Form 51 for each employee will be forwarded to the Central Office, Personnel Division. Forms forwarded from the Regional Offices should be arranged according to grades and ratings with the "Excellent" ratings on top followed by "Very Good", etc. In addition to the Forms 51, Regional Offices are requested to forward at the same time the following data:

(1) Number of professional employees receiving ratings of "Excellent", "Very Good", "Good", "Fair", and "Unsatisfactory".

(2) Similar data for sub-professional, clerical and ungraded (printers) employees.

(3) A list of the names of employees for whom records of protested rating marks are on file with Form 51 forwarded for review.

22. SCHEDULE. Regulations require that ratings be made and finally reviewed by the Bureau Efficiency Rating Review Committee so that employees may be notified of their ratings not later than 60 days after March 31. Strict observance of the following schedule will make this possible.

(1) March 22 to March 31, employees rated by rating officers.

(2) April 1 to April 9, ratings reviewed by reviewing officers.

(3) April 12 to April 23, review of regional ratings by Regional Review Committee. Review of Washington area ratings by Bureau Review Committee.

(4) April 26 to May 7, completion of Forms 68 and filing of retained copies by grade and adjective ratings for inspection lists.

(5) May 10 to May 14, review of regional ratings by Bureau Review Committee.

(6) May 17 to May 28, notice of ratings to employees.

CAUTION: "Notice to Employee" must not be released until Regional Offices have been notified of approval by Bureau Review Committee.

23. APPEALS. An employee dissatisfied with his rating may file a formal appeal with the Chairman, Efficiency Rating Board of Review, Civil Service Commission, Washington 25, D.C. within 90 days of the date the Notice of Efficiency Rating is received. However, it is suggested that before filing a formal appeal, the rating be discussed with the rating and reviewing official. If further consideration is desired, a request for administrative review by the Bureau Efficiency Rating Review Committee may be made within 30 days from the receipt of the Notice of Efficiency Rating. Decision to file an appeal with the Bureau Efficiency Rating Review Committee does not extend the 90 day period during which appeal may be made to the Chairman of the Efficiency Rating Board of Review. The provisions of this paragraph should be brought to the attention of all employees who indicate their intention to appeal their ratings.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

STANDARD RATING PATTERN

Select one of the 27 patterns below as the basis for the rating. Write the serial number of the selected pattern in the blank space to right of the word "Standard" in the heading over adjective definitions. (Underscore element numbers according to marks under the numberals within the selected pattern.)

1.	OIC - working alone.	1, 3, 4, 6, 8, 10, 12, 14, 16, 19.
2.	OIC - station with no principal assistant.	3, 5, 6, 8, 9, 10, 12, 15, 16, 17, 19, 24, 25, 26, 27, 30.
3.	OIC - station with one subordinate supervisor sharing supervision.	3, 9, 10, 12, 15, 16, 17, 19, 22, 24, 26, 27, 29, 30.
4.	OIC - at large station where there are two or more subordinate supervisors.	3, 9, 10, 15, 16, 17, 19, 22, 23, 24, 26, 27, 29, 30, 31.
5.	Professional principal assistant at small station.	3, 6, 9, 12, 15, 16, 17, 19, 24, 25, 26, 27, 30.
6.	Subprofessional principal assistant at small station, or subprofessional group supervisor at large station. (Duties include observing or map work.)	3, 4, 6, 8, 9, 12, 15, 16, 17, 19, 25, 26, 27, 30.
7.	Principal assistant at large station where duties are mainly administrative and technical.	3, 8, 9, 10, 12, 15, 16, 17, 19, 22, 24, 25, 26, 27, 29, 30.
8.	Subprofessional assistant with general observing and/or map responsibilities.	3, 4, 6, 8, 9, 12, 15, 16, 17, 19.
9.	CAF map plotters.	3, 4, 6, 8, 12, 15, 16, 17, 19.
10.	Radiosonde observer.	1, 3, 4, 6, 8, 9, 12, 15, 16, 17, 19.
11.	Radiosonde technician. Initial rating to be made in Regional Office in which headquartered and forwarded to the Instrument Division at C.O. for review.	1, 3, 5, 6, 7, 9, 10, 12, 15, 16, 17, 18, 19, 20, 26, 27.
12.	Supervising radiosonde technician (CAF-8). (Same rating procedure as in 11.)	1, 3, 5, 6, 7, 9, 10, 12, 15, 16, 17, 18, 19, 20, 25, 26, 27.

13.	Professional assistant at station (other than first assistant); technical assistant.	3, 5, 6, 8, 9, 10, 12, 14, 15, 16, 17, 19, 30.
14.	Forecasters, whose regular duties do not include supervision. This includes FAWS, special service forecasters and others.	3, 5, 6, 8, 9, 10, 12, 14, 15, 16, 17, 19, 30.
15.	Head forecaster, and fruit-frost or fire-weather general supervisor.	3, 9, 10, 12, 15, 16, 17, 19, 22, 23, 24, 25, 26, 27, 29, 30, 31.
16.	Staff forecaster. This includes fire-weather district representative, airway forecasters and district forecasters.	3, 5, 6, 9, 10, 12, 14, 15, 16, 17, 19, 25, 27, 30.
17.	RTRCL instructor.	3, 5, 6, 9, 10, 11, 14, 15, 16, 17, 19, 23, 24, 25, 26, 27.
18.	Chief liaison official (head of Regional Office operations section).	3, 6, 9, 10, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 26, 27, 28, 30.
19.	Liaison official (first order station).	3, 6, 9, 10, 12, 14, 15, 16, 17, 18, 19, 20, 22, 26, 27, 28, 30.
20.	Liaison official (second order station).	2, 3, 5, 6, 9, 10, 12, 14, 15, 16, 17, 18, 19, 20, 26, 27, 28, 30.
21.	Regional engineer.	3, 6, 9, 10, 12, 14, 15, 16, 17, 19, 22, 23, 26, 30.
22.	Hydroclimatic inspector.	1, 2, 3, 6, 9, 10, 12, 14, 15, 16, 18, 19, 20, 26, 27, 30.
23.	CAF - supervisory.	3, 5, 8, 9, 10, 12, 15, 16, 17, 18, 19, 24, 25, 26, 27, 30.
24.	CAF - secretary.	3, 4, 5, 6, 8, 10, 12, 15, 16, 17, 19.
25.	CAF - general (non-supervisory)	3, 4, 6, 7, 12, 16, 19.
26.	Printer.	1, 3, 4, 6, 7, 12, 16, 19.
27.	Foreman Printer.	1, 3, 4, 6, 7, 12, 16, 18, 19, 24, 26, 27, 29.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

SR&F-Hew
File No. 622.5

January 26, 1948

CIRCULAR LETTER NO. 6-48
(To All First Order Stations)

Subject: Distribution of Weather Information by Radio.

Reference: Circular Letter No. 124-47.

Central Office files of WB Form 1040 (Distribution of Weather Information by Radio) are used extensively in answering inquiries from all parts of the country regarding availability of weather information. They are also being used for frequent reference and study in connection with the broadcast training program and for other administrative and planning purposes.

It is desirable that the information files be as complete and up-to-date as possible at all times. To accomplish this it is requested that all stations concerned submit new forms 1040 by February 10, 1948, showing programs scheduled as of February 1, 1948. In addition, thereafter, the forms will be regularly submitted semi-annually by June 10 and November 10, showing schedules as of June 1 and November 1. These dates will permit routine reporting of seasonal time changes and will reduce the number of special reports, which will be required only for new broadcasts (made in accordance with prior Central Office authorization) or for important changes (including cancellations) in existing schedules.

Reports are requested concerning all radio broadcasts, including AM, FM, and television, in which the Weather Bureau regularly assists. These will include both direct broadcasts and studio broadcasts if forecasts, script or other material is supplied especially for that purpose. In addition, it is desired to continue to receive reports concerning studio broadcast of forecasts, even though they are taken from press wires and no special material (except warnings) is furnished by the Weather Bureau, provided local officials maintain contact with the radio station or consider the broadcast to be of significance as a public service.

It is desired that Saturday schedules be reported and holiday schedules omitted. All stations are requested to change the fourth column, now headed "Holidays", to "Saturdays".

In addition, for the February reports only, it is requested that two columns be added to the right hand margin to show average time spent in preparing the broadcast and average number of minutes on the air. Also, if script is prepared for a studio broadcast this should be noted by a remark on back of form.

F. W. Reichelderfer,
Chief of Bureau.

initial & return to MAM.
Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

MPO/JB/lmb
(File No. 100, 153)

January 27, 1948

CIRCULAR LETTER NO. 7-48
(To All First-order Stations)

Subject: Private Business Activites of Employees.

In view of recent inquiries concerning the extent of commodity dealings by employees of the Department, the provisions of current departmental instructions in this regard are brought to the attention of all employees.

Department of Commerce regulations are set forth in Department Order No. 77 and Administrative Order No. 202-26. Since sufficient copies of these orders are not available for general distribution, the parts of the orders which pertain to employees of the Weather Bureau are stated below:

1. Policy of the Department. There is no general prohibition of Law against the conduct of private business activities for compensation by officers or employees of the Department of Commerce, except with reference to (1) certain public offices enumerated by statute (40 Op. A. G. 47); (2) certain types of private business activities enumerated by statute (Title 18, U. S. C., Sections 93, 202 and 203); and (3) all other cases involving a clear conflict of interest between the particular public office and the particular private business activity. In addition, officers and employees are prohibited from accepting any gift, loan, gratuitous service, or other thing of value from any person or firm with which they may have official relations.

Specifically, the policy of the Department forbids an employee to engage in private business activities which:

1. Interfere with the performance of his duties in the Department.

2. May reflect discredit on the Department; or

3. Make possible the unethical capitalization of information gained through his employment in the Department.

Included in these restrictions are (1) any private activities which are or could become a matter of embarrassment to the Department or any of

its organization units; (2) the use of information acquired by official means to advance the interest of self, family, or friends over the interest of others; (3) the limitations prescribed in a letter from the President to the Civil Service Commission, dated April 22, 1937, which specifies that no officer or employee may participate directly or indirectly in any transaction concerning the sale of corporate stocks or bonds or of any other commodities for speculative purposes, as distinguished from bona fide investment purposes (reference Topics & Personnel April, 1937); and (4) other circumstances which come within the general restrictions heretofore specified. These limitations are applicable when an employee's spouse engages in the private business activity, to the same extent as though the employee himself were engaged in such activity.

2. Administration. Upon any indication that an employee is engaged in private business activities not compatible with his public employment, the employee's supervisor or other appropriate official shall require him to explain in writing the nature of such activities, in sufficient detail to permit a reasonable appraisal of their relationship or possible relationship to the employee's public employment. Refusal to submit such a statement will be considered primafacie evidence of the incompatibility of the private activities with the employee's Government work. Employees engaged in private activities which they believe may possibly be subject to question are urged to initiate a review of the circumstances by explaining the facts in a letter forwarded to the Division of Personnel Management, which will take steps to obtain a decision with respect thereto.

3. Violations. In cases involving flagrant violations the primary organization unit will promptly initiate "removal" action pursuant to the provisions of Section 4 of Administrative Order 202-20, based on grounds that the employee's private business activities are not considered to be compatible with his public employment or that he has improperly requested or received a gratuity, with a supporting explanation of the circumstances.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

SR&F-Hew
(File No. 620.43)

February 10, 1948

CIRCULAR LETTER NO. 8-48
(To all First-Order Stations)

Subject: Specialized Forecasts for Agriculture

Reference: Circular Letters Nos. 15-47 and 22-46

With the approach of Spring all offices should review existing programs for forecast and warning service to agriculture and make plans for the coming crop season. Instructions and suggestions contained in previous circular letters on this subject should be reviewed. As in the past, local offices should make arrangements to receive any needed guidance forecasts from the district forecast centers. In states where there are specialized services units (New York, Pennsylvania, Iowa, Missouri, Texas and Oregon), local offices may arrange to obtain needed guidance forecasts from the appropriate service center.

The purpose of the program of providing specialized forecasts for agriculture is to give the farmer, insofar as is practicable, the weather information he needs for planning and conducting his operations. In some cases the agricultural forecasts are specialized as to particular operations, such as fruit-tree spraying, maple sugar production, crop planting, spraying, dusting or harvesting. This type of forecast is usually issued in cooperation with county agents or by Weather Bureau offices where our officials are familiar with and in a position to keep abreast of current farm operations and problems.

In other cases the agricultural forecasts are specialized in a somewhat different sense, that is, they are given in more detail or are more localized than the state forecasts, they often contain an outlook extending beyond the period of the state forecasts, and they are given special distribution to insure that they will reach the people for whom they are intended. The agricultural forecasts issued by most offices are of this latter type. However, local or district officials so far as practicable should be familiar with current farm operations and should take them into account in issuing agricultural forecasts or advices, but in the absence of such information should issue detailed weather forecasts from which the farmer can extract the information he needs.

The sample copies of agricultural forecasts which local offices send to the Regional Offices for forwarding to the Central Office (SR&F Division) are very helpful and useful and this practice should be continued. A careful review of samples submitted shows that the agricultural forecasts programs of most participating offices are excellent, but the following suggestions are in order in some cases:

(1) Avoid vague and indefinite forecasts. "Mostly fair next two or three days" and similar forecasts do not give the farmer much information. Although the third day portion of the forecast (when included) will ordinarily be a generalized outlook, the first portion of the forecast should contain significant information on cloudiness, temperature, wind and approximate time of any precipitation occurrence.

(2) Where practicable, the forecasts should be localized to the area in which they will be received by farmers. Thus, the power of the radio station over which the forecasts are to be broadcast should be considered. Forecasts broadcast over high-power stations reach an audience over a large area, but low-power stations (250-1000 watts) covering only a very limited area offer the opportunity of giving the farmers more localized information. Offices which are in a position to do so are encouraged to localize and detail the guidance forecasts they may receive from the district forecast center.

(3) The larger Weather Bureau offices, and in particular state section centers, are encouraged to participate actively in the preparation and distribution of the agricultural forecasts. For example, if agricultural forecasts are broadcast by several county agents all within a radius of about 100 miles of a section center, it is considered preferable that the district forecast office send one guidance forecast to the section center and that the latter in turn adapt or localize the forecast to the area to be covered by each broadcast and relay the final forecasts to the several county agents.

(4) In a few cases it appears that agricultural forecasts are sent to county agents or radio stations in the morning and are broadcast several times throughout the day and evening. This is not desirable unless arrangements have been made for amending the forecast when necessary. Most district forecast centers do not have the time to issue amended agricultural forecasts as such, but local offices should use the latest state forecasts as guidance to bring the agricultural forecast up to date whenever necessary.

All important changes in services to agriculture should be coordinated with the Central Office and prior approval obtained before inaugurating new services, particularly when communication expenses are involved.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Mat.-TnE:Re
(File No.420.3)

February 11, 1948

CIRCULAR LETTER NO. 9-48
(To All First-Order Stations)

Subject: Radio Broadcast Receivers

It is essential to the Broadcast Training Program that information be furnished as to the present radio receiving equipment in the Bureau.

Information requested on the reverse side of this letter should be submitted to the Central Office as soon as possible by stations equipped with radio broadcast receivers.

F. W. Reichelderfer,
Chief of Bureau.

Questionnaire on Radio Broadcast Receiver

Station: _____
(indicate WBO, WBAS or Mobile Unit) Location

1. Do you have a radio receiver in your office that will receive standard broadcasts (550 to 1600 KC-AM)?

_____

2. Is it in operating condition? _____

3. Is it used to listen to weather reports? _____

4. Can you also tune:

FM _____
(yes or no)

CAA _____
(Yes or no)

5. How old is the receiver? _____

6. Make and type: (number of tubes, etc.)? _____

7. How was it procured?

(a) Name of Vendor, order number and date. (if available)

(b) If obtained from Central Office, Requisition number and date.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Pers.-Fo.
File No. 130.1

February 11, 1948

CIRCULAR LETTER NO. 10-48
(To All First-Order Stations)

Subject: Annual Leave
Reference: Circular Letter No. 80-47

Circular Letter No. 80-47 restricts the amount of annual leave which may be carried forward at the beginning of the new calendar year. This will result in a larger number of employees having maximum accumulations and requests for greater amounts of leave may be anticipated to prevent loss. For this reason, each station official should establish a leave schedule which will permit employees to discharge their annual leave throughout the year. Insofar as possible, leave should be discharged progressively and as early as possible in the year in order that unforeseen personnel shortages or emergency conditions may not interfere.

Particular care should be taken to prevent accumulations of leave that would necessitate absences at the end of the year to an extent that would impair station activities. In arranging the schedule, priority should be given employees who desire to take the full 26 days during the year to prevent loss of leave.

The staff of all stations with a complement of 6 or more whether maintaining 24 hour service or not are staffed to provide for the granting of the full annual leave to each employee. If necessary in emergency conditions or because of sick leave, compensatory time will be approved or overtime will be authorized if funds are available.

At stations with a complement of 5 maintaining a 24 hour program 7 days a week, 8 hours of overtime or compensatory time a week will be approved when there are more than 4 man days of leave in a calendar week. Absences for periods of less than 4 days except for emergencies should be provided for through scheduling.

At other stations with complements of less than 4, the staff is usually adequate to provide for discharge of annual leave. There are exceptions but they will be considered individually by the Regional Office.

Compensatory time should not be authorized in amounts that cannot be discharged in the period allowed without impairment of regular station activities.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr-A
(File No. 030.4, 604)

February 11, 1948

CIRCULAR LETTER NO. 11-48
(To All First Order Stations)

Subject: Meteorological Program on Ice Patrol Vessels.

The North Atlantic Ice Patrol operated by the Coast Guard will be resumed during 1948. The Weather Bureau will assign observers to the vessels and the same meteorological program will be carried out as on the weather patrol ships, except that only one of the two vessels will be equipped for making rawins.

The vessels will base at Argentia, Nfld. during the ice season. Each patrol will be of approximately two weeks duration.

The scheduled observations will be transmitted to Coast Guard Radio Washington (NMH) in the same manner as those taken on the weather patrol vessels, in so far as operations of the ice patrol permit. The radio call letters "NIDK" will be transmitted with meteorological reports from ice patrol vessels for identification. The reports will be transmitted in the regular ship report collectives on Services "C" and "O".

The season of operation usually extends from about the middle of March to August, depending on ice conditions.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

MPO/JB/lmb
(File No. 901,
700.6. 700.7)

February 12, 1948

CIRCULAR LETTER NO. 12-48
(To all First Order Stations)

Subject: Mailing Lists

The Department of Commerce has requested information from the Weather Bureau in connection with a study being made of station mailing lists.

It will be appreciated if you will furnish through your Regional Office, a report in tabular form, containing the information requested below:

1. Title of Mailing Lists (WB Form 1030-Climatological Monthly Summary, WB Form 1038-Daily Weather Bulletin, Daily Weather Map, etc.)

2. Number of recipients on each list.

3. Frequency of Distribution (monthly, weekly, daily, etc.)

4. Number of paid subscriptions.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
WASHINGTON 25

SR&F-Hew
(File No. 622.5)

February 19, 1948

CIRCULAR LETTER NO. 13-48
(To All First Order Stations)

Subject: Television

A great deal of interest in television presentation of weather information is being evidenced wherever television stations are in operation or are being planned. Experience gained in a few experimental programs indicates that much more time is required to prepare a television weather program than to prepare the usual radio program. In addition, the telecasts normally originate in a studio requiring the personal attendance of the participants.

Careful consideration is being given to questions concerning the extent of Weather Bureau participation in television programs. The possibility of a network arrangement is being investigated and experiments in techniques of presentation are being carried out.

Until it becomes possible to determine the Bureau's policy in this regard, station officials are requested to avoid committing the Bureau to a regular program of weather information by television without prior Central Office approval.

There is no objection to occasional guest appearances for special programs but any requests involving routine participation or unusually time-consuming or elaborate preparations should be referred to the Central Office.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

SR&F/cjc
(File No.730.4, 610.4)

February 19, 1948

CIRCULAR LETTER NO. 14-48
(To All First-Order Stations)

Subject: Revision of Manuscript Maps.

Reference: Federal Airways Manual of Operations II-B-4-2.

Copies of the referenced publication, which contain new letter identifiers for all weather reporting stations in the United States and Alaska, have been distributed by the Civil Aeronautics Administration to all Weather Bureau offices. The new call letters are to become effective March 1, 1948, at which time they will replace letter identifiers in current use.

All manuscript map bases which bear letter designators to indicate reporting stations are being revised as rapidly as possible, and it is expected that most offices will be supplied with the new charts by March 1. However, it has not been possible to complete the revision, printing and distribution of all bases in time to meet the deadline, therefore it will be necessary for some stations to continue to use their present stocks until the revisions are received. The attached copy of a revised map WB 1524 will serve as a guide during this period. There will be no changes in index number assignments at this time and existing bases will serve just as well as the revised maps for plotting regular 6-hourly reports from Service "C".

As the result of several changes in the proposed designators that were announced after completion of the revision of this map there are a few stations which do not bear the correct call letters. It is not desired that the Central Office be notified regarding these discrepancies. They will be corrected on subsequent revisions.

Station officials are reminded that all inquiries regarding manuscript maps, and all requests for additional map stocks should be made by letter marked "Attention: SR&F Division". Manuscript maps should not be ordered on a forms requisition.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

Attachment

W.B.-1524
REVISED JANUARY 1948

GEOSTROPHIC WIND SCALE
Isobaric Interval 3 mb.
Sea Level Density

U. S. Department of Commerce, Weather Bureau

SCALE 1:5,000,000

100 50 0 100 200 300 400 500 Miles

LAMBERT CONFORMAL PROJECTION. STANDARD PARALLELS AT 30° AND 60°

W.B.-1524 REVISED JANUARY 1948

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr:We
(File No. 610)

February 25, 1948

CIRCULAR LETTER NO. 15-48
(To All Stations)

Subject: Transmission of Height of 700 mb. Surface with Hourly Airway Observations

All raob stations have been instructed to transmit RAFRZ and RAICG data, and the height of the 700 mb. surface, as remarks in the first hourly (but not 3-hourly) airway observation following determination of the data. The RAFRZ and RAICG data will be determined and otherwise transmitted as at present.

The height of the 700 mb. surface will be transmitted in the form "700 mb. hhh," in which the symbol "hhh" has the same meaning as in the 1945 Radiosonde Code, paragraph 1917; e.g., 700 mb. height equaling 10,150 gft would be transmitted in Remarks as "700 mb. 015."

F. W. Reichelderfer
Chief of Bureau

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

SR&F/cjc
(File No. 610.4)

February 26, 1948

CIRCULAR LETTER NO. 16-48
(To All First-Order Stations)

Subject: New Location Identifiers.

Reference: Circular Letter No. 14 48.

In order to facilitate the entry of pibal reports the new and old designators for all sequence collections have been listed on the reverse side of this letter for use as a guide for map plotters. While it is expected that revised upper air charts will be on hand at all stations by March 1, the effective date of the new call letters, it is believed that these lists will assist personnel in learning the new identifiers.

F. W. Reichelderfer,
Chief of Bureau

PIBAL SEQUENCE COLLECTIONS

PB 30		PB 31		PB 32		PB 33		PB 34		PB 35		PBAL		PBUS	
New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old
HKD	HKD	HHA	HHA	ITC	WD	APN	TAA	BNO	PBS	WMC	TEJ	AKN	KD	LGB	DLB
LGA	LG	PHL	PG	PUB	PU	MQT	TTE	WSN	TTI	MFR	MF	PHO	HWL		DTZ
HFD	HT	ANP	NAK	DEN	DV	GRB	TGB	GGW	TGW	RBL	FH	OTZ	KP	FLY	DLW
BOS	BW	TYS	KX	CYS	CX	SPI	ZD	HVR	THV	EUG	EU	QAM	WK	TOE	DTO
PWM	PW	BRR	NA	DDC	OD	STL	LS	LND	TLN	PDX	PD	BTI	BTI	RAN	DNU
BUF	BJ	NKZ	NKZ	LBF	NQ	SGF	SX	SLC	SL	BOI	BE	ANC	HQ	ILN	DWO
ALB	AZ	RIC	RW	RAP	RZ	CBI	CA	MDU	PMA	PDT	PO	CXD	KA	MTC	DED
SYR	SR	ROA	RO	BIS	RK	TUL	TS	ELY	PEV	NFS	NFS	YAK	UVY	SWF	DSE
BGM	TBY	GSO	GW	BIL	BI	LIT	LI	LAS	LQ	PAE	GPA	JNU	JE	FTB	DOP
BTV	JG	SPA	SU	FAR	FO	EVV	EV	BUR	BU	TTI	PTA	ANN	KG	BAD	DBY
CAR	TIB	ORF	NW	STC	TZC	SDF	DXL	INW	WO	EKO	EL	BRW	HWY	MXF	DXW
NNX	PNK	HAT	PHA	HON	HR	TXK	TR	PHX	PH	OAK	OA	UMT	PZ	BIX	DUX
JOT	JO	RDU	DU	SUX	YX	MKC	KC	TUS	TZ	RNO	RP	NOM	YO	CEE	DOJ
IND	ID	CHA	CB	GLD	GN	DLH	DH	ABQ	AB	FNO	FT	BET	UB	ORB	DOR
CMH	CO	CHS	CS	FTW	FV	INL	PIL	RTN	TMG	BFL	BD	SNP	HPI	RME	DRN
CVG	FFC	ATL	AG	HCU	HCU	LCS	LE	SAN	SQ	BIH	TBH	GAL	GQ		
FWA	FW	JXE	JX	HRR	HRR	MSN	MA	ELC	MB	SNC	TZM	MCG	WH		
TOL	TL	NKT	NKT	HMM	HMM	MKE	MK	GJT	EJ	SAC	SZ	ADK	NCI		
AKR	AX	EYW	KW	ELP	EO	MLI	MO	GTF	GT	SDB	TZB	CDB	DI		
PSB	MJ	DRE	DDR	HRN	HRN	DSM	DM	MSO	MX			UMK	RS		
HUN	HI	TLH	TJ	HUU	HUU	OMA	OH	GEG	DGF			AMC	CH		
EKN	EK	BHM	BH	HES	HES	YIP	YIP	ELN	EB			FAI	FX		
PIT	PT	MEM	PS	HGX	HGX	SSM	VC	PIH	PQ			ORT	PM		
HAR	HX	JAX	JA	ROW	THJ	MKG	UK	BTM	BT						
DCA	WA	NEW	NO	ABI	AP			SHR	ZY						
		MOB	MS	BGS	BZ			CPR	CW						
		MIA	MM	AMA	AQ			RKS	RT						
		HSU	HSU	WAO	WC			SEC	SEC						
		CVD	NAS	LRD	LL			TPH	RY						
		MLB	OU	DRT	PDR										
				SAT	JR										
				LCH	LC										
				HOU	HU										
				NGP	CR										
				OKC	OL										
				BRO	JH										

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

SR&F-Mu
File No. 615, 610, 210.2

February 27, 1948

CIRCULAR LETTER NO. 18-48
(To All First Order Stations)

Subject: Communications Expenditures Chargeable to Allotment 0182309.

The Central Office has need of basic information as to expenditures for toll charges to assist in administration of the tolls communications allotment. This information as to total costs incurred must be kept as current as possible. Therefore field offices are requested to supply the required data in the form of simple monthly statements as explained below.

1. All Weather Bureau offices incurring toll expense for paid or collect messages are requested to render a brief statement each month giving communication costs for the previous month for which the station is billed and to itemize these data under telegraph, telephone, TWX, cable and miscellaneous.

2. It also is requested that total for each of the first six months of the 1948 fiscal year (July to December 1947 inclusive) be submitted by each station to reach the Central Office as soon after receipt of this letter as possible and not later than March 10. These data for the first six months are required to determine the overall trend and the amount expended in the first half of the present fiscal year and to indicate (by comparison with other figures) how much additional cost is involved by reason of the recent Western Union rate increase. January data should be added to these figures if available. If not they should be submitted in a separate report in accordance with (1) above.

3. The form in which the data should be submitted is shown on the reverse of this sheet. Costs involved in collection of ship reports should not be included, as separate procedures have been set up to collect these data.

4. In most cases submission of the monthly totals as soon as bills from the local company have been received will be sufficiently prompt for estimate purposes but if, for any reason, the bill is held up beyond a reasonable period, say three or four weeks, an approximate figure should be given if practicable. As preliminary monthly estimates are rounded up in hundreds of dollars it is not necessary to have exact figures from the individual station, and where receipt of bills is delayed for settlement of individual items or for other reasons the approximate figure will serve. If later correction is necessary this should be indicated when the next monthly report is given.

5. As estimates must be prepared on a monthly basis it is requested that costs be given for each monthly period when possible; otherwise billing periods used by the local office of the telegraph or telephone company may be used with an appropriate notation as to dates included.

6. When communication costs at a station run considerably above the general average an explanatory note is requested. These notes may be brief, such as "hurricane" "flood conditions", etc. This information is desired in order to determine the cause of marked increases in overall costs and whether such costs are temporary or reflect permanent increase in program.

F. W. Reichelderfer,
Chief of Bureau.

REPORT ON TOLL EXPENDITURES*

Reference: Circular Letter No. 18-48

Station _____ Date _____

Cost of communication tolls chargeable to Allotment 0182309 for which this office is billed ** as determined from vouchers for periods indicated:

Month	Telegraph	Telephone	TWX	Cable	Misc.	Totals
July 1947						
Aug.						
Sept.						
Oct.						
Nov.						
Dec.						
Total						
Jan. 1948						

Note: *Subsequent reports will be for the preceding month only unless material revision of monthly totals previously submitted is necessary.

**Include only charges for messages which your station sends paid or receives collect and which are billed to your station for vouchering.

***Enter charges for calendar month if practicable. If not indicate period covered by entering of dates in parenthesis after appropriate month.

February

NOTES FOR ATTACHMENT TO CIRCULAR LETTER NO. 18-48.
(To All First Order Stations)

The sample form for submitting reports on toll expenditures with explanatory notes should have been printed on the reverse side of CL 18-48 but through an inadvertence this material was printed on a separate sheet. As the sample form was used by most stations for rendering the initial report, it is reproduced in part below(with notes) for the information and guidance of station officials. Attachment of this sheet to CL No. 18-48 is requested.

REPORT ON TOLL EXPENDITURES*

Reference: Circular Letter No. 18-48.

Station _____ Date _____

Cost of communication tolls chargeable to Allotment 0182309 for which this office is billed** as determined from vouchers for periods indicated:

Month (or billing period***)	Telephone	TWX	Cable	Misc.	Total

Notes: *Subsequent reports will be for the preceding month only unless material revision of monthly totals previously submitted is necessary.

**Include only charges for messages which your station sends paid or receives collect and which are billed to your station for vouchering. (Do not include telephone or private line rentals or other non-toll items.)

***Enter charges for calendar month if practicable. If not, indicate period covered by entry of dates in parenthesis after appropriate month.

SPECIAL NOTE

An examination of reports furnished in compliance with CL 18-48 indicates that in some instances telephone rental, private line rental and other items not chargeable to Allotment 0182309 have been included in the monthly totals. Allotment 0182309 covers only S&E communications expenses incurred for the transmission of messages on a word or time basis by long distance telephone, telegraph, TWX, radio and cable, and the monthly reports should include such charges only. Therefore, any station that has included telephone or private line rentals or other non-toll items or communication expenses not chargeable to Allotment 0182309, such as tolls for Flood Control messages, charges for excess local calls, etc., in the report previously submitted is requested to forward a revised statement on receipt of this letter giving corrected totals by months beginning with the month July, 1947.

Stations that correctly rendered reports in accordance with the above are requested to send in a confirmatory letter stating that cost data previously submitted included only tolls chargeable to Allotment 0182309.

These monthly reports are proving very valuable for estimate purposes. Their prompt submission each month will be greatly appreciated. The SR&F Division will gladly answer any questions stations may have as to procedures in making the report.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr:We
(File No. 043, 601.2

March 1, 1948

CIRCULAR LETTER NO. 19-48
(To All Stations)

Subject: International Aerological Days, April 1-10, 1948

INTRODUCTION:

Aerological Days are designated by the International Meteorological Organization for the purpose of intensifying and enlarging observational programs throughout the world to provide data for meteorological research. The Weather Bureau participated in these programs from 1904 to 1914, when World War I caused their abandonment. They were resumed in 1926 and continued until 1939 when they were again suspended owing to World War II. They are now being resumed with increased vigor and interest following the 12th Conference of Meteorological Directors held in Washington, D. C., during September and October, 1947. This conference was attended by representatives of 59 countries and 61 meteorological services.

The great stimulus given to meteorology during the war years by the world-wide network of upper-air stations established by the armed forces, together with new and improved electronic techniques in observational methods, which were developed during that period, is of outstanding significance. It is therefore expected that the special observations planned for April 1 - 10 will yield results of great importance and value. In recognition of this important milestone in meteorology, every observer is requested to do his utmost to achieve the fullest measure of success in obtaining as many as possible of the specially scheduled observations.

The following Resolution (No. 82) was approved by the I.M.O.

The Conference decides:

(1) that the program of International Aerological Days shall be resumed as of 1948;

(2) that there shall be two periods of International Aerological Days per annum, each period consisting of ten consecutive days;

(3) that in 1948, and alternate years thereafter, the International Aerological Days shall be in the spring and autumn seasons, and, in the intervening years, in the summer and winter seasons;

(4) that the President of the Aerological Commission is authorized to select the periods and notify the Meteorological Services of the periods chosen; (The Aerological Commission has selected April 1 - 10 as the first period for 1948.)

(5) that all Meteorological Services should endeavor to provide for as many observations as possible by radiosondes, vertical aircraft ascents, balloon meteorographs, meteorological reconnaissance flights, commercial aircraft and pilot balloons;

(6) that efforts should be made to coordinate the program of Aerological Days with the programs of rocket soundings being carried on in some countries.

FIRST ORDER AIRWAY STATIONS:

During daylight hours all first order airway stations will make detailed cloud observations at the time of every record airway observation. These will be completely recorded on Form 1130 in the appropriate columns.

On April 5 and 6, at 1330 EST, all stations that have cameras available are requested to obtain cloud photographs from a suitable position where a free horizon may be observed in the four cardinal directions, north, east, south, and west. If clouds are not visible, photographs will not be required. After exposure, the undeveloped film should be forwarded promptly to the Central Office, attention Observations Section, with the special instruction and data sheets which are attached. The procurement of film at government expense should be cleared with the Regional Office before purchasing, since the cost would be charged to the Regional allotment. Each official in charge should ascertain from the Regional Office whether the type of film required by the camera available at the station is obtainable under Bureau of Federal Supply contract or whether it should be procured by Field Purchase Order.

PIBAL STATIONS:

Pibal stations will use 100-gram balloons for all scheduled observations from 0300 GCT, April 1, to 2100 GCT, April 10.* Strict adherence to scheduled release times during this period is important in order to obtain simultaneity at all stations. In order to obtain the highest possible ascents supplementary instructions will be furnished pibal stations.

* If clouds are below 5,000 feet, use 30-gram balloons.

RADIOSONDE STATIONS:

All radiosonde stations will make rabal observations on all releases (in lieu of pibals) during the period 0300 GCT, April 1, to 1500 GCT, April 10. A four-day period will be selected by the Analysis Center in Washington, during which four raobs instead of two will be made daily at stations in continental United States, so far as practicable. The intermediate raobs will be made at 0900 GCT and 2100 GCT. Stations will be notified by Station Operations Division when to effect the four per day schedule. If such notice is not received by 2100 GCT, April 6, the four per day schedule should be started at 0900 GCT, April 7, and continued through 2100 GCT, April 10.

Stations should make every effort to obtain a complete descent record in both day and night observations during the 10-day period. In all cases, regardless of the temperature difference, the ascent and descent records should be evaluated and plotted on the adiabatic charts. The estimated direction and distance from the station where the descent began should be given if possible in each case.

500-gram balloons are to be used in all observations during the International Aerological Days and special care should be exercised to condition the balloons properly in order to obtain optimum flights. Unless a supply has already been received, raob stations should order 500-gram balloons which contain a higher antifreeze content, as described in MAL, Instr-R/S, dated January 27, 1948. It is recommended that these balloons be used for both day and night observations during this 10-day period in order to obtain maximum altitudes.

RASON STATIONS:

The instructions applying to raob stations will also apply to rason stations operating SCR-658 equipment, except that rawins will replace rabals. When the limiting elevation angle is reached, an effort should be made to continue the observation by theodolite.

OCEAN WEATHER SHIP STATIONS:

Insofar as practicable, all weather ships will carry out the program described herein for special observations, except that four raobs, including rawins, are desired daily during the entire period, April 1-10.

RADAR STATIONS:

Radar stations will take photographs of PPI scopes during the 10-day period at one-hour intervals whenever echoes are observed in accordance with supplementary instructions which will be issued to the stations concerned.

GENERAL:

Evaluation of the intermediate raobs may be made after the observation as opportunity permits. The data from intermediate observations will not be transmitted over the teletype system. Separate Forms 1173 should be prepared for intermediate observations and carbon copies of Form 1103 should be made for all raobs for the 10-day period. All records should be forwarded to the processing centers in the usual manner. Sufficient helium should be procured in advance by each station for this program. It is desired that compensatory time be granted for necessary overtime in connection with these observations.

Each station is requested to forward to the Central Office, attention Observations Section, a report showing the number, kind and time of special observations that were made.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

Attachment

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

March 1, 1948 Opr:We

MULTIPLE ADDRESS LETTER
(To All First Order Airway Stations)

Subject: International Aerological Days, Weather Bureau Synoptic Cloud Photograph Project

1. All stations that have cameras available are requested to obtain cloud photographs on April 5 and 6, 1948, at 1330 EST. At least four photographs should be obtained on each day, with the camera directed toward the north, east, south, and west. Deviation from these directions may be made when an unusual cloud is observed between one of the cardinal points. The direction and elevation angle of the camera will be indicated in the proper space on the attached data sheet. If clouds are not visible, photographs will not be required.

2. The undeveloped film should be forwarded promptly to the Central Office, attention Observations Section, with the data sheet completed. Please do not have film developed locally. The name of the station should be plainly stamped or written in ink on the paper leader of the film or on the film pack container.

3. The procurement of film at government expense should be cleared with the Regional Office before purchase, since the cost will be charged to the Regional Office allotment. Each official in charge should ascertain from the Regional Office whether the type of film required by the camera available at the station is obtainable under Bureau of Federal Supply Photographic Schedule No. 18, or whether it should be procured by field purchase order.

4. Photographs will be made at the synoptic time, 1330 EST, on the days scheduled, after the record observation has been filed. Photographs should be taken even though filters and tripods may not be available. Any failures or double exposures should be noted in the explanation column of the data sheet. Ordinarily overhead photographs will not be included. However, unusual phenomena may be photographed overhead if sufficient explanation is given on the orientation of the camera (i.e., bottom of picture north, axis of camera 80° elevation angle). In the explanation column the distance and height of prominent objects such as mountains and tall buildings should be given in addition to a description of the cloud form photographed. Sketch the location of clouds in the sky circle in the upper portion of the data sheet. The center of the circle is the zenith and the circle represents the horizon.

5. Camera information

a. Minimum size negative 2 1/4" x 3 1/4" (No. 120 or No. 620)

b. Films - fine grain, Panatomic "X" or Plus "X"
Weston Emulsion speeds - Panatomic X = 24,
Plus X = 40.

c. Filters - Yellow "K^2" will give picture about as you see it.
Orange "G" will make sky slightly darker.
Red "A" will give over-correction, dark sky, and good contrast.

d. Use of filters: Overcast, dark clouds. Use "G" filter.
Cumulus clouds, bright day. Use "K^2" or "G" filter.
Cirrus or Altocumulus against sky - medium light. Use "A" filter.

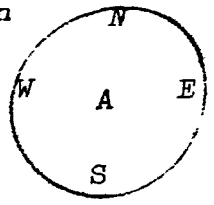
e. Filter factors for Panatomic X film or Plus X film:
K^2 - 2 times normal exposure
G - 3 times normal exposure
A - 7 times normal exposure

f. Camera should be mounted on a tripod or fixed base.

g. Horizon or some fixed object should be included in lower part, not over 1/6, of picture.

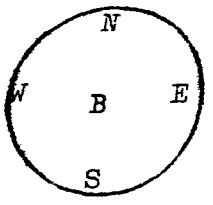
D. M. Little
Assistant Chief for Operations

Location of Clouds in Sky



INTERNATIONAL AEROLOGICAL DAYS
WEATHER BUREAU SYNOPTIC CLOUD PHOTOGRAPHY PROJECT

DATA SHEET



Location of Clouds in Sky

Station _____ Full Name of Photographer _____

Series A: Date _____ Time _____

Surface Observation _____
(WBAN-10A, Cols. 1-15)
Cloud Observation _____
(WBAN-10A, Cols. 19-24)
Position of Sun: Azimuth ____°; Altitude ____°

Ground Cover (snow, grass, etc.) _____

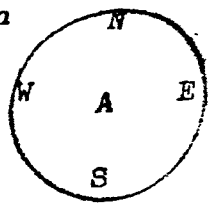
Series B: Date _____ Time _____

Surface Observation _____
(WBAN-10A, Cols. 1-15)
Cloud Observation _____
(WBAN-10A, Cols. 19-24)
Position of Sun: Azimuth ____°; Altitude ____°

Ground Cover (snow, grass, etc.) _____

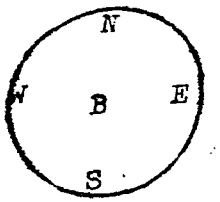
Series	No.	Orientation of Camera Direction & Elevation Angle	Type of Camera	Type of Film	F Value	Filter	Exposure Time	Marking on Exposed Film Container	Exposure No.	Explanation of Photo
Series A										
Series B										

Location of Clouds in Sky



INTERNATIONAL AEROLOGICAL DAYS
WEATHER BUREAU SYNOPTIC CLOUD PHOTOGRAPHY PROJECT

DATA SHEET



Location of Clouds in Sky

Station _____ Full Name of Photographer _____

Series A: Date _____ Time _____	Series B: Date _____ Time _____
Surface Observation _____ (WBAN-10A, Cols. 1-15)	Surface Observation _____ (WBAN-10A, Cols. 1-15)
Cloud Observation _____ (WBAN-10A, Cols. 19-24)	Cloud Observation _____ (WBAN-10A, Cols. 19-24)
Position of Sun: Azimuth ____°; Altitude ____°	Position of Sun: Azimuth ____°; Altitude ____°
Ground Cover (snow, grass, etc.) _____	Ground Cover (snow, grass, etc.) _____

Series	No.	Orientation of Camera Direction & Elevation Angle	Type of Camera	Type of Film	F Value	Filter	Exposure Time	Marking on Exposed Film Container	Exposure No.	Explanation of Photo
Series A										
Series B										

Library.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr:We
(File No. 601.4, 601.3
600.1)

March 8, 1948

CIRCULAR LETTER NO. 20-48
(To All Stations)

Subject: Scheduled Times of Upper Air Observations

In accordance with an agreement reached at the International Meteorological Organization Conference of Directors in Washington in 1947, the scheduled times of upper air observations, effective 0001 G.C.T., April 1, 1948, will be as follows:

Raobs and Rasons - 0300 and 1500 G.C.T.

Winds Aloft - 0300, 0900, 1500, and 2100 G.C.T.

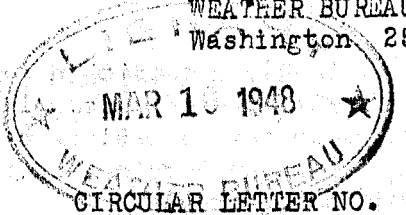
Instructions have been issued to personnel at upper air stations to exert every practical effort to make releases at these precise times. Where exceptional conditions require it, authorization for somewhat earlier releases will be issued to a few stations that have unusual difficulty in meeting telecommunication schedules. When conditions are such that a release cannot be made at the scheduled time, a delayed observation will be taken, if possible, within the succeeding 6 hours in the case of raobs, rawins and rabals; and within the succeeding 3 hours in the case of pibals. All observations will be filed for transmission in accordance with current instructions.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25



Mat.-Re
(File No. 750)

March 8, 1948

CIRCULAR LETTER NO. 21-48
(To All First Order Stations)

Subject: Use of W.B. Form 1429 (Revised), Requisition for Telephone, TWX, and Private Line Service.

Reference: Circular Letter No. 47-47, dated June 11, 1947.

Form 1429, Requisition for Telephone Service, has been revised and the instructions in Circular Letter No. 47-47, dated June 11, 1947, as to its use are amended as follows:

The title of Form 1429 has been changed to "Requisition for Telephone, TWX, and Private Line Service" and use of the form extended to include TWX and Private Line Service. All of the other instructions contained in Circular Letter No. 47-47 remain in effect.

Paragraphs 1 and 7 of Instructions on the reverse side of Form 1429 are amended to read as follows:

Par. 1. "This form is for use in requisitioning local telephone, TWX, and private line communications services under contracts of the Bureau of Federal Supply and from other Government agencies. The forms shall be prepared in an original and three carbons when telephone rent only is involved and in an original and four carbons when TWX and private line communications services are involved. All copies will be forwarded to the Regional Office and that office will forward them to the Central Office when approval by that office is required. After approval, distribution will be as follows: Original to the Telephone Company or Government Agency furnishing the services; and one copy each to Fiscal Section of the Central Office, the Regional Office, the station, and the fifth copy, when prepared, to the Division of Synoptic Reports and Forecasts of the Central Office."

Par. 7. "The proposed date of installation will be shown by the station official when submitting the requisition to the Regional Office or Central Office allotee. Justification must be given for additional services and requisitions must be submitted sufficiently in advance to permit of approval or disapproval by the allotee prior to the proposed date of installation."

A copy of W.B. Form 1429 (Revised), Requisition for Telephone, TWX, and Private Line Service, is attached and a supply will be furnished each Regional Office in the near future. Blank copies of the old Form 1929, Requisition for Telephone Service, on hand are hereby declared obsolete and should be destroyed.

Copies of the Bureau of Federal Supply contracts for telephone and teletypewriter services will be forwarded to the Regional Offices as soon as they are available at the Central Office.

F. W. Reicholderfer

F. W. Reicholderfer,
Chief of Bureau.

(Enclosure)

429
948—10M) 800

U. S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

Requisition No.....
Date .....
Modification No.....
Date .....

REQUISITION FOR TELEPHONE, TWX, AND PRIVATE LINE SERVICE

(For the fiscal year ending June 30, 19....., and thereafter until further notice)

..... For.....

.....

ion for directory listing:

o. / on, and Item of Contract	Service (Itemized)	Non-recurring Charge	Rate per Month: Per Unit	Rate per Month: Total
	Totals			

date of installation:

Monthly Rate

ous al	Increases or Decreases on This Requisition: Increase	Increases or Decreases on This Requisition: Decrease	Present Total

:

Actual date of beginning of service:

Estimated cost for extra local messages:

For the remainder of the current fiscal year..... $.....

Annually thereafter..... $.....

Date submitted:

(Signature) .....

(Title).....

Date approved:

(Signature) .....
Allotee

Allotment No .....

INSTRUCTIONS

1. This form is for use in requisitioning local telephone, TWX, and private line communications services under contracts of the Bureau of Federal Supply and from other Government agencies. The forms shall be prepared in an original and three carbons when telephone rent only is involved and in an original and four carbons when TWX and private line communications services are involved. All copies wlll be forwarded to the Regional Office and that office will forward them to the Central Office when approval by that office is required. After approval, distribution will be as follows: Original to the Telephone Company or Government Agency furnishing the services, and one copy each to Fiscal Section of the Central Office, the Regional Office, the station, and the fifth copy, when prepared, to the Division of Synoptic Reports and Forecasts of the Central Office.

2. A special series of numbers will be used in order to eliminate the necessity for a new requisition each fiscal year. The number should be suffixed with the letter "C"; e.g., NY-1-C, NY-2-C, etc. Numbers will be applied in the Regional Office and will be in a continuing series without regard to fiscal years. The number should be assigned at the time of approval.

3. Modification numbers will also be applied in the Regional Office and will be in a consecutive series under each requisition.

4. The name and address of the Telephone Company will be entered in the block after the word "To" when service is under a contract of the Bureau of Federal Supply. The name and address of the Government Agency will be entered in that space when service is furnished by another Government Agency.

5. The name and address of the station will be entered in the block after the word "For" with indication whether the service is for a city office, airport station, or Regional Office.

6. The column headed "Contract No." will be used only when service is under contract of the Bureau of Federal Supply. The number of the "Tps" contract will be shown and the class, section, and item will be shown for each item of service; e.g., 102-1-13.

7. The proposed date of installation will be shown by the station official when submitting the requisition to the Regional Office or Central Office allotee. Justification must be given for additional services and requisitions must be submitted sufficiently in advance to permit of approval or disapproval by the allotee prior to the proposed date of installation.

8. All copies of the form except the Regional Office copy will be returned to the station for entry of the actual date of beginning of service. The copy for the Central Office will then be returned to the Regional Office for notation thereon of the allotment symbol and forwarding to the Central Office. Notation as to the actual date of beginning of service will be made on the Regional Office copy.

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

Office of Chief/Oc.
(File No. 070.2, 000,
420.3, 620.8,
622.1)

March 9, 1948

CIRCULAR LETTER NO. 22-48
(TO ALL STATIONS)

Subject: Policy With Respect to Private Practice of Meteorology and Instructions Regarding Cooperation With Private Meteorologists.

All employees should be familiar with the policy on extension of applied meteorology and development of private meteorological services to meet commercial and industrial requirements beyond the scope of Government services. This policy has been stated from time to time during the past several years in public announcements and bureau correspondence. It is based not only on the Government's general policy of fostering private enterprise but also on the fact that applied meteorology in general will benefit through a competent and vigorous body of private practitioners. Advantages will accrue also to the Bureau and its meteorological services as result of broader development of applied meteorology. There will be problems and individual difficulties that arise from competition, duplication and questions of professional ethics but these will not outweigh the general advantages. To assist in carrying out this policy, the following specific instructions are issued summarizing the provisions now in effect in the interest of good coordination and cooperation:

1. Weather Bureau facilities should be directed primarily towards - (a) adequate and accurate observations, reports and records of weather and climate; (b) superior service in storm, cold wave, etc., warnings and advisories, and in regular forecasts for public dissemination by radio, television, press, automatic transcription telephone, etc., and (c) authorized research and development projects for the general good. The Bureau has an excellent tradition of courteous and helpful service to individuals who call at its offices or telephone for weather information, and this form of service will be continued wherever possible. But with the increasing interest in and applications of meteorology, the Bureau cannot serve all individuals and business concerns who request information. Individual calls should not be allowed to interfere with prompt and efficient services to the general public by radio and press, and other broad responsibilities of the Bureau.

2. Weather Bureau offices are authorized to give special advices on an industry-wide basis for general fields of application, such as agriculture, transportation, shipping, etc., but these services should not be individualized to an extent of becoming private consultant advices like those referred to in paragraph 4, below.

3. Field offices of the Bureau are authorized and urged to cooperate with private meteorologists engaged in ethical and legitimate practice of the profession in accordance with the terms of our teletype

service agreements. The Weather Bureau must not permit an impression that it has "exclusive rights" in the science and practice of meteorology. In public statements and contacts with private meteorologists, employees of the Bureau may not question the rights of any agency or person to employ the services of a private meteorologist. Public controversies over the relative values of services or the accuracy of forecasts should be avoided. It is the general policy of the Federal Government not to express opinions on the merits of private enterprises except when the statutes place on a Government agency this specific authority. Suspected violations of ethical practices, or activities believed to be contrary to the public interest should be reported to the Central Office and not made the subject of local action or statement unless authorized by the Central Office. In most cases private meteorologists have shown the desire and ability to cooperate well with Weather Bureau offices with mutual benefit to their services and the public services of the Bureau.

4. Weather Bureau offices are not authorized to give individualized services to private agencies which call for special study or prolonged attention. Persons who request services of a private nature should be courteously referred to commercial sources of weather information or to the American Meteorological Society which endeavors to put private inquiries in touch with consultant sources. As a guide it may be stated that the general rule is for field offices of the Bureau not to furnish regular daily services to any individual or business when they require special studies or lengthy interviews each day. The time limitation would not apply as strictly to single (i.e. not daily) interviews on meteorological problems of a new or non-recurring nature not large enough to require the services of a private meteorologist. In general, the field of private practice in meteorology will supplement and individualize the services of the Weather Bureau, not directly duplicate them. Usually, a question on whether a private request is within the province of a government service or should be referred to private sources can be decided by comparison with similar cases in other professions, such as engineering or law. If in analogous cases the matter is one for a private engineer or a lawyer, it probably falls within the province of the private meteorologist. The Bureau must refrain from giving at public expense services that are definitely outside the sphere of government functions and in such cases, we have a public obligation to cooperate in the advancement of applied meteorology by referring such inquiries to reliable sources of private consulting services, if known. When in doubt, such cases should be referred to the Central Office.

Nothing in these instructions is to be construed as prohibiting issue of information, forecasts and warnings to any person or organization in times of emergency when such action is in the public interest and required for safety of life and property. Further, these instructions do not modify the long standing policy throughout the Bureau of being alert to opportunities for greater public service and encouraging a helpful and progressive outlook at all times in the performance of official duties.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

C&HS/wy
(File No. 724.2)

March 11, 1948

CIRCULAR LETTER NO. 23-48
(To all First-Order Stations)

Subject: Discontinuance of Snow and Ice Bulletin.

The Weekly Snow and Ice Bulletin, season of 1947-48, at present included in the Weekly Weather and Crop Bulletin, will be discontinued with the reports for the week ending Monday, March 29, 1948. All telegraphic and other reports of snow depth and ice thicknesses now being sent for use in this publication will cease after Tuesday, March 30, until further notice.

Section directors who arranged for reports of snow depth from cooperative observers are requested to notify them concerning this action and express the Weather Bureau's appreciation for their kind assistance.

Respectfully,

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

Library.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
WASHINGTON 25

Syn-lv
(File No. 610)

March 11, 1948

CIRCULAR LETTER NO. 24-48
(To All First Order Stations)

Subject: Relay of observations during periods of teletype failure

References: Circular N, paragraphs 20311 and 21310, and CAA Manual of Operations B-7

At some Weather Bureau offices only one CAA facility is available,--that is, either Service "A" or Service "C". At these locations when the teletype facilities fail the observations should be telephoned or telegraphed as outlined in Circular N. Since the Government does not receive the special Western Union rates, as heretofore, it is considered advisable for the station to route the report to the nearest transmitting station having facilities on the same service. That is, if Service "C" is the only service available at a station and failure occurs, the observations should be routed by telephone or telegraph to the nearest Service "C" sending-receiving station that is in operation. Similarly, if Service "A" is the only facility available and it fails, the observations should be sent to a nearby sending-receiving station on Service "A" where service has not failed.

This instruction would also apply to stations having more than one service when all fail at the same time. The CAA Manual of Operations B-7 states that "the report should be routed to a nearby station where service has not failed."

Responsibility for telephoning or telegraphing is placed upon the observer personnel and not on the communicator. The CAA is issuing notice to their stations to accept the reports from nearby observation points when service has failed.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Mat.-DYE:Re
(File No. 400)

March 15, 1948

CIRCULAR LETTER NO. 25-48
(To All First-Order Stations)

Subject: Federal Supply Schedule Index

Sufficient copies of the subject index were mailed February 24, 1948 to all regional offices for distribution to first-order stations.

The use of this Index will enable officials in charge to acquaint themselves with items that are usually available (1) under government contract; (2) from Bureau of Federal Supply stock or, (3) from other sources; and thereby avoid any irregularity in the event it is mandatory to purchase a particular item under existing contracts or from sources listed in the Index.

When an item is listed in the index, it is suggested that the Official in Charge submit a purchase requisition to the Regional Office for consideration and action thereby reducing the possibility of making local purchases which would be in conflict with Government procurement regulations. It must be borne in mind that although an item is listed in the index, it does not always follow that the item in question is under contract, in stock, or available as indicated at the particular time of the proposed purchase.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Accts.-lms
(File No. 130.1)

March 17, 1948

CIRCULAR LETTER NO. 26-48
(To all First Order Stations)

Reference: Circular Letters Nos. 100-45, 71-46 and 97-46.

Subject: Annual leave.

The Comptroller General of the United States, in a recent decision, emphasized the fact that an employee, permanent for leave purposes, is entitled to a credit of 26 days annual leave for each calendar year of service.

Therefore, in accordance with the above, paragraph 1 of Circular Letter No. 97-46, dated December 6, 1946, is hereby amended to show the correct total number of hours of annual leave that should have been credited during the period January 1, 1946 to December 31, 1946 as 208 hours rather than 207 hours for the period January 1, 1946 to December 28, 1946.

The additional credit of one hour will be added to the current total amount of annual leave to the credit of each employee now on the rolls who was on the rolls during the entire calendar year 1946. The adjustment will be effected in the pay-rolling offices and an appropriate identifying notation will be entered under "Remarks" on the Time and Attendance Reports. In the interim, all lump-sum payments will include the adjustment for the one hour leave in cases involving employees entitled thereto.

Further, the Comptroller General ruled that an employee upon separation from the service during a calendar year is entitled only to that portion of leave that was actually earned from January 1 of that year to the date of separation, and that by considering 260 basic workdays as constituting the number of basic workdays required in any one calendar year for earning the full credit of 26 days, the following formula should be used to compute the amount of leave actually earned:

$$\frac{\text{Number of workdays (Inclusive of holidays within a tour of duty)}}{260} \times 26 = \text{leave earned.}$$

For example, an employee, who resigned at the termination of January 30, 1948, was actually credited with 20 hours of annual leave for the calendar year 1948. Applying the above formula, the employee has earned only 17½ hours (22/260 X 26).

Adjustment should be made in the formula and in the leave credit for 1946 where necessary for employees in Alaska, Hawaii and Puerto Rico who are entitled to 30 days of leave annually rather than 26.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Budget-Ha
(File No. 212)

March 18, 1948

CIRCULAR LETTER NO. 27-48
(To All First Order Stations)

Subject: Annual Station Estimates

Each year all field stations are required to prepare WB Form 1403, Annual Station Estimates, which reflects their estimated financial requirements for authorized station activities (excluding personal services) for the following fiscal year.

The policies prescribed by the President in his directive of August 1, 1946, pertaining to the procurement of office furniture and equipment are still appropriate and should be taken into consideration in estimating the station's requirements for allotment 15. Estimates for the remaining allotments should represent, as heretofore, those items which are essential for normal operations.

A supply of Forms 1403 with instructions concerning their preparation is being furnished all regional offices for field distribution. They should be prepared in accordance with the instructions and returned to the appropriate regional office. All previous instructions concerning the preparation of this form are rescinded, as this form and instructions relating thereto have been revised this year.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

File No. 620.11
SR&F-A1

March 19, 1948

CIRCULAR LETTER NO. 28-48
(To All First-Order Stations)

Subject: 2-Hour Terminal Forecast Program.

Effective at 0000E April 1, 1948, stations which have been authorized to issue 2-hour terminal forecasts under the provisions of Circular Letter No. 73-46 may modify that program in accordance with the following provisions:

1. The minimum program at each authorized station will provide hourly forecasts for the succeeding two hours beginning with the broadcast made at 0745 (local standard time) and ending with the 1715 broadcast. It is recommended, however, that where staff and local work load permit, the program be continuous from sunrise to sunset. Each authorized station may further extend the hours of operation of this program as necessary to meet local needs, within the limitations of available staff and facilities.

2. The suggestion made by some stations that these broadcasts be suspended during periods of CAVU weather is not considered advisable. As a guide to future operations, pilots find value in utilizing the forecasts on a regular schedule irrespective of current weather conditions.

3. When local conditions warrant, stations making 2-hour terminal forecasts are authorized to include statements describing anticipated weather conditions within a radius of 30 miles of the field. Wording used, however, should make clear the distinction between strictly local conditions and those which apply to more remote locations.

4. Stations should promptly advise the Central Office of changes in hours of operation or content of the forecasts.

F. W. Reichelderfer,
Chief of Bureau.

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Pers.-Ma.
File No. 100, 130.4, 120

March 30, 1948

CIRCULAR LETTER NO. 29-48
(To all First-order Stations)

Subject: Personnel Information

The following information should be of general interest to all Weather Bureau employees:

MILITARY LEAVE

In view of the many inquiries now being received on this subject, attention is invited to the provisions of the Department policy with respect to such training which has been stated in Section 6.11 of Aministrative Order 202-17 (amended) as follows:

> "Military leave is authorized only in the amounts specified in Section 6.03 (15 days per calendar year, except for D.C. National Guard). However, if an employee requests leave for military training purposes in excess of such amounts, primary organization units may grant an additional period of annual leave or leave without pay for this purpose not in excess of 75 days only if the employee's services can be readily spared. Absences for longer periods will entail separation."

In summary, employees who are reservists or national guardists are entitled only to the amounts of "military leave" specified in Section 6.03 of A.O. 202-17 (limited to 15 days per calendar year, except for D.C. National Guard). The granting of amounts over and above the amounts specified in that Section is completely optional and subject to the aforementioned policy. In considering applications for additional leave pursuant to this policy, the basic factor is whether or not the bureau or office concerned feels that it can spare the employee's services for the period in question, and other factors are merely incidental to this basic consideration. (It should be noted also that a reservist recalled for a training period or refresher course ranging from 15 to 90 days is not entitled to mandatory restoration under the service Extension Act of 1941 or Section 3 of Public Resolution 96, 76th Congress, since such duty is not ordered pursuant to these statutes.)

COMPTROLLER GENERAL'S DECISION

Decision of the Comptroller General (B-72972) dated March 8, 1948, states that action for conversion of an employee from temporary to permanent status and within-grade salary increase action may be processed simultaneously, provided that the two actions are effected on a date which also begins a new pay period and the employee has attained eligibility for the within-grade salary advancement prior thereto. In view of this decision

the practice in some offices of first converting the employee from temporary to permanent status as of the beginning of one pay period and delaying the within-grade increase action until the beginning of the following pay period should be discontinued.

COURT OF CLAIMS DECISION

The importance of carefully complying with the procedural requirements outlined in Administrative Order 202-20, on the subject of "Separations and Suspensions", is emphasized by a recent decision of the Court of Claims on March 1, 1948, that a Federal employee who was improperly dismissed due to procedural oversights is entitled to recover his salary for the period between his dismissal and subsequent reinstatement. The decision clearly illustrates the need for handling "removal" and other separation actions with considerable care.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington, D. C.

Pers:Tr-Lo
(File No. 031.2
151)

March 30,1948

CIRCULAR LETTER NO. 30-48
(To All First-Order Stations)

Subject: Evaluation of Scores in Graduate Record Examination for Equivalence of College Education.

Reference: Circular Letter No. 101-47.

> "If the examinee receives scores above the average score of college seniors, the Bureau will credit the equivalence of four years of college."

The above statement established the policy with regard to the acceptability of scores in the Graduate Record Examination, and is worded in broad and general terms.

It is the purpose of this Circular Letter to define the terms and to establish definite "passing" scores for Weather Bureau employees taking the examination.

The term "average," as used above, is a generic term which covers any measure of central tendency. The measure of central tendency to be used in evaluating scores in the Weather Bureau will be the median.

Comparison will be made with the median scores of 3670 male first-year graduates. These persons, having been admitted for graduate study by universities and colleges, meet an acceptable standard of scholarship. Their median scores (1945-1947) are as follows:

Mathematics 475; Physics 495; Chemistry 473; Biology 463;
Social Studies 404; Literature 396; Fine Arts 400;
Verbal Factor 403.

In cooperation with the Graduate Record Office, which administers the examination, the following conditions have been defined as "passing" for Weather Bureau employees:

(over)

A. Scores equal to or greater than

(1) an arithmetic average of 485 for Mathematics and Physics (median for Mathematics = 475, median for Physics = 495, arithmetic average of medians = 485)

and (2) an arithmetic average of 439 for the eight undergraduate tests (439 is the arithmetic average of medians for Mathematics, Physics, Chemistry, Biology, Social Studies, Literature, Fine Arts, and Verbal Factor).

B. If a score of 500 or over is achieved in the "Advanced Test," in addition to meeting conditions (1) and (2), the examinee will be credited with a "major" in the field represented by the advanced test. If a score lower than 500 is achieved in the advanced test, but conditions (1) and (2) are met, four years of college will be credited, with no major.

It may be of interest to note that of eight reports of scores so far received at the Central Office, only two got no college credit; four were credited with four years of college, but no major; and two were credited with four years of college plus a major.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

SR&F-Ch
(File No. 610, 622.1)

April 6, 1948

CIRCULAR LETTER NO. 31-48
(To All First-Order Stations)

Subject: Schedule of Transmissions of State and Airway Forecasts on Service "C".

Weather Bureau field offices have from time to time suggested to the Central Office the rescheduling of transmissions of forecasts on Service "C" so that state forecasts would precede airway forecasts. In letters of reaction by forecast offices to papers submitted to the Central Office in anticipation of the forthcoming Forecasters' Conference, the majority opinion of those responding favored the proposal for earlier transmission of state forecasts.

Before the Central Office takes action to reschedule transmissions of forecasts on Service "C" accordingly, it is desired to ascertain whether there are any valid and sufficient reasons for not making the change at this time.

The proposed schedules for the transmission of state and airway forecasts on Service "C" would be as follows:

State Forecasts: 0440-0457 EST and every six hours thereafter.

Airway Forecasts: 0458-0613 EST and every six hours thereafter.

It will be noted that airway forecast transmissions would begin 18 minutes later than now scheduled, but state forecasts would be transmitted one hour and 16 minutes earlier.

Schedules for transmission of airway terminal forecasts on Service "A" would not be affected by the proposed change.

All stations who consider the proposed change undesirable are requested to notify the Central Office by April 26, 1948, giving their reasons. In view of the opinion expressed by most forecast offices favoring this proposal, response to the same effect need not be sent to the Central Office.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

Lubrano

UNITED STATES DEPARTMENT OF COMMERCE
Weather Bureau
Washington

Office of Chief/Oc. — April 8, 1948
File No. 6225

CIRCULAR LETTER NO. 32-48
(TO ALL STATIONS)

Subject: Preparation of Weather Information for Radio Broadcast.

In recent hearings members of Congress have questioned some of the Weather Bureau's practices in providing material for radio broadcast. The Bureau's authorized policy on this subject is believed to be generally consistent with the recognized activities of Government in this respect. To safeguard the public services which the field has built up with the cooperation of radio broadcasting stations, it is important for the Bureau to refrain scrupulously from any exceptions that might open the entire program to criticism. Accordingly, authorized practices are briefly summarized here.

PREPARATION OF MATERIAL FOR BROADCAST. Weather reports, forecasts, bulletins and advisories prepared by the Bureau for broadcast, whether for use of the radio station staff or for direct broadcast by a Bureau employee in ~~com~~ office, are essentially "Press Releases" of the nature issued by any Government agency that has information to publish. Such material should be factual and free from amplifications and embellishments which may be construed as radio script in the sense of entertainment for a sustaining or sponsored program. It is inappropriate to refer to such official releases as radio "script" since this term is applied by the broadcasting profession primarily to material for commercial programs. The Weather Bureau's reports and information may be referred to as bulletins or releases, etc.

LENGTH OF PROGRAM. The Bureau should not provide material for nor present lengthy programs on a regular daily basis since this may invade the field of private enterprise and conflict with the interests of commercial producers of radio programs. In general, daily Weather Bureau schedules should be for periods not exceeding five minutes at one time. Where exceptions are desirable in the public interest, they must receive specific approval of the Central Office.

SPONSORSHIP. The Weather Bureau must take every reasonable precaution to avoid commercial relationships that would appear to give Government sponsorship of a commercial product or would otherwise set up a relationship that might embarrass the Government or the science and profession of meteorology. Use of commercially subscribed radio time is approved only when it is free from commercials in the usual sense, and is the only practical means of providing adequate service to the public. Brief announcement of sponsor is permissible as is the practice in appearances of public officials in general. Each such program, in accordance with existing instructions, must have the approval of the Central Office and definite agreement as to terms of sponsorship.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

SR&F/cjc
(File No. 730.4)

April 9, 1948

CIRCULAR LETTER NO. 33-48
(To All First-Order Stations)

Subject: Revision of Manuscript Maps.

Reference: Circular Letter No. 14-48.

The referenced correspondence carried as an attachment a copy of Map WB-1524 revised in January 1948, bearing the then proposed three-letter identifiers. That map was prepared in accordance with information available at that time and a copy was sent to all first-order stations for use as a reference chart and as an aid in locating reporting stations after introduction of the new identifier system on March 1.

In view of a number of changes that have been made in the original assignments, and because many of the maps printed for regular station use cannot be revised in accordance with these changes for some time, it has been considered advisable to revise and redistribute Map WB-1524. A copy of the April revision, corrected through March 31, 1948, is attached for your information.

Map WB-1524 is prepared especially for use at the Analysis Center in Washington and is not available for regular station use. However, because of its large scale and dense network of reporting stations, it is suggested that this copy be retained for reference and that it be kept up to date in accordance with any future changes distributed by WAMES on Service "A".

While Map WB-1524 cannot be furnished in quantity, we will be glad to send a limited number of additional copies to stations that require them. Requests for additional copies, as in the case of all requests for and correspondence dealing with maps should be marked: Attention of the SR&F Division.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

Attachment.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

SR&F/C&HS/We
(File No. 621.1, 621.5

April 9, 1948

CIRCULAR LETTER NO. 34-48
(To all First Order Stations)

Subject: Special Warning Service to American Red Cross Area Headquarters Offices.

On a number of occasions the American Red Cross has expressed its appreciation for Weather Bureau cooperation in providing warnings and information on storm and flood conditions. The fact has been brought out that the effectiveness of their disaster operations depends very much upon this close cooperation with the Weather Bureau. Emphasis has been placed also on the value of advance information of a potential emergency weather or flood condition, even though the development has not reached the point for public advisories.

On April 20, 1944, a Multiple Address Letter, SR&F-De, was sent to Regional Offices and District Forecast Centers. It outlined a schedule for the relay to the Red Cross of special warnings of high winds, glaze and ice storms, areas of expected tornado activity, hurricanes, heavy rains, floods and other severe weather conditions when such are expected to cause disaster conditions. Apparently, this arrangement in general is working satisfactorily and liaison has been maintained at a high level throughout the field service. The purposes of this present circular letter are: (1) to bring up to date the details of existing arrangements; (2) to encourage field officials to make full use of this relationship with the Red Cross, giving consideration to broader use of the "alert procedure" in providing confidential information to the Red Cross headquarters whenever practicable; and (3) to inform our local offices (not actively participating in this program) of the arrangements in effect.

Table I, attached, contains a revised list of addresses for the receipt of special warnings of severe weather conditions issued by the general Weather Forecast Centers, and Table II for receipt of flood warnings. Existing arrangements in the various regions (except as modified by the revised tables I and II attached) for the relay of warnings to the Red Cross should be carried on if they are operating satisfactorily.

The Central Office will be glad to assist in any way possible in solving any local distribution problems which may exist, or to receive suggestions for improving the service.

F. W. Reichelderfer,
Chief of Bureau.

Attachments.

TABLE I

WEATHER INFORMATION (EXCEPT WARNINGS AND ADVICES CONCERNING FLOODS)
TO BE FURNISHED BY FORECAST CENTERS

FORECAST DISTRICT CENTER	AREA TO BE COVERED BY WARNINGS	WEATHER BUREAU ADDRESSES TO WHICH MESSAGES WILL BE SENT	FOR RELAY BY WEATHER BUREAU OFFICE TO
WBAS, Atlanta, Ga.	N.C., S.C., Ga.	- - - - -	A.R.C., Hdq., Atlanta
WBO, Billings, Mont.	N.D., & S.D.	WBO, St. Louis	A.R.C., Hdq., St. Louis
	Montana	WBO, San Francisco	A.R.C., Hdq., San Francisco
WBAS, Boston, Mass.	Me., N.H., Vt., Mass., R.I., & Conn.	WBAS, La Guardia	A.R.C., Hdq., New York
WBAS, Chicago, Ill.	Minn., Ia., Wis., Mich., & Ill.	WBO, St. Louis	A.R.C., Hdq., St. Louis
	Indiana	WBAS, Washington	A.R.C., Hdq., Alexandria, Va. & Washington, D.C.
WBAS, Denver, Colo.	Colo., Wyo., New Mexico	WBO, St. Louis	A.R.C., Hdq., St. Louis
WBAS, Kansas City	Nebr., Kans., Okla., Mo.	WBO, St. Louis	A.R.C., Hdq., St. Louis
WBAS, Los Angeles	So. Calif., Arizona	WBO, San Francisco	A.R.C., Hdq., San Francisco
WBAS, Miami	Florida	WBAS, Atlanta	A.R.C., Hdq., Atlanta
WBO, Miami	Hurricane District	WBAS, Atlanta	A.R.C., Hdq., Atlanta

(The Weather Bureau Office at Miami will also furnish hurricane warning information to American Red Cross representatives at Miami according to special arrangements in effect each year.)

(over)

TABLE I (cont'd)

FORECAST DISTRICT CENTER	AREA TO BE COVERED BY WARNINGS	WEATHER BUREAU ADDRESSES TO WHICH MESSAGES WILL BE SENT	FOR RELAY BY WEATHER BUREAU OFFICE TO
WBAS, New Orleans	Tex., Ark.	WBO, St. Louis	A.R.C., Hdq., St. Louis
	La., Miss., Ala., Ext. N.W. Fla.	WBAS, Atlanta	A.R.C., Hdq., Atlanta
WBAS, Salt Lake City	Utah	WBO, San Francisco	A.R.C., Hdq., San Francisco
WBAS, Seattle	Wash., Ore., Idaho	WBO, San Francisco	A.R.C., Hdq., San Francisco
WBAS, Washington	Ky., Ohio, W. Va., Va., Md., & Pa.	- - - - -	A.R.C., Hdq., Alexandria, Va. & Washington, D. C.
	N.Y., N.J., & Del.	WBAS, La Guardia	A.R.C., Hdq., New York
	Tennessee	WBAS, Atlanta	A.R.C., Hdq., Atlanta
WBO, San Francisco	No. & Central Calif., & Nevada	- - - - -	A.R.C., Hdq., San Francisco

NOTE: Montana has been transferred from supervision of A.R.C. Hdq., St. Louis, to A.R.C. Hdq., San Francisco.

TABLE II

ADVICES AND WARNINGS CONCERNING FLOOD CONDITIONS TO BE FURNISHED BY THE REGIONAL OFFICES TO ADDRESSES AS INDICATED BELOW

ADVICES ISSUED UNDER SUPERVISION OF	AREA	TRANSMITTED TO	REMARKS
R.O., New York, N.Y.	Me., N.H., Vt., Mass., Conn., R.I., N.Y., N.J., & Del.	A.R.C., Hdq., N.Y. WBAS, La Guardia	Direct from R.O. For information
	Boston Forecast District	WBAS, Boston	For information
C&HS Div., Washington	Pa., Md., Va., W. Va., Ky., Ohio, & Ind.	A.R.C., Hdq., Arlington	Direct from C&HS
	Wash., Frcst. District	WBAS, Washington	For information
R.O. Atlanta	N.C., S.C., Ga., Fla., Tenn. Ala., Miss., La.	A.R.C., Hdq., Atlanta	Direct from R.O.
	Atlanta Frcst. District	WBAS, Atlanta	For information
	Miami Frcst. District	WBAS, Miami	For information
R.O., Chicago	N.Dak., Minn., Wis., Mich., E.Ill., NE Ia.	WBO, St. Louis	For relay to A.R.C. Hdq., St. Louis
	Chicago Frcst. District	WBAS, Chicago	For information
R.O., Fort Worth	S.Kans., Ark., Okla., Tex., N.Mex.	WBO, St. Louis	For relay to A.R.C. Hdq., St. Louis
	Texas	WBO, Austin	For relay to A.R.C., State Relations Office, Austin
	New Orleans Frcst. Dist.	WBAS, New Orleans	For information

(over)

TABLE II (cont'd)

ADVICES ISSUED UNDER SUPERVISION OF	AREA	TRANSMITTED TO	REMARKS
R.O., Kansas City	S.Dak., SW Ia., W.Ill., Mo., N.Kans., Nebr., Colo., S.Wyo.	WBO, St. Louis	For relay to A.R.C. Hdq., St. Louis
	Kansas City Frcst. District	WBAS, Kansas City	For information
R.O., Los Angeles	Calif., Nev., Utah, Ariz.	WBO, San Francisco	For relay to A.R.C. Hdq., San Francisco
	Los Angeles Frcst. District	WBAS, Burbank	For information
R.O., Seattle	N. Wyoming	WBO, St. Louis	For relay to A.R.C. Hdq., St. Louis
	Mont., Wash., Ore., Idaho	WBO, San Francisco	For relay to A.R.C. Hdq., San Francisco

NOTE: Montana has been transferred from supervision of A.R.C. Hdq., St. Louis, to A.R.C. Hdq., San Francisco.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

SR&F/cjc
(File No. 610.3, 600.00)

April 13, 1948

CIRCULAR LETTER NO. 35 -48
(To All First-Order Stations)

Subject: Code for Weather Analysis Transmissions (W. B. No. 1345); Amendment to.

Reference: W. B. No. 1345, Revised Edition effective September 1, 1944.

The amendments to the "Code for Weather Analysis Transmissions" (W. B. No. 1345, revised edition effective September 1, 1944), contained in the ATTACHMENT "A" become effective 0000 GCT (Z) May 1, 1948.

ATTACHMENT "B" contains reprints of some of the changes given in ATTACHMENT "A". These reprints are included for convenience and may be removed from the circular letter and attached to the code book as appropriate.

The following remarks are offered for general information purposes: During its 1947 meetings the International Meteorological Organization adopted a New International Analysis Code (IAC) to become effective January 1, 1949. The new IAC is essentially Part A (CAC) of the W. B. No. 1345. The Weather Bureau plans to place the new IAC in use in accordance with International Meteorological Organization agreements. In the meantime, the Weather Bureau supplemental portions of the 1345 will be reviewed in order to reduce the number of special provisions to the lowest number practicable. Instructions regarding use of the IAC and its effective date will be issued at a later date and until such instructions are issued the present amended edition of W. B. No. 1345 will continue in use.

F. W. Reichelderfer,
Chief of Bureau

Attachments

ATTACHMENT "A"
(Circular Letter No. 35-48)

The corrections given below will be made in station copies of W. B. No. 1345:

Part B, Section III.

1. On Page 11 add:

(j) Contour systems:

(99900) (9NNSS) $8h_th_chh$ yyyyy yyyyy ..... (mddvv) (00C00)

(9NNSS) $8h_th_chh$ yyyyy yyyyy ..... (mddvv) (00C00)

....

(k) Centers of rise or fall of pressure (or of height on a constant pressure surface):

(99900) (9NNSS) $000G_1G_1$ 70ppp / 75ppp / 70hhh / 75hhh yyyyy yyyyy ..... (mddvv) (00C00)

(9NNSS) $000G_1G_1$ 70ppp / 75ppp / 70hhh / 75hhh yyyyy yyyyy ..... (mddvv) (00C00)

....

2. On Page 12, to the definition of $000G_1G_1$ add the following:

"The $000G_1G_1$ group will also follow the (99900) (9NNSS) groups, when groups are used to transmit centers of rise or fall of pressure or height, to indicate the time period, in hours, for which the rise or fall is computed."

3. On Page 13, between the definitions of groups "$555P_{70}P_{70}$" and "$9Y_aY_aY_bY_b$" insert the following:

70hhh - Center of height rise on a constant pressure surface.
75hhh - Center of height fall on a constant pressure surface.
70ppp - Center of pressure rise.
75ppp - Center of pressure fall.
$8h_th_chh$ - Contour system on a constant pressure surface, used in the same manner as the group $8P_tP_cPP$ is used for pressure systems on a constant level chart.

ATTACHMENT "A" (Continued)
(Circular Letter No. 35-48)

4. Page 14, alter present definition for G_1G_1 so that it reads:

"Time interval, hours, from which rise or fall of pressure or height is determined."

5. Page 14, between the definitions for "H" and "h_ph_p" insert the following definitions:

"hh - Height, in "hundreds" and "tens" of feet, on a constant pressure surface.

hhh - Amount of rise or fall of height, in "thousands", "hundreds", and "tens" of feet.

h_c - Character of contour system, according to the table for P_c, except that h_c is defined in terms of height on a constant pressure surface; for example, $h_c = 7$ indicates "general rise of height", and $h_c = 8$ indicates "general fall of height"; all other specifications read the same as for P_c."

6. Page 14, between the definitions for "h_ph_p" and "I_a" insert the following definition:

h_t - Type of contour system, according to the table for P_t, except that h_t is defined in terms of height on a constant pressure surface; for example $h_t = 6$ indicates "area of uniform height"; all other specifications read the same as for P_t.

7. Page 15, between definitions for "pp" and "ss" insert the following definition:

ppp - Amount of pressure rise or fall, in "tens", "units", and "tenths" of millibars.

ATTACHMENT "B"
(Circular Letter No. 35-48)

The following paragraphs may be cut out and inserted in the W. B. No. 1345 as appropriate:

Change No. 1 Circular Letter No. 35-48 Eff. May 1, 1948

(j) Contour systems:

(99900) (9NNSS) $8h_th_chh$ yyyyy yyyyy ..... (mddvv) (00C00)

(9NNSS) $8h_th_chh$ yyyyy yyyyy ..... (mddvv) (00C00)

....

(k) Centers of rise or fall of pressure (or of height on a constant pressure surface):

(99900) (9NNSS) $000G_1G_1$ 70ppp / 75ppp / 70hhh / 75hhh yyyyy yyyyy ..... (mddvv) (00C00)

(9NNSS) $000G_1G_1$ 70ppp / 75ppp / 70hhh / 75hhh yyyyy yyyyy ..... (mddvv) (00C00)

....

Change No. 2 Circular Letter No. 35-48 Eff. May 1, 1948

The $000G_1G_1$ group will also follow the (99900) (9NNSS) groups, when these groups are used to transmit centers of rise or fall of pressure or height, to indicate the time period, in hours, for which the rise or fall is computed.

Change No. 3 Circular Letter No. 35-48 Eff. May 1, 1948

70hhh - Center of height rise on a constant pressure surface.
75hhh - Center of height fall on a constant pressure surface.
70ppp - Center of pressure rise.
75ppp - Center of pressure fall.
$8h_th_chh$ - Contour system on a constant pressure surface, used in the same manner as the group $8P_tP_cPP$ is used for pressure systems on a constant level chart.

Change No. 5 Circular Letter No. 35-48 Eff. May 1, 1948

"hh - Height, in "hundreds" and "tens" of feet, on a constant pressure surface.

hhh - Amount of rise or fall of height, in "thousands", "hundreds", and "tens" of feet.

h_c - Character of contour system, according to the table for P_c, except that h_c is defined in terms of height on a constant pressure surface; for example:

h_c = 7 indicates "general rise of height",
h_c = 8 indicates "general fall of height";
all other specifications read the same as for P_c."

Change No. 6 Circular Letter No. 35-48 Eff. May 1, 1948

h_t - Type of contour system, according to the table for P_t, except that h_t is defined in terms of height on a constant pressure surface; for example:

h_t = 6 indicates "area of uniform height";
all other specifications read the same as for P_t.

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

ASSTChO:Ko
(File No. 340.3
622.1
622.11

April 30, 1948

CIRCULAR LETTER NO. 36-48
(To All First Order Stations)

Subject: Telephone Facilities at Weather Bureau Stations.

A considerable number of questions in connection with local telephone installations have been referred to the Central Office for advice. It seems desirable therefore to furnish a statement outlining Weather Bureau policy in this regard.

Telephone connections required to carry all of the outgoing business of the office necessary for the dissemination of forecasts and warnings through radio, press, public agencies of information, etc. are authorized without question or reservation. If in order to serve these functions a single two-way line open to the public is inadequate because too frequently busy with incoming calls, one or more additional lines may be installed but these should either be limited to outgoing traffic or unlisted and thereby kept free from general public demand.

Offices in some of the larger cities undoubtedly require more than a single connection for use by the general public in requesting forecasts, climatological and other information and an additional line will be authorized where justified by legitimate public demand. On the other hand, because the installation of additional telephones almost invariably results in requests for increased personnel to handle them, the Central Office does not favor adding telephones solely as a solution to the problem of the general public demand for individualized information. Experience has proved that there is no practical limit to the number of telephones needed to satisfy public demands for weather information, especially during periods of unusual weather.

In some instances, such as the occurrence of severe floods and hurricanes, installation of additional telephones on a temporary basis is authorized and local officials should not hesitate to arrange for temporary installations limited to the duration of such conditions. In the past some stations have enlisted the cooperation of Chambers of Commerce and local telephone companies in setting up special switchboards with operators to handle the telephone load in these emergencies.

The impossibility of meeting ordinary public demand in larger cities through personalized telephone service is shown by the fact that last month in Washington the average number of calls to the automatic telephone forecast system (WE 1212) was more than 68,000 per day. The total number of calls to the Washington system on a busy day is greatly in excess of this figure.

It is not an unusual experience in bad weather to get the busy signal time after time when dialing WE 1212, although more than 200 calls can be handled simultaneously by the system. It is probable that the volume of calls in larger cities would frequently exceed this figure.

The solution to the local service problem, in so far as a solution is possible, must be attained through intensified use by the public of forecasts and other information distributed by radio broadcast and newspaper publication. This, in turn, imposes upon local officials the obligation to improve distribution through these channels where necessary by assuring that the material broadcast and published is as up-to-date and complete as possible and presented in an interesting and easily understood form.

The automatic telephone system is one of the most effective means for making weather forecasts available to the general public, and representations have been made to the American Telephone and Telegraph Company urging that this system be installed in all principal cities. That no new installations have been made since before the war is due to shortages in required materials, but we have reason to believe that favorable action will be taken as soon as equipment is available. It is suggested that, in the meantime, station officials in the larger cities discuss this matter with local telephone company officials to encourage installation of automatic systems as soon as conditions make this practicable.

Many telephone calls received by Weather Bureau offices are for climatological data. It is suggested that local officials keep a check on the statistical or climatological information, including local weather data, requested by phone and arrange to include more of it in newspaper bulletins or in local printed bulletins if the check indicates this would cut down on the number of telephone calls. In exceptional cases approval may be given requests for authority to issue local weather bulletins for distribution to public utilities, business concerns and other interests if justified by the demand and if the required information cannot be given through newspaper publication. It should be mentioned, however, that the trend has been away from local Weather Bureau printed bulletins and toward increased newspaper publication and radio broadcast due to the fact that weather information can be made available to practically everyone through these means.

Regional Offices have authority to approve telephone installation in local Weather Bureau offices and it is expected that, as a rule, questions relating to the number of telephones, PBX boards, interoffice systems, etc., will be worked out by the Regional Office and local officials in accordance with the general policies outlined in this letter, both seeking the ideal of a single telephone line open to general public demands at any station. Justification for more than two such lines must be presented to the Central Office for decision.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau.

4. (continued)

CAA weather observers to determine their knowledge of observational procedures, so that new observers may be officially certificated to take weather observations, and to insure that the proficiency of all such observers is maintained; reports certifications to the Regional Technical Assistant for recording; (c) suspends certificates when deficiencies which cannot be corrected are found, and notifies Regional Office by telegraph; (d) tests vision of observers for conformity to Bureau standards; reports to Regional Office for action when vision falls below requirement.

5. Reviews personnel evaluation forms prepared by the Official in Charge or supervisor of the observational personnel, contributing to this evaluation his own opinions, obtained during check and test of individual proficiency.

6. Trains newly-assigned inspectors by going with them to field stations and instructing them in the full scope of observational inspection duties. Participates in setting up standards for the inspector-trainee to follow in trips to second-order and supplementary aeronautical weather reporting stations where the trainee will serve alone, inspecting observational techniques and administering tests.

7. Directs the selection or, in inspection trips to substations, actually selects special observers paid by the day, and airway, synoptic and special meteorological observers paid by the observation in accordance with the provisions of W. B. Circular II, under C. S. Authority A-II-xl. In accordance with procedures established by the Training Section, trains such observers in making and recording observations, remaining with new observers to demonstrate proper procedures until satisfied that observer is competent to carry on independently. Makes follow-up visits to ascertain maintenance of satisfactory observational standards.

8. Reports effectiveness of on-station training program on the basis of standards established by the Area Training Officer.

9. Inspects punched-card recording procedures and observational records of the station for proper presentation of meteorological data and determines that routing, preparation, checking and legibility conform to established procedures and instructions.

JOB DESCRIPTION
METEOROLOGICAL TECHNICIAN TRAINEE
SP-1350-8

As Meteorological Aid (Observational Inspector) SP-8, receiving instructions in all phases of observational inspection duties; under immediate direction of and in company with the Inspector, P-3, inspects the observational program of first-order stations and administers tests; and under general supervision, following established procedures, travels alone to second-order stations to inspect the observational procedures of these stations.

1. Travels with P-3 Inspector to first-order stations and under his supervision (a) determines that observational techniques at the station conform to Bureau procedures and instructions; (b) administers tests to ascertain the observational knowledge of personnel; (c) tests vision of observers for conformity to Bureau standards.

2. Without immediate supervision, but following procedures established by the Inspector P-3, travels to second-order and supplementary aeronautical weather reporting stations to survey the observational procedures of personnel at these stations to be sure they meet Bureau standards; to determine that observational equipment is maintained at required operating efficiency and to administer tests to these observers for their certification as official Bureau observers, reporting results of such tests to the Regional Technical Assistant for recording, Selects special observers including airway observers paid by the day, and airway, synoptic and special meteorological observers paid by observation in accordance with the provisions of W.B. Circular II, under C. S. Authority A-11-xl. In accordance with procedures established by the Training Section, trains such observers in making and recording observations, remaining with new observers to demonstrate proper procedures until satisfied that observer is competent to carry on independently. Makes follow-up visits to ascertain maintenance of satisfactory observational standards.

3. Makes complete reports on observational procedures that in his judgment need revision at either first- or second-order stations which he has surveyed.

4. Analyzes observational records of these stations to insure that meteorological data are being recorded properly and that routing, preparation, checking and legibility of records conform to Bureau standards.

5. While in a trainee status, receives complete indoctrination in all Bureau procedures and instructions affecting observations in order that he may combine, with his already established observational background, a thorough knowledge of Bureau regulations and procedures in preparation for assignment to full scope of duties as an Observational Inspector P-3.

Attachment (C)

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

SR&F/Syn-fw
(File No. 622.1,
620.2, 610)

May 4, 1948.

CIRCULAR LETTER NO. 38-48
(To All Stations)

Subject: Revised State Forecast Distribution Pattern on Service "C".

Effective about May 12, 1948, a major revision to the Service "C" state forecast distribution pattern will go into effect. This revision is in answer to requests received from Weather Bureau Offices for a more equitable distribution pattern. Although under the present system certain state forecasts fall within the area embraced by the circuit, they are often not transmitted on that circuit due to lack of sufficient circuit time. Consequently, some stations do not even receive their own state forecasts. This creates an undesirable situation which seriously handicaps service to the public.

Under the revised system, those forecasts which are in the area of the circuit involved will be transmitted first, whenever operationally practicable, and other forecasts will be transmitted in the order of their distance from that circuit. It is believed that a pattern of this kind will obviate many of the difficulties being experienced under the present distribution pattern.

Attached for the guidance of all concerned is a tabulation which indicates the contents of each state forecast group and the groups transmitted on each circuit. This tabulation does not indicate the order of collection and dissemination on each circuit or the order of state forecasts within a given group. Additional information regarding state forecast collection and dissemination on each circuit in addition to related maps showing state forecast areas will be contained in revised pages 21 through 24, inclusive, of the Service "C" Manual to be issued soon by the CAA.

F. W. Reichelderfer
Chief of Bureau

PREPARATION AND DISSEMINATION OF STATE FORECASTS

Forecast Center	Group Headings	Contents	Distribution					
Washington	DCA-1	Ohio Kentucky Tennessee	30*	31	32	33		
	DCA-2	Eastern New York Western New York Eastern Pennsylvania Western Pennsylvania New Jersey Block Island to Hatteras	30*	31		33		
	DCA-3	West Virginia District of Columbia Virginia Delaware Maryland	30*	31				
Boston	BOS-1	Vermont New Hampshire Maine Massachusetts Rhode Island Connecticut Eastport to Block Island	30*					
Atlanta	ATL-1	North Carolina South Carolina Georgia Hatteras to Jacksonville	30	31*				
Miami	MIA-1	Florida Jacksonville to Florida Straits and East Gulf		31*				
New Orleans	MSY-1	Eastern Texas Western Texas West Gulf		31	32*			35
	MSY-2	Northwestern Florida Alabama Mississippi Louisiana Arkansas Middle Gulf		31	32*			
Denver	DEN-1	Wyoming Colorado			32	33	34*	35*
	DEN-2	New Mexico			32			35*

Forecast Center	Group Headings	Contents	Distribution					
Kansas City	MKC-1	Nebraska			32*	33	34	
	MKC-2	Missouri		31	32*	33		
	MKC-3	Oklahoma		31	32*	33		
	MKC-4	Kansas		31	32*	33		
Chicago	CHI-1	Lower Michigan Upper Michigan Lake Superior Lake Michigan Lake Huron Lake St. Clair Lake Erie Lake Ontario	30			33*		
	CHI-2	Illinois Indiana	30	31	32	33*		
	CHI-3	Iowa	30		32	33*	34	
	CHI-4	Wisconsin Minnesota	30			33*	34	
San Francisco	SFO-1	Northern Calif. Nevada					34	
	SFO-2	San Francisco Bay Region Sierra Nevada Sacramento Valley San Joaquin Valley Santa Clara Livermore Valley Salina Valleys Las Vegas and Lake Mead					34	
Billings	BIL-1	South Dakota			32	33	34*	
	BIL-2	North Dakota				33	34*	
	BIL-3	Eastern Montana Western Montana				33	34*	
Los Angeles	LAX-1	Southern Calif. Arizona					34	
	LAX-2	Los Angeles Southern Calif. Coast Southern Calif. Coastal Valleys Southern Calif. Intermediate Valleys Southern Calif. Mountain Areas Southern Calif. Interior and Desert Regions						

Forecast Center	Group Headings	Contents	Distribution					
					32		34	35*
Salt Lake City	SLC-1	Utah					34*	35
Seattle, Wash.	SEA-1	Western Washington Eastern Washington Western Oregon Eastern Oregon Northern Idaho Southwestern Idaho Southeastern Idaho						

*Circuit of origin

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Budget-Ha
(File No. 750, 102.4, 202)

May 11, 1948

CIRCULAR LETTER NO. 39-48
(To All First Order Stations)

Subject: Time Distribution Report

Requirements of the Congress, the Budget Bureau, and the Department Office of Budget and Management put a new emphasis on the need to determine and report the cost of functional activities. Several years ago, stations were required to distribute payroll and other costs under a "project accounting" method then employed by the Bureau. We find, however, that the overall costs of functional activities can be approximated by the Central Office to the satisfaction of the Bureau of the Budget and Congress, on the basis of time spent by operating personnel on various activities.

WB Form 1411, Time Distribution Report (first used in 1946), provides these basic data. The form has been revised to permit punching on machine tabulating cards at the Central Office. A supply of this form is being forwarded to each regional office for distribution to the field stations. Complete instructions for the preparation of the form are printed on the back. This year's submission will be for the twelve months preceding the rendition. The calendar year code entered on the form will be "48." The following schedule should be maintained in preparing and submitting this report:

1. Each regional office will distribute by May 25, 1948, a sufficient supply of Form 1411 to each station in the region to permit preparation of one form by each employee paid from "S and E" funds. The regional office will also furnish each station with the appropriate station code number (taken from the Station Complement Book) and the state code number (taken from the Personnel Code Book). Where mail facilities are such that the form cannot be completed and returned in the time specified below, forms will be prepared at the regional office by those most familiar with the details of operating program in such remote stations, and the station concerned will be so advised.

2. Field employees will prepare the form in accordance with instructions printed thereon. Each official-in-charge will mail the forms for all employees at his station on May 31 so as to reach the regional office not later than June 8. Forms for employees on leave or otherwise unavoidably out of touch will be prepared and forwarded by the official-in-charge.

3. Regional offices will assemble and mail the completed reports in time to reach the Central Office by June 20.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

SR&F-A1
(File No. 620.11)

May 12, 1948

CIRCULAR LETTER NO. 40-48
(To All First-Order Stations)

Subject: Responsibility for Trip Forecasts.

Reference: Circular Letter No. 53-47.

Recent inquiries have been presented to the Central Office on the subject of responsibility for preparing trip forecasts. This circular letter is being issued to help clarify the matter.

When a request is received by a Weather Bureau Airport Station for a trip forecast which is covered both in time and area by available airway forecasts, personnel on duty at the Airport Station will prepare the trip forecast from the latest forecasts available by teletype. Requests for trip forecasts made to Airway Communication Stations for the same time and area will be forwarded to the FAWS unit or Airway Forecast Center which can be contacted most conveniently. However, forecasts for trips which extend beyond existing available forecasts, either in distance or time will be forwarded to the most accessible Airway Forecast Center. Telephone toll charges will not be incurred for trip forecasts for civilian aircraft except in emergencies which involve safety of life or property.

Reference to the availability of weather information and the proper procedure for requesting trip forecasts is found in current issues of the "Airman's Guide" and will be included in the next edition of the "Flight Information Manual." In addition, plans are being made to prepare small handouts which may be distributed to pilots by Weather Bureau and CAA stations.

More complete discussion of these questions may be included in the next edition of the "Flight Assistance Service Manual" and will be written into Chapter III-B-23 of the Weather Bureau Manual.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D.C.

Instr-R/S
(File No. 451.6)

May 18, 1948

CIRCULAR LETTER NO. 41-48
(To All First-Order Stations)

Subject: Use of Neoprene Pilot Balloons

1. Premature bursting of 30-gram neoprene balloons has been reported by several stations. Samples were selected from the lots reported as defective and placed under test. The results indicated that all the balloons met the specified performance requirements for a successful pibal after they had been properly heat-conditioned and inflated.

2. Neoprene becomes stiff and loses its elasticity with age. The loss of elasticity is accelerated by low temperatures. This condition, which involves molecular structure, is reversible and the elasticity can be restored by subjecting the material to higher temperatures. Balloons shipped during the winter months are undoubtedly subjected in many cases to extremely low temperatures and such balloons must be heat-treated to restore them to the normal state for use. To obtain satisfactory performance, 30- and 100-gram pilot balloons must be heat-conditioned and inflated at a reasonable rate to allow sufficient time for uniform expansion of the balloon envelope.

2.1. It is important that all portions of the balloon envelope be softened uniformly during the heat-conditioning process since stresses are established between the areas at different temperatures. The two methods of heat-conditioning recommended for pilot balloons are outlined below. Since immersion of the balloon in hot water provides the most uniform softening of the neoprene, method (a) is preferred.

(a) Hot Water Treatment.--The neck of the balloon should be sealed by means of a rubber band or soft string to avoid having water enter the balloon and to provide a means for stirring the balloon while it is completely immersed in the hot water. Boiling water is preferable as the balloon will be properly conditioned after an immersion period of five minutes. Hot tap water may also be used. The conditioning period must, however, be increased for a proportionately longer period at lower temperatures, ranging from five minutes at 212°F. to a period of four hours at 120°F. All free water should be shaken from the balloon before inflation is begun.

(b) Direct Heat Treatment.--Uniform heating can be obtained by suspending the balloons in a heated box or oven. The temperature must be controlled as the neoprene will be damaged or burned if the temperature exceeds 248°F. The balloons will be adequately heat-conditioned if exposed in the box at a temperature of 212°F. for a period of 30 minutes.

A proportionately longer period is required for conditioning at lower temperatures. A period of approximately 10 hours is required at 120°F. Conditioning at lower temperatures will not sufficiently soften the rubber. An excessively long conditioning period will result in deterioration of the neoprene.

2.2. Pilot balloons delivered on future contracts may be made of natural latex, which probably will not require a special heat-conditioning treatment. Therefore, the most convenient and economical method of conditioning the neoprene pilot balloon should be placed into use at this time.

3. Rate of Inflation.--The gas pressure during inflation should not exceed 10 pounds per square inch. The inflation period should not be less than two minutes for the 30-gram balloon or less than five minutes for the 100-gram balloon, to provide an adequate period for uniform expansion of the envelope.

4. Defective Balloons.--If two of the first ten balloons from one carton burst during inflation, the remaining balloons from the carton should be set aside and a report forwarded to the Central Office through the Regional Office. The report should include the size and color of the balloons, name of manufacturer, date of manufacture, number of balloons used, number bursting prematurely, rate of inflation, and the temperature, method, and length of heat-conditioning. The balloons remaining in the carton should be held at the station for 30 days from the date of the report. If no instructions are received by the end of the 30-day period, the remaining balloons in the carton should be used.

5. These instructions supersede those contained in Circular Letter No. 9-44, January 17, 1944, Subject: Instructions for Using Neoprene Balloons, which is hereby cancelled.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
WASHINGTON 25

Cpr:kbl
(File No. 740.5)

May 20, 1948

CIRCULAR LETTER NO. 42-48
(To All Stations)

Subject: Circular N, 5th Edition, Chapter 31 Revised; and Form WBAN 10, Revised

Chapter 31 revised will become effective July 1, 1948 to coincide with use of revised WBAN 10A and B, supplies of which are being shipped under separate cover.

Supplies of WBAN 10D and instructions will be distributed at a later date. Data now being entered on WBAN 10A will be entered on WBAN10A and B. Chapter 31 revised cancels Chapter 31, paragraphs 40123 through 40134, and Table 34 of the 11th amendment to Circular N, all of which have been incorporated in the revised chapter. Table 26 in the uncancelled portion of Chapter 40 should be renumbered to read Table 32.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

Attachment

CHAPTER 31. ENTRY ON FORM WBAN 10 (Revised)

31000. GENERAL. Form WBAN 10 revised, consisting of parts A, B, and D, will constitute the basic original record of surface observations at all stations at which the form is prepared. A new WBAN 10A-B will be started for recording each day's observations, beginning with the first observation at or following 0000 local standard time, as defined below. One page of WBAN 10B and as many pages of WBAN 10A as are needed will be used for each day. WBAN 10D will be prepared monthly in accordance with instructions on the reverse side of the form.

31001. Enter observations as legibly as possible in chronological order, restricting data, so far as possible, to the columns appropriate to them as indicated by the column headings. Ditto marks will not be used. At stations where the form is used by the communications operator directly, slants to separate data in the airway code may be used as specified in Chapter 40.

31002. The name of the station and date will be entered in the spaces provided.

31015. MISSING DATA. The symbol "M" will be entered only for missing data normally recorded. Appropriate notes explaining the missing data will be entered in column 90.

31020. CORRECTION OF ENTRIES. When incorrect data have been entered, corrections will be made as follows:

31021. If the error is discovered before the report is filed, the erroneous entry will be erased and correct entry made.

31022. If an error is discovered on the record or 6-hourly synoptic observation within one hour after filing time, a red line will be drawn through the erroneous entry only and the correction entered in red immediately above it. In column 14 of the erroneous observation enter the phrase "CQN FILED (Time)" in red. The complete corrected observation will be filed for transmission at once. Carbon copies need not be corrected in red.

31023. Corrections for special and check observations will be filed for transmission in the same manner as those for record observations only when a succeeding observation has not been filed for teletype or radio distribution. Whenever a succeeding observation has been filed, the observation will be corrected by striking out the erroneous entry and entering the correct data in red above it.

31024. When a record or 6-hourly synoptic observation has been filed, and more than an hour has elapsed before the error has been discovered at the station, a red line will be drawn through the erroneous entry and the correction entered in red above it. A corrected report will not be filed for transmission.

31030. TIME. For the purpose of securing a uniform understanding of time for use in Form WBAN 10, certain definitions are established as follows:

31031. GREENWICH CIVIL TIME. Greenwich Civil Time (G.C.T.) is sometimes called "universal time" because time used in most other parts of the world is derived from G.C.T. Greenwich Civil Time is the local civil time, standard time, and zone time within the time zone of Greenwich (0° longitude).

31032. LOCAL STANDARD TIME. In the United States, standard time zones have been established by law, and the time within these zones is the mean solar time at the meridians in Table 15. The time based upon any of the standard time meridians can be converted to G.C.T. by adding one hour for each 15° of longitude west from Greenwich. A conversion table follows:

Table 15. Meridians of standard time zones and conversion to G.C.T.

Standard Time Zone	Meridian	To convert to G.C.T., add
Atlantic Standard Time	60°	4 hours
Eastern Standard Time (EST)	75°	5 hours
Central Standard Time (CST)	90°	6 hours
Mountain Standard Time (MST)	105°	7 hours
Pacific Standard Time (PST)	120°	8 hours
Yukon Standard Time (YST)	135°	9 hours
Alaskan Standard Time (AST)	150°	10 hours
Bering Standard Time (BST)	165°	11 hours

31100. WBAN 10A. (Cols. 1-15) Surface weather observations, which primarily provide readily available information for flying, are entered on "10A." The data will be entered in columns 1 through 15 in accordance with the instructions in paragraphs 31105 to 31115.

31101. TYPE. The type of report will be indicated by one of the following designations:

(1) R Record observation

(2) S (followed by serial number) Special observation. Serial numbers are assigned consecutively for each day. Number 1 is the first special (or record-special) filed for transmission on or after 0000, LST, of a given day.

(3) RS (followed by serial number) Record-special observation.

(4) L Local extra observation.

(5) ✓ Check observation. (If a check observation requires local extra procedure, enter "L.")

(6) 6H Six-hourly.

31102. TIME ENTRIES. (Col. 2) The time ascribed to an observation is that of the last entry on Form WBAN 10. Entries will be in local standard time to the nearest minute in terms of the 24-hour clock. The first two figures will indicate the hour, and the last two the minutes. For example, 0000 indicates the beginning of the day; 0235 indicates 2:35 A.M.; 1346 indicates 1:46 P.M.; 2359 indicates the end of the day.

31103. CEILING. (Col. 3) Enter the ceiling as required by Table 16. When a value is half-way between two reportable values, the lower value will be selected, e.g., 50 feet will be entered as "0." Prefix an appropriate classification symbol selected from Table 17 to each numerical ceiling value. All heights pertaining to symbols for sky condition (see paragraph 31104) are with reference to height above ground, not above sea level, except heights that may be reported in Column 14 as a part of a Pireps.

Table 16. Reportable ceiling values.

0 to 5,050 feet	5,051 to 9,750 feet	Above 9,750 feet
To nearest 100 feet in hundreds of feet.	To nearest 500 feet in hundreds of feet.	Numerical value omitted. A slant mark, denoting "high," follows sky condition symbol.

Table 17. Ceiling classification symbols.

A	Ceiling reported from aircraft.
B	Balloon ceiling.
E	Estimated ceiling.
M	Measured ceiling.
P	Precipitation ceiling.
W	Indefinite ceiling.

31103.1. Whenever the ceiling is observed as variable, the range of variability will be recorded in Column 14 (see Table 24, items 1-2). If the ceiling is less than 2,000 feet, the letter "V" will be entered immediately after the ceiling value.

31103.2. An entry is required in column 3 when 0.6 or more of the sky is covered at 9750 feet or less by obscuring phenomena not classified as thin and by clouds. Note that the height ascribed to obscuring phenomena for entry in column 3 is the vertical visibility into the phenomena and not the base of the phenomena.

31103.3. If a thin obscuration is present, an entry will be made in column 3 only if

(1) Clouds whose base is at 9750 feet or below are visible above the thin obscuration, or

(2) Clouds whose base is at 9750 feet or below cover more than 0.6 of the sky below the thin obscuration. (See Table 19.)

Note: See Table 19 for illustrations of entries in column 3; see Table 24, items 3-7, 11-14 for instructions for recording in column 14 heights of cloud layers not recorded in column 3, and bases of obscuring phenomena above the surface.

31104. SKY. (Col. 4) Record state of the sky in terms of the standard teletype symbols, or combinations* of them, listed in Table 18. See Table 19 for illustration of entries in column 4 under various sky conditions. See Table 24 for instructions on reporting in column 14 cloud layers not reported in column 4.

31104.1. The symbols ◐, ◑, and ⊕ may be modified by the prefixes plus (+) and minus (-) for dark and thin clouds respectively. The symbol X may be modified by the prefix minus (-) for thin obscuration.

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* The symbol for clear will not be used in combination with any other sky condition symbol.

Table 18. Sky-condition symbols.

Symbol and Meaning	Explanation
X Obscuration	0.6 or more of the sky obscured by precipitation or obstructions to vision either alone or in combination with lower clouds, and irrespective of higher clouds.
O* Clear	Less than 0.1 total sky cover, or less than 0.6 obscuring phenomena with clouds not visible.
◑ Scattered Clouds	0.1 to less than 0.6 sky cover.
◍ Broken Clouds	0.6 to 0.9 sky cover.
⊕ Overcast	More than 0.9 sky cover.

* The symbol for clear will not be used in combination with any other sky condition symbol.

31104.2. HEIGHT OF LOW SCATTERED CLOUDS. The height of low scattered clouds immediately precedes the sky condition symbol to which it applies whenever 1) the symbol appears alone, e.g., 20 ◑ or 2) the symbol is the second in a combination of sky condition symbols, e.g., ◑20 ◑ . In all other cases the height of low scattered clouds is reported in column 14. (See Table 24.)

31104.3. HEIGHT OF HIGH CLOUDS OR HIGH OBSCURING PHENOMENA. Enter a slant (/) following the symbol to indicate high clouds or an obscuration whose base is higher than 9750 feet.

31104.4. When a high obscuration is present with high clouds, the high obscuration will be recorded in column 4, regardless of whether the high clouds are above or below it (see Table 19, item 13.) Information concerning the high clouds will be recorded in column 14 in accordance with Table 24, item 7.

Table 19

Examples of entries in columns 3, 4, and 14 under various sky conditions

Note: This table illustrates conditions requiring not more than two sky-condition symbols. (See Table 24 for instructions on reporting additional symbols in column 14.)

Conditions Observed	Col. 3	Col. 4	Col. 14
Clouds alone visible			
1. Less than 0.1 of sky covered	- -	O	- -

Table 19, Cont'd.

Conditions Observed	Col. 3	Col. 4	Col. 14
2. 0.1 - 0.5 of sky covered by one layer			
a. low clouds (i.e., at 9750 ft. or less)	--	25 ⓪	--
b. high clouds (i.e., above 9750 ft.)	--	⓪/	--
3. 0.1 - 0.5 of sky covered by two layers			
a. Both layers low	--	⓪18⓪	30⓪
b. Both layers high	--	⓪/	--
c. One layer low clouds, one high clouds	--	⓪/18⓪	--
4. 0.6 - 0.9 of sky covered by one layer			
a. Low	M65	⓪	--
b. High	--	⓪/	--
5. 0.6 - 0.9 of sky covered by two layers			
a. Both layers low			
(1) Lower layer covering less than 0.6 of sky	M25	⓪10⓪	--
(2) Lower layer covering 0.6 - 0.9 of sky	A27	⓪⓪	E50⓪
b. Both layers high	--	⓪/	--
c. One layer low, one high			
(1) Lower layer covering less than 0.6 of sky	--	⓪/25⓪	--
(2) Lower layer covering 0.6 - 0.9 of sky	M25	⓪/⓪	--

Table 19, Cont'd.

Conditions Observed	Col. 3	Col. 4	Col. 14
6. More than 0.9 of sky covered by one layer			
a. Low	M26	⊕	—
b. High	—	⊕/	—
7. More than 0.9 of sky covered by two layers			
a. Both layers low			
(1) Lower layer covering less than 0.6 of sky	M75	⊕35Ⓓ	—
(2) Lower layer covering 0.6 - 0.9	M35	⊕Ⓓ	M75 ⊕
b. Both layers high	—	⊕/	—
c. One layer low, one high			
(1) Lower layer covering less than 0.6 of sky	—	⊕/35Ⓓ	—
(2) Lower layer covering 0.6 - 0.9	M35	⊕/Ⓓ	—
Obscuring phenomena alone visible			
8. Less than 0.6 of sky obscured	—	O	BASE K LYR W E20
9. 0.6 or more of sky obscured by one layer			
a. Sky overhead visible			
(1) Low obscuration (i.e., base at 9750 ft. or below)	—	-X	BASE K LYR E5
(2) High obscuration (i.e., base above 9750 ft.)	—	-X/	HI H LYR

Table 19, Cont'd.

Conditions Observed	Col. 3	Col. 4	Col. 14
b. Sky overhead not visible			
(1) Low Obscuration	P2	X	—
(2) High Obscuration	—	X/	HI H LYR
Combinations of clouds and obscuring phenomena visible			
10. Low obscuration beneath clouds			
a. 0.9 or less of sky covered by combination			
(1) Sky or clouds overhead not visible through obscuration but visible at horizon			
(a) Low clouds	W8	⊕ X	E50 ⊕
(b) High clouds	W8	⊕ /X	—
(2) Sky or clouds overhead visible through obscuration			
(a) Low clouds	M45	⊕-X	—
(b) High clouds	—	⊕/-X	—
b. More than 0.9 of sky covered by combination			
(1) Sky or clouds overhead not visible through obscuration but visible at horizon			
(a) Low clouds	W8	⊕X	E30⊕
(b) High clouds	W8	⊕/X	—

Table 19 Cont'd.

Conditions Observed	Col. 3	Col. 4	Col. 14
(2) Sky or clouds overhead visible through obscuration			
(a) Low clouds	M50	⊕-X	--
(b) High clouds	--	⊕/-X	—
11. Low obscuration above clouds			
a. Less than 0.6 clouds			
(1) Obscuration not thin	W25	X10Ⓓ	BASE K LYR E23
(2) Thin obscuration	—	-X10Ⓓ	BASE H LYR E50
b. 0.6 or more clouds			
(1) Obscuration not thin	E25	XⒹ	BASE H LYR E48
(2) Thin obscuration	M18	-XⒹ	BASE H LYR E50
12. High obscuration above low clouds			
a. Less than 0.6 clouds			
(1) Obscuration not thin	—	X/25Ⓓ	HI K LYR
(2) Thin obscuration	—	-X/25Ⓓ	HI K LYR
b. 0.6 or more clouds			
(1) Obscuration not thin	M25	X/Ⓓ	HI K LYR
(2) Thin obscuration	M18	-X/Ⓓ	HI K LYR
13. High clouds and high obscuration			
a. Sky or clouds not visible overhead but visible at horizon	—	X/	HI K LYR
b. Sky or clouds overhead visible	--	-X/	HI K LYR

Table 19, Cont'd.

Conditions Observed	Col. 3	Col. 4	Col. 14
14. Obscuring phenomena beneath clouds with obscuring phenomena alone covering less than 0.6 of sky.			
a. Low clouds			
(1) Total sky cover less than 0.5	—	45⌀	LWR K LYR W
(2) Total sky cover 0.6 - 0.9	M48	⌀	K LYR N
(3) Total sky cover more than 0.9	M48	⊕	K LYR S
b. High clouds			
(1) Total sky cover less than 0.5	—	⌀/	K LYR W
(2) Total sky cover 0.6 - 0.9	--	⌀/	K LYR N
(3) Total sky cover more than 0.9	—	⊕/	K LYR S
15. Obscuring phenomena above clouds with 0.1 - 0.5 total sky cover			
a. Low clouds	—	25⌀	K LYR E80
b. High clouds	--	⌀/	HI K LYR
(Note that if summation of obscuring phenomena and lower clouds is 0.6 or more, an obscuration exists, and items 11 and 12 apply.)			

31105. VISIBILITY. (Col. 5) Enter the prevailing visibility, selecting the closest corresponding value from Table 20. When the prevailing visibility is exactly half way between two of the values, select the lower value.

Table 20. Table of values for recording visibility in columns 5 and 14.

0	1
1/16	1 1/4
1/8	1 1/2
3/16	1 3/4
1/4	2
5/16	2 1/4
3/8	2 1/2
1/2	One mile increments when visibility
5/8	is 3 to 15 miles, inclusive.
3/4	
	Five-mile increments when visibility is more than 15 miles.

31105.1. VARIABLE VISIBILITY. Whenever the visibility is variable, the range of variability will be recorded in column 14 (see Table 24, item 15). If the prevailing visibility is less than 2 miles, the letter "V" will be entered immediately after the visibility value.

31105.2. A plus sign (+) will be entered following the figure 15 when the visibility is estimated to be more than 15 miles and the most distant visibility marker is 15 miles or less.

31105.3. CONTROL TOWER VISIBILITY. When the visibility at the usual point of observation is less than 3 miles, the visibility at the control tower level will be recorded in column 5 at stations participating in the control tower visibility program. The visibility at the usual point of observation, and the height of the restricting phenomena, when known, will be recorded in column 14 (see Table 24, item 17).

31105.4. See Table 24, item 16 for recording visibility differing in various quadrants in column 14.

31106. WEATHER AND OBSTRUCTIONS TO VISION. (Col. 6) Entries of weather and obstructions to vision will be made in accordance with Tables 21 and 22. Two or more entries for a single observation will be made in the following order:

(1) Tornado (or waterspout).
(2) Thunderstorm.
(3) Liquid precipitation, in the order of decreasing intensity.
(4) Freezing precipitation, in the order of decreasing intensity.
(5) Frozen precipitation, in the order of decreasing intensity.
(6) Obstructions to vision in the order of decreasing predominance, if discernible.

Note that an entry is required in column 6 whenever the visibility is less than 7 miles.

31106.1. WEATHER AND INTENSITY. Enter the character of hydrometeors and other phenomena occurring at the time of observation in printed letter symbols in accordance with Table 21.* Use a plus sign after symbols for precipitation and squalls to indicate a heavy degree of intensity and a minus sign to indicate a light degree; the absence of any sign indicates moderate intensity. (See also paragraphs below captioned thunderstorms, tornados and waterspouts).

Table 21. Symbols for Weather

TORNADO or WATERSPOUT (always written out in full)			
T +	Heavy Thunderstorm	SW	Snow Showers
T	Thunderstorm	SP	Snow Pellets
R	Rain	SG	Snow Grains
RW	Rain Showers	IC	Ice Crystals
L	Drizzle	A	Hail
ZR	Freezing Rain	AP	Small Hail
ZL	Freezing Drizzle	SQ	Snow Squall
E	Sleet	RQ	Rain Squall
S	Snow		

31106.11. PRECIPITATION. Precipitation of a showery or intermittent character not occurring at the time of observation, will be reported in remarks (Table 24, item 21) for a period not exceeding 15 minutes after cessation of active precipitation.

31106.12. SQUALLS. A squall observed within 15 minutes of, but not at, the time of observation, will be reported in the symbols RQ and SQ according as the type of precipitation that accompanied the squall was rain or snow. When precipitation occurs at the time of observation and squalls occur at the same time or within 15 minutes prior to it, the precipitation will be coded in the symbols appropriate to its character and form (R-, RW, etc.) and prefixed to the squall symbol, e.g., RWRQ, S-SQ, etc.

31106.13. THUNDERSTORMS. Thunderstorms will be reported if 15 minutes or less have elapsed since thunder was last heard. Thunderstorms are reported as either heavy or moderate; that is, all thunderstorms not classified as heavy are reported as moderate.

31106.14. TORNADOS AND WATERSPOUTS. The direction of a waterspout or tornado from the station will immediately follow the term TORNADO or WATERSPOUT. (See Table 24, item 18 for entries in column 14). Tornados and waterspouts will be reported without indication of intensity.

Note: See table 24, items 18-21, for additional information concerning weather to be reported in column 14.

* See Table 24 for instructions for reporting intermittent and showery precipitations occurring within 15 minutes prior to the observation.

31106.2. OBSTRUCTIONS TO VISION. Enter obstructions to vision in printed letter symbols in accordance with Table 22.

Table 22. Symbols for Obstructions to Vision

F	Fog
GF	Ground Fog
BS	Blowing Snow
GS	Drifting Snow
BD	Blowing Dust
BN	Blowing Sand
IF	Ice Fog
H	Haze
K	Smoke
D	Dust

Note: See Table 24, items 17 and 22, for additional information concerning obstructions to vision to be reported in column 14.

31107. SEA-LEVEL PRESSURE. (Col. 7) The initial "9" or "10" of the sea-level pressure will be omitted and the pressure will be entered as three figures (without a decimal point) representing tens, units, and tenths of millibars; e.g., 1013.2 would be entered as 132.

Note: See Table 24, items 24 and 25, for reporting pressure data in column 14.

31108. TEMPERATURE. (Col. 8) Enter the dry-bulb temperature to the nearest whole degree Fahrenheit. Prefix a minus sign to temperatures below zero.

31109. DEW POINT. (Col. 9) Enter the dew-point temperature to the nearest whole degree Fahrenheit. Prefix a minus sign to dew-point temperatures below zero. Whenever the air temperature is below -35°F., dew points will not be entered. (See paragraph 31015.)

31110. WIND DIRECTION. (Col. 10) Enter the wind direction to sixteen points of the compass by means of one or two short arrows, as shown in Table 23. When the wind is calm, make no entry in this column.

Table 23. Wind Direction Symbols

↓	North	↑	South
↓↙	North-northeast	↑↗	South-southwest
↙	Northeast	↗	Southwest
←↙	East-northeast	→↗	West-southwest
←	East	→	West
←↖	East-southeast	→↘	West-northwest
↖	Southeast	↘	Northwest
↑↖	South-southeast	↓↘	North-northwest

31111. WIND SPEED. (Col. 11) Enter the wind speed in miles per hour. If the wind speed is estimated, enter the letter "E" immediately following the speed. Enter "C" for calm.

31112. WIND CHARACTER AND SHIFTS. (Col. 12) Entries will be made without spaces to separate the data. The data will be entered in the following order.

31112.1. CHARACTER. When gustiness is present, enter in column 12 a minus sign to indicate fresh gusts, and a plus sign to indicate strong gusts (paragraph 9320). When gustiness and a wind shift occur together, record the wind shift immediately following the intensity of the gustiness, without a space.

31112.2. WIND SHIFTS. Enter the direction of the wind before the shift to sixteen points of the compass with short arrows followed by the local standard time of the shift (24-hour clock) and a letter denoting the local standard time zone. Indicate the intensity of the shift after the time or time-zone indicator by a plus sign for a heavy shift, a minus sign for a light shift; the absence of a sign indicates moderate intensity. For example, if a heavy wind shift occurred from southeast to northwest in the Central time zone at 1614, the entry in the column would be "↖1614C+." Since the space provided in column 12 is not sufficient for wind shift data, distribute all wind data evenly among columns 10, 11, and 12.

NOTE: See Table 24, item 26, for instructions on reporting peak speed of gusts in column 14.

31113. ALTIMETER SETTING. (Col. 13) Entries will be made in this column only at stations equipped with a mercurial barometer that is used to establish corrections for an altimeter setting indicator, barograph, or precision aneroid. Record the altimeter setting as three figures without a decimal point to represent units, tenths, and hundredths of inches. For example: 29.92 would be entered as 992.

31113.1. When the altimeter setting is the only element reported in a special observation, it will be preceded by the authorized contraction "ALSTG."

31114. REMARKS. (Col. 14) Certain conditions require the addition of explanatory remarks to the report. Instructions concerning conditions that require further explanation, or exclusive reporting, in column 14, together with examples of their use, have been condensed in Table 24. The examples are not exhaustive, and when conditions other than those illustrated obtain, the observer will amplify the report with such remarks as he judges to be pertinent to the meteorological situation and useful to the users of the data.

31114.1. When intensity of phenomena remote from the station cannot be determined, the symbol "U" will be placed after the symbol for the phenomena to indicate intensity unknown.

31114.2. Whenever possible, enter remarks in symbols or authorized contractions. Otherwise use plain English.

31114.3. If necessary, use additional lines for column 14 to report phenomena. It is not intended that the physical limitations of the column shall limit in any way the information to be reported.

31114.4. Additive data groups, transmitted by designated stations with 3- and 6-hourly record observations, will be entered after "Remarks."

31114.5. (Cols. 14A and 14B) Entry of dry- and wet-bulb temperature readings for observations other than record observations that require these data will be made in these columns.

Table 24. REMARKS - Instructions and Illustrations.

Conditions Observed	Instructions for Entry in Column 14	Illustrations	
		Cols. 3-7 or 12	Col. 14
Ceiling, cloud heights, sky:			
1. Variable ceiling below 2000 ft.	Enter range of variability.	M4V	CIG VRBL 2 TO 6
2. Variable ceiling 2000 ft. or more	Enter range of variability.	M27	CIG VRBL 25 TO 30
3. Two broken, or overcast and broken, layers at 9750 ft. or less	Enter classification, height, and symbol for upper layer.	MI7①① M28⊕①	E31① E55⊕
4. Two scattered layers at 9750 ft. or less	Enter height and symbol for upper layer.	①27①	55①
5. More than two broken or overcast layers	Enter classification, height, and symbol for intermediate layers. See also item (3).	M47⊕/①	E70①E60 ①
6. Several scattered layers below broken (or overcast) layer	Enter height and symbol for scattered layers below the two highest layers	E75①55①	35①20①

Table 24, Cont'd.

Conditions Observed		Instructions for Entry in Column 14	Illustrations	
			Cols. 3-7 or 12	Col. 14
7.	Height of cloud layers above 9750 ft., classified as measured, aircraft, or balloon	Enter classification, height, and symbol for each layer in hundreds of feet to nearest 1000 ft. Select sky symbol in accordance with summation principle. NOTE: This symbol may not be the same as symbol for high clouds in column 4 if more than one high cloud layer reported in latter symbol.	⊕/	M120◑
8.	Variable sky condition	Enter corresponding sky condition symbols, separated by letter V.	3◑	◑V◑
9.	Breaks in overcast	Enter contraction BINOVC, followed, if possible, by location of breaks.	M25⊕	BINOVC W
10.	Special cloud types			
	(a) Towering cumulus	Enter appropriate abbreviations, as illustrated, followed by location of clouds, if practicable	30◑	TWRG CU S
	(b) Cumulonimbus		46◑	CB NW
	(c) Cumulomammatus		M55⊕	CM OVHD
	(d) Altocumulus castellatus		◑/	ACC SW
11.	Less than 0.6 of the sky obscured and clouds not visible	Enter nature and location of obscuring phenomenon.	○	K LYR E

Table 24, Cont'd.

Conditions Observed	Instructions for Entry in Column 14	Illustrations Cols. 3-7 or 12	Illustrations Col. 14
12. 0.6 or more of sky obscured, base of obscuring phenomemon above surface, but not above 9750 ft.	Enter base and nature of obscuring phenomenon. (Note that if the obscuring phenomenon is at the surface the height of the base will not be entered in Column 14).	W7X	BASE K LYR E5
13. 0.6 or more of sky obscured, base of thin obscuring phenomenon above 9750 ft.	Enter nature of obscuring phenomenon as illustrated, preceded by abbreviation HI.	-X/	HI K LYR
14. More than one layer of obscuring phenomena	Enter character and elevation of additional upper layers.	-X	BASE K LYR E5 UPPER H LYR E80
Visibility:			
15. Variable prevailing visibility:			
(a) Less than 2 miles	Enter range of variability.	1V	VSBY VRBL 1/2 to 13/4
(b) 2 miles or more		2	VSBY VRBL 11/4 to 3
16. Visibility differing in different quadrants:			
(a) Prevailing visibility less than 3 miles	Enter visibility in each quadrant beginning with N or NE.	21/2	VSBY N2E21/2 S11/4W21/2
(b) Prevailing visibility 3 miles or more	Enter visibility in quadrants in which visibility differs by 1/2 or more or 100% or more from prevailing visibility.	4 5	VSBY S11/2W10 VSBY E2

Table 24, Cont'd.

Conditions Observed	Instructions for Entry in Column 14	Illustrations Cols. 3-7 or 12	Illustrations Col. 14
17. Visibility differing at level of control tower from that at level of usual observation point; prevailing visibility less than 3 miles from latter point.	Enter visibility at level of usual observation point and height of visibility restricting phenomenon.	5	SFC VSBY 2 GFDEP 40
Weather:			
18. Tornado and Waterspout			
(a) Observed from station	Enter direction toward which tornado or waterspout is moving. Entire report as a special observation appears as a remark.	TORNADO W	MOVG NEWD
(b) Reported by public	Enter (1) location with respect to weather-reporting station or a city or town, (2) direction toward which tornado is moving, 3) time tornado was observed.		UNCOMFIRMED TORNADO 15 MIS W DCA MOVG N 1600E
19. Thunderstorm	Enter direction, if observable, (1) with respect to station (2) direction toward which storm is moving.	T T+	T NW MOVG EWD T+ OVHD MOVG EWD
20. Lightning, with or without audible thunder	Enter, if observed, (1) Frequency (2) Type (cloud to cloud, etc.)		OCNL LTNG CLD TO CLD· LTNG CLD TO CLD AND TO GND FQT LTNG CLD TO GND NW OCNL LTNG N

Table 24, Cont'd.

Conditions Observed	Instructions for Entry in Column 14	Illustrations	
		Cols. 3-7 or 12	Col. 14
21. Precipitation			
(a) Hail	Enter diameter in inches of largest hailstones.	A+	HLSTO 11/4 INCHES
(b) Intermittent	Enter intermittent character of precipitation,		
	(1) not occurring at time of observation.	--	INTMT R-
	(2) occurring at time of observation.	R-	R- INTMT
(c) Sparse	Enter appropriate abbreviation describing rain or snow showers, or steady precipitation, when precipitation is very light.	RW- -- SW- R-S-	OCNL SPKL OCNL SPKL OCNL SNW FLRY PCPN VERY LGT
(d) Fine	Enter appropriate abbreviation describing precipitation in small drops (as opposed to sparseness).	R	R VERY FINE
(e) Variation of Intensity	Enter abbreviation describing rapidly variable intensity.	R-	R- OCNLY R+
(f) Precipitation at a distance but not at station	Enter form of precipitation if known and direction with respect to station.	-- --	PCPN W INTSTY UNK RU OVR RIDGE N
22. Obstructions to vision			
(a) Fog dissipating (or increasing)	Enter appropriate abbreviations.	F F	F DSIPTG F INCRG
(b) Smoke drifting over field	Enter appropriate abbreviations.	K	K DRFTG OVR FLD

Table 24, Cont'd.

Conditions Observed	Instructions for Entry in Column 14	Illustrations Cols. 3-7 or 12	Illustrations Col. 14
(c) Shallow fog (height less than 6 ft.)	Enter abbreviations for phenomena excluded from coding as obstructions to vision since they do not restrict visibility to 6 miles or less at 6 ft. or more above ground.	--	SHLW F 2 FT DEEP
(d) Snow drifting but not obscuring vision at 6 ft. or more above ground		--	LOW DRFTG SNW
(e) Dust devils	Enter description of phenomenon, and direction, if possible.	--	DUST DEVILS NW
23. Aurora	Enter appropriate abbreviation.	--	BRGT AURBO
Pressure:			
24. A sudden marked fall, then rapid rise of 0.06 inch or more in pressure, shown on the barogram as a "V"	Enter in the next record observation lowest sea-level pressure in tens, units and tenths of millibars, time of its occurrence in local standard time, with amount of rise expressed in millibars since lowest pressure.	665	LOWEST PRES 631 1745C RSG 3 MB
25. Rapidly falling (or rising) pressure	Enter abbreviation: PRESFR (or PRESRR).	821	PRESFR
Wind:			
26. Peak gusts	Enter peak wind speed in strong gusts if station is equipped with direct-reading wind equipment.	↘45+	G 75

31115. OBSERVER'S INITIALS. (Col. 15) The observer taking the observation will enter his initials in this column.

31200. ENTRY OF DATA AT 6-HOURLY SYNOPTIC PERIODS. Data pertaining to 6-hourly observations will be entered on both WBAN 10A and 10B, similarly to the airway hourly observations to the extent that 6-hourly and hourly observations contain the same data. Since the 6-hourly observation and the next succeeding record observation very nearly coincide in point of time, a single set of entries will suffice for both observations unless a change is observed in reportable values of ceiling, sky, visibility, weather, or obstructions to vision. If a single set of entries represents both a 6-hourly and a record observation, R will be entered in column 1 and the time of the record observation in columns 2 and 16.

31200.1. If a change is observed in reportable values of ceiling, sky, visibility, weather, or obstructions to vision, 6H will be entered in column 1 and the time of the 6-hourly in column 2. A separate record observation will be entered on the next lower line of Form 10A. On Form 10B, the values pertaining to the 6-hourly observation and entered in columns 17, and 21 through 37, will be changed to agree with the corresponding entries in columns 2 to 5 pertaining to the record observation. The changed values will be entered in parentheses above the entries for the 6-hourly observation, and the time of the record observation entered in column 16 in accordance with paragraph 31416.

31300. ENTRY OF PILOT REPORTS ON WBAN 10A. Pilot reports of weather within 1 1/2 miles of the boundaries of the field will be entered on WBAN 10A in accordance with the following instructions:

(1) Column 2. Record the time of entry of the pilot report on the form, unless the Pireps is added to an observation.

(2) Column 14. Enter the term "Pireps," or authorized equivalent, followed by the report coded in accordance with instructions in Chapter 40.

31310. All pireps of weather more than 1 1/2 miles from the boundary of the field filed with observing units, and all pireps filed with FAWS, will be entered on a supplementary Form 10A distinct from that used for official observations. This supplementary form will be treated in all respects as part of the observational record. When a pireps of weather more than 1 1/2 miles from the boundary of the field is transmitted in the remarks portion of an observation, an appropriate note will be entered in parentheses following the pireps on the supplementary form to identify the observation with which the pireps is transmitted (e.g., "sent with 1028 obs.").

31311. The supplementary Form 10A for pireps will be started the first of each month, and pireps for as many days as possible entered on each page. The period covered by each page will be indicated in the space provided for the date. Pireps for consecutive days will be separated

by a line space, and the date pertaining to the succeeding entries will be entered in this space near the center of the form. Dates will not be entered for days on which pireps are not received.

31311.1. Entry of pireps on the supplementary form will not be confined to column 14, but may extend across the entire form.

31400. WBAN 10B. Form 10B will be used for entry of data of a synoptic and climatological nature. Entries in columns 16-40 will be made in accordance with instructions in paragraphs 31416 to 31437.

31416. TIME. (Col. 16) Entries in this column will be in chronological order, to the nearest minute. The times will be the same as times of corresponding record observations. (See paragraph 31200.1.) Note that the first two figures of the time group are printed on the form.

31417. STATION PRESSURE. (Col. 17) Enter mercurial or precision aneroid barometer readings to the nearest 0.001 inch. The station pressure for other than 6-hourly observations may be taken from a barograph at stations equipped with one, provided a correction applicable to the barograph has been established within the prece ding 6 hours, by comparison with the reading of a precision aneroid or a mercurial barometer. Enter values taken from a barograph to the nearest 0.005 inch. At stations not equipped with a mercurial barometer , all entries will be omitted from this column.

31418. DRY BULB. (Col. 18) Enter the temperature of the dry bulb to the nearest degree and tenth, Fahrenheit, supplying minus signs as required.

31418.1. At stations equipped with telepsychrometers, when the dry bulb is above 20°F., but the wet bulb is 33° or less, the dry-bulb temperature obtained from the telepsychrometer will be entered in column 18; the wet- and dry-bulb temperatures obtained from mercurial thermometers and used in computing the dew point will not be recorded.

31419. WET-BULB. (Col. 19) Enter the temperature of the wet-bulb to the nearest degree and tenth, Fahrenheit, supplying minus signs as required. At air temperatures below -35°F., wet-bulb temperatures will not be entered. (See paragraph 31015.)

31419.1. At stations equipped with telepsychrometers, when the wet bulb is 33°F. or less and the dry bulb is above 20°F., enter in column 19 the wet-bulb temperature as computed on the psychrometric diagram,* using 1) the dry-bulb temperature obtained from the telepsychrometer and 2) the dew point obtained from mercurial thermometers.

31420. RELATIVE HUMIDITY. (Col. 20) Enter relative humidity for each record observation unless the air temperature is below -35°F. (See paragraph 31015.)

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* Relating dew-point, dry- and wet-bulb temperatures.

31420.1. At stations equipped with telepsychrometers, when the wet bulb is 33°F. or less and the dry bulb is above 20°F., enter in column 20 the relative humidity as computed on the psychrometric slide rule, using 1) the dry-bulb temperature obtained from the telepsychrometer and 2) the dew-point temperature obtained from the mercurial thermometers.

31421. TOTAL SKY COVER. (Col. 21) At each record-hourly and each 6-hourly synoptic observation, total tenths of sky covered by clouds or obscured will be entered. Enter zero if neither clouds nor obscuring phenomena are present. Enter 1- if less than 0.1 clouds and obscuring phenomena are present. Enter 9+ if breaks in an overcast are present; enter 10 if the sky is completely overcast or obscured. Note that visible sky plus "total sky cover" equals ten-tenths.

31422. CLOUDS AND OBSCURING PHENOMENA. (Cols. 22-35) Entries will be made in columns 22-35 for each 3- and 6-hourly synoptic observation to provide information of clouds and obscuring phenomena. Data will be entered in appropriate columns for clouds and obscuring phenomena in ascending order of height with respect to their distribution in space. When they are present at more than four levels, data for levels above the 4th will not be entered here, but the presence of these levels will be indicated by the entry for total sky cover (column 21). Additional information concerning these levels will be recorded in column 90.

31422.1. AMOUNT AND SUMMATION TOTAL. (Cols. 22, 25, 28, 29, 32, 33) Enter to the nearest tenth the amount of clouds and obscuring phenomena observed at each level. Amounts of obscuring phenomena will comprise the amount of clouds or sky actually obscured by the phenomena and will not include that portion of the phenomena through which sky or clouds are visible. (Note that the amount of thin obscuring phenomena therefore cannot exceed 9+.) Enter less than 0.1 of clouds or obscuring phenomena as 1-; more than 0.9 but less than 1.0 as 9+. Since a series of frequent observations or pilot reports often indicate the extent or existence of cloud layers above a layer of broken or overcast clouds, the sum of the number of tenths entered in columns 22, 25, 29 and 33 may exceed ten-tenths. However, the entries in columns 28 and 32 will be a summation of the amount of sky covered by clouds or obscured at and below the elevations reported in columns 27 and 31 respectively, and will not exceed 1.0. For example: if 0.4 clouds are visible at 1000 feet and a pilot reports 1.0 clouds at 3000 feet, the summation total entered in column 28 would nevertheless be only ten-tenths.

31422.11. When an observation of higher layers is impossible because lower cloud layers or obscuring phenomena cover more than 0.9 of the sky, a "U" will be entered in the amount columns and entries will be omitted in the type and height columns pertaining to higher layers unless a pilot report of a higher layer is available.

31422.12. When 1) clouds or obscuring phenomena are not present at any level, or 2) higher layers are not visible and 0.1 or more of the sky is visible, enter zeros in the appropriate amount columns and omit any entry in type and height columns.

31422.13. Entries will be made as follows in columns 28 and 32:

	Columns 25 and 29	Columns 28 and 32
a.	"U" entered in columns 25 and 29.	No entries in columns 28 and 32.
b.	Numerical entry in column 25: "U" in column 29.	Numerical entry in column 28, and no entry in column 32.
c.	Numerical entries (including zero) in columns 25 and 29.	Numerical entries in columns 28 and 32.

31422.14. When two or more types of clouds or obscuring phenomena occur at the same level, their combined amounts will be entered in the appropriate column captioned "Amount" (paragraph 31422.21).

31422.2 . TYPE. (Cols. 23, 26, 30 and 34) Enter the appropriate abbreviation selected from Table 25 for clouds or obscuring phenomena observed. A minus sign (-) denoting thin will be prefixed to the abbreviation for any obscuring phenomena thin enough to reveal the sky directly above the observer.

31422.21. When two or more types of clouds or obscuring phenomena are observed at the same level, the predominating type will be recorded.

Table 25. Cloud Types and Obscuring Phenomena.

Cloud Type and Obscuring Phenomena	Abbreviations
CLOUDS:	
Altocumulus	Ac
Altocumulus castellatus	Acc
Altostratus	As
Cirrocumulus	Cc
Cirrostratus	Cs
Cirrus	Ci
Cumulonimbus	Cb
Cumulonimbus mammatus (Mammato cumulus)	Cm
Cumulus	Cu
Fractocumulus	Fc
Fractostratus	Fs
Nimbostratus	Ns
Stratocumulus	Sc
Stratus	St
OBSCURING PHENOMENA - Precipitation:	
Drizzle (any form and intensity including L and ZL)	L

Table 25, Cont'd.

Cloud Type and Obscuring Phenomena	Abbreviations
OBSCURING PHENOMENA - Precipitation: (Cont'd)	
Hail(any form and intensity including A, AP)	A
Ice Crystals	IC
Rain (any form and intensity including R, RW, ZR)	R
Sleet	E
Snow (any form and intensity including S, SW, SP, SG)	S
Hydrometeors other than Precipitation	
Blowing Snow	BS
Drifting Snow	GS
Fog (any form, including F, GF, IF)	F
Lithometeors	
Dust	D
Haze	H
Sand	N
Smoke	K

31422.3 . DIRECTION. (Cols. 23,26, 30, and 34) Enter the direction from which the clouds and obscuring phenomena are moving. When the direction is unknown, omit the entry. When motion is not discernible, enter "C" for calm; otherwise, enter an arrow denoting the motion to eight points of the compass immediately above the abbreviation as follows:

Table 26 - Cloud Direction

↓ from north	↑ from south
↙ from northeast	↗ from southwest
← from east	→ from west
↖ from southeast	↘ from northwest

31422.4 . HEIGHT. (Cols. 24, 27, 31, 35) Enter height of clouds and the vertical visibility ascribed to obscuring phenomena not classified as thin in columns captioned "height." Enter the height of the base of obscuring phenomena classified as thin. Make all entries in hundreds of feet. Enter all measured heights to the nearest 100 feet above the elevation of the stations; e.g., 14,500 would be entered as 145. Enter other than measured heights to the nearest 100 feet from the surface to

5,000 feet; to the nearest 500 feet between 5,000 and 10,000 feet; and to the nearest 1,000 feet above 10,000. Prefix an appropriate classification letter selected from Table 17 to the height entries.

31436. PRESSURE TENDENCY. (Col. 36) This entry will be made for 3- and 6-hourly synoptic observations at stations equipped with a barograph or microbarograph. Enter a single code figure, taken from Table 27 for pressure tendency during the three-hour period ending at the time of observation. (See paragraph 40400).

Table 27. Pressure Tendencies

Code Figure	Description	
0	Rising, then falling.	Barometer now higher than, or the same as, 3 hours ago.
1	Rising, then steady; or rising, then rising more slowly.	
2	Unsteady or rising unsteadily.	
3	Steady or rising steadily.	
4	Falling or steady, then rising; or rising, then rising more quickly.	
5	Falling, then rising.	Barometer now lower than 3 hours ago
6	Falling, then steady; or falling, then falling more slowly.	
7	Unsteady or falling unsteadily.	
8	Falling steadily.	
9	Steady or rising, then falling; or falling, then falling more quickly.	

31437. NET THREE-HOUR PRESSURE-CHANGE. (Col. 37) Entries will be made in this column at stations where pressure tendencies are entered in accordance with instructions for column 36 above. At the time of the 3- and 6-hourly observations, the net change in station pressure for the preceding three hours will be entered to the nearest 0.005 inch or 0.2 millibar, depending upon whether the barograph sheet is graduated in inches or millibars.

31440. SYNOPTIC OBSERVATIONS. (Cols. 41-65) Entries for synoptic observations will be made in columns 41-65, in accordance with instructions in paragraphs 31441 through 31465. Entries in columns 44-56 will pertain to the synoptic periods and portions of synoptic periods indicated by entries in column 42. Entries on the first and sixth lines of these columns will be made at the time of the first synoptic observation after midnight and at midnight, LST, respectively.

31441. TIME. (Cols. 41 and 42) Entries in column 41 will be omitted unless otherwise instructed. In column 42 in the block captioned "Midnight to ," enter the time of the beginning of the first 6-hourly observation after 0000 LST. In the next four blocks below, enter the time of the beginning of the 6-hourly synoptic observation. The entries will be to the nearest minute in terms of the 24-hour clock.

31444. PRECIPITATION. (Col. 44) Entries in the 6-hourly spaces will comprise the total precipitation occurring during the six hours ending with the observation. On the line captioned "Midnight" enter the amount measured at midnight, i.e., the amount that has occurred between midnight and the preceding 6-hourly observation. On the line captioned "Midnight to ," enter the amount of precipitation that has occurred between midnight and the succeeding 6-hourly observation. At stations where personnel are not on duty at midnight, this entry and the one opposite "Midnight" will be omitted. Entries will be in inches and hundredths, thus, 0.06. When precipitation has occurred in amounts of 0.005 inch or less, enter "T" denoting trace. When precipitation has not occurred, enter 0.00.

31445. SNOWFALL. (Col. 45) Enter the depth of snowfall and sleet (unmelted) to inches and tenths for the six hours ending with the observation. When snow or sleet has fallen in amounts of 0.05 inch or less, enter "T" denoting trace. When none has occurred, enter 0.0. When snow or sleet melted as it fell, enter "T" with a note "Melted as it fell" under "Remarks, Notes, and Miscellaneous Phenomena." On the line captioned "Midnight" enter the amount occurring between midnight and the preceding 6-hourly observation. On the line captioned "Midnight to ," enter the amount that has occurred between midnight and the succeeding 6-hourly observation. At stations where personnel are not on duty at midnight this entry and the one opposite "Midnight" will be omitted.

31446. SNOW DEPTH. (Col. 46) Enter the depth of snow, sleet and ice on the ground at each 6-hourly observation to the nearest inch. When snow, sleet or ice is on the ground and the depth amounts to 0.5 inch or less, enter "T" denoting trace. When none of these are on the ground, enter 0. In the column captioned "Midnight" enter the amount on the ground at midnight.

31447. MAXIMUM AND MINIMUM TEMPERATURES. (Cols. 47 and 48) These data will be entered only at stations equipped with maximum and minimum thermometers, telepsychrometers, or thermographs. Enter the maximum and minimum temperatures to degrees and tenths Fahrenheit for the six hours ending with the observation. Take the data from telepsychrometer or maximum and minimum thermometers, if available; if not, from the thermograph. Note that these temperatures must be as high and low respectively as any temperature recorded in the preceding six hours, including the current temperature. On the line captioned "Midnight" enter the maximum and minimum temperatures occurring between midnight and the preceding 6-hourly observation. On the line captioned "Midnight to ," enter the maximum and minimum temperatures occurring between

midnight and the succeeding 6-hourly observation. Note that these are not necessarily the maximum and minimum temperatures for the 6-hourly observation. At stations where an observer is not on duty at midnight, the data will be taken from the thermograph, if available; otherwise, the entry will be omitted.

31449. HEIGHT OF 850-MILLIBAR SURFACE. (Col. 49) At stations designated to compute this datum, the height of the 850-millibar surface above sea level will be entered in feet to the nearest ten g-feet.

31450. STATE OF GROUND. (Col. 50) Entries for the state of ground will be made in accordance with Table 28.

Table 28. State of Ground

Code Figures	Description
0	Surface of ground dry (no appreciable amount of dust or loose sand).
1	Surface of ground moist.
2	Surface of ground wet (standing water in small or large pools on surface).
3	Surface of ground bare and frozen.
4	Glaze on ground but no ice, slush, or snow.
5	Ice, slush, or snow covering less than one-half of ground.
6	Ice, slush, or firm, or settled snow covering more than one-half of ground (but not completely).
7	Ice, slush, or firm, or settled snow covering ground completely.
*8	Loose dry snow covering more than one-half of surface (but not completely).
*9	Loose dry snow covering surface completely.

* Figures 8 and 9 may be used to indicate dust or loose sand on the surface of the ground in the proportions indicated when the temperature is below 0°C. In such a case, enter the words "State of ground - dust" or "State of ground - loose sand" in Col. 90.

Note: Numbers 0 to 4 apply to representative bare ground and numbers 5 to 9 to an open representative area.

31451. SEA, STATE AND DIRECTION. ** (Col. 51) State and direction of the sea refer only to the condition of the sea surface resulting from the action of winds prevailing in the immediate local area. It should be noted that it is possible for a "flat, oily" sea to co-exist with a " light," "moderate," or even "heavy" swell.

** The instructions concerning sea conditions in paragraphs 31451 to 31454.5 will apply to designated stations only.

31451.1. The state of the sea will be recorded as a code figure in accordance with Table 29.

Table 29. State of Sea

Code Figures	Description	Approximate Average Wave Height, Feet
0	Flat, oily	0
1	Calm rippled	0
2	Smooth (wavelets)	1
3	Slight	1 - 3
4	Moderate	3 - 5
5	Rough	5 - 8
6	Very Rough	8 - 12
7	High	12 - 20
8	Very high	20 - 40
9	Mountainous	More than 40

31451.2. The direction of the sea is the direction, to eight points of the compass, from which the sea is coming. It is recorded as an arrow.

Example: A rough sea (waves 5 - 8 feet) from the southwest would be recorded as "5↗."

31452. SWELL, HEIGHT, AND DIRECTION. (Col. 52) The term "swell" is restricted in usage to the wave motion that underlies the "sea" raised and driven by the local wind. Swell usually has traveled over a considerable distance from the point where it was generated by the wind, and its direction may often differ widely from the direction of the local wind-driven waves ("sea"). It should also be noted that there may be no swell when the sea partakes of any of the values described in Table 29.

31452.1. Height of swell is recorded as the estimated average height of swell in the open sea, measured in whole feet from crest to trough.

31452.2. Direction of swell is the direction, to eight points of the compass, from which the swell is coming. It is recorded as an arrow.

Example: A three-foot swell from the west would be recorded as "3→."

31453. SWELL PERIOD. (Col. 53) Swell period is the average time between successive crests, measured to the nearest second. The swell period usually can be observed best by watching the rise and fall in the swell of a patch of foam or other floating object. When the elapsed time, measured by a stop watch, of ten successive rises of such an object has been obtained, a good average period may be recorded by taking one-tenth of the value.

31454. SURF. (Col. 54) A five-figure code comprises the "Primary Data Group" of the combined Surf Code (SURFCO). Enter it every six hours at stations (and ships when appropriate) with means of observing surf condition.

31454.1. PRIMARY SURF DATA GROUP. A five-figure code group, symbol form $H_sH_sM_sP_sO_s$.

31454.2. SYMBOL H_sH_s. Average height of waves in feet.
99 indicates average height impossible to estimate.
Two figures to be entered for whole feet.
(Example: 01 for 1 foot, 12 for 12 feet, etc.)

31454.3. SYMBOL M_s. Difference between height of maximum waves and average waves in a five-minute interval. Third figure in group to be entered in accordance with the following code table:

Table 30. SURF (M_s)

Code No.	Difference between height of maximum waves and average waves
0	0
1	1 foot
2	2 feet
3	3 feet
4	4 feet
5	5 feet
6	6 feet
7	7 feet
8	8 feet
9	Greater than 8 feet except when H_sH_s is reported as 99, in which case this figure means that an estimate is impossible.

31454.4. SYMBOL P_s. Period, i.e., time between passage of successive breakers at a fixed point. Fourth figure of group to be entered in accordance with the following code table:

Table 31. SURF (P_s)

Code No.	Time between successive breakers
0	No surf
1	Less than 5 seconds
2	5 or 6 seconds
3	7 or 8 seconds
4	9 or 10 seconds

Table 31, Cont'd.

Code No.	Time between successive breakers
5	11 or 12 seconds
6	13 to 15 seconds
7	16 to 18 seconds
8	Greater than 18 seconds
9	Time impossible to estimate

31454.5. SYMBOL D_s. Angle of breakers with the beach and direction of wave travel (referred to observer on beach facing the sea). Enter fifth figure of group in accordance with the following table:

Table 32. SURF (D_s)

Code No.	Angle of breakers with the beach
0	Calm
1	0° up to 10°)
2	10° up to 20°) from the left
3	More than 20°)
4	Confused, but predominantly from the left
5	0° up to 10°)
6	10 up to 20°) from the right
7	More than 20°)
8	Confused, but predominantly from the right
9	Not known

31455. WATER TEMPERATURE. (Col. 55) On ships and at designated land stations only, the water temperature will be entered to degrees and tenths Fahrenheit.

31456. SOIL TEMPERATURE. (Col. 56) At designated stations only, soil temperature will be entered to degrees and tenths Fahrenheit.

31458. STATION PRESSURE COMPUTATIONS. Station pressure computations for the 6-hourly synoptic observations will be entered in accordance with the following instructions:

31459. TIME. (Line 59) Enter the time of reading the barometer. (Note that this time will usually differ from that ascribed to the observation in columns 2 and 16.)

31460. ATTACHED THERMOMETER. (Line 60) Enter the temperature of the thermometer attached to the mercurial barometer to the nearest 0.5°F . or C . Entries will be omitted when the pressure readings are taken from precision aneroid barometers.

31461. OBSERVED BAROMETER. (Line 61) Enter the uncorrected observed reading of the mercurial or precision aneroid barometer to the nearest 0.001 inch or 0.05 millibar.

31462. TOTAL CORRECTION. (Line 62) Enter the sum of all corrections required to reduce the observed reading to station pressure.

31463. STATION PRESSURE. (Line 63) Enter to the nearest 0.001 inch or 0.05 millibar for mercurial barometer readings, and to the nearest 0.001 inch or 0.1 millibar for precision aneroid readings.

31464. BAROGRAPH READING. (Line 64) Enter to the nearest 0.005 inch or 0.2 millibar.

31465. BAROGRAPH CORRECTION. (Line 65) Enter to the nearest 0.01 inch or 0.2 millibar with proper sign the difference between the station pressure read on the barograph and that determined with a mercurial or precision aneroid barometer.

31466. SUMMARY OF DAY. (Cols 66-81) Midnight to midnight refers to the interval 0000 to 2359 local standard time.

31467. MAXIMUM AND MINIMUM TEMPERATURES. (Cols. 66-67) Enter these data in whole degrees Fahrenheit. Note that the maximum and minimum temperatures must be at least as high and low, respectively, as any temperature recorded through the day.

31468. TWENTY-FOUR-HOUR PRECIPITATION. (Col. 68) Enter the total amount of precipitation (water equivalent of solid types) to the nearest 0.01 inch. If precipitation has occurred in amounts of 0.005 inch or less, enter "T" denoting trace. If precipitation has not occurred, enter 0.00. The sum of any number of "T" observations will be regarded as a trace unless recording equipment indicates the total is greater than 0.005 inch (liquid).

31469. TWENTY-FOUR-HOUR SNOWFALL. (Col. 69) Twenty-four-hour snowfall is the total amount, to tenths of an inch, of unmelted snow or sleet that falls during a 24-hour period. If there are separate snowfalls, each of which melts before the following occurs, the total for the day will be the sum of the maximum depth of each fall. Record the amount of snowfall (unmelted) in inches and tenths. When snow or sleet melts as it falls, enter "T" with a note "Melted as it fell" under "Remarks, Notes and Miscellaneous Phenomena." If snow or sleet has fallen in amounts of 0.005 inch or less, enter "T" denoting trace. If none has fallen, enter 0.0.

31470. SNOW DEPTH. (Col. 70) Enter the depth of snow, sleet, and ice on ground at midnight to the nearest inch. This entry will be taken from the midnight snow depth entry under synoptic observations. If personnel are not on duty at midnight, this entry will be omitted. When snow, sleet or ice is not on the ground, enter 0.

31471. PEAK GUST. (Cols. 71-73) This datum will be entered only at stations supplied with gust-recording equipment. The peak gust is the highest velocity of wind recorded during the 24 hours. Enter 1) the direction to 16 points, if suitable recording equipment is available, otherwise to eight points; 2) the speed to nearest mile; and 3) time to nearest minute.

31474. THICKNESS OF ICE ON WATER. (Col. 74) This datum will be entered only at designated stations, to the nearest 0.1 inch.

31475. FROZEN GROUND LAYER. (Cols. 75-76) This datum will be entered only at designated stations, to the nearest whole inch.

31477. RIVER GAGE. (Col. 77) The river gage reading will be entered to the nearest 0.1 foot at stations where a river gage is read.

31500. (Cols. 82-90) Authorized teletype symbols and contractions, and plain English only will be used in making entries in columns 82, 86, and 90. Since there will always be a time lapse between the occurrence or cessation of phenomena and their reporting, it will not be necessary to reconcile this difference in time with the time entries pertaining to the observations reporting their occurrence or cessation.

31510. PRECIPITATION AND THUNDERSTORMS. (Cols. 82-85) Enter times of beginnings and endings, to the nearest minute, of thunderstorms, precipitation, changes in forms and character of precipitation (e.g., rain to rain shower) and changes in intensity of thunderstorms and precipitation. Intervals of 15 minutes or less between the time of ending and recommencement need not be recorded unless occurring within one hour previous to the beginning of a 6-hourly observation, when all beginnings and endings will be recorded. This also applies to changes in intensity that do not last more than 15 minutes.

31520. OBSTRUCTIONS TO VISION. (Cols. 86-89) Enter the times of beginnings and endings of each obstruction to vision.

31530. DURATION. (Cols. 85 and 89) Unless otherwise designated, make no entries in these columns.

31550. REMARKS, NOTES, AND MISCELLANEOUS PHENOMENA. (Col. 90) All pertinent information will be entered concerning severe storms, floods, and miscellaneous hydrometeors, etc., and, when required, snow surface temperature data.

31550.1. HAILSTORMS. Enter all available information, such as size of hailstones, damage caused, etc.

31550.2. TORNADO OR WATERSPOUT. Enter as complete information as possible on time, path, size of storm, its appearance, direction of movement, damage, etc.

31550.3. LIGHTNING. Enter notes on approximate duration, distance, direction, frequency, etc., of lightning observed when a thunderstorm is not in progress at the station; i.e., when thunder is not heard.

31550.4. HARBOR ICE. Enter appropriate data on quantity, thickness, character, breaks, size of floes, persistence, conditions of aircraft landing area, conditions affecting the transfer of passengers from craft of all types, and any other conditions worthy of note.

31550.5. SNOW SURFACE TEMPERATURE. Snow surface temperature and related data will be entered at designated stations as follows: "SNW SFC TMP -20°C, 0410 GCT, 4.6 ft. dif."

31550.6. MISCELLANEOUS. Phenomena sent in synoptic messages as special phenomena groups, such as frost, glaze, etc., will be entered also.

31550.7. SUNRISE AND SUNSET. Character of sunrise and sunset will be entered in the spaces provided, as clear, cloudy, foggy, hazy, dusty, or smoky, at stations equipped with triple registers.

W.B FORM 1130 A Revised 7-1-48

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

WBAN 10 A

SURFACE WEATHER OBSERVATIONS

STATION WBAS San Bruno, Calif. DATE Sept. 15, 1947

TYPE 1	TIME (LST) 2	CEILING (Hundreds of Feet) 3	SKY 4	VISIBILITY (Miles) 5	WEATHER and OBSTRUCTIONS TO VISION 6	SEA LEVEL PRESS. (mbs.) 7	TEMP (°F) 8	DEW PT. (°F) 9	WIND DIRECTION 10	WIND SPEED (m.p.h.) 11	WIND CHARACTER AND SHIFTS 12	ALTIMETER SET. (ins.) 13	REMARKS AND SUPPLEMENTAL CODED DATA 14	OBSERVERS INITIALS 15
V	0002		0	7					→↘	8		989	ST BNK NW	JAB
R	0028		0	7		125	52	51	→↘	7		989	VSBY NW2F	LEB
S1	0045		0	4	GF				→↘	8			VSBY N2W½	LEB
V	0100		0	3	GF				→↘	8		990	VSBY N1W½	LEB
R	0126		0	3	GF	129	51	51	→↘	8		990	103	LEB
V	0200		0	5	GF				→↘	9		990	VSBY N2½	LEB
R	0227		0	5	GF	129	51	49	→↘	8		990		LEB
V	0300		0	4	GF				↘	10		990	VSBY N¾E2	LEB
R	0328		0	4	GF	129	51	50	→↘	11		990	VSBY N¾W¾	LEB
S2	0345	W2	X	½	F				→↘	10				LEB
L	0400	W2	X	⅜	F				→↘	10		990		LEB
L	0415	W2	X	⅜	F									LEB
R	0428	W2	X	⅜	F	129	51	51	→↘	11		990	0000	LEB
L	0445	W2	X	⅜	F									LEB
S3	0501		0	¾	GF				→↘	10		990	VSBY N½E½S¾W1	LEB
L	0515		0	¾	GF									LEB
RS4	0527		0	¼	GF	129	51	51	→↘	10		990		LEB
L	0545		0	¼	GF									LEB
S5	0600	W2	X	3/16 V	F				→↘	10		990	VSBY VRBL 0 TO ⅜	LEB
L	0615	W2	X	¼	F									LEB
R	0626	W2	X	¼	F	132	51	51	→↘	10		991		LEB
S6	0645		-X	½	F				↘	10			VSBY N¼E½S½W3 CNDS RPDLY CHG BL	LEB
S7	0658	M7	⊕	3	F				↘	10		991	VSBY NIE¾S3W4	LEB
R	0728	M7V	⊕	3	F	135	53	53	↘	10		992	VSBY NI CIG VRBL 5 TO 8 404 5006	LEB
V	0800	E6	⊕	3	FH				↘	12		993		LEB
R	0828	E6	⊕	3	FH	146	56	54	↘	10		995		LEB
S8	0846		8⊕	4	FH				↘	10				LEB
V	0901		8⊕	4	FH				↘	10		995		LEB
RS9	0928		⊕/	5	H	146	61	54	↘	10		995		LEB
V	1001		⊕/	6	H				↘	12		995		LEB
6H	1015		⊕/	6	H	146	63	53	↘	12		995		LEB
RS10	1028		-⊕/	6	H	146	63	53	↘	12		995	5075/2	LEB
V	1101		-⊕/	6	H				↘	14		995		LEB
R	1128		-⊕/	8		146	67	55	↘	14		995		LEB
V	1201		-⊕/	8					↘	18		994		LEB
R	1228		-⊕/	8		139	65	55	↘	20		993		LEB
V	1302		-⊕/	12					↘	18		993		LEB
R	1328		-⊕/	12		135	65	56	↘	22		992	805 5063/2	LEB
V	1403		-⊕/	12					↘	20		991		LEB
R	1428		-⊕/	12		129	65	53	↘	24	+	990	G30	LEB
V	1502		-⊕/	10					↘	22		990	BD ON FLD SE	LEB
R	1528		-⊕/	12		125	63	56	↘	24		989	BD ON FLD SE	LEB
V	1559		-⊕/	12					↘	22		989		LEB
R	1628		-⊕/	12		125	61	55	↘	20		989	5069/2	JAB
V	1658		-⊕/	12					↘	16		989	ST BNK NW	JAB
R	1728		-⊕/	12		125	60	55	↘	20		989	ST BNK NW	JAB
V	1758		-⊕/60	12					↘	18		989		JAB

Fig 7. Examples of consecutive entries on Form WBAN 10 A

W B FORM 1130 B Revised 7-1-46

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

WBAN 10 B

SURFACE WEATHER OBSERVATIONS

STATION WBAS San Bruno, Calif. DATE Sept 15, 1947

TIME (LST) 16	STATION PRESSURE (ins.) 17	DRY BULB (°F) 18	WET BULB (°F) 19	REL. HUMIDITY (%) 20	TOTAL SKY COVER 21	CLOUDS AND OBSCURING PHENOMENA: LOWEST LAYER AMT. 22	LOWEST LAYER TYPE & DIR 23	LOWEST LAYER HEIGHT 24	SECOND LAYER AMT. 25	SECOND LAYER TYPE & DIR 26	SECOND LAYER HEIGHT 27	SUMMATION TOTAL 28	THIRD LAYER AMT. 29	THIRD LAYER TYPE & DIR 30	THIRD LAYER HEIGHT 31	SUMMATION TOTAL 32	FOURTH LAYER AMT. 33	FOURTH LAYER TYPE & DIR 34	FOURTH LAYER HEIGHT 35	PRESSURE TENDENCY 36	NET 3-HR CHANGE 37	38	39	40
00 28	29.880	52.5	51.9	96	1-																			
01 26	29.885	51.1	50.8	98	0	0			0			0	0			0	0			1	.020			
02 27	29.885	50.9	50.0	94	0																			
03 28	29.885	50.8	50.3	96	0																			
04 28	29.888	51.0	50.8	99	10	10	F	W2	U				U				U			4	.005			
05 27	29.890	50.8	50.8	100	0																			
06 26	29.900	51.3	51.3	100	10																			
07 28	29.910	53.4	53.2	99	9	9	St	M7	0				0				0			4	.025			
08 28	29.945	55.8	54.8	95	9																			
09 28	29.945	61.4	57.0	77	3																			
10 28	29.943	63.2	56.9	68	4	1-	St	E3	(10) 4	Cs	E200	4	0			(10) 4	0			1	.035			
11 28	29.940	66.9	59.8	66	7																			
12 28	29.920	65.0	58.9	70	5																			
13 28	29.910	64.9	59.3	73	7	1-	St	E4	7	Cs	E200	7	0			7	0			8	.030			
14 28	29.890	64.7	59.0	71	6																			
15 28	29.880	62.9	58.5	77	6																			
16 28	29.875	60.9	57.6	82	8	1-	St	E6	8	Cs	E250	8	0			8	0			6	.035			
17 28	29.885	59.9	57.2	85	8																			
18 27	29.885	57.8	55.1	85	8																			
19 28	29.890	57.1	55.7	92	5	1	St	E6	5	Ci	E250	5	0			5	0			4	.010			
20 26	29.910	57.0	55.7	92	2																			
21 28	29.920	56.7	55.4	93	2																			
22 28	29.938	56.4	55.4	94	3	3	St	E6	0			3	0			3	0			1	.050			
23 26	29.940	55.9	55.0	95	2																			

SYNOPTIC OBSERVATIONS

TIME (G.C.T.) 41	TIME (LST) 42	NO. 43	PRECIP. (ins.) 44	SNOW FALL (ins.) 45	SNOW DEPTH (ins.) 46	MAX TEMP. (°F) 47	MIN. TEMP. (°F) 48	HGT. 850 MB. SURFACE 49	STATE OF GRND 50	SEA STATE & DIR. 51	SWELL HGT. & DIR. 52	SWELL PERIOD 53	SURF H_s H_s M_s P_s D_s 53	WATER TEMP. 55	SOIL TEMP. 56	57	58
	MID TO 0405	X	0.00	0.0	X	53.2	50.2	X	X	X	X	X	X	X	X		
	0405	1	0.00	0.0	0	54.3	50.2		0								
	1005	2	0.00	0.0	0	63.9	49.0		0								
	1605	3	0.00	0.0	0	67.0	60.8		0								
	2205	4	0.00	0.0	0	60.9	56.3		0								
	MID	X	0.00	0.0	0	56.4	55.9	X	X	X	X	X	X	X	X		

STATION PRESSURE COMPUTATIONS

TIME (LST) 59	0408	1007	1610	2208
ATT THERM 60	77.0	75.0	78.0	76.5
OBSRVD BAR 61	30.040	30.090	30.030	30.089
TOTAL CORR 62	-.152	-.147	-.155	-.151
STA PRESS 63	29.888	29.943	29.875	29.938
BAROGRAPH 64	29.890	29.940	29.880	29.940
BAR CORR 65	0	0	0	0

SUMMARY OF DAY (MIDNIGHT TO MIDNIGHT)

24-HR MAX TEMP. (°F) 66	24-HR MIN TEMP (°F) 67	24-HR PRECIP. (WATER EQUIV (ins) 68	24-HR SNOWFALL UNMLTD. (ins.) 69	SNOW DEPTH (ins.) 70	PEAK GUST SPEED (m.p.h.) 71	PEAK GUST DIRECTION 72	PEAK GUST TIME (LST) 73	THICKNESS OF ICE ON WATER (ins.) 74	FROZEN GRND LAYER (ins.) TOP 75	FROZEN GRND LAYER (ins.) BASE 76	RIVER GAGE 77	78	79	80	81
67	49	0.00	0.0	0											

PRECIP & THDRSTM. 82	BEGAN 83	ENDED 84	DUR. 85 hrs	DUR. 85 mins	OBSTR. TO VIS 86	BEGAN 87	ENDED 88	DUR. 89 hrs	DUR. 89 mins
					GF	0040	0340		
					F	0340	0454		
					GF	0454	0550		
					F	0550	0920		
					H	0745	1120		

REMARKS, NOTES AND MISCELLANEOUS PHENOMENA 90

SUNRISE Foggy SUNSET Cloudy

Fig. 8. Consecutive examples entered on Form WBAN 10B in agreement with related data in Fig. 7.

W.B. FORM 1130 A Revised 7-1-48

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

WBAN 10 A

SURFACE WEATHER OBSERVATIONS

STATION _____ DATE _____

	TYPE 1	TIME (LST) 2	CEILING (Hundreds of Feet) 3	SKY 4	VISIBILITY (Miles) 5	WEATHER and OBSTRUCTIONS TO VISION 6	SEA LEVEL PRESS. (mbs.) 7	TEMP. (°F) 8	DEW PT. (°F) 9	WIND DIRECTION 10	WIND SPEED (m.p.h.) 11	WIND CHARACTER AND SHIFTS 12	ALTIMETER SET. (ins.) 13	REMARKS AND SUPPLEMENTAL CODED DATA 14	14A	14B	OBSERVERS INITIALS 15
(1)	S4	1844	W8	X	8					↑	7			BASE K LYR E5			ERL
(2)	L	0915	W5	⊕X	4	F								BASE K LYR E3 E25⊕			RJL
(3)	S2	0244									ALSTG		995				EHB
(4)	S8	0915								→↘25	+1091 2E			G33			WLF
(5)	R	2226	M24	⊕⊕	2½	ZL-S-	213	32	31	↙	14		* 013 044	E60⊕ * (CQN FILED 2240)			RLP
(6)	S10	1112	P25	X	2	TRWA				→	19			T W MOVG EWD OCNL LTNG CLD TO			KCJ
														CLD HLSTO ½ INCH			
(7)	L	2135	M5											(FOR AAL)			JWM
(8)	L	2150		O	15+		217	84	73	1/	5		016	(ACFT ACCIDENT)			SEJ
(9)	S1	1618												UNCONFIRMED TORNADO			
(10)														20 MIS S MOVG NEWD 1530C			JJL
(11)	S8	0812	M6	⊕-X	2	FK				1	2						CLM
(12)	R	0926		-X	7		186	67	61	1/	4		009	BASE H LYR E25			SCL
(13)	R	0624		-X15①	8		154	58	51	↘	6		000	BASE K LYR E30			AJC
	L	1909		①25①	4	GF								SFC VSBY 2½ 60①			

NOTE: The above entries do not represent consecutive observations.

(1) Obscuration alone, base aloft.
(2) Obscuration with clouds above.
(3) Altimeter Setting — entered singly as a special.
(4) Wind Shift — " " " " " "
(5) Erroneous observation transmitted — correction sent
*These data entered in red
(6) (a) Obscuration — base at surface.
(b) Remarks for thunderstorm and hailstones.
(7) Single element local extra.
(8) Aircraft accident local extra.
(9) Tornado — unconfirmed.
(10) Thin obscuration beneath clouds.
(11) Thin obscuration — base aloft.
(12) Thin obscuration — " " , with scattered clouds beneath.
(13) (a) Scattered clouds at two elevations.
(b) Tower visibility.

paragraph 31114, Table 24 item 12
" 31104, " 19 " 10 b (1)(a)
" 31113.1
" 31112
" 31022
"
" 31104, " 19 " 9 b (1)
" 31114, " 24 " 19, 20 + 21
" 20132
" 20133
" 31114, " 24 " 18 b
" 31104, " 19 " 10 a (2)(a)
" 31104, " 19 " 9 a (1)
"
" 31104, " 19 " 11 a (2)
" 31104, " 19 " 3 a
" 31105.3,

CHS 97057-1

Fig 9. Examples of entries on Form WBAN 10 A

W B FORM 1130 B Revised 7-1-48 — U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU — WBAN 10 B

SURFACE WEATHER OBSERVATIONS

STATION_____ DATE_____

TIME (LST) 16	STATION PRESSURE (ins.) 17	DRY BULB (°F) 18	WET BULB (°F) 19	REL. HUMIDITY (%) 20	TOTAL SKY COVER 21	CLOUDS AND OBSCURING PHENOMENA — LOWEST LAYER: AMT. 22	TYPE & DIR 23	HEIGHT 24	SECOND LAYER: AMT. 25	TYPE & DIR 26	HEIGHT 27	SUMMATION TOTAL 28	THIRD LAYER: AMT. 29	TYPE & DIR 30	HEIGHT 31	SUMMATION TOTAL 32	FOURTH LAYER: AMT. 33	TYPE & DIR 34	HEIGHT 35	PRESSURE TENDENCY 36	NET 3-HR CHANGE 37	38	39	40
00				(1)	0	0			0			0	0			0	0							
01																								
02				(2)	10	2	Sc.	E8	3	As	M120	4	4	Cc Cl	M200	8	2	Cl	A280					
03				(3)	9	9	Cc Ac	M100	0			9	0			9	0							
04																								
05				(4)	10	10	Ac	M100	U				U				U							
06				(5)	10	10	S	P10	U				U				U							
07				(6)	10	2	Sf.	W1	1	Sc	E10	3	7	K	E20	10	U							
08				(7)	10	2	Cu	E40	3	H	E60	5	5	Cl	M200	10	U							
09																								
10				(8)	5	4	K	E10	2	Ac	E100	5	0			5	0							
11																								
12				(9)	4	4	-K		0			4	0			4	0							
13				(10)	8	6	-H		3	Sc	E15	8	0			8	0							
14				(11)	9+	6	Sc	M21	9+	-H		9+	0			9+	0							
15																								
16						Note: The above entries do not represent consecutive observations.																			
17																								
18																								
19																								
20																								
21																								
22																								
23																								

0 No Clouds or obscuring phenomena.
2 Four layers of clouds
9 0.9 sky cover at one elevation—upper clouds not visible
10 1.0 sky cover at one elevation
5 Obscuring Phenomena—covering entire sky above and below.
6 Obscuring Phenomena—with clouds above.
4 Thin Obscuring Phenomena—alone.
8 " " " —clouds above
9+ " " " —clouds below

SYNOPTIC OBSERVATIONS

TIME (G.C.T.) 41	TIME (L.S.T.) 42	NO. 43	PRECIP. (ins.) 44	SNOW FALL (ins.) 45	SNOW DEPTH (ins.) 46	MAX TEMP. (°F) 47	MIN. TEMP. (°F) 48	HGT. 850 MB. SURFACE 49	STATE OF GRND 50	SEA STATE & DIR. 51	SWELL HGT. & DIR. 52	SWELL PERIOD 53	SURF H_s H_s M_s P_s D_s 54	WATER TEMP. 55	SOIL TEMP. 56	57	58
	MID TO																
		1															
		2															
		3															
		4															
	MID																

STATION PRESSURE COMPUTATIONS

TIME (LST) 59				
ATT THERM 60				
OBSRVD BAR 61				
TOTAL CORR 62				
STA PRESS 63				
BAROGRAPH 64				
BAR CORR 65				

SUMMARY OF DAY (MIDNIGHT TO MIDNIGHT)

24-HR MAX TEMP. (°F) 66	24-HR MIN TEMP. (°F) 67	24-HR PRECIP. (WATER EQUIV. (ins.)) 68	24-HR SNOWFALL UNMLTD. (ins.) 69	SNOW DEPTH (ins.) 70	PEAK GUST: SPEED (m.p.h.) 71	DIRECTION 72	TIME (L.S.T.) 73	THICKNESS OF ICE ON WATER (ins.) 74	FROZEN GRND LAYER (ins.): TOP 75	BASE 76	RIVER GAGE 77	78	79	80	81

PRECIP & THDRSTM. 82	BEGAN 83	ENDED 84	DUR. 85 hrs	DUR. 85 mins	OBSTR. TO VIS 86	BEGAN 87	ENDED 88	DUR. 89 hrs	DUR. 89 mins

REMARKS, NOTES AND MISCELLANEOUS PHENOMENA 90

SUNRISE_____ SUNSET_____

Fig. 10. Examples of entries on Form WBAN 10B

ADDENDUM FOR WB STATIONS

WB Form 3069. When a correction for a record observation has not been filed for transmission in accordance with paragraph 31022, Form 3069 will be prepared and routed according to instructions printed on the form. The entries on the form will be corrected in accordance with paragraph 31022.

When the attention of the observer has been brought to an error by receipt of Form 3069 from another station, the error will be corrected in accordance with paragraph 31022. Form 3069 will be signed and routed according to the instructions on the form.

Corrections for synoptic reports not filed for transmission will be entered on Form 3069, and the form routed in accordance with instructions on the form.

WB Form 1083. Form 1083 will be used at second-order synoptic stations for recording surface weather observations. It will be used at all other stations for computation of sea-level pressure, and height of the 850-millibar surface, and for coding of synoptic reports.

WBAN 10. WBAN 10 will be used at all stations, except second-order synoptic, for recording surface weather observations.

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

C&HS/ACC/Da
(File No. 080,080.02)

May 24, 1948

CIRCULAR LETTER NO. 43-48
(To All First-Order Stations)

Subject: Weather Records Filing and Storage Survey.

The handling and filing of weather records of ever increasing volume has long been recognized as one of our major operating problems in the field of climatology. At many of our offices, particularly Section Centers, the problems of space, filing facilities, and records management are becoming acute. Also, due to the impetus of wartime developments there has been a considerable increase in weather research projects and investigations in industrial, agricultural, engineering, water supply and many other fields, thus proportionately increasing the demand for the use of our record data.

A better plan of service in this connection must be found if we are to meet our obligations in this connection. The possibility of establishing a central Weather Records Archives (WRA), coordinated with a program of microfilming weather records currently to provide for simultaneous use of records by several projects, is being considered along with other possibilities.

In order to further study the problem, certain information is needed from field stations which should be supplied through use of the attached questionnaire. This questionnaire should be prepared in triplicate (one each for Station, Regional Office, and Central Office) and returned through the Regional Office as soon as possible.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

(Enclosures)

UNITED STATES WEATHER BUREAU
WEATHER RECORDS FILING QUESTIONNAIRE

Instructions are numbered according to column numbers on attached questionnaire.

1. Enter appropriate data in columns (2 through 17) for each form listed in column (1) if at station, and enter form number of records not listed in column (1) and include appropriate data in columns (2-17).

2., 3., 4., 5. Indicate by ✓ how records are filed or stored.

6. Indicate to whole years number of station years of record at stations. Lump series forms such as 1009, 1009A, etc. together in determining years of record. For this entry a close approximation will suffice, an exact count need not be made.

7. If none of the forms are needed at the station answer "No", otherwise "Yes". If answer is "No" enter "0" in columns (8) and (9) and appropriate data in other columns.

8. Enter number of months of record which it is believed would be required if microfilm of the record was supplied in lieu of the forms, and microfilm reader equipment was supplied to station. For example, if Forms 1006 for all stations were needed for only the last five months of the record, enter 5, if required for two years enter 24.

9. Enter number of months of record which it is believed would be required at station if quick services on requests for data or for special summaries was provided by the Weather Records Archives, but microfilm copy of records were not provided.

10. Enter number of 4-drawer vertical steel filing cases which could be reassigned if the records indicated by entry in column 8 were deposited in Weather Records Archives.

11. Enter number of 4-drawer vertical steel filing cases which could be reassigned if the records indicated by entry in column 9 were deposited in Weather Records Archives.

12. Enter number of 2-drawer horizontal steel filing cases which could be reassigned if records indicated by entry in column 8 were deposited in Weather Records Archives.

13. Enter number of 2-drawer horizontal steel filing cases which could be reassigned if records indicated by entry in Column 9 were deposited in Weather Records Archives.

14. Enter estimated annual savings in cost at station of filing and storage of forms if records indicated by column (8) were deposited in Weather Records Archives. Include savings from rentals, man-hours used for searching for records, etc.

15. Enter estimated annual savings in cost at station of filing and storage of forms if records indicated in column (9) were deposited in Weather Records Archives. Include savings from rentals, man-hours used for searching for records, etc.

16. Enter estimated square footage of floor space which would be released for other use if forms indicated by entries in column (8) were deposited in Weather Records Archives.

17. Enter estimated square footage of floor space which would be released for other uses if forms indicated by entry in column (9) were deposited in Weather Records Archives.

18. Make no entry.

19. Remarks. Enter any appropriate remark.

STATION _____ U.S. Department of Commerce, Weather Bureau DATE _____

(PLEASE READ INSTRUCTION SHEET BEFORE PREPARING QUESTIONNAIRE)

FORM OR RECORD	HOW FILED OR STORED: FILING CABINETS	HOW FILED OR STORED: BOOK CASES	HOW FILED OR STORED: SHELVES	HOW FILED OR STORED: OTHER	NUMBER OF STATION YEARS RECORD	IS ANY OF THIS RECORD NEEDED AT STATION?	WITH MICROFILM AND READERS PROVIDED, HOW MANY MONTHS OF RECORD WOULD BE REQUIRED AT STATION?	WITHOUT MICROFILM BUT WITH SERVICE BY WRA, HOW MANY MONTHS OF RECORD WOULD BE REQUIRED AT STATION?:	NUMBER OF 4-DRAWER VERTICAL STEEL FILES WHICH COULD BE RELEASED IF RECORDS WERE REMOVED TO WRA.	NUMBER OF 2-DRAWER HORIZONTAL STEEL FILES WHICH COULD BE RELEASED IF RECORDS WERE REMOVED TO WRA.	ANNUAL SAVINGS IN COST OF FILING AND STORAGE IF FORMS WERE REMOVED.	AMOUNT OF FLOOR SPACE SAVED IF FORMS WERE REMOVED.	VOLUME OF FORMS (CU. FT.)	REMARKS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1130																		
1006																		
1009																		
1024																		
1014																		
1082																		
1083																		
1068																		
1074																		
Rain Gage Charts																		
1017																		
1076																		
Other																		

STATION _____ U.S. Department of Commerce, Weather Bureau DATE _____

(PLEASE READ INSTRUCTION SHEET BEFORE PREPARING QUESTIONNAIRE)

FORM OR RECORD	HOW FILED OR STORED: FILING CABINETS	HOW FILED OR STORED: BOOK CASES	HOW FILED OR STORED: SHELVES	HOW FILED OR STORED: OTHER	NUMBER OF STATION YEARS RECORD	IS ANY OF THIS RECORD NEEDED AT STATION?	WITH MICROFILM AND READERS PROVIDED, HOW MANY MONTHS OF RECORD WOULD BE REQUIRED AT STATION?	ICE BY WRA, HOW MANY MONTHS OF RECORD WOULD BE REQUIRED AT STATION?	NUMBER OF 4-DRAWER VERTICAL STEEL FILES WHICH COULD BE RELEASED IF RECORDS WERE REMOVED TO WRA.	NUMBER OF 2-DRAWER HORIZONTAL STEEL FILES WHICH COULD BE RELEASED IF RECORDS WERE REMOVED TO WRA.	ANNUAL SAVINGS IN COST OF FILING AND STORAGE IF FORMS WERE REMOVED.	AMOUNT OF FLOOR SPACE SAVED IF FORMS WERE REMOVED.	VOLUME OF FORMS (CU. FT.)	REMARKS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1130																		
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1014																		
1082																		
1083																		
1068																		
1074																		
Rain Gage Charts																		
1017																		
1076																		
Other																		

STATION _____ DATE _____

(PLEASE READ INSTRUCTION SHEET BEFORE PREPARING QUESTIONNAIRE)

FORM OR RECORD	HOW FILED OR STORED				NUMBER OF STATION YEARS RECORD	IS ANY OF THIS RECORD NEEDED AT STATION?	WITH MICROFILM AND READERS PROVIDED, HOW MANY MONTHS OF RECORD WOULD BE REQUIRED AT STATION?	WITHOUT MICROFILM BUT WITH SERVICE BY WRA, HOW MANY MONTHS OF RECORD WOULD BE REQUIRED AT STATION?	NUMBER OF 4-DRAWER VERTICAL STEEL FILES WHICH COULD BE RELEASED IF RECORDS WERE REMOVED TO WRA.		NUMBER OF 2-DRAWER HORIZONTAL STEEL FILES WHICH COULD BE RELEASED IF RECORDS WERE REMOVED TO WRA.		ANNUAL SAVINGS IN COST OF FILING AND STORAGE IF FORMS WERE REMOVED.		AMOUNT OF FLOOR SPACE SAVED IF FORMS WERE REMOVED.		VOLUME OF FORMS (CU. FT.)	REMARKS
	FILING CABINETS	BOOK CASES	SHELVES	OTHER													
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1130																		
1006																		
1009																		
1024																		
1014																		
1082																		
1083																		
1068																		
1074																		
Rain Gage Charts																		
1017																		
1076																		
Other																		

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D.C.

Pers.-Lo
(File No. 031.2

May 27, 1948

CIRCULAR LETTER NO. 44-48
(To All First-Order Stations)

Subject: Applications for Meteorological Training at Universities.

Persons who have not had professional meteorological training at an academic institution and wish to improve their knowledge and techniques may be interested in receiving university meteorological training at Weather Bureau expense. They should write letters of application to the Central Office, attention Training Section, before July 1, 1948.

The training will be given at New York University beginning in September 1948 and ending in May 1949. If a successful candidate resides near one of the other universities which provide a full meteorological curriculum, he may elect to attend that university. As in other years, the ten candidates will be transferred to the university at government expense. They will continue to receive their present salaries while on this assignment and their tuitions will be paid by the Weather Bureau.

Only applications from personnel with permanent Civil Service status will be accepted. Applicants must have at least 60 semester hours of college credits including one year-course in general college physics (not a survey course) and college mathematics through differential and integral calculus.

The shortage of housing in New York is still acute, and applicants should not plan to take their families with them if they are selected for the training.

In making the application it is important that information on all of the following be given:

1. Name, age, and station.
2. Marital status and dependents.
3. Availability (Endorsement by Official in Charge and Regional Director is necessary).
4. Scholastic qualifications.
5. Reasons why you desire the meteorological training.
6. Your ambitions in the Weather Bureau.

In addition, a complete college transcript must be furnished. If a copy is on file at the Central Office, please indicate this fact.

Promptness in filing applications will be greatly appreciated.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Syn-lv
(File No. 610, 610.4)

June 1, 1948

CIRCULAR LETTER NO. 45-48
(To All First Order Stations)

Subject: Standard headings for weather collectives

Representatives of the Air Lines, Navy, Air Force, Civil Aeronautics Administration, and Weather Bureau are working together in an effort to obtain uniformity in weather collective headings. It has been recommended that these headings should be abbreviated and should contain just three groups showing:

1. Type of reports and geographical area covered.

2. Collecting station or circuit.

3. Date and reference time of observation.

A list of designators which have been accepted for use in showing types of reports and geographical areas is attached for your information.

Most current weather collective headings already conform to the above standards. Some exceptions are listed on the other side of this letter and it is anticipated that these will be amended, as indicated, effective July 1, 1948.

All concerned should be alert, therefore, to recognize those collectives for which new heading designators will be transmitted beginning the first of July.

F. W. Reichelderfer
Chief of Bureau

OLD Type of Report Designators:	NEW Type of Report Designators:	Meaning
UF	FU	Upper air forecast
SC	AW	Airway weather (Hourly surface reports)
3M	TH	Synoptic surface reports. (Observations taken at intermediate (3-hourly) synoptic periods.)
SH	MT, PB, RS, TH	As applicable. Individual descriptions contained in attached list.

OLD Geographical Designators:	NEW Geographical Designators:	Meaning
AC	CN	Canada
CA	CA	Caribbean, Gulf of Mexico, and Central America
	MX	Mexico

Samples:

- Type of report.
- Geographical area.
- Nation of origin.
- Date.
- Time of observation.

MT NA NMH 241800Z
SHIPS
NMMA 20620 33018 20620 33018 20503 17841 55008 73528 00820 20238
NMMC 20527 35518 20527 35518 04202 24749 45006 32156 00805 10242
etc.

Explanations given above.

MT PA NPM 010600Z
44400 00106 22222 99900 03890 06528 14671 67103 60978 97947
03864 08328 15671 60405 60276 97787 02864 06415 17171 70405
13972 99150 03852 02428 15270 77307 60969 99220 02863 06526
SHIPS
Edward A. Filene 51520 55906 28600 43935 30000 78700 63310
Hiram S. Maxim 51432 64506 16364 21643 36//8 74268 23305
Lightning 51365 77000 06502 32756 38007 64227 26306

Note: Ship reports included in same collections as land reports are blocked separately and preceded by the word "SHIPS"

TYPE-OF-REPORT DESIGNATORS

AD Analogue Data
AW Airway Weather (Hourly Surface Reports)
CR Crop and River Reports
FA Airway Forecast
FD Extended Forecast Data
FE Extended Forecast
FP Public or State Forecast
FR Route Forecast (May include Terminal Forecast at Destination)
FT Terminal Forecast
FU Upper Air Forecast
FW Winter Sports Forecast
FX Temperature Extremes Forecast
HU Hurricane Bulletins
MA Surface Map Analysis
MC Miscellaneous Data
MF Prognostic or Forecast Surface Map Analysis
MT Synoptic Surface Report (Observations taken at Primary Synoptic Periods)
PB Pilot Balloon and/or Rawin Reports
PR Pilot Report (Except Weather Reconnaissance Observations)
PS Pilot Report Summary
RS Radiosonde Report
SD Storm Detection Report (Secured by Electronic means)
SL Selected Level (Upper Air Data)
SW Supplementary Airway Weather
TH Synoptic Surface Reports (Observations taken at Intermediate Synoptic Periods)
TA 3-hourly Analysis
UA Upper Air Analysis
WR Weather Reconnaissance Aircraft Report
WS Weather Summary

SPECIAL TECHNICAL DESIGNATORS

MI Microseismograph Report
RW Radio Warning Service (Radio Wave Propagation Forecast)

GEOGRAPHICAL DESIGNATORS

AF Africa
AL Alaska and Aleutian Islands
AN Antarctic Ocean Area, Including Antarctic Continent
AR Arctic Ocean Area
AS Asia (Except Russia and Japan)
AU Australia, New Zealand and Oceana
CA Caribbean, Gulf of Mexico, and Central America
CN Canada
EA Austria
EB Baltic Countries (Lithuania, Latvia, and Estonia)
EC Czechoslovakia
ED Denmark
EE British Isles, Faeroes, and Shetland Islands
EF France
EG Germany
EH Hungary
EI Italy
EJ Iberia (Portugal, Spain, and Balearic Isles)
EK Greece (Including Aegean Isles)
EL Low Countries (Belgium, Holland, and Luxembourg)
EM Mediterranean Sea
EN Norway
EO Bulgaria
EP Poland
EQ Iraq, Trans-Jordan, and Levant Sea
ES Sweden
ET Turkey
EU Europe (Except European Russia)
EW Switzerland
EX Finland
EY Yugoslavia
JA Japan
MX Mexico
NA North Atlantic (Including Greenland and Iceland)
NH Northern Hemisphere
NP Northern Pacific
PA Pacific Area
PH Philippine and Indian Islands
RU Russia (U.S.S.R.)
SA South America and South Atlantic Ocean Area
US United States (Geographical Indicator is normally used to identify transmissions comprising reports for stations in the Continental United States)
XX Unspecified General Area (May be used to indicate reports from two or more of the above areas)

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Met.-DYE:Re
(File No. 410.3)

June 2, 1948

CIRCULAR LETTER NO. 46-48
(To All First Order Stations)

Subject: Purchase of Typewriters - May 1, 1948 to June 30, 1948

Reference: Multiple Address Letter dated November 7, 1947 from Chief, Materiel Section (Central Office).

The directive from the President printed on the reverse of this letter is self-explanatory and is furnished for information and guidance until June 30, 1948. The Department stated that the terms of the directive are to be strictly carried out.

The procedure in requisitioning typewriters (all kinds) until further notice is, as follows:

1. All purchase requisitions must be submitted to the Central Office for consideration and approval.

2. Each purchase requisition must be accompanied by a sufficient justification to support approval.

3. This procedure will cover the purchase of both new or used machines from any source, surplus or otherwise.

4. The Department quota in referenced Multiple Address Letter is still in force.

F. W. Reichelderfer,
Chief of Bureau

THE WHITE HOUSE

WASHINGTON

May 1, 1948.

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES.

In view of the availability of large numbers of surplus typewriters, and in order to reserve for new programs an adequate supply of standard typewriters, it will be necessary to conserve to the fullest extent the remaining balance of machines available for the current fiscal year through the supply contracts of the Bureau of Federal Supply. Accordingly, all departments and agencies except the Economic Cooperation Administration shall revoke, as of this date, all unfilled requisitions for new standard typewriters, and shall place no new orders for standard typewriters without advance approval of the Director of the Bureau of the Budget or his duly authorized agent.

No new orders shall be placed for portable or electric typewriters, except on a replacement basis, without advance approval of the Director of the Bureau of the Budget or his duly authorized agent. This order shall become effective as of this date and will remain in force until the close of business June 30, 1948.

/s/ Harry S. Truman

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

File No. 700.6, 070.2 June 4, 1948
Libr/RCA

CIRCULAR LETTER NO. 47-48
(To All First Order Stations)

Subject: Foreign exchange of station publications

At the recent conference of the International Meteorological Organization it was agreed through several resolutions that there should be a free and easy exchange of data and publications between National Meteorological Services. The Library in the Central Office maintains control of the general exchange of Weather Bureau publications.

Field Offices issue various periodic publications and have established mailing lists for their dissemination. Each station official isauthorized to treat requests from foreign individuals, organizations, and institutions to be placed on mailing lists for station publications in the following manner:

1. Requests from Canada and Bermuda, Cuba and Mexico and all United States possessions are to be handled in the same manner as those from within the United States.

2. All requests from other countries are to be forwarded to the Central Office Library for approval. Such approval rarely would be denied. This procedure would give the Library an opportunity to secure such reports and research papers as may result from the use of Weather Bureau publications. The approved requests will be returned to the stations concerned for such action as may be necessary to distribute the publications.

JUN 10 1948

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
WASHINGTON 25

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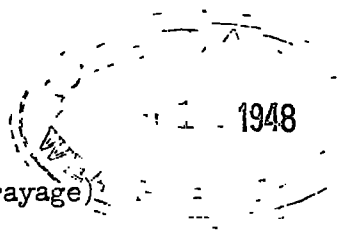
June 4, 1948

(File No. 260.2)
240

CIRCULAR LETTER No. 48-48
(To All Stations)



Subject: Specifications on continuing service (drayage)

Reference: Supplementing Circular Letter No. 19-46 dated March 27, 1946

It has been brought to the attention of the Central Office that the phrase "or fraction thereof," in the wording under Items 1(d) and 2(d) on exhibit Form 33 of Continuing Service Standard Specifications for Drayage has caused more or less confusion in billing by the contractor and auditing by the Bureau. For clarification, the standard specifications on Form 33 have been revised and the phrase in question deleted. Sample exhibit attached.

Likewise, Regional Offices when preparing informal agreements for drayage service should exclude the phrase "or fraction thereof" whenever possible. Helium cylinders weigh approximately 125 pounds and if actual weight is basis for payment rather than paying for the next 100 pounds when actual weight is only a fraction of 100, the Weather Bureau could possibly save considerable money.

The attachment headed GENERAL CONDITIONS APPLICABLE TO SERVICE AND/OR CONSTRUCTION CONTRACTS and attachment headed GENERAL CONDITIONS APPLICABLE TO SUPPLY CONTRACTS, should be changed by deleting Paragraph 13 on each sheet. Maximum prices or wages are no longer fixed by Federal authority.

Circular Letter No. 19-46 advised that changes may be made to fit the requirements peculiar to the station involved, and the unit may be changed to fit particular cases when the revision will result in advantage to the Government. In instances where dealers haul only on the basis of unit price per 100 pounds or fraction thereof, the original sample exhibit may be used instead of the revised sample.

F. W. Reichelderfer
Chief of Bureau

U.S. Standard Form 33 (Revised)
Approved by the Secretary of the Treasury
January 17, 1939

Invitation No. .....
Contract No. .....

INVITATION, BID, AND ACCEPTANCE

(SHORT FORM CONTRACT)

(Department or establishment) ..... (Office or station) .....

(Address) ..... (Date) .....

INVITATION

Sealed bids, in ..... subject to the conditions on the reverse hereof, will be received at this office until ..... o'clock ..... m., ..., and then publicly opened, for furnishing the following supplies, and/or services, for delivery at .....

(Name) ..... (Title) .....

ITEM NO.	ARTICLES OR SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT Dollars	AMOUNT Cents
	DRAYAGE: Drayage of freight and/or express delivery of helium cylinders, and other equipment and supplies, between points designated for: (supply name of station)					
1.	Cylinders: (Supply information on points of pick-up and delivery).					
	(a) Minimum rate per one-way trip.					
	(b) Minimum rate per round trip.					
	(c) Maximum weight allowed on minimum trip: _____ pounds.					
	(d) Cost per cwt. for poundage in excess of maximum weight allowed on minimum trip.					
	Estimated number of cylinders (approx. weight 130 lbs. each) per trip will be _____. Estimated number of one-way trips _____; round trips _____ per month.					
2.	Parcels: One or more (Supply information on points of pick-up and delivery).					
	(a) Minimum rate per one-way trip.					
	(b) Minimum rate per round trip					
	(c) Maximum weight allowed on minimum trip _____ pounds.					
	(d) Cost per cwt. for poundage in excess of maximum weight allowed on minimum trip.					

(OVER)

BID

(Date) .....

In compliance with the above invitation for bids, and subject to all the conditions thereof, the undersigned offers, and agrees, if this bid be accepted within ..... calendar days from the date of the opening, to furnish any or all of the items upon which prices are quoted, at the price set opposite each item, delivered at the point(s) as specified and, unless otherwise specified within ..... calendar days after receipt of order.

Discounts will be allowed for payment as follows: ..... percent 10 calendar days; ..... percent 20 calendar days; ..... percent 30 calendar days.

Bidder ..... Address .....

By ..... Title .....

(Signature of person authorized to sign this bid)

ACCEPTANCE BY THE GOVERNMENT

(Date) .....

Accepted as to items numbered .....

Name ..... Title .....

10—1806

(OVER)

CONDITIONS

1. The Government reserves the right to reject any or all bids, to waive any informality in bids and, unless otherwise specified by the Government or by the bidder, to accept any item in the bid. In case of error in the *extension of prices in the bid, the unit prices will govern.*

2. Time, in connection with discount offered, will be computed from date of the delivery of the supplies to carrier when final inspection and acceptance are at point of origin, or from date of delivery at destination or port of embarkation when final inspection and acceptance are at those points, or from date correct bill or voucher properly certified by the contractor is received if the latter date is later than the date of delivery.

3. In case of default of the contractor, the Government may procure the articles or services from other sources and hold the contractor responsible for any excess cost occasioned thereby: *Provided,* That if public necessity requires the use of materials or supplies not conforming to the specifications they may be accepted *and payment therefor shall be made at a proper reduction in price.*

4. If the contractor refuses or fails to make deliveries of the materials or supplies within the time specified, or any extension thereof, the Government may by written notice terminate the right of the contractor to proceed with deliveries or such part or parts thereof as to which there has been delay. In such event, the Government may purchase similar materials or supplies in the open market or secure the manufacture and delivery of the materials and supplies by contract or otherwise, and the contractor and his sureties (if any) shall be liable to the Government for any excess cost occasioned the Government thereby: *Provided,* That the contractor shall not be charged with *any excess cost occasioned the Government by the purchase of materials or* supplies in the open market or under other contracts when the delay of the contractor in making deliveries is due to unforeseeable causes beyond the control and without the fault or negligence of the contractor, including, but not restricted to, acts of God or of the public enemy, acts of the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, and delays of a subcontractor due to such causes unless the contracting officer shall determine that the materials or supplies to be furnished under the subcontract are procurable in the open market, if the contractor shall notify the contracting officer in writing of the cause of any such delay, within 10 days from the beginning thereof, or within such further period as the contracting officer shall, with the approval of the head of the department or his duly authorized representative, prior to the date of final settlement of the contract, grant for the giving of such notice. The contracting officer shall then ascertain the facts and extent of delay, and his findings of fact thereon shall be final and conclusive on the parties hereto, subject only to appeal within 30 days by the contractor to the head of the department concerned or his duly authorized representative, whose decision on such appeal as to the facts of delay shall be final and conclusive, on the parties hereto. As used herein "head of the department" means the head or any assistant head of the executive department or independent establishment involved, and "his duly authorized representative" means any person specially authorized to act for him other than the contracting officer; and the term "contracting officer" shall include his duly appointed successor or his authorized representative.

5. No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom unless it be made with a corporation for its general benefit.

6. Prices bid herein include any Federal tax heretofore imposed by the Congress which is applicable to the material on this bid. If any sales tax, processing tax, adjustment charge, or other taxes or charges are imposed or changed by the Congress after the date set for the opening of this bid, or made applicable directly upon the production, manufacture, or sale of the supplies covered by this bid, and are paid by the contractor on the articles or supplies herein contracted for, then the prices named in this bid will be increased or decreased accordingly, and any amount due the contractor as a result of such change will be charged to the Government and entered on vouchers (or invoices) as separate items.

7. Unless otherwise specified by the bidder, it is understood and agreed that only such unmanufactured articles, materials, and supplies as have been mined or produced in the United States, and only such manufactured articles, materials, and supplies as have been manufactured in the United States substantially all from articles, materials, or supplies mined, produced, or manufactured, as the case may be, in the United States shall be delivered pursuant to a contract awarded as a result of this bid.

Item 2 (continued).

Estimated number of one-way trips_____; round trips_____per month.

The contract will be for the period July 1, 19__, or from date of award if award is made later than July 1, 19__, to June 30, 19__.

Payments will be made in accordance with Paragraph 8 "GENERAL CONDITIONS APPLICABLE TO SERVICE AND/OR CONSTRUCTION CONTRACTS", Herewith, as soon as practicable after end of each month.

This agreement may be terminated by either party thereto upon two weeks' written notice to the other party.

Note: Bidder's attention is called to all attachments herewith.

INSTRUCTIONS TO BIDDERS

1. Samples of items, when required, must be furnished, free of expense, *prior to the opening of bids, and, if not destroyed,* will, *upon request,* be returned at the bidder's expense.

2. Prices should be stated in units of quantity specified, with packing included.

3. Time of proposed delivery must be stated in definite terms. If time varies for different items the bidder shall so state.

4. Envelops containing bids must be sealed and marked on the upper left-hand corner with the name and address of the bidder and the date and hour of opening, and addressed as instructed.

5. For further instructions read U. S. Standard Form 22 (Instructions to Bidders).

INSTRUCTIONS TO CONTRACTING OFFICERS

1. If shipment is made by Government bill of lading, observe consolidated classification requirements so as to secure the lowest rate applicable.

2. Although this form meets the requirements of a formal contract (R. S. 3744), if the execution of a formal contract with bond is contemplated U. S. Standard Forms 31 and 32 should be used.

3. If there is not sufficient space on the schedule to list all of the items, insert at the bottom of the schedule "Continued on _____ sheets of U. S. Standard Form 36", and use that form also.

4. If it is definitely known that final acceptance cannot be accomplished within 10 or 20 days from date of delivery due to necessity for tests or analyses which cannot be accomplished within that time, delete, before issuance, the discount provision relating to 10 calendar days or to both 10 and 20 calendar days. The provision relating to discounts may also be deleted when funds do not become available so that payment may be made within such time limits.

5. If the contract is likely to involve patent liability, the article on patents as contained in U. S. Standard Form 32 should be used.

6. If the contract provides for liquidated damages, the above Condition No. 4 should be deleted and there should be substituted therefor the article entitled "Delays—Liquidated Damages", quoted in Paragraph 5 of the instructions on page 6, U. S. Standard Form 32, modified as follows: Delete Article 1", line 2, and if no bond is required, delete "and his sureties" lines 6 and 10; add the last sentence (definitions) of the above Condition No.

U. S. GOVERNMENT PRINTING OFFICE 10—1806 - 0

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

Mat:JJD:bv
(File No. 410.3)

June 7, 1948

Circular Letter No. 49-48
(To All First Order Stations)

Subject: Purchase of Rubber Stamps

Beginning July 5, 1948 the procedure for ordering rubber stamps will be as follows:

1. Rubber Stamp Requisition, WB Form 2047 and Continuation Sheet, WB Form 2047A herewith, will be prepared by the ordering office, following the instructions appearing on the reverse of the form.

2. Where the cost of the stamps on existing Bureau of Federal Supply Contract is less than the cost from the Federal Works Agency, Washington, D. C. the regional office will issue the purchase authority and charge to regional allotments.

   (a) Local purchases of rubber stamps may be made if the cost is less than that of the Federal Works and when no Bureau of Federal Supply contract exists.

The present price of rubber stamps is 10¢ a line and stations will be advised of any change in price.

F. W. Reichelderfer,
Chief of Bureau.

Attachment

Form 2047A

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU

Page No.....

RUBBER STAMP REQUISITION continued

Name of Office..... Date.....

No. of Stamps (1)	Reading Matter (2)	Size and style of type (3)	Requisitioning Office Do not write in this space		
			No. Lines	Line Cost	Total Cost

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr:We
(File No. 601.2,
603.51)

June 11, 1948

CIRCULAR LETTER NO. 51-48
(To All First Order Stations)

Subject: Control Tower Visibility Program

Reference: (1) Circular Letter 34-43
(2) Paragraphs 20240 and 31105.3 (Revised 7/1/48) of Circular N

The instructions for taking visibility observations from CAA control towers are outlined in Circular Letter 34-43, and supplemented by the reference paragraphs in Circular N. Since there have been several recent indications that these instructions may not be completely understood, certain procedures outlined therein are amplified and restated in this letter.

Visibility observations will be taken from the control tower level whenever the visibility at the usual point of observation is less than three miles. Since the visibility observation from the latter point will always be taken by a Weather Bureau observer, it is the responsibility of the Weather Bureau observer to inform the control tower whenever observations from the control tower are necessary or whenever these observations are no longer needed.

Most of the difficulties encountered in the control tower visibility program have apparently resulted from divided responsibility. It is believed that this division of responsibility will be eliminated if the point of observation and the responsible observer are specifically designated. When the responsibility for the visibility observations has been transferred to the control tower in accordance with the preceding paragraph, visibility observations made by control tower personnel will be accepted immediately without question. Since control tower operators are certificated to take visibility observations, these observations are official as soon as they are taken, and do not require clearance through the Weather Bureau Office prior to their dissemination. It is important, of course, that the Weather Bureau be informed as soon as practicable of all visibility changes observed at the control tower level.

Visibility observations should be made from the control tower by Weather Bureau observers wherever possible. However, if a Weather Bureau observer cannot remain continuously in the control tower during the entire period that the visibility is below three miles, the

visibility observations will be taken by control tower personnel. It should be noted that visibility observations from the control tower level must be continued even though a Weather Bureau observer is not available for assignment to the tower.

Visibility observations will be taken from the control tower when the visibility is less than three miles unless specific authority to the contrary is secured from the Central Office. It is therefore requested that stations not participating in the control tower visibility program, but at which a CAA control tower is located, inform the Central Office of the circumstances preventing their participation in this program.

F. W. Reichelderfer.

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Pers.-jp
(File No. 120.1)

June 11, 1948

CIRCULAR LETTER NO. 52-48
(To All Stations)

Subject: Within-grade Promotions for "Temporary Indefinite" Employees

The Civil Service Regulations have been amended to provide within-grade salary advancements for temporary-indefinite employees, effective July 1, 1948.

Accordingly, temporary-indefinite employees who have completed appropriate waiting periods and comply with the efficiency rating and the service and conduct requirements on July 1 will be eligible for one-step administrative pay increases effective the beginning of the first pay period following July 1st.

Each regional office should promptly determine the due dates for periodic pay increases for all temporary-indefinite employees on its rolls and take necessary action to effectuate such increases as they come due after July 1st.

Regional offices are also requested to furnish the Personnel Division of the Central Office with the following items of information not later than June 25, 1948, for inclusion in a report to the Department: (1) the approximate number of temporary-indefinite employees in its region who will become eligible for periodic salary increases during the fiscal year 1949, and (2) the estimated additional dollar cost (total) of such increases during the fiscal year 1949.

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D.C.

Pers:Tr-Lo
(File No. 151)

June 22, 1943

CIRCULAR LETTER NO. 54-43
(To All Stations)

Subject: Examinations Administered by Field Aides.

In order that all Field Aides may operate in a uniform and acceptable manner in regard to administering on-station examinations, a definite policy has been formulated.

A. Commissioned Observers

No further written examinations will be given after a score of 80%, or higher, has been made on any written examination in meteorological observations unless:

1. The monitoring, checking or reviewing of the observations indicates that observational procedures are unsatisfactory.

2. The Field Aide observes that the individual's observational techniques and procedures result in inaccuracy and do not conform to standard instructions.

B. Non-Commissioned Observers

All observers, paid or unpaid, who are required to hold a "Certificate of Authority to take Meteorological Observations" will not be given further certification examinations after passing the initial one with a score of 80%, or higher, but exceptions will be made according to subparagraphs 1 and 2 above.

A variety of examinations will be furnished to the Regional Field Inspection Sections by the Area Training Office in order that there will be at least one applicable to each of the various types of observation stations.

Appropriate refresher examinations, to aid observers in keeping apprised of the latest instructions and to assist them in the review of old instructions, will continue to be issued by mail at least once every three months by the Area Training Offices. These examinations will be reviewed with the observers by the Field Aide during each visit.

It is expected that the Area Training Offices will keep the Regional Field Inspection sections informed as to the misinterpretation of observational instructions as determined through the analyses of the results of refresher examinations.

All previous instructions in regard to the examination of observers during a routine station visit are rescinded.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

Mat:THE:Re
(File No. 400.2)

June 23, 1948

CIRCULAR LETTER NO. 55-48
(To All First Order Stations)

Subject: Discontinuance of Transmission of Copies of Purchase Orders to Bureau of Federal Supply, Washington, D. C.

Instructions have been received from the Bureau of Federal Supply in Circular Letter B-40-Revised, dated June 6, 1948, that effective July 1, 1948, copies of purchase orders and memorandum vouchers, Standard Form 1034a, need no longer be furnished that Agency.

In the event the Bureau of Federal Supply will again require the submission of copies of such documents, you will be so advised.

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Accts.-Nch
(File No. 200.4,
615)

June 28, 1948

CIRCULAR LETTER No. 56-48
(To All First Order Stations)

Reference: Circular Letters 88-46 and 94-46.

Subject: Preparation and submission of vouchers covering communication services.

Vouchers for telephone rent and long-distance tolls at stations under regional control will be forwarded to Regional Offices rather than to the Central Office beginning with those covering rent for the first period payable from the 1949 appropriation; i. e., rent for the month of July, 1948, if billing is on a flat-month basis or for the June-July bill if billing is on a split-month basis.

The vouchers will be prepared in an original and three carbons and the original and two carbons forwarded to the Regional Office. It will, therefore, be necessary to ask the Telephone Company to submit the toll statement (SN 650) in quadruplicate in order that the original voucher may be supported by the original of Form SN 650 and each carbon by a carbon copy of the form.

Vouchers covering the cost of telegraph tolls will be forwarded to the Central Office as heretofore. Vouchers for teletypewriter and other special communication services will be forwarded to the Central Office if the expenses are charged to a Central Office allotment and to the regional office if chargeable to a regional allotment. The Regional Director will in each case advise the station official as to the particular expenses which are chargeable to regional allotments.

All other instructions in Circular Letters 88-46 and 94-46 will remain in effect.

F. W. Reichelderfer

RECEIVED
JUN 30 1948
WEATHER BUREAU

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr:We
(File No. 451.6,
601.3)

June 29, 1948

CIRCULAR LETTER NO. 57-48
(To All Stations)

Subject: Inflation of 100-gram Pilot Balloons

Effective August 1, 1948, 100-gram pilot balloons will be inflated to a free lift of 515 grams instead of 503 grams as at present. This will require the use of a supplemental 12-gram weight with either the inflation balance or the inflation nozzle. If it is impossible to make this weight locally, the Central Office should be so informed immediately. New inflation nozzles will be furnished all stations as soon as they become available.

The present 100-gram balloon ascensional rates and horizontal distance tables (Form 1043A) will continue to be used with the new free lift.

The original free lift of 503 grams for 100-gram balloons inflated with helium was arrived at through consideration of the results of slightly more than one hundred double-theodolite observations of 100-gram balloons inflated with hydrogen to a free lift of 450 grams. These observations were made mostly during the spring and fall over a period of two years at Washington, D. C.

A more extensive body of ascensional rate data based on double-theodolite observations made by the Weather Bureau and other organizations has been recently analyzed. The results indicate that the ascensional rate on which the horizontal distance tables are based is not being attained with the free lift of 503 grams, and that a free lift of 515 grams will, on the average, give more nearly the assumed ascensional rate.

Deviations of the ascensional rate from the assumed average value, due to diurnal, seasonal, and geographical variations of the properties of the atmosphere cannot be corrected by this new free lift; however, on the average, it is expected that more satisfactory agreement with the assumed rate of ascent will result from the change.

The attached table shows the departure of individual ascensional rates from the mean now used for 100-gram balloons inflated to 503 grams free lift.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

Attachment

ASCENSIONAL RATE DEPARTURES FOR 100-GRAM BALLOONS WITH 503 GRAMS FREE LIFT

Departure Ranges from Assumed Rate (M.P.M.)	Number of Observations and Percentage Frequency									
	0 - 10 Minutes (Assumed Rate 302)		10 - 20 Minutes (Assumed Rate 274)		20 - 30 Minutes (Assumed Rate 270)		30 - 40 Minutes (Assumed Rate 284)		40 - 50 Minutes (Assumed Rate 298)	
	No. of Obs.	Percentage Frequency	No. of Obs.	Percentage Frequency	No. of Obs.	Percentage Frequency	No. of Obs.	Percentage Frequency	No. of Obs.	Percentage Frequency
+56 to +65	4	1.7%								
+46 to +55										
+36 to +45	10	4.2%								
+26 to +35	18	7.6%	2	1.4%	-					
+16 to +25	34	14.5%	7	5.0%	3	3.6%				
+ 6 to +15	23	9.8%	15	10.8%	10	12.0%	1	2.6%	1	4.8%
+ 5 to - 5	40	17.0%	31	22.3%	18	21.7%	6	15.8%	0	
- 6 to -15	26	11.1%	26	18.7%	23	27.7%	9	23.7%	1	4.8%
-16 to -25	22	9.4%	17	12.2%	7	8.4%	11	29.0%	1	4.8%
-26 to -35	9	3.8%	8	5.8%	8	9.6%	6	15.8%	1	4.8%
-36 to -45	10	4.2%	15	10.8%	11	13.2%	2	5.3%	11	52.4%
-46 to -55	8	3.4%	12	8.6%	3	3.6%	2	5.3%	3	14.3%
-56 to -65	11	4.7%	6	4.3%			1	2.6%	1	4.8%
-66 to -75	12	5.1%							2	9.5%
-76 to -85	8	3.4%								
-86 to -95										
TOTAL	235	-	139	-	83	-	38	-	21	-

Note: Time ranges indicated at head of columns refer to minutes after release of the balloon. Assumed rates for the indicated time intervals are in meters per minute and refer to the mean ascensional rates used for 100-gram balloons.

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UNITED STATES DEPARTMENT OF COMMERCE
Weather Bureau
Washington

Office of Chief/Wd
File No. 070.2

June 30, 1948

CIRCULAR LETTER NO. 58-48
(TO ALL STATIONS)

Subject: Cooperation with Amateur Weathermen of America.

Inquiries have been received as to the relationship of the subject organization to the Weather Bureau. Although the Amateur Weathermen of America is in no sense an official government organization and has no official relationship to the Weather Bureau, it has a constructive program in cooperation with the Franklin Institute of Philadelphia and is engaged in very worthwhile projects for educating the public in the use of weather information and promoting intelligent study of meteorological problems. Most Weather Bureau employees are doubtless familiar with its publication entitled "Weatherwise" which has presented some commendable articles of interest to the professional meteorologist as well as the layman and the amateur.

Shortly after it was organized, the Director of Amateur Weathermen of America expressed his policy of close cooperation with the Weather Bureau and requested approval to enlist the voluntary assistance of Weather Bureau employees in observational projects from time to time. The Bureau replied that such proposals should be addressed to Weather Bureau employees individually as a personal matter in the same way the organization might address any meteorologist. Those who desire to volunteer cooperation with the Amateur Weathermen of America on worthwhile projects have the full concurrence of the Weather Bureau, although there is no official requirement in this connection.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington, D.C.

Adm.-Vo.
(File No. 480, 155)

June 30, 1948

CIRCULAR LETTER NO. 59-48
(All First-Order Stations)

Subject: Accident Reporting and the Processing of Claims under the Federal Tort Claims Act.

The Bureau of the Budget has promulgated standard forms to be used by all departments and establishments, effective July 1, 1948, for the reporting of accidents and for the processing of claims under the Federal Tort Claims Act. These forms have been designed to provide information on accident analysis in accident prevention programs; to provide basic information in connection with claims under the Federal Tort Claims Act, and for use in recording the facts concerning accidents and in adjudicating claims. They are as follows:

(a) Operator's Report of Motor Vehicle Accident, Standard Form 91 - To be prepared by the driver of the Government or privately owned and Federally operated motor vehicle involved in an accident, regardless of the extent of injury or damage. A supply of these, and other pertinent forms will be carried in each Government motor vehicle. Standard Form No. 26 is hereby revoked.

(b) Supervisor's Report of Accident, Standard Form No. 92 - This form is to be filled out by the supervisor of Government work in which there is injury to Federal personnel or other persons, or damage to Federal or non-Federal property. If more than one person is injured in a single accident, a separate S. F. 92 is to be prepared for each injured person. This form is not to be used for motor vehicle or aircraft accidents.

(c) Report of Investigating Officer, Standard Form 93 - This form is to be prepared by the person investigating the circumstances surrounding the accident. Standard Form No. 27 is hereby revoked.

(d) Statement of Witness, Standard Form 94 - This form is to be completed by and obtained from persons who witnessed the accident.

(e) Claim for Damage or Injury, Standard Form 95 - This form is to be filled out by, or on behalf of the person who sustained the damage or injury. Standard Form 28 is hereby revoked.

(f) Settlement Agreement, Standard Form 96 - This form is to be executed by the claimant only in those cases where the amount of the settlement is less than the amount claimed on Standard Form 95.

The above do not supersede forms issued by the Bureau of Employee's Compensation, however the "Supervisor's Report of Accident" appearing on the reverse of Form CA-1 need not be completed in future. Subsequent editions of this form will be printed front side only in view of the existence of Standard Form 92.

A small supply of Standard Forms 91 through 96 has been furnished each Regional Office and a quantity of the necessary forms will be furnished each first-order station when received from the Government Printing Office.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr:kbl
File No. 621.6
601.3, 601.4

July 2, 1948

CIRCULAR LETTER NO. 60-48
(To All First Order Stations)

Subject: Special Aerological Observations during Hurricanes.

Special radiosonde and winds aloft observations will be requested by hurricane forecasters as provided for herein, by direct wire to the station. These "specials" will be made for two purposes, namely research and current use.

"Specials" for research:

Particular effort will be made this season to obtain "specials" for research and in these cases the records may be evaluated at the convenience of the station program and the data will not be transmitted by dispatch. This should minimize the amount of overtime required for these special observations.

The responsibility for requesting "specials" for research purposes will rest with the Official in Charge, Weather Bureau Office, Miami, Florida, or an assistant designated by him. For the information of the stations concerned, special raobs (including rawins where rasons are made) and pibals for research purposes will be taken at 6-hour intervals from stations located within 800 miles of an approaching storm center; and at 3-hour intervals when within 300 miles of the approaching storm center. After passage of the storm center, specials will be taken at 6-hour intervals until three consecutive soundings have been made, provided the storm center remains within 300 miles of the station and is not dissipated within the 12-hour period. Upon receipt of a message from the Weather Bureau Office, Miami, requesting that "specials" be started, it will be the responsibility of the Official in Charge of the raob or pibal station to determine when his station comes within the 800-mile or 300-mile limit from the storm center, and to take special observations at the appropriate intervals so long as he is within that limit, or until a message is received from Miami requesting the discontinuance of "specials".

Effort should also be made to obtain "specials" in the "eye" of the storm. "Specials" under such conditions may be made on the initiative of the station when no request has been received from a forecast office.

In view of the importance of winds aloft (pibals and rawins), both scheduled and special observations should be made to the greatest possible heights. 100-gram balloons should be used in pibals at stations equipped with suitable inflation nozzles, whenever conditions favor reaching high altitudes. Also, in order to obtain the greatest

possible heights in raobs and rawins, the "night flight" type raob balloons described in MAL dated January 27, 1948, Instr-R/S should be used for all raobs and rasons made in connection with hurricanes, and the special parachute-balloon assembly described in MAL dated Obtober 10, 1947, Instr-R/S should be used during periods of high surface winds.

Complete descent records, in both day and night raobs, are desired insofar as practicable. The descent records should be evaluated and plotted on adiabatic charts in accordance with MAL dated March 12, 1948, Opr-A, Subject: International Aerological Days, April 1 - 10, 1948.

Messages requesting "specials" which do not specify "for current use" will be understood to mean they are desired for research.

"Specials" for current use:

Requests for "specials" desired for current use in connection with a given storm will be issued by hurricane forecasters at the station issuing hurricane advisories for that storm. Such requests will specify "for current use" and are to be evaluated promptly and transmitted to the hurricane forecast office making the request. Frequently these requests will be filled by use of the same "special" made for research purposes. In no case will soundings be made more frequently than at 3-hour intervals. Such "specials" will be transmitted, if practicable, via circuit 7072 or the hurricane circuit, otherwise by telegraph. When these reports are not filed on the foregoing circuits by the originating office, they will be relayed over one or both of the circuits by the forecast office, at the discretion of that office. In case records cannot be evaluated immediately and the reports transmitted to the forecast office in time for current use, the records may be evaluated later in accordance with preceding instructions for "specials" made for research purposes.

General:

All "specials" should be entered on a single Form 1114 and 1173 and all records forwarded to the checking stations in the usual manner.

Stations making special observations in connection with this program are requested to forward by mail the following information to the Central Office, Station Operations Division, promptly after December 1, 1948.

(a) Reference to request, if any received, or a statement that "specials" were made on own initiative;
(b) Kind of "specials" made, including dates and times;
(c) Whether or not the data were transmitted for current use;
(d) Any additional pertinent information.

Stations concerned are requested to take steps so as to have an ample stock of necessary supplies, including helium, on hand for these observations.

The hurricane forecast offices will be furnished the names of raob, rason (rawin) and pibal stations, including those of the Air Force, Navy and cooperative stations in Cuba and Mexico, from which specials may be requested.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Pers:er
(File No. 120.1, 202)

July 2, 1948

CIRCULAR LETTER NO. 61-48
(To All First Order Stations)

Subject: Periodic Pay Increases

Effective with pay period beginning July 11, 1948, the issuance of fanfolds (Form SS116) covering periodic pay increases will be discontinued, except when included with a Conversion to Competitive or Probational Status action.

For payroll and personnel record purposes, a list will be used. Attached is a sample copy of a list which may be used by any Regional Office as a pattern, with the addition to each page, of the statement "services and conduct of employees shown hereon reviewed and satisfactory". Any regional office already using a list which furnishes all information necessary, may continue same without change. The lists should be prepared well in advance to reach the payroll offices for inclusion on payrolls of appropriate dates.

Each Regional Office Personnel Unit and the Central Office Personnel Division will prepare a sufficient number of copies of each list for purpose of placing one copy in each personnel file in both the Regional Offices and the Central Office for record purposes. If the list is made up of more than one page, only the page on which the employee's name appears should be placed in his personnel file. This will reduce the number of copies that need be made. The Regional Offices should forward the copies of lists as promptly as possible to the Central Office in order to keep personnel records up to date.

If an error is found or a name is omitted from any list it should be corrected by preparing a new complete tabulation only for the employee whose name was omitted or whose data was in error.

The only notification received by employees will be the Department of Commerce Form SS1126A, Payroll Change Slip, which is currently in use by all payroll offices.

When a periodic pay increase falls due at the same time as a Conversion Action, such employees will not be included on lists, but appropriate information must be shown on fanfolds. Instructions for this type of fanfold were furnished to the Regional Offices in MAL dated April 21, 1948.

FJy vf
-18/48

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

(Inclosure)

Statement of within-grade promotions recommended to become effective_____, in accordance with the provisions of the Act of August 1, 1941 (Public Law No. 200), as amended.

☐ DEPARTMENTAL SERVICE ☐ FIELD SERVICE Date_____

Name of employee	Classification and grade	SALARY			LAST PRIOR CHANGE				Efficiency rating
		Present	Proposed	Increase	Date effective	Amount	Nature of action	Prior salary	

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

Opr-A
(File No. 604)

July 6, 1948

CIRCULAR LETTER NO. 62-48
(To All First Order Stations)

Subject: Atlantic Weather Stations.

Reference: Circular Letter No. 94-47.

Part time operation of Atlantic Weather Station "M" (Lat 66°N, Long 02°E) was begun approximately June 15, 1948. The station is operated jointly by Sweden, Great Britain, and Norway, and is expected to be in full time operation by September. It is believed that surface reports only will be received by the Weather Bureau.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

July 15, 1948

SR&F/CRE/WE
(File 620.7) CIRCULAR LETTER NO. 63-48
(To all First Order Stations)

Subject: 30-Day Outlook

Soon after July 15, and semi-monthly thereafter, a copy of the 30-day outlook will be sent to each first order station. These outlooks are for use on the station and are not to be given further distribution by republication.

Before any use is made of the data contained in the outlook, a careful study should be made of the explanation which appears on the front cover of the folder. The meaning of the data and their limitations, there set forth, are important in interpreting the outlook. Special attention is directed to the fact that the anomalies are given in terms of long periods and large areas. The outlook does not attempt to indicate what weather conditions will exist at any particular time or place. In answering questions of individuals and firms the information contained in the outlook should be used only when it is interpreted in the terms referred to above and with reference to the climatological information printed on the back page of the folder.

Inquiries from the public requesting copies of the outlook may be answered by quoting the subscription notice found on the front page.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

AsstChO:Fl
(File No. 000)

July 26, 1948

CIRCULAR LETTER NO. 64-48
(To all Weather Bureau Offices)

Subject: Central Office Organizational Changes

The following changes in the administrative organizational structure of the Weather Bureau become effective on August 1, 1948, or as soon thereafter as the details of reorganization can be completed:

1. Organization

(a) The Offices of Management Planning, Field Inspection and certain functions of Station Operations Division are consolidated to bring about closer coordination of administrative and operational functions. The new office is known as the "Plans and Program Management Office." Although this office will be a staff office closely related to the Office of the Chief of Bureau, it will be directly responsible to the Assistant Chief for Administration and to the Assistant Chief for Operations within their respective areas. The office will be divided into two sections, (1) Field Analysis, and (2) Program Planning.

(b) Mr. L. E. Brotzman, presently Acting Chief of Station Operations Division, has been selected as Chief of the Plans and Program Management Office.

(c) The principal duties of the Plans and Program Management Office follow:

(1) Field Analysis Section

In collaboration with the Assistant Chiefs of Bureau for Administration and Operations, develops and assists in promulgating standards for field practice based on work load measurements and the analysis of broad scale field programs; analyzes inspection activities carried on in the field to determine quality and quantity of the work product of the Regional Field Inspection Sections so that uniformity of results can be maintained. Develops standard methods for station analyses, including the establishment of methods and procedures for testing the efficiency of station management and the development and determination of standards of performance for individual station activities; develops reporting forms and maintains continuous review of established forms to assure adequacy of coverage.

(2) Program Planning Section

Maintains close coordination with all Central Office Divisions concerning plans for changes in field program and assists in developing and implementing those plans at particular stations in order that Bureau policies, methods and procedures may be observed; develops standard staff patterns for field stations based on work measurement studies and analyses of field inspection reports, and submits recommendations for changes in staff patterns to bring about the most effective utilization of field personnel. Reviews all requests for changes in station staff patterns and coordinates with Central Office operating Divisions the need for additional personnel, or proposals for reductions in staff, in order that an authorized program can be adequately outlined and supported at each station; makes special analyses or work measurement studies of specified individual field installations to develop basic information for (1) the integration of new elements of program with existing local programs, and (2) the determination of local staff requirements to carry out the authorized program. Assists with the development of operational policies affecting broad classes of field activity and advises when appropriate as to the need for clarification or modification of existing policies; initiates studies concerning methods for maintaining practicable and efficient control of field programs.

(d) The project offices comprising Arctic, Thunderstorm, Philippine Rehabilitation, Overseas and Foreign Relations are consolidated into one office which is directly responsible to the Assistant Chief for Operations. This office is known as "Special Projects." Those projects which are still in the development stage will continue to be supervised by specially designated leaders, e.g. Arctic, Thunderstorm, etc., whereas those projects which are in process of integration with regular Division activities, e.g. Philippine, Overseas, etc., will be supervised as a group by a single Project Leader under the general supervision of the Assistant Chief for Operations and direct supervision of the Chief of the Plans and Program Management Office.

(e) Outline of the duties of the Special Projects Office.

Coordinates plans and arranges for inauguration and/or maintenance of special meteorological projects which require particular (direct line or unitary) attention; acts as liaison with appropriate administrative units in improvising

administrative and operating procedures for new projects in keeping with Weather Bureau policy on an interim basis pending final determination of organizational location and responsibility for the project; gives special attention as necessary to coordination with military and civilian Government agencies

(f) The Division of Station Operations is reorganized and will be known henceforth as the "Division of Station Facilities and Meteorological Observations."

The duties of the Hydroclimatic Substation Section are merged with some of the functions of the Regional Operations Section and the new section is to be known as "Station Facilities." The Meteorological Observations and Technical Investigations Sections will be continued as they now exist.

(g) Mr. R. H. Weightman, presently Head of the Foreign Relations Office, has been selected as Chief of the Station Facilities and Meteorological Observations Division.

(h) Outline of the duties of the Station Facilities Section.

Develops standard materiel requirements (quantity and type) for furniture and related equipment for the establishment of various types of stations or for the implementation of expande station programs; develops standards for space and for the physical arrangement of furniture, office equipment, instruments, and communication facilities as an aid in implementing the space layouts in the manner most conducive to efficient operations. As authorized by the Chief of Bureau (or official designated by him) on recommendation of the operating divisions concerned, carries out action to open or close stations, including substations; develops and maintains descriptive records of station history, surrounding terrain, elevation, exposure of instruments, instrumentation, type of observational program, type of service program, and related administrative information for each station; prepares data, reports, maps and/or similar exhibits portraying the various types of observational networks, to show especially the relative density and degree of uniformity of distribution with respect to the various classes of observations and reports. Coordinate the observing and reporting programs of the hydroclimatic, rive and rainfall reporting, climatological and other substation networks; manages the networks of hydroclimatic and reporting substations for which funds are annually transferred by the Corps of Engineers and Bureau of Reclamation so as to meet project objectives as recommended by cooperative agencies and the Division of Climatological and Hydrologic Services and approved by the Chief of Bureau. Prepares and maintains

current the schedule of wage rates covering part-time employees who are paid for performing special observing services (Circular II).

(i) The separate Office of Foreign Relations has been discontinued.

II. Organizational Numbering System.

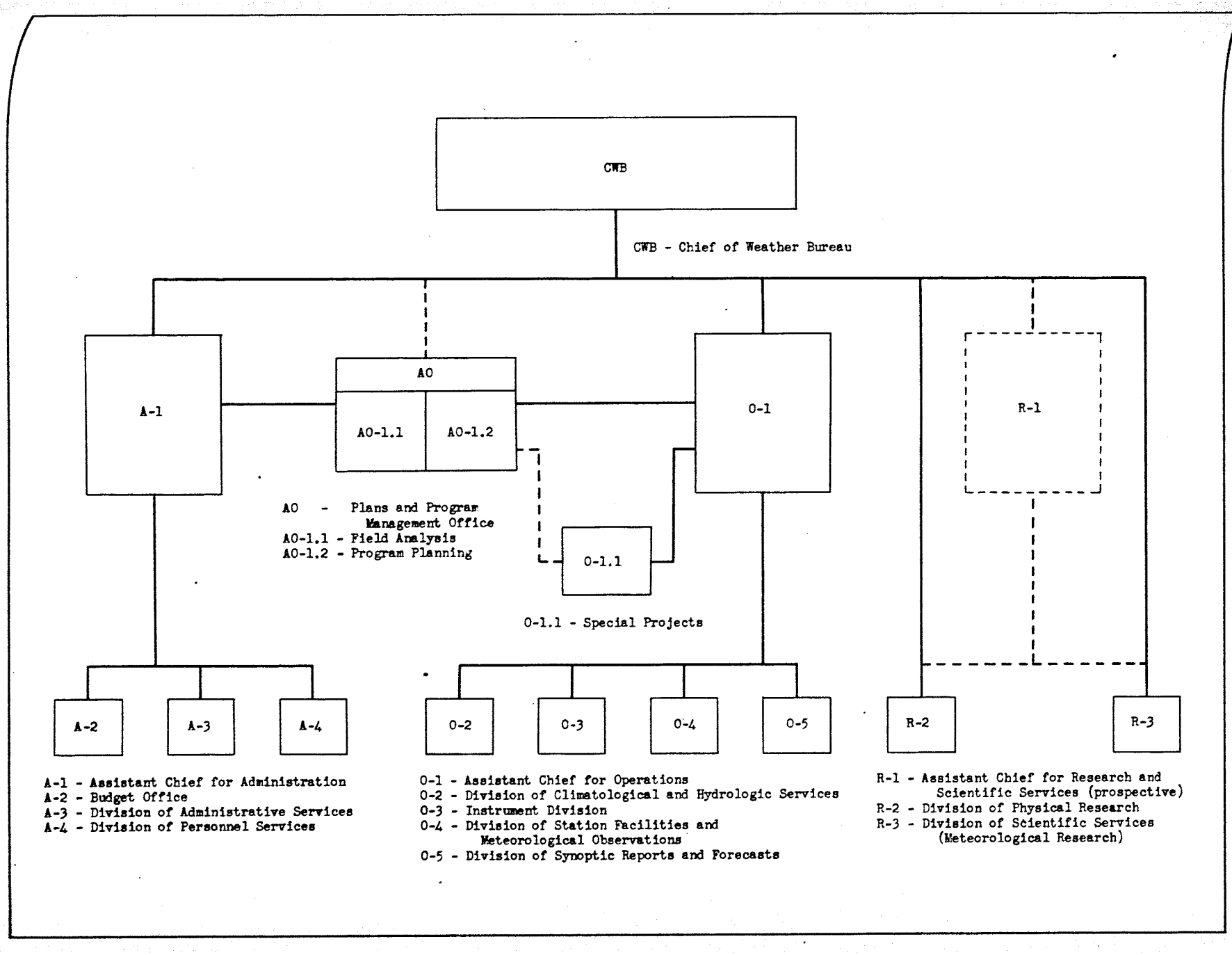
(a) A new feature for identifying organizationally the Offices and Divisions of the Weather Bureau is adopted and incorporated in the numbering system shown on the organization chart. In this system the Office of the Assistant Chief for Administration will be numbered A-1 and the Divisions for which he is responsible will be numbered A-2, etc. Likewise, the Office of the Assistant Chief for Operations will be numbered O-1 and the Divisions under his supervision will be O-2, etc. The prospective Office of Assistant Chief for Research and Scientific Services will be numbered R-1, with the Division of Physical Research R-2, and the Division of Scientific Services R-3. This system will be amplified later and probably will be extended to Regional Office organization at a future date.

(b) As soon as detailed instructions can be prepared, correspondence will carry the identifying office number as a code reference, instead of the Division symbols as at present. Since this numbering system can be expanded to designate sections and units, the handling of correspondence in the Central Office and the field will be simplified.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

Attachment


CWB
CWB - Chief of Weather Bureau
A-1
AO
AO-1.1
AO-1.2
O-1
R-1
AO - Plans and Program Management Office
AO-1.1 - Field Analysis
AO-1.2 - Program Planning
O-1.1
O-1.1 - Special Projects
A-2
A-3
A-4
O-2
O-3
O-4
O-5
R-2
R-3
A-1 - Assistant Chief for Administration
A-2 - Budget Office
A-3 - Division of Administrative Services
A-4 - Division of Personnel Services
O-1 - Assistant Chief for Operations
O-2 - Division of Climatological and Hydrologic Services
O-3 - Instrument Division
O-4 - Division of Station Facilities and Meteorological Observations
O-5 - Division of Synoptic Reports and Forecasts
R-1 - Assistant Chief for Research and Scientific Services (prospective)
R-2 - Division of Physical Research
R-3 - Division of Scientific Services (Meteorological Research)

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D.C.

Anl-mlh
(File No. 610,
600.00)

August 3, 1948

CIRCULAR LETTER NO. 65-48
(To All First Order Stations)

Subject: Changes in analysis transmissions on Service C.

In accordance with WAMES issued on C.A.A. Circuits, the Weather Bureau-Air Force-Navy Analysis Center in Washington, D.C. began transmissions of the following new analyses on Service C effective 0001Z 1 August 1948:

Heading	Description	Area
UAAM DCA	700-millibar analysis; contour systems, contours, isotherms, and mixing ratio (or dew point) isopleths, in CAC.	20°N - 60°N 50°W - 130°W
MFAM DCA	30-hour surface prognostic chart; pressure systems, fronts and isobars, in CAC.	20°N - 60°N 50°W - 160°W
UFAM DCA	36-hour 700-millibar prognostic chart; contour systems, fronts, and contours, in CAC.	20°N - 60°N 50°W - 160°W

	Time on Service C GMT	Time on Service C EST	Circuit of Origin	Relays
UAAM DCA	0910-0919 2115-2124	0410-0419 1615-1624	30 (via local circuit to Washington National Airport)	To all Service C circuits simultaneously.
MFAM DCA UFAM DCA	0010-0024 1205-1219	1910-1924 0705-0719		

MFAM DCA, except for increased area coverage, is the same as the previous MF DCA which it replaces, and UFAM DCA is in lieu of the previous UA DCA, 24-hour 700-millibar prognostic chart. UAAM DCA is a new transmission on Service C.

To facilitate use of the prognostic charts, the continental portion of MFAM DCA is coded first, followed by the Pacific, and finally the Atlantic portion. The same coding procedure is followed in the UFAM DCA, permitting stations to decode only those portions needed.

The same analyses as listed above are recoded for transmission on Air Force circuits, with DCA replaced by WBC in the headings, and with point position groups given in the form QLLll. Point position groups in Service C analysis transmissions will continue in the form IIIDs for continental areas until such time as Weather Bureau base maps are revised to permit use of latitude and longitude for locating points.

Effective with inauguration of the above transmissions, the following were discontinued on Service O: UAAM WBC (700-millibar analysis), MFAM WBC (24-hour surface prognostic chart), and UFAM WBC (24-hour 700-millibar prognostic chart). Also at the same time, MFAM1 WBC (48-hour surface prognostic chart) on Service O became a 54-hour surface prognostic chart, but was not otherwise changed as to heading, content, and distribution.

It is recommended that Weather Bureau forecast centers, as a matter of routine, decode and chart the MFAM DCA and UFAM DCA, either in full or as much as has a bearing on forecasts issued. These prognoses are intended to assist the forecaster by providing independent advice in his own evaluation of future trends. It is advisable for the forecaster to examine each prognosis carefully so far as it has bearing on his forecast; this applies both to the overall features affecting his forecast area and to the more minute details as influenced by local topography. The forecaster's authority and responsibility for his final decision are not altered as a result of the prognoses.

At Weather Bureau stations other than forecast centers the use of prognosis transmissions will be at the discretion of the Official in Charge, but they should be used as a guide and time saver in preparing the forecast at all such offices that originate forecasts.

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25.

SR&F-Hu
(File No. 102.4,
080)

August 4, 1948

CIRCULAR LETTER NO. 66-48
(To All First Order Stations)

Subject: Emergency Responsibilities of Weather Bureau Offices.

General storms are relatively infrequent during the summer season and emergency warnings are therefore seldom necessary except in regions where hurricanes occur. Occasionally however, there are local storms during the summer months which involve danger to life and property. With staff shortages, absences due to vacations, and the slow-up incident to hot summer weather, the possibility of emergency conditions should not be overlooked. The provisions for emergency overtime service stated in Circular Letter 16-47 continue in effect at all times. Officials in Charge should make sure that those responsible for regular watch service are thoroughly familiar with local emergency procedures and all offices should be prepared at all times to meet emergency conditions.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

August 4, 1948

Circular Letter No. 67-48
(To all First Order Stations)

Subject: Disposition of surplus property

Circular Letter C-1, dated July 1, 1948, issued by the Treasury Department, Bureau of Federal Supply reads in part as follows:

> "The Supplemental Independent Offices Appropriation Act, 1949, approved June 30, 1948, provides in part as follows:
>
> > "(11) The Surplus Property Act of 1944, as amended, shall not apply to property of the Government which has not been declared surplus under the terms of such Act as of the date of enactment hereof and any such property determined to be surplus shall be disposed of in accordance with the terms of other existing law."
>
> "Under "other existing law", all supplies, materials and equipment located in the District of Columbia and all serviceable supplies, materials, and equipment located outside of the District of Columbia, surplus to the needs of any executive agency or the District of Columbia Government, must be declared to the Bureau of Federal Supply, Act of December 20, 1928, 45 Stat. 1030 (40 U.S.C. 311a); Act of Mar3, 1933, 47 Stat. 1517; Executive Order 6166, dated June 10, 1933; and the Regulations Governing the Operations of the Bureau of Federal Supply, approved by the President, April 12, 1935, as amended (41 CFR 33.1 - 33.3).
>
> Effective July 1, 1948, except as provided below, all such surplus supplies, materials and equipment of the common supply type (i. e. items appearing in the Federal Supply Schedule and Stock Catalogs of this Bureau) shall be declared to the Bureau of Federal Supply. Instructions regarding declarations of surplus personal property other than those of the comon supply type will be issued within the next 30 days. Declarations of property required to be made by this Circular Letter should be submitted on the forms presently prescribed by the War Assets Administration, with such modifications as may be appropriate, pending the issuance of further instructions."

To carry out the provisions of the above directive, all serviceable surplus property shall be reported on Stock Form 3, Survey of Public Property, in accordance with Par. E-7502 of the Weather Bureau Manual.

The Materiel Section, Central Office will prepare the surplus reports on WAA Form 1001, Declaration of Surplus Personal Property and forward the form to the Regional Bureau of Federal Supply Office. Copies of the declaration will be forwarded to the Regional Office and the Station declaring the property surplus. Receipt of this form will constitute authority to dispose of the property upon receipt of instructions from the Bureau of Federal Supply.

A report shall be made to Materiel Section, Central Office of all authorizations for the disposal of property which have been issued by Central Office but which have not been consummated prior to July 1, 1948. This report should include the referenced disposal authority form and date. Declarations to War Assets Administration should not be included in this report, as the revised law does not affect declarations made prior to July 1, 1948 under the Surplus Property Act of 1944.

Chapter E-75 of the Manual will be amended upon receipt of detailed instructions from the Bureau of Federal Supply.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

August 5, 1948

SR&F-Hu
(File No. 610)

CIRCULAR LETTER NO. 68-48
(To All First Order Stations)
Subject: Economy in Communication Expenditures.

Allotments for communication costs have been curtailed as a part of general reductions required to keep Weather Bureau expenditures within the limits of Congressional appropriations for the current fiscal year.

To bring expenditures in line with communication allotments, reduction in communication costs must be effected wherever this can be done without serious curtailment of approved Weather Bureau services.

The purpose of this letter is to enjoin the strictest economy in the use of telegraph, telephone, TWX and the PBA network for the handling of administrative business. Where wire communication is necessary for administrative purposes, the channel and/or class of message used should be that involving the least expense consistent with the urgency of the communication. Long distance telephone costs of an administrative nature must be kept to a minimum and used only in urgent cases, and then only when the questions to be discussed are written up in advance as an agenda for the call so as to minimize time consumed.

Curtailment in communication costs for other purposes will be the subject of further correspondence with stations and offices concerned.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D.C.

Pers:Tr-Lo
(File No. 102.2)

August 5, 1948

CIRCULAR LETTER NO. 69-48
(To All First-Order Stations)

Subject: Civil Service Announcement for P-1 Meteorologist Examination.

An announcement for a P-1 Meteorologist examination was issued by the Civil Service Commission on August 2, 1948. All employees, permanent or otherwise, including those on leave without pay, who desire permanent status at P-1 grade and are qualified for it according to specifications in the announcement, should apply for the examination. The announcement, No. 107, contains all information necessary, and lists places where application cards may be obtained. The closing date for application is August 31, 1948.

It is expected that an examination announcement for P-2 through P-5 Meteorologists will be issued by the Civil Service Commission in the very near future.

According to present plans, the examination for Meteorologists P-2 through P-5 will not be a written one.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

C&HS/ES/No.
(File No. 750)

August 5, 1948

CIRCULAR LETTER NO. 70-48
(To All First-Order Stations)

Subject: "Instructions for Preparing Pages 2-5 WB Form 1001" Printed on Page 3a Form 1001.

Effective upon receipt, "Instructions For Preparing Pages 2-5, Forms 1001 and 1001-A", are amended as follows:

1. With the inauguration July 1, 1948 of the revised WBAN 10 most of the references to columns on page 3a of Form 1001 "Instructions for Preparing Pages 2-5" no longer apply. In lieu of revised instructions which will be issued effective January 1, 1949 in connection with replacement records for Forms 1001 and 1001A, column captions rather than column numbers should be used for the transcription of data from WBAN 10 to WB Forms 1001 and 1001A.

2. "Types of Clouds", Instructions numbered 16, 17, and 18. These instructions should be cancelled for stations taking hourly observations. All entries of clouds and obscuring phenomena should be omitted from Columns 16, 17, and 18 on Forms 1001 and 1001A at such stations. Stations taking only synoptic observations should continue to enter these data.

3. "Ceiling". Instruction No. 19. The last sentence of this instruction should be deleted. Henceforth, only the ceiling value will be entered.

4. "Present Weather", Instruction No. 21. The sixth sentence should be made to read as follows: "ww" code numbers 00 to 03 should always be entered in Column 21, accordingly as the number of tenths of sky cover entered in Column 15 Form 1001 satisfy the criteria for these code groups.

Entry of data in Columns 16, 17, 18, 19, and 21 of Forms 1001 and 1001A, which have already been made and which do not accord with these amended instructions do not need to be changed to conform with these instructions.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau

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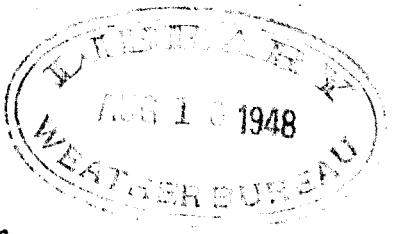
UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D.C.

Pers:Tr-Lo
(File No. 102.2)

August 6, 1948



CIRCULAR LETTER NO. 71-48
(To All First-Order Stations)

Subject: Civil Service Examinations for Meteorologist P-2 Through P-5.

The best information available indicates that the Civil Service Examination for Meteorologist P-2 through P-5 will be announced in the very near future, perhaps within a few weeks. All employees who are interested in these examinations, especially those in the professional grades who have War Service or Temporary appointments, should keep alert for the announcements. Those on leave should watch the bulletin boards at Post Offices and other public buildings where Civil Service examination announcements are usually posted.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

NOTE: Officials-in-Charge are requested to make a special point of inviting attention of all employees who desire to acquire permanent status, to the importance of this announcement of examinations for professional grades. Those who fail to apply for the examination are subject to replacement by those whose names are placed on the register.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

SR&F-Hew
(File No. 621.1, 621.5) August 6, 1948

CIRCULAR LETTER NO. 72-48
(To all First-Order Stations)

Subject: Warning Service to American Red Cross

Circular Letter No. 34-48 outlines procedures for furnishing warnings or advance information of a potential emergency weather or flood condition to the Red Cross. There is a similar field in which the Weather Bureau can perform a valuable service. Red Cross disaster operations include the furnishing of food supplies and shelter to the victims of disasters including those which are the result of other than weather or flood conditions. To assist them in maintaining a high efficiency in such operations it is helpful to obtain routine or special daily weather forecasts for the point or area in which these relief operations are being carried out for the duration of such operations.

The following general plan is outlined for carrying out this service. The Area Headquarters Office of the Red Cross will notify the designated WBO listed in table below whenever field disaster units which can utilize daily weather forecast in connection with their operations are set up within their area. Decision should be reached as to the point to which these forecasts should be sent. That WBO will then take action to furnish the forecasts. If necessary, the request may be referred to an appropriate District Forecast Center or to a local Weather Bureau office. If there is any question concerning which office should furnish the forecasts in any particular case, the matter should be referred to the Central Office.

This plan has been discussed with the national Red Cross office, and that office is issuing corresponding instructions to its field offices. Routine forecast messages sent to the Red Cross under this plan will be "collect."

F. W. Reichelderfer,
Chief of Bureau.

AREA HEADQUARTERS RED CROSS	AREA COVERED BY RED CROSS	WEATHER BUREAU OFFICE
Alexandria, Va.	Ind., Ky., Ohio, W. Va., Va., Md. & Pa.	WBAS, Washington
Atlanta, Ga.	N. C., S. C., Ga., Fla., Ala., Miss., La., & Tenn.	WBAS, Atlanta
New York, N. Y.	New Eng., N. Y., N. J., & Del.	WBO, New York
St. Louis, Mo.	Ill., Mich., Wis., Ia., Minn., N. Dak., S. Dak., Nebr., Mo., Kans., Okla., Ark., Tex., N. Mex., Colo., & Wyo.	WBO, St. Louis
San Francisco, Calif.	Ariz., Calif., Nev., Utah, Mont., Idaho, Wash., & Oreg.	WBAS, San Francisco Airport, San Bruno

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

August 6, 1948

(AG and MO/461
File No. 2601.2, 603.51)

CIRCULAR LETTER NO. 73-48
(To All First Order Stations)

Subject: Additional requirements for special airway observations.

Effective September 15, 1948, all stations at which ILS operations are conducted will transmit a special airway observation whenever

(1) the visibility increases to equal or exceed 1/4, 1/2, or 3/4 mile

(Example: a special observation will be required when the visibility changes from 5/8 to 3/4 mile.)

(2) the visibility decreases to less than 1/4, 1/2, or 3/4 mile

(Example: a special observation will be required when the visibility changes from 1/2 to 3/8 mile.)

The above requirements for special observations are in addition to those already contained in Circular N.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

SFandMO/S
(File No. 740.5

August 27, 1948

CIRCULAR LETTER NO. 74-48
(To all Stations)

Subject: Circular N, 11th Amendment, Paragraphs 20161 and 20162.

Personnel at all stations are requested to inspect copies of Circular N, 11th Amendment, Paragraphs 20161 and 20162 to determine that the text corresponds with the following:

"20161. All pireps of information other than elements already contained in current Weather Bureau reports will be filed immediately for transmission or otherwise disseminated. In this respect, the weather observer's function is merely to assist in the prompt dissemination of the pireps.

20162. Measured ceiling values will be redetermined immediately upon receipt of a pilot's report indicating a different value obtained within 1½ miles of the boundary of the airport. The pireps will be entered in parentheses on Form 1130A for record purposes and will not be disseminated unless a redetermination of ceiling height is impossible. When a pilot reports a ceiling height differing from any but a measured ceiling value, the pireps will be disseminated, after which an observation of ceiling and sky will be taken at once. If a measurement is possible, and it differs from the pilot's report by an amount that requires filing a special observation for ceiling change, the observer will immediately file a special observation of ceiling, sky, visibility, weather, obstruction to vision, and wind. If a special observation is not required, it will be entered on Form 1130A as a local extra observation

(Continued on following page)

of ceiling and sky condition only, and given local extra dissemination. When a projector measurement is not possible, a pilot's report of ceiling will be used in subsequent airway observations taken within the succeeding 15 minutes, provided the ceiling has not changed to a degree that makes the pilot's report of ceiling inapplicable."

If a difference is noted, the text quoted above should be pasted over, or otherwise substituted for the differing text.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

File No. 750 August 30,1948 SF&NO:A

CIRCULAR LETTER NO. 75-48
(To All Stations)

Subject: Discontinuance of preparation of Form 1083 at certain stations.

Since space for computation of station pressure is now provided on revised Form 1130B, preparation of Form 1083 will be discontinued, effective September 15, 1948, at all stations using it for computation of station and sea-level pressure only. Preparation of Form 1083 will be continued at all stations presently using it either for coding purposes or for computation of the height of the 850-mb surface, but entry of pressure reduction data on it should be discontinued at these stations also. First order Weather Bureau stations taking hourly and synoptic observations will continue to send Form 1083 to New Orleans, in accordance with Circular Letter No. 8-47 dated February 5, 1947.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

C&HS/Inf/Wy
(File No. 600.23)

August 30, 1948

CIRCULAR LETTER NO. 76-48
(To all Stations)

Subject: Releasing Weather Information Associated With Aircraft Accidents.

Reference: Circular Letter No. 137-41, dated October 21, 1941.

The question has arisen as to what Weather Bureau records may be made accessible to the public for use in connection with aircraft accidents. The following paragraph, quoted from the referenced circular letter, should be brought to the attention of all personnel who may receive requests for weather information related to such accidents.

> Reports of aircraft accidents are for the exclusive and confidential information of the Weather Bureau and the Civil Aeronautics Administration. Under no circumstances will these written reports, or statements contained in them, be given to outside interests. The actual weather reports and forecasts provided will be furnished to all interests upon request. In no case will a statement be made by any Weather Bureau official to outside persons regarding his conclusions as to the cause of the accident.

In accordance with the quoted paragraph, persons outside the Weather Bureau and the Civil Aeronautics Administration may be furnished copies of surface and upper-air records, forecasts, sequence reports, etc., but will not be given Form 1120 nor statements contained in this report, other than the items listed above. Furthermore, Weather Bureau officials will not interpret the weather records and forecasts as related to the accident, nor make any statements, nor express any opinions to outside persons as to the possible causes, even though weather may have been a contributing factor, without previous approval from the Central Office. In view of the fact that the Civil Aeronautics Board is by law the Federal agency responsible for determining the cause of aircraft accidents, the Weather Bureau should make no statements about aircraft accidents which would encroach upon this function of the Civil Aeronautics Board.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

P&PMO
(File No. 700.7,
723.3)

August 31, 1948

CIRCULAR LETTER NO. 77-48
(To All First-Order Stations)

Subject: Subscription Lists for Climatological Data.

Effective with subscriptions received for the August 1948 and later issues the following new prices have been approved for Climatological Data.

Combined Climatological and Hydrologic Bulletin:	
One section, per month	$ .15
Per year, including Annual Summary	1.50
Forty-two sections, bound in paper, per month	4.00
Forty-two sections, bound in paper, per year including Annual Summary	48.00
Annual Summary for 42 sections, per section	.15
Annual Summary for 42 Sections, bound in paper	4.00
Climatological Data for Alaska, Hawaii and the West Indies; for each of three sections issued monthly, per month	.10
For each of three sections issued monthly, including Annual Summary, per year	1.00

As soon as Climatological Data are printed by photo-offset, either at field Government Printing Offices or field Weather Bureau plants, the Weather Records Processing Centers will assume and maintain control of the mailing lists for this publication. This will relieve Section Centers of this routine and should result in more efficient operation, since preparation of the address lists and mailing of the bulletins will be accomplished in the plant where the printing is done.

In Regions 1, 2, 4 and 5 where Weather Bureau photo-offset plants are not yet in operation, distribution of Climatological Data should be made from the Section Centers until the Weather Bureau printing plants are equipped and staffed. Climatological Data printed for states in these regions will be sent to the Section Centers for distribution until Weather Bureau photo-offset plants are in operation.

The following actions are necessary whenever a field Government Printing Office or field Weather Bureau plant is ready to handle the mailing.

The Weather Records Processing Center will ask each Section Center to furnish a complete mailing list for the Climatological Data. This list should show which subscribers are on the free list and should include the

expiration date for each paid subscription. To this list should be added names of Hydrologic Bulletin subscribers who do not now receive Climatological Data. These names will be or have been furnished each Weather Records Processing Center by the Central Office.

In regions 3, 6, and 7 the Weather Records Processing Center will find out if addressograph plates now used at the Section Centers will fit the Government Printing Office addressographs. If so, these plates should be used.

Action will be started at the Central Office to furnish Weather Records Processing Centers in Regions 1, 2, 4 and 5 with addressing machines and the equipment for making plates.

All correspondence concerning subscriptions to the Climatological Data, and all remittances for this publication received at any field station should be forwarded to the appropriate Weather Records Processing Center for action. Deposits of remittances by the Weather Records Processing Centers will be made in the FederalReserve banks in accordance with instructions in Pars. 4015 and 4016 of the Fiscal Manual.

Effective immediately, no subscriptions should be accepted for more than one year in advance. Subscribers eligible for the free list include only municipal, county, state, and federal government agencies, libraries of educational institutions such a s colleges and universities, and cooperative observers.

Subscribers will be advised when their paid subscription expires by an insert sheet to be furnished by the Central Office to the Weather Records Processing Centers and Section Centers for distribution to the subscribers with the last paid issue.

A supply of a form letter explaining the changes in the bulletin and also listing the changes in price of the bulletin will soon be furnished to each Weather Records Processing Center and Section Center concerned. A copy of this letter should be sent to each paid subscriber.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

C&HS/FS/Mo
(File No. 047, 750)

September 10, 1948

CIRCULAR LETTER NO. 78-48
(To All First-Order Stations)

Subject: Earthquake Reports, WB Form 5000

The Weather Bureau, because of its wide network of First-Order stations through the United States and its territories, has for many years been cooperating with the U. S. Coast and Geodetic Survey in the collection of earthquake reports, through the monthly rendition of WB Form 5000 by each First-Order Weather Bureau office. These reports are collected in the Central Office and later furnished to the Washington, D. C. office of the U. S. Coast and Geodetic Survey. Recently the Central Office's responsibility for the collection and transmission of the earthquake reports to the U. S. Coast and Geodetic Survey was transferred from the Editor's Office to the C&HS Division.

To most efficiently accomplish this cooperative project, the following instructions will become effective upon receipt at all First-Order stations.

1. When an earthquake occurs, an original and one carbon copy of Form 5000 should be prepared in detail by the First-Order stations. The original copy will be sent to the Section Center, which will forward it promptly to the Central Office, marked for the attention of C&HS Division.

2. When no earthquakes occur during a month the Section Center will submit one copy of Form 5000 to C&HS Division with the statement "No earthquakes reported in (Section) during (month) (year)" entered on the face of the form. This report should be mailed by the 20th of the following month.

Under this plan it will be necessary for stations, other than Section Centers, to submit an earthquake report only when a quake occurs.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

AO-1.2
(File No. 000,080)

September 16, 1948

CIRCULAR LETTER NO. 79-48
(To all First-Order Stations)

Subject: Organizational Numbering System.

Reference: Circular Letter No. 64-48.

Effective upon receipt of this Circular Letter, division symbols will no longer be used, nor will letterheads carry the name of the division originating correspondence; instead, all correspondence emanating from the Central Office will merely carry an identifying office number as a code reference. Regional and field officials, in replying to correspondence from the Central Office, will include the code numbers as part of the reference; i.e., "Your letter of July 3, 1948 - AO-1.2".

Attached is the numbering system which has been expanded to designate sections and units of the Central Office. This code will appear on correspondence as follows: "A-3.31". "A" indicates Assistant Chief of Bureau for Administration; "3" represents division (Administrative Services); ".3" indicates section (Fiscal); and "1" indicates unit (Accounting).

If the attached breakdown is found inadequate in any particular case, further breakdowns as necessary will be made by expanding the codes. It is realized that some of the sections and units in the code breakdown do not prepare correspondence; however, we believe it desirable to include all offices in the new numbering system since the codes will be used for other purposes as well as correspondence.

The dictator's and typist's initials will no longer appear on the outgoing letter or memorandum but will be typed in the upper left corner of retained copies only.

The correspondence chapter of the Manual will be amended in the near future to incorporate the above changes in procedure.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

(Attachments)

ORGANIZATIONAL NUMBERING SYSTEM

CWB	Chief of Weather Bureau
A-1	Assistant Chief for Administration
O-1	Assistant Chief for Operations
R-1	Assistant Chief for Research & Scientific Services
AO-1	Plans and Program Management Office
AO-1.1	Field Analysis Section
AO-1.2	Program Planning Section
AO-1.3	Overseas Section
A-2	Budget Office
A-3	Office of Division Chief, Administrative Services
A-3.1	Carpenter Shop
A-3.2	Drafting Section
A-3.3	Fiscal Section
A-3.31	Accounting Unit
A-3.32	Auditing Unit
A-3.33	Payroll Unit
A-3.34	Travel Unit
A-3.4	General Service Section
A-3.5	Materiel Section
A-3.51	Forms & Publications Distribution Unit
A-3.52	Procurement Unit
A-3.53	Property Accountability & Issue Unit
A-3.6	Printing Section
A-3.61	Composing Room
A-3.62	Duplicating Unit
A-3.63	Printing Plant
A-3.7	Records Management Section
A-4	Office of Division Chief, Personnel Management
A-4.1	Classification Section
A-4.2	Employee Relations Section
A-4.3	Placement Section
A-4.31	Transactions Unit
A-4.4	Records Section
A-4.5	Training Section
O-1.1	Special Projects (Title only)
O-1.2	Arctic
O-1.3	Thunderstorm
O-2	Office of Division Chief, C&HS
O-2.1	Office of Asst. Chief for Climatology
O-2.11	Climatological Information Section
O-2.12	Climatological Investigations Section
O-2.13	Field Services Section
O-2.14	Records & Processing Section
O-2.141	Processing Unit
O-2.142	Radiosonde Verification Unit (WNAP)
O-2.143	Radiosonde Verification Unit (New Orleans)
O-2.144	Records Unit
O-2.145	Tabulation Unit (New Orleans)

0-2.2 Office of Asst. Chief for Hydrology
0-2.21 Cooperative Studies Section
0-2.211 Meteorological Unit
0-2.212 Storm Review Unit
0-2.22 Hydrometeorological Section
0-2.221 Drafting & Reproduction Unit
0-2.222 Hydrologic Unit
0-2.223 Meteorological Unit
0-2.224 Preliminary Estimates Unit
0-2.225 Storm Review Unit
0-2.23 Procedure Development Section
0-2.231 Drafting Unit
0-2.232 Technical Unit
0-2.24 River Services Section

0-3 Office of Division Chief, Instrument
0-3.1 Engineering Section
0-3.2 Instrument Shop
0-3.3 Laboratory Section
0-3.4 Radiosonde Section
0-3.5 Technical Equipment Section

0-4 Office of Division Chief, Sta. Facilities & Metl. Obs.
0-4.1 Station Facilities Section
0-4.2 Meteorological Observations Section
0-4.3 Technical Investigations Section

0-5 Office of Division Chief, Synoptic Reports & Forecasts
0-5.1 Analysis Center
0-5.2 Assistant Chief for Synoptic Services
0-5.21 Codes & Maps Section
0-5.22 Radio Marine Section
0-5.23 Synoptic Section
0-5.231 Communications & Bulletin Unit
0-5.3 Assistant Chief for Weather Forecasting & Services
0-5.31 Domestic Aviation Section
0-5.32 Public & Special Services Section
0-5.321 Daily Map Unit
0-5.4 International Aviation Section

R-2 Office of Division Chief, Physical Research
R-2.1 Atmospheric Electricity Section
R-2.2 Cloud Physics Section
R-2.3 Cloud Physics Air & Ground Opr. Group(Wilmington)
R-2.4 Engineering Development Section
R-2.5 Instrument Research Section

R-3 Office of Division Chief, Scientific Services
R-3.1 Editorial Section
R-3.2 Extended Forecasts Section
R-3.3 Library
R-3.4 Meteorological Physics Section
R-3.5 Meteorological Statistics Section
R-3.6 Short Range Forecast Development Section
R-3.7 Special Projects Section

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

SR&F-Ch
(File No. 600.22, 610)

September 17, 1948

CIRCULAR LETTER NO. 80-48
(To All First-Order Stations)

Subject: Distribution of Pilot Weather Reports.

A review of the distribution currently given to PIREPS indicates that many PIREPS are not being transmitted on Service A; that there is confusion as to which office is responsible for transmitting these reports; and that PIREPS are not reaching some offices that might have use for them.

In order to provide for a more complete distribution of PIREPS between FAWS, WBAS, Forecast Centers, ARTC, Towers and the airlines, the following instructions will become effective 0030 EST, October 1, 1948.

1. If the original PIREP is received by the Tower, the Tower will relay this report to the local Weather Bureau Airport Station and to ARTC. The local Weather Bureau Airport Station will be responsible for transmitting the PIREP on Service A.

2. If the original PIREP is received by INSAC, INSAC will advise the local Weather Bureau Airport Station and ARTC. The local Weather Bureau Airport Station will be responsible for transmitting the report on Service A.

3. The Air Transport Association has agreed that the airlines will give PIREPS to ARTC through airline company radio stations, or to the local Weather Bureau Office. It is expected that most of these PIREPS will go to ARTC, who in turn will give the report to FAWS. In this case, FAWS will be responsible for transmitting the report on Service A. When FAWS receives a PIREP, it will be necessary to determine whether this report came through Tower, INSAC or airline radio. If FAWS does not have access to Service A facilities, it will be necessary to relay the report to the local Weather Bureau Airport Station for transmission. FAWS is hereby authorized to edit PIREPS before forwarding them for transmission on Service A. "Editing" may consist of deleting material considered unimportant; combining two or more PIREPS; and in general, arranging the PIREPS in clear, concise form. Instructions in Circular N relative to PIREPS should be adhered to.

4. If the PIREP is originally received by WBAS, that station will be responsible for transmitting the report via Service A, and no further distribution will be necessary.

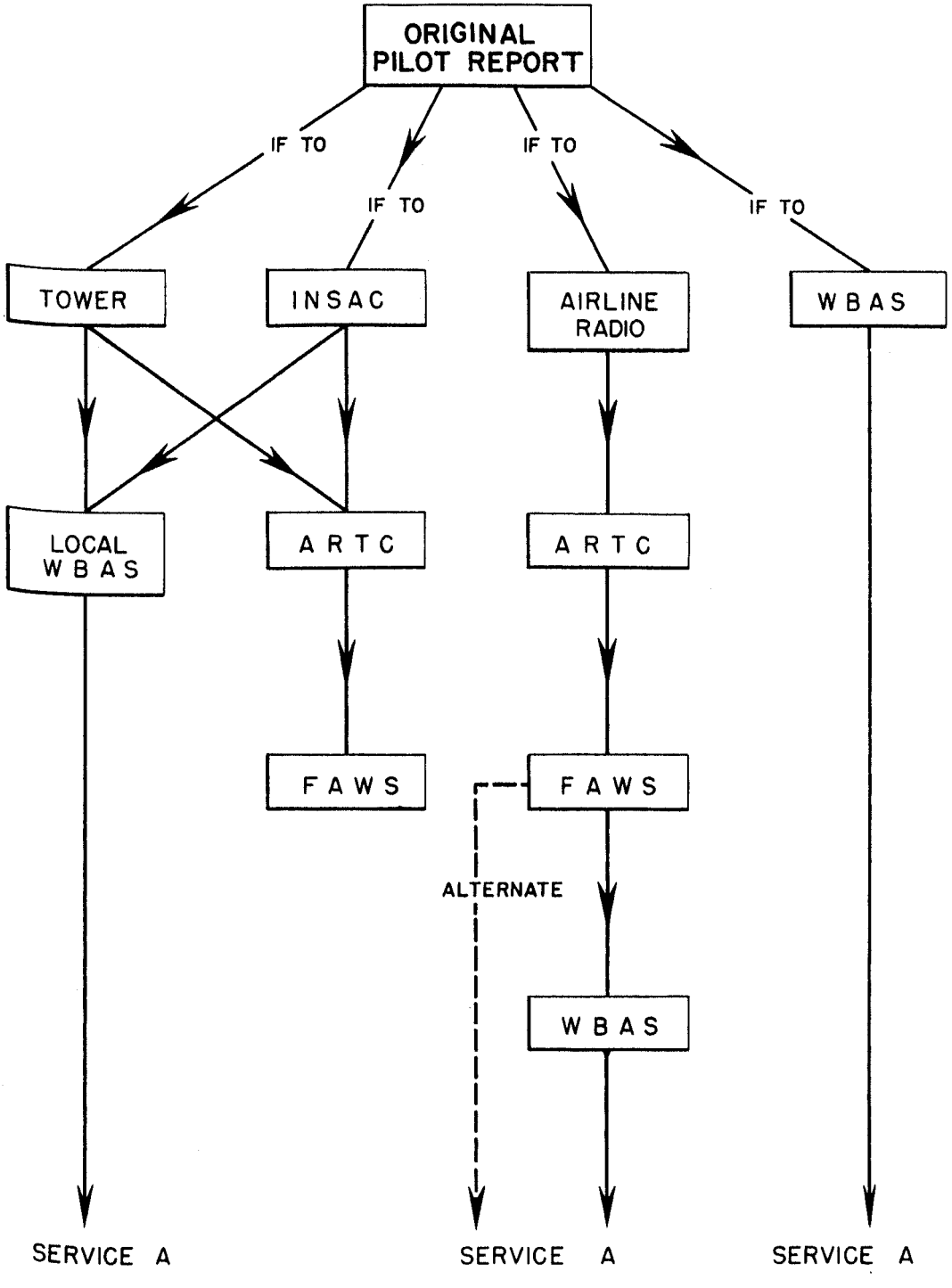
It is realized that not all stations will be able to follow the exact pattern outlined in this instruction. Variations in procedure may have to be made locally, but the general plan as shown on the enclosed chart should be followed as closely as possible.

This plan has been coordinated with the Civil Aeronautics Administration and the Air Transport Association.

F. W. Reichelderfer,
Chief of Bureau.

Enclosure

PIREPS DISTRIBUTION CHART



Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

SF&MO:We
(File No. 601.3)

September 20, 1948

CIRCULAR LETTER NO. 81-48
(To All Stations)

Subject: Winds-aloft observations at high altitudes

Civil and military aviation require wind data at higher altitudes than those commonly reached in our winds-aloft program. So far as facilities and personnel permit, it is the responsibility of the Weather Bureau to furnish the data. The results obtained during the recent International Aerological Days program constitute a gratifying demonstration that this can be done. The following instructions are intended to secure the same results on a continuing basis. Therefore, these instructions, which are effective upon receipt at the station, supersede those previously issued in this connection.

(1) Rabals will be substituted for pibals whenever weather conditions permit at the scheduled 0300 and 1500 G.C.T. times at all raob stations that do not make rawins.

(2) One-hundred gram balloons will be used for any scheduled pibal that is expected to reach 7 km. or higher.

(3) All pibals will be continued as long as possible. When only one observer is on duty and it is possible to obtain a high flight, the pibal may be started one-half hour before the scheduled time and continued as long as possible thereafter, omitting all record and check observations that might ordinarily be taken during that period. However, before the observation is started in such cases, arrangements should be made with the CAA operator to transmit the code group "DCAVU" instead of the next regular hourly observation. This code group means "Surface observation omitted on account of pibal but ceiling is more than 9750 feet and visibility is more than 10 miles." Since at such times the ceiling and visibility would be unrestricted, safety of aviation would not be endangered.

In order to preserve continuity in the surface records, as much as possible of the omitted record observation should be observed visually during the pibal and taken from the autographic records as soon as the pibal has ended.

The omitted observation will not be transmitted, but will be recorded on WBAN 10 as follows:

1. Enter "R" in column 1.

2. Enter the time of the beginning of the observation sequence in which it normally would have appeared in columns 2 and 16.

3. Enter ceiling, sky, visibility, weather and obstructions to vision, and cloud and obscuring phenomena data in columns 3, 4, 5, 6, and 21-35 respectively. These data will be observed during the pibal at the time the omitted observation was scheduled.

4. Enter dry-bulb and wet-bulb temperature data in columns 8, 18, and 19. These data will be interpolated between the dry-bulb and wet-bulb values recorded in the observations immediately preceding and following the omitted observation, except that the data will be taken from thermographs or telepsychrometers at stations equipped with them.

5. Enter in columns 9 and 20 dew point and relative humidity data, computed from the interpolated dry-bulb and wet-bulb temperature data in the usual manner.

6. Enter sea-level pressure, altimeter setting, station pressure, pressure tendency, and net three-hour change data in columns 7, 13, 17, 36 and 37 respectively. The basic data will be taken from the barograph trace. The dry-bulb temperature obtained in accordance with the preceding instructions will be used to obtain the 12-hour mean temperature for pressure reductions.

7. Enter surface wind direction and speed in columns 10 and 11. These data will be taken from multiple registers at stations equipped with them. At other stations the wind data will be estimated during the pibal at the scheduled time of the omitted observation.

8. Enter any remarks noted during the pibal observation, and additive data, if appropriate, in column 14. Enter the following in parenthesis in column 14: (Not Transmitted).

(4) During periods of high winds when the balloon reaches the rawin limiting angle in a relatively short period of time, every possible effort will be made to supplement the rawin data with rabal data. During these periods the theodolite should be set up near the SCR-658 before the observation is started so that the changeover can be made without delay.

(5) Water-activated lighting units should be used whenever a nighttime observation of over twenty minutes can be obtained. In areas where candles and lanterns are prohibited, water-activated lighting units should be used whenever an observation of 12 minutes or more is expected; otherwise a penlight unit will be used.

Observer personnel are urged to take all possible steps to secure wind data to the greatest possible height. Officials in charge and supervising observers will take necessary action to insure compliance with these instructions.

F. W. Reichelderfer
Chief of Bureau

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

(File No. 604)

SF&MO:A
September 21, 1948

CIRCULAR LETTER NO. 82-48
(To All First Order Stations)

Subject: Additional Ocean Weather Ship Stations.

Continuous operation of Atlantic Station BAKER (56°30'N, 51°00'W) is scheduled to begin September 18, 1948 when U. S. Coast Guard cutters will operate this station jointly with the Canadian frigate " St. Stephen". The latter vessel operated this station on a part time basis since November, 1947.

Atlantic Station EASY (34°00'N, 52°00'W) is scheduled to begin operation by the U. S. Government on September 29, 1948.

Pacific Station ABLE (49°00'N, 148°00'W) is scheduled to begin operation by the U. S. Government on September 21, 1948.

Atlantic Stations DOG (45°00'N, 45°00'W), FOX (35°30'N, 40°00'W), HYPO (36°00'N, 70°00'W) and GEORGE (46°00'N, 29°00'W) are expected to begin operation during this fiscal year. Announcement will be made as soon as the dates are more definitely known.

The following U. S. weather ship stations are already in operation:

Atlantic Station ABLE (62°00'N, 33°00'W)
Atlantic Station CHARLIE (52°45'N, 35°30'W)
Pacific Station FOX (30°00'N, 40°00'W)

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

September 27, 1948

File No. 601.2, 600.22

SF&LO:A

CIRCULAR LETTER NO. 83-48
(To All Stations)

Subject: Differing weather observations.

In order to examine the need for revised observational procedures, the Central Office has investigated and analyzed a series of observations in which the weather reported by a ground observer differed from that reported by a pilot observer in an aircraft. A summary of these differing observations according to frequency of occurrence with different types of weather conditions is as follows:

Group	Observed phenomena	% of total number of differing obs.	Observation No. (See Attachment B)
I	Differing ceiling during precipitation or obstructions to vision (ceiling classified E, W, or P)	53	3,4,5,6,9,10,11,12,14,15, 16,17,20,26,27,28,30,33, 34,35,36,37,39,40,45
II	Differing visibility during relatively shallow obstructions to vision	19	2, 13, 21, 22, 23, 24, 38, 44, 47.
III	Differing sky condition	15	7,18,19,25,31,41,42
IV	Differing type of precipitation	6	8, 32, 43
V	Differing ceiling not during precipitation or obstructions to vision (ceiling classified as E or M)	4	29, 46
VI	Differing ceiling classification	2	1

It will be noted from the foregoing tabulation that approximately three-fourths of all differing observations were either (a) reports of differing ceilings during precipitation or obstructions to vision, or (b) reports of differing visibility during relatively shallow obstructions to vision. During such conditions, it is to be expected that reports of conditions viewed from aloft will differ widely from reports of conditions viewed from the ground. For this reason, it is especially important under these circumstances that the pilot's report be disseminated promptly.

Investigation of the differing weather observations has indicated that, in some instances, the procedures for disseminating pilots' reports may not have been completely understood. Therefore, the procedures for handling each type of differing weather observation are restated and amplified in Attachment A. For illustrative purposes, the significant differences in each observation investigated are listed in Attachment B. All observers are requested to study carefully these attachments and to take care that, in all future cases, pilots' reports are distributed promptly in accordance with these instructions.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau

Attachments (2)

ATTACHMENT A

GROUP I. Differing ceiling during precipitation or obstructions to vision (ceiling classified E, W, or P).

Whenever the sky is obscured by precipitation or other obscuring phenomena it is the responsibility of the observer not only to disseminate all pilots' reports of ceiling brought to his attention, but also to request control tower operators or other communications personnel to obtain reports from aircraft known to be in the vicinity. Since observers must utilize the most accurate method of determining ceilings, and since, during precipitation or obstructions to vision, tests have indicated pilots' reports are the most accurate method available, ceilings will be classified as "indefinite" or "precipitation" only if an aircraft ceiling cannot be obtained.

Specifically, the following procedures should have been followed in reporting the weather conditions indicated in observation number 5 of Attachment B:

(1) As soon as the sky was observed to be obscured by snow, communications personnel should have been contacted immediately to determine whether a pilot's report of ceiling were available.

(2) If the pilot's report of the 3700-foot ceiling was available, the ceiling should have been reported as A37, even though the ceilometer (or ceiling light, balloons, etc.) indicated the ceiling was only 800 feet.

(3) If the pilot's report of ceiling could not be obtained immediately, the ceiling should have been reported as P8, but a continuing effort should have been made to obtain an aircraft ceiling. As soon as the pilot's report of the 3700-foot ceiling was available, a special observation should have been filed reporting the ceiling as A37.

II. Differing visibility during relatively shallow obstructions to vision

Pilots' reports of flight visibility, especially those reports received when the surface visibility is restricted by relatively thin obstructions to vision, contain information of considerable operational significance which should be immediately disseminated in the form of a pireps. Since these observations are taken from a different vantage point than the visibility reported in the official weather observation, they should be expected to differ widely under certain circumstances. It is therefore important that both the pilot's report and the ground observer's report be distributed, the former in a pireps and the latter in the usual form of an airway weather observation. In reporting visibility as viewed from aloft, the pireps should be stated in a manner clearly indicating that the visibility being reported in it is not the horizontal visibility at the surface, but the flight visibility reported from an aircraft.

Specifically, the following procedures should have been observed in reporting the condition indicated in observation number 28 of Attachment B:

(1) Upon receipt of the pilot's report of flight visibility, the following pireps should have been transmitted regardless of whether the visibility reported in it corresponded to that in the current weather observation.

ALREPS FLD CLRLY VSBL FROM 5 MIS 28 MSL (Information on time, exact location, etc. should also be included if available).

(2) The horizontal visibility should have been immediately rechecked to ascertain whether the change in visibility as viewed from aloft had occurred at the surface. This visibility should be evaluated solely on the basis of that prevailing at the surface, and may differ considerably from the flight visibility reported by the pilot.

III and IV. Differing sky condition and differing types of precipitation.

Pilots' reports of sky condition and of precipitation aloft should be disseminated in a manner similar to flight visibility. For example, the conditions indicated in observation No. 42 should have been reported as follows:

(1) Upon receipt of the pilot's report, the following pireps should have been transmitted regardless of whether it agreed with the sky condition reported in the current weather observation:

ALREPS SKY CLR 2 MIS W FLD (Information on time, altitude of aircraft, etc. should also be included if available.)

(2) The sky condition observed from the usual point of observation should be immediately rechecked to ascertain if the change reported by the aircraft can be viewed also from the ground, and a careful watch should be maintained to insure that if a change does occur, it will be immediately reported.

V. Differing ceiling not during precipitation or obstructions to vision (ceiling classified as E or M).

Pilots' reports of ceiling when the currently reported ceiling value is classified as "measured" are not immediately disseminated. However, a recheck of the ceiling should be made immediately. If the ceiling is still classified as "measured" the pireps should not be disseminated, but recorded for record purposes only on Form 1130A; if a recheck indicates the ceiling is no longer classified "measured" the pilot's report should be disseminated and the ceiling classified "aircraft".

It will be noted that only two cases have been reported of differing ceilings when precipitation or obstructions to vision were not occurring and that in one case the ceiling was classified "measured" and in the other case was classified "estimated". Since in both cases the cloud layer constituting the ceiling was

broken, and the value reported by the observer higher than that reported by the pilot, it is probable that the ceilometer or ceiling light reaction was from the side of the cloud. Special care must be taken under these circumstances to measure the height of the base and not the side of the cloud.

VI. Differing ceiling classification.

Pilots' reports of types of cloud bases should be disseminated in the form of pireps reporting "ragged ceiling" or in other similarly descriptive terms. Decision as to whether the ceiling in the official weather observation will be classified "indefinite", "measured", or otherwise, will be based on the criteria indicated in Circular N, rather than on the pilot's report.

NOTE: Although the list of elements in par. 20165 of Circular N indicates many of the elements commonly reported in pireps, the list is not exhaustive; the instructions in this attachment indicate several additional elements which, although not specifically mentioned in par. 20165, should nevertheless be distributed as pireps in accordance with the general instructions in par. 20161.

ATTACHMENT B. DIFFERING WEATHER OBSERVATIONS

No.	Date	Ground Observer	Pilot Report	Remarks
1.				
2.	11/21/46	L8 [illegible]K	Ceiling indefinite	
3.	11/27/46	[illegible]/ 3/16 GF	CAVU	
	12/2/46	E8-[illegible]5GF K	CIG 1100 Ft	Pilot more than 1 1/2 mi. from airport boundaries.
4.	2/8/47	W4X3D	Field visible from 3200 ft and 5 miles	
5.	2/19/47	P8X1S-	Field visible from 3700 ft	
6.	2/25/47	P8X3/4S-	Field visible from 900 ft and 1 mile	
7.	2/26/47	E40 [illegible]/[illegible]	No clouds below 10,000 ft	
8.	3/5/47	E-	No sleet	Pilot on ground 1/2 mi. from Weather Bureau
9.	3/6/47	W6 [illegible]2L-FK (Remarks: M16[illegible])	Field visible from 3000 ft	
10.	3/9/47	P3X1 3/4 4S-BS	Field visible from 1400 ft.	
11.	3/9/47	P9X 3/4 S[illegible]-	Field visible from 1600 ft.	
12.	3/17/47	W2 [illegible] 3/4 F	Field visible from 8 miles (altitude not specified)	
13.	3/20/47	[illegible] 1/8 GF	CAVU	
14.	4/5/47	E15[illegible]1/2VSW-GS	Field visible from 5 miles (altitude not specified)	
15.	4/16/47	E8[illegible]1 1/2 R-F	On instruments at 600 ft.	
16.	5/1/47	E20[illegible]8[illegible]2R-F	In clouds at 600 ft.	
17.	5/19/47	W3[illegible]1 1/4 R-FK	Field visible from 5000 ft.	
18.	7/18/47	E3[illegible]/[illegible]3R-F	Lower clouds only scattered.	
19.	8/14/47	[illegible]/	Low stratus overcast over field.	
20.	8/15/47	P5X1RW+	Field visible from 1000 ft. and 4 miles	
21.	9/20/47	[illegible]5GF	Field not visible	Aircraft visible from ground during and after approach.
22.	10/11/47	[illegible]1/2GF	CAVU	
23.	10/22/47	[illegible]1/4GF	Field clearly visible (altitude not specified).	

No.	Date	Ground Observer	Pilot Report	Remarks
24.	10/24/47	○ 1/2 K	Field clearly visible from 5 miles.	
25.	11/4/47	W3⊕⊙ (Remarks: W7⊕)	Pilot reported lower layer only scattered.	
26.	11/8/47	P3X 1 1/2 RWSWF	Field visible from 2000 ft.	
27.	12/2/47	P5X 1/2 RW-	No clouds below 2000 ft; ground visible from 6400 ft.	
28.	12/23/47	⊙20⊙ 3/4 IF 80⊙	Field visible from 2000 ft. and 5 mi.	
29.	12/30/47	M41⊕/⊙8	Ceiling 3500 ft.	Exact location of pilot at time of report not specified.
30.	1/4/48	P5X 3/4 SG-F	Field visible from 1700 ft., flight visibility 1 to 2 mis.	
31.	1/6/48	M5 ⊕⊙4R-	Lower layer only scattered.	
32.	1/20/48	ZR-	ZL- aloft	
33.	2/1/48	E3- ⊕ 2F	Field visible from 400 ft.	
34.	2/1/48	W3X2S-	Field visible from 2600 ft.	
35.	2/10/48	W8X 1/4 S-BS	Ceiling unlimited, flight vis ibility 1 - 3 miles.	
36.	2/10/48	WOX 1/8 S-BS	Field visible from 2500 ft. and 2 - 3 mis.	
37.	2/11/48	- ⊕/4⊙ 1 1/2 HK	High overcast; top smoke layer E2.	
38.	2/11/48	○ 1/2 GF	Field clearly visible (altitude not specified)	
39.	2/20/48	W3⊕ 1SP-F	Field visible from 2000 ft.; scattered clouds at 500 ft.; flight visibility 1 mi.	
40.	2/26/48	W2⊕ 2E-S-	Ceiling 3600 ft., flight visibility 8 mi.	
41.	2/28/48	M3⊙	Clouds at 300 ft. only scattered.	
42.	3/1/48	W4 ⊙	Sky clear over city (more than 1 1/2 miles from airport).	
43.	3/5/48	ZR-	No ice at 2500 ft. temperature 25°F.	
44.	3/18/48	○ 1/4 GF	Field visible from 1000 ft.	

No.	Date	Ground Observer	Pilot Report	Remarks
45.	5/25/48	W3 ⊕ 4R-BINOVC	Field visible from 3400 ft.	
46.	6/21/48	E40 ⊕/Ⓦ	Field not visible from 5000 ft.	Exact location of pilot not specified.
47.	8/25/48	○ 1 1/2 K	Field visible from 5 miles.	

Note: For comparative purposes, all altitudes in this table refer to feet above ground, not above mean sea level.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

(File No. 610,610.4)
0-5.23

September 28, 1948

CIRCULAR LETTER NO. 84-48
(To all First Order Stations)

Subject: Standard Headings for Weather Collectives

Reference: Circular Letter No. 45-48

This subject has been coordinated with the Canadian Meteorological Service and we are informed that the standard headings as outlined in our above referenced letter were made effective in Canada on July 15, 1948.

A few minor changes to the type of report and geographical area designators have since been made. A current list of these designators is attached and the old list, therefore, should be either destroyed or amended with pen and ink.

As indicated in Circular Letter No. 45-48, an appropriate type of report designator and an appropriate geographical area designator may be combined to make up the first group of the standard heading for a weather collective.

F. W. Reichelderfer
Chief of Bureau

73130

TYPE-OF-REPORT DESIGNATORS

AD Analogue Data
AW Airway Weather (hourly surface reports)
CR Crop and River Reports
FA Airway Forecast
FE Extended Forecast
FP Public Forecast (state, area or marine)
FR Route Forecast (may include terminal forecast at destination)
FT Terminal Forecast
FW Winter Sports Forecast
FX Temperature Extremes Forecast
FZ Zonal Pressure Forecast
HU Hurricane Bulletin
MA Surface Map Analysis
MC Miscellaneous Data
MF Prognostic or Forecast Surface Map Analysis
MT Synoptic Surface Reports (observations taken at primary synoptic periods)
PB Pilot Balloon and/or Rawin Reports
PR Pilot Reports (except weather reconnaissance observations)
PS Pilot Report Summary
RS Radiosonde Reports
SD Storm Detection Reports (secured by electronic means)
SL Selected Level Data (upper air)
SW Supplementary Airway Weather
TA Three-hourly Analysis
TH Synoptic Surface Reports (observations taken at intermediate synoptic periods)
UA Upper Air Analysis
UF Upper Air Prognosis or Forecast
WR Weather Reconnaissance Aircraft Reports
WS Weather Summary

SPECIAL TECHNICAL DESIGNATORS

MI Microseismograph Reports
RW Radio Warning Service (radio wave propagation forecast)
SR Seismograph Earthquake Reports

GEOGRAPHICAL DESIGNATORS
(Land areas include adjacent waters.)

AF	Africa
AL	Alaska and Aleutian Islands
AM	North America (U.S., Canada, Mexico, and Central America)
AN	Antarctic Ocean Area (including Antarctic continent)
AR	Arctic Ocean Area
AS	Asia (except Russia and Japan)
AU	Australia, New Zealand and Oceana
CA	Caribbean, Gulf of Mexico, and Central America
CN	Canada
EA	Austria
EB	Baltic Countries (Lithuania, Latvia, and Estonia)
EC	Czechoslovakia
ED	Denmark
EE	British Isles, Faeroes, and Shetland Islands
EF	France
EG	Germany
EH	Hungary
EI	Italy
EJ	Iberia (Portugal, Spain, and Balearic Isles)
EK	Greece (including Aegean Isles)
EL	Low Countries (Belgium, Holland, and Luxembourg)
EM	Mediterranean Sea
EN	Norway
EO	Bulgaria
EP	Poland
ER	Roumania
ES	Sweden
ET	Turkey (European and Asiatic)
EU	Europe (except European Russia)
EW	Switzerland
EX	Finland
EY	Yugoslavia
JA	Japan
MX	Mexico
NA	North Atlantic (including Greenland, Iceland and other North Atlantic Islands)
NE	Near East (including Palestine, Arabia, Iraq, Trans-Jordan and Iran)
NH	Northern Hemisphere
PA	Pacific
PH	Philippine and East Indian Islands
RU	Russia (Union of Soviet Socialist Republics)
SA	South America and South Atlantic Ocean Area
US	United States (continental area)
XX	Unspecified General Area (may be used to indicate reports from two or more of the above areas)

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-5.21

October 1, 1948

(File No. 730.4, 700.6)

CIRCULAR LETTER NO. 85-48
(To All First-Order Stations)

Subject: Furnishing Copies of Manuscript Maps to Other Agencies.

Reference: Circular Letter No. 100-46.

A number of inquiries have been received which indicate the need for a reiteration of policy with reference to furnishing copies of manuscript maps to other agencies. It is the purpose of this letter to furnish more explicit guidance concerning conditions and arrangements under which copies of current manuscript maps may be furnished.

The current policy with regard to this subject is quoted from the referenced circular letter:

> "It is a policy of the Weather Bureau that in exceptional cases copies of maps and charts may be furnished at the discretion of the local official in charge, provided such action can be justified as the most efficient, or the only means of supplying information and when such copies can be prepared with available equipment and personnel without interfering with scheduled Weather Bureau operations."

There has been no change in policy, nor in any of the provisions or requirements set forth in Circular Letter No. 100-46.

The following paragraphs contain additional information which may be helpful in clarifying some of the points about which there have been questions, but it is not desired that any portion of this letter be quoted in answering requests for copies of charts or inquiries regarding their availability, nor should it be referred to or cited in verbal discussions with persons other than Weather Bureau employees.

1. Exceptional cases in which the OIC may provide copies of maps at his discretion are those in which a few maps are required for special occasions (not on a regular basis), and those of an emergency nature (to continue on a regular basis). In the latter case he may make temporary arrangements subject to approval of the Central Office if such cases clearly are in accord with policy. All other cases require prior Central Office approval.

2. Other than the Daily Weather Map, which is printed at Washington and available upon subscription, it should not be taken for granted that the Weather Bureau is committed to furnish regularly copies of any maps to any agency or individual. The decision in each case should be made at the Central Office, after recommendation by Official in Charge. In some cases, it may be more convenient to the Weather Bureau station to furnish copies of the current manuscript map than to render an authorized weather service in any other manner, but such facts should be included in the recommendation.

3. The Official in Charge is expected to consider each such request on its own merits, giving due consideration to the meteorological requirements of the requesting agency or individual. The local official making the recommendation is usually in a better position than the Central Office to know (or determine) whether the party making the request has operations which depend upon receipt of the material requested and has facilities for making efficient use of such items.

4. The furnishing of copies of station maps cannot be justified if the information required can be furnished as efficiently in some other manner such as by consultation, by a telephone contact, or by a written statement. The information furnished should be in accordance with Circular Letter No. 22-48.

5. The furnishing of copies of station charts should not be undertaken if such action interferes with the performance of official duties or delays use of the working chart by the forecaster.

6. The only items that may be furnished under the policy cited are:

   (a) copies of completed, fully analyzed, manuscript maps that are prepared regularly at the station for official use, and:

   (b) sketch maps of a type that can be prepared in a short time showing isobaric patterns and fronts, representative temperatures, etc.

7. The furnishing of copies of unanalyzed or partially analyzed station maps, or special maps containing reports or data not required at the station, is not authorized. Such a practice cannot be considered a valid means of supplying necessary weather information.

8. Any arrangements whereby the recipients furnish special supplies will depend upon individual circumstances and must be worked out between the Official in Charge and the recipients.

9. Correspondence with the Central Office in connection with requests for copies of maps should contain all the information requested in Circular Letter No. 100-46, plus a recommendation from the Official in Charge, either that the furnishing of copies of maps may be authorized or that his action in declining a request be approved.

It is suggested that this letter and Circular Letter No. 100-46 be reviewed when a request for copies of maps is received.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

O-5.31
(File No. 610, 622.1)

October 4, 1948

CIRCULAR LETTER NO. ~~86-48~~
(To All First-Order Stations)

Subject: Change in Teletype Schedules and Forecasts

Effective approximately October 11, 1948, there will be a change in the transmission schedules of state and airway forecasts on Service "C" teletype circuits. After that time, state forecasts will be transmitted from 0344Z to 0402Z and every six hours thereafter, while airway forecasts will be transmitted from 0403Z to 0517Z and every six hours thereafter. At the same time, minor changes will be made in the order of transmission of certain groups of forecasts. Details will be included in a revision of the Service "C" Manual of Operations, which is to be distributed before the date of the change.

Coincidental with the inauguration of the new schedule for transmission of State forecasts, the dispatch of state forecasts by telegram, TWX, and telephone to Weather Bureau Offices having drops on Service "C" will be discontinued. Effective at the same time, telegrams containing agricultural forecasts sent by forecast centers to Weather Bureau Offices having drops on Service "C" will carry only such additional information as is not included in the State forecasts.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

0-5.32
(File No. 622.1
420.3

October 6, 1948

CIRCULAR LETTER NO. 88-48
(To All First-Order Stations)

Subject: Local Public Service Weather Teletype Circuits.

In order to satisfy the increasing public demand for weather information and provide service required for the general welfare it is necessary that the Weather Bureau make full use of all practical methods for mass distribution of weather information. Most offices are making good use of radio for this purpose, and the public should be encouraged to obtain local forecasts from that source. The usefulness of the automatic telephone system for making forecasts available to the metropolitan public was pointed out in Circular Letter No. 36-48, but this system has been installed in only a few cities. Many interests must, at present, rely on getting through to the local Weather Bureau office by telephone -- which is often difficult, particularly during unfavorable weather. Many radio stations desire hourly temperature and humidity readings for broadcast; radio stations and newspapers need to obtain the latest forecasts to meet their deadlines and other information for broadcast or publication; shippers want temperature forecasts for various localities; many interests need local meteorological data, etc. In an attempt to arrange for mass distribution of weather information to these varied and important interests, local weather teletype circuits have been established in two large cities and plans are progressing for installation in a third city. As other offices in large cities may wish to investigate the practicability and desirability of such an installation in their locality, the pertinent details are outlined in this letter.

ORGANIZATION AND INSTALLATION: Arrangements for organization and installation of the local teletype circuit are handled by a communications company (usually either the Telephone Company or Western Union). Local Weather Bureau officials who find it impossible to meet the growing demand for public weather service may contact the Telephone Company or Western Union to discuss the possibility of establishing a local circuit, and if it appears that such action is desirable the Weather Bureau officials may suggest a conference of representatives of the communications companies, radio stations, newspapers, utilities, and other frequent callers to discuss the proposed plan. The administration of this circuit is handled completely by the communications company. Any person, firm, or association desiring to obtain a drop on the circuit may do so, and all such arrangements are made directly with the communications company at private expense. The expense to the Weather Bureau will be limited to providing the weather reports, forecasts, etc., approved by the Central Office. (The communications company usually requires a minimum of eight subscribers before the circuit is set up).

OPERATION: All material entered on the local teletype weather circuits is tranmitted from a Weather Bureau office. All other connections to the circuit are "receiving-only" drops. The scheduling of material for entry on the circuit is handled by the Weather Bureau office concerned, with due regard to the deadlines of press and radio interests, the general weather requirements of the subscribing group, and the capacity of the Weather Bureau office to organize and transmit the weather material needed.

MATERIAL TRANSMITTED: As one of the main purposes of these local teletype circuits is to reduce the volume of calls received by the Weather Bureau office from press, radio, and other frequent users of weather information, material of general interest should be placed on the circuit to accomplish that purpose. Where these circuits are now in operation, the following material is entered on the circuit: Hourly temperatures and humidities; detailed local forecasts; revised local forecasts as needed; state forecasts; weather summaries and bulletins; shipper's temperature forecasts; warnings and advisories; local data (such as maximum and minimum temperatures, degree days, amount of precipitation, etc., for the previous day). This list is not all-inclusive--any needed weather information of general interest or importance is made available as far as possible.

These circuits must not be used in conflict with the intent and purpose of Circular Letter No. 22-48. The circuits must not be used to render individualized or consultant services which should be performed by private meteorological consultants. Forecasts should be given in detail and revised as necessary, but firms or organizations requiring individual or consultant service should be tactfully referred to commercial sources of such information in accordance with instructions in Circular Letter No. 22-48.

Weather Bureau offices and forecast centers located in large cities should consider the desirability of inaugurating a local teletype circuit as one of the ways to reduce telephone loads. Such offices are authorized to hold preliminary discussions with representatives of communication agencies on this matter, but no action for installation of a circuit should be taken until plans have been submitted to the Central Office and approval has been received. In general these plans should be advanced only in places where the existing telephone load on the Weather Bureau office is so heavy that we may expect to gain the time required for putting information on a local weather teletype circuit by offset through the reduction in employee time now required to handle telephone inquiries for information.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

(File No. 043, 601.2)

0-4.2
October 11, 1948

CIRCULAR LETTER NO. 89-48
(To All Stations)

Subject: Second Period of International Aerological Days in 1948.

Reference: Circular Letter No. 19-48.

The Aerological Commission of the International Meteorological Organization has designated November 11 - 20, inclusive, as the second period of International Aerological Days in 1948. Stations are requested to review the I.M.O. Resolution quoted in Circular Letter No. 19-48. It is desired that Weather Bureau stations carry out the following observational program during the 10-day period, so far as practicable. In order to provide the maximum amount of upper-air data for use in meteorological research it is requested that special effort be made to obtain the greatest possible heights in all aerological observations and to make all balloon releases at the scheduled times during this 10-day period. Compensatory time should be allowed for necessary overtime in connection with these observations.

RADIOSONDE STATIONS

The regular twice-daily scheduled raob program will be carried out at Weather Bureau stations during the 10-day period. A complete descent record is desired in both day and night observations during the 10-day period. In all cases, regardless of the temperature difference, the ascent and descent records should be evaluated and plotted on the adiabatic charts. The descent records are to be evaluated by computing from the surface to the maximum altitude in accordance with Station Operations Division MAL dated March 12, 1948. When the descent record terminates before reaching the ground level, identical elevations for the next higher standard isobaric surface above the termination point will be assumed for both ascent and descent records. Computations will proceed from that surface to the maximum elevation.

The estimated direction and distance from the station where the descent began should be entered on Form 1103.

500-gram balloons should be used for raobs and special care taken to treat the balloons in accordance with current instructions so as to obtain optimum heights. Neoprene balloons (marked "NIGHT FLIGHT") having a higher anti-freeze content, should be used in the manner described in MAL, Instr-R/S, January 27, 1948. Natural latex balloons should be handled in accordance with MAL 0-3.4, September 30, 1948, Subject: "Natural Latex 500-gram Balloons." If both "NIGHT FLIGHT" and natural latex 500-gram balloons are on hand, the type generally reaching the higher elevation should be used.

Rabals should be made in lieu of pibals on all releases during the 10-day period.

Raob records may be retained at the stations until November 25 to permit completion of the additional computations. Carbon copies of Forms 1103 should be made for all raobs for the 10-day period and forwarded to the RAVU.

Sufficient helium and other necessary supplies should be procured in ample time by each station for this program.

RAWINSONDE STATIONS

The instructions applying to raob stations will also apply to rason stations, except that rawins will replace rabals. When the limiting elevation angle is reached, special effort should be made to continue the observation by theodolite.

PILOT BALLOON STATIONS

100-gram balloons will be used for all pibals during the 10-day period, except when cloud ceilings make it possible to follow a 30-gram balloon to the cloud base.

In order to reach optimum heights the 100-gram neoprene balloons should, if practicable, be treated by immersion in boiling water in accordance with Circular Letter No. 41-48, par. 2.1(a). The 100- gram natural latex balloons should not be boiled but should be warmed prior to inflation in accordance with the current instructions. If both neoprene and natural latex 100-gram balloons are on hand, the type generally reaching the higher elevation should be used. Inflation of 100-gram balloons for nighttime pibals, using either electric units or candles, will be accomplished as follows:

With Inflation Nozzle - Attach a 37-gram weight to the standard 515-gram nozzle; do not attach lighting unit to nozzle during inflation.

With Inflation Balance - Set rider on zero of the lower weighing scale. In addition to the 515-gram weight normally placed on the left pan, add a 37-gram weight to the same pan; do not place lighting unit on pan during inflation.

RADAR STATIONS

Radar observation stations will take routine hourly observations and prepare the currently used forms "Radar Weather Observational Record" in triplicate for the 10-day period. In the event that sufficient recording cameras, Type A (35 mm) can again be obtained by the Central Office, 100-foot rolls of 35-mm film will be furnished. Stations so equipped will photograph the PPI scope at half-hourly intervals, during periods when echoes are observed. The exposed undeveloped film should be plainly identified and forwarded, together with original and one copy of the observation record, to the Central Office, marked for attention, Observations Section.

OCEAN WEATHER SHIP STATIONS

Weather ships are requested to carry out the same program described herein for land stations so far as practicable.

CLIMATOLOGICAL SUBSTATIONS

Section Directors are requested to arrange the same program of special climatological observations to be taken at 1330 E.S.T. during the 10-day period at a selected list of climatological substations in accordance with Station Operations Division IAL dated March 18, 1948, Subject: "Climatological Observations on International Aerological Days, April 1 - 10, 1948." The series of ten maps referred to therein should be forwarded to the Central Office, marked for attention Observations Section.

CLOUD OBSERVATIONS

Stations that regularly prepare Form 1130B will complete columns 22 through 35 for every record observation during daylight hours. Cloud photographs are not being requested from all stations having cameras available as was done for the observations last April. However, any stations that desire to take cloud photographs during the 10-day period may do so, and such photographs will be welcome. Their usefulness would in general be increased if they were made near synoptic hours. Special forms for this purpose will be furnished stations upon request. Stations planning to take cloud photographs are requested to refer to Station Operations Division IAL dated March 1, 1948, Subject: "International Aerological Days, Weather Bureau Synoptic Cloud Photographs Project", with respect to the purchase and forwarding of film to the Central Office and other details concerning photographing clouds.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

SR&F/CBC/Hew
(File No. 621.3, 622.1)

October 15, 1948

CIRCULAR LETTER NO. 90-48
(To all Stations)

Subject: Alert for Winter Weather Service

With the approach of winter all offices should review their procedures to insure prompt and efficient issuance and distribution of warnings of severe weather conditions. The Cold Wave and Related Warnings Manual (WB-1347) should be carefully reread by all personnel. Forecast offices and local offices should be thoroughly familiar with their responsibilities for issuance and distribution of warnings.

Every precaution should be taken to insure that whenever severe weather conditions are expected to occur the public will receive sufficient warning and will be kept fully informed. Every office should have a carefully formulated plan of action which is thoroughly understood by all employees. Special attention should be given to adequate coverage of emergency conditions on week ends and holidays. Prompt and widespread distribution of warnings and alerts is essential. Complete plans for distribution of warnings to radio stations and other disseminating agencies should be readily available at all times. Where practicable, use should be made of police and highway department radio and teletype networks for distribution of warnings, and arrangements should be made for warning service to school bus drivers.

Whenever severe or dangerous weather conditions are expected or are occurring, local officials in charge will arrange for 24-hour service (if not already in effect) at their stations, to continue as long as severe weather requires. Timely and adequate warnings are our most important responsibility to the public.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-3.4 October 20, 1948
(File No. 451.6)

CIRCULAR LETTER NO. 92-48
(To All First Order Stations)

Subject: Use of Natural Latex Pilot Balloons

1. The 100-gram pilot balloons supplied by Molded Latex Products, Inc. on the contract for the 1949 fiscal year are made of natural latex. Instructions for the use of these balloons and for natural latex pilot balloons which may be supplied on future contracts are given below. (The 10- and 30-gram balloons purchased from the Dewey and Almy Chemical Company for the 1949 fiscal year are made of neoprene and should be heat-conditioned in accordance with Circular Letter No. 41-48, dated May 18, 1948.)

2. Although the natural latex balloon differs chiefly from the neoprene balloon in that special heat-conditioning treatment is not required, it does require better storage conditions and more careful handling than the neoprene balloon.

2.1. Storage.--Natural latex will age satisfactorily if kept at room temperature out of direct sunlight. Natural latex balloons should be stored in the closed containers at a temperature near 70°F. and away from cold walls and radiators.

2.2. Handling.--Natural latex deteriorates rapidly when exposed to solar radiation and when allowed to come in contact with dirt or grease. The natural latex balloon, therefore, should be subjected to a minimum of handling and exposure to direct sunlight prior to release.

2.3. Warming.-- If the temperature of the room in which the balloons are stored drops below 70°F., the natural latex balloon should be thoroughly warmed by exposure to temperatures above 70° F. (but not exceeding 120°F.) prior to inflation. This warming is for the purpose of removing any stiffening of the rubber which may have resulted from exposure to low temperatures.

3. Rate of Inflation.--The gas pressure during inflation should not exceed 10 pounds per square inch. The inflation period should not be less than two minutes for the 30-gram balloon or less than five minutes for the 100-gram balloon, to provide an adequate period for uniform expansion of the envelope.

4. Defective Balloons.--If two of the first ten natural latex pilot balloons from one carton burst during inflation, the remaining balloons from the carton should be set aside and a report forwarded to the Central Office through the Regional Office. The report should include the size and color of the balloons, name of manufacturer, date of manufacture, number of balloons used, number bursting prematurely, and the rate of inflation. The balloons remaining in the carton should be held at the station for 30 days from the date of the report. If no instructions are received by the end of the 30-day period, the remaining balloons in the carton should be used.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-5.23
(File No. 601.4, 610)

October 21, 1948

CIRCULAR LETTER NO. 93-48
(To All Stations)

Subject: Rawin reports from Strategic Air Command (SAC) installations

The Strategic Air Command, in connection with their air operations, has established a number of rawin stations. Rawin reports from certain of these installations are made available, whenever practicable, to the Weather Bureau through two sources: relay from Air Force circuits to Service C, and direct from SAC stations to nearby Weather Bureau offices for coordination and inclusion in the pibal collection on the Service A teletype system.

The tabulation below indicates the location at which reports are made and the collective in which they appear whenever available.

Name of Installation	How Transmitted
1. Spokane, Wash. (Ft. George Wright)	Service A, Ckt. 8010, with national relay on Service C.
2. San Diego, Calif. (Ft. Rosecranz)	Service A , Ckt. 8009, with national relay on Service C.
3. Sacramento, Calif. (McClellan Field)	Service A, Ckt. 8012, with national relay on Service C.
4. Tampa, Fla. (MacDill Field)	Service A, Ckt. 8004, with national relay on Service C.
5. Fort Worth, Tex. (Carswell AFB)	In PBUS 9890-1-3-4 collective which receives national relay on Service C.
6. Birmingham, Ala. (Municipal Arpt)	Service A, Ckt. 8004, with national relay on Service C
7. Kansas City, Kans. (Fairfax AFB)	In PBUS 9890-1-3-4 collective which receives national relay on Service C

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

O-5.32
(File No. 620.2)

October 21, 1948

CIRCULAR LETTER NO. 94-48
(To All First Order Stations)

Subject: Report on Localized Forecasts.

During the past few years there has been a considerable increase in the number of cases of a community without a Weather Bureau office receiving localized forecasts from a Weather Bureau office located in another city. This is a type of service which we have encouraged and wish to extend where practicable. However, in a number of instances local offices and forecast centers have made arrangements to provide localized forecasts to radio stations, newspapers or other interests in a community without advising the Central Office. This has resulted at times in uncoordinated activities, duplication of services, and the possibility of conflicting local forecasts for the same area. Several cases have recently come to our attention where two or more Weather Bureau offices are furnishing localized forecasts to different public dissemination agencies in the same city. Unless the Central Office is informed of service arrangements, we are not in a position to evaluate properly and answer many of the requests for localized forecasts or inquiries regarding service which we receive from sources outside the Bureau.

In order that the Central Office may be fully informed of these activities, all local offices and forecast centers are requested to furnish the Central Office a list of the localized forecasts which they prepare on a routine basis for communities other than the city in which they are located. This list should include the name of the community (or small area) to which the forecast applies, the address to which the forecast is sent, the time and method of transmission and a statement as to whether or not the transmission is at Weather Bureau expense. If the forecast is sent to a local distributor, the further distribution given the forecast, e.g. to radio stations, newspapers, etc., should also be given.

All lists should be submitted to the Central Office (Attention: SR&F Division) with copy to appropriate Regional Office by November 15, 1948. In order that these lists may be kept up to date, all offices should advise the Central Office when any such service is discontinued. New local forecast services should be coordinated with the Central Office.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
WASHINGTON 25

A-3
(File No 901)

October 27, 1948

CIRCULAR LETTER NO. 95-48
(To all Stations)

Subject: Penalty Mail Act of 1948

The subject legislation repeals certain provisions of the Penalty Mail Act of 1944 (See Cir.Let. 66-44) in that future payments to the Post Office Dep artment for handling mail will be based on the quantity of indicia-bearing items on hand each June 30 rather than on report of mailings which in the past has been submitted quarterly.

As a result, the submission of Penalty Mail Report and Statement of Articles Bearing Penalty Indicia (WB Form 2008) will not be required for periods subsequent to June 30, 1948, but all station officials will submit to their respective Regional Offices the attached certification.

The requirement that a quarterly statement of the number of indicia bearing articles printed or procured by any office during the period remains in effect, therefore Post Office Dep t. Form B/A 48, will continue in use.

Upon receipt at Regional Offices, the certificates and statements will be combined and one certification and statement for the region forwarded the Central Office. These will be the only reports required quarterly.

Submitted annually as of June 30 each year, in addition to the regular quarterly certification of mailings and statement of printings, will be an inventory of all indicia bearing articles on hand as of that date and a re port of the number of indicia bearing articles destroyed or obliterated during the year.

Inventory figures in the past have been furnished in Column 17 of WB Form 2008, and the record of obliterations in Column 15. The reason for alterations or destructions, acquisition reference and other data that may be pertinent are called for on the obliterations statement forms which will be furnished all stations prior to the end of the fiscal year.

Attached is a copy of quarterly certification and statement of printings as required under the amended program. The extra copy which is enclosed should be completed promptly and returned to your Regional Office. Future supplies need not be requisitioned, instead the Central Office will furnish blank copies to each Regional Office at least a month before the end of any quarter and the subsequent distribution to field stations will serve as a reminder that completed forms should be returned as soon as practical after the end of the month.

Only fiscal year records should require an appreciable amount of time in prep aration. For this reason it should be possible for reports to be available for Bureau consolidation by the middle of the month following the end of the quarters.

Chapter F-15 of the Weather Bureau Manual will be amended to cover the above changes in procedure.

F.W. Reichelderfer

F.W. Reichelderfer
Chief of Bureau

Attachment:
Encl:

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU

_____

(Enter name of station and date of PREPARATION on line above.)

CERTIFICATE OF COMPLIANCE WITH THE PROVISIONS OF SECTION 306, TITLE III OF THE PENALTY MAIL ACT, PUBLIC LAW 785, 80th CONGRESS, APPROVED JUNE 25, 1948.

I hereby certify that during the quarter ended September 30, 1948, no book, report, periodical, bulletin, pamphlet, list, or other article or document was transmitted through the mail free of postage by this office in violation of Section 306 of the Penalty Mail Act of 1948, approved June 25, 1948, Public Law 785-80th Congress (*).

_____
Name

_____
Title

(*) Section 306 of the Penalty Mail Act of 1948, is quoted on the reverse for your information.

Form B/A-48

STATEMENT OF MATTER BEARING PENALTY INDICIA PREPARED OR PROCURED UNDER PERMIT

There was prepared or procured under permit No. 1024, issued to this Department (or Agency), during the quarter year ended Sept. 30 1948, matter bearing penalty indicia in the form and quantity stated below:

Envelopes (all sizes)	①_____
Labels	②_____
Wrappers	③_____
Cards	④_____
Tags	⑤_____
Other articles	⑥_____
TOTAL	_____

Department or Agency_____ Signature of Authorized Agent_____

SEC. 306. No executive department or independent establishment of the Government shall transmit through the mail, free of postage, any book, report, periodical, bulletin, pamphlet, list, or other article or document (except official letter correspondence, including such enclosures as are reasonably related to the subject matter of the correspondence; informational releases in connection with the decennial census of the United States, mail concerning the sale of Government securities, and all forms and blanks and copies of statutes, rules, regulations, and instructions and administrative orders and interpretations necessary in the administration of such departments and establishments), unless a request therefor has been previously received by such department or independent establishment; or such transmission is required by law; or such document is transmitted to inform the recipient thereof of the adoption, amendment, or interpretation of a statute, rule, regulation, or order to which he is subject. The head of each independent establishment and executive department (other than the Post Office Department) shall certify to the Postmaster General at the end of each quarter that nothing was transmitted through the mail free of postage by the independent establishment or department in violation of the provisions of this section: *Provided*, That nothing herein shall be construed to prohibit the mailing free of postage of lists of agricultural bulletins, lists of public documents which are offered for sale by the Superintendent of Public Documents, or of announcements of publications of maps, atlases, statistical, and other reports offered for sale by the Federal Power Commission as authorized by section 825k of title 16 U. S. C.: *Provided further*, That this prohibition shall not apply to the transmission of such books, reports, periodicals, bulletins, pamphlets, lists, articles, or documents to educational institutions or public libraries, or to Federal, State, or other public authorities.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

O-5.32
(File No. 610.3, 724.3)

October 29, 1948

CIRCULAR LETTER NO. 96-48
(To All First Order Stations)

Subject: Winter Sports Code.

Reference: Circular Letter No. 74-47, dated August 26, 1947.

Reports have been received which indicate that the Winter Sports Code, furnished with Circular Letter No. 74-47 proved satisfactory last season. Its use for teletype transmission of winter sports observations should therefore be continued.

You are again reminded that transmission of winter sports reports and forecasts on Service "C" is explained in the Manual of Operations "Domestic Synoptic Weather Schedules", paragraph 11. These transmissions are classified as unscheduled priority traffic, and as such can be transmitted on the circuit during any available idle period.

Although transmission may be made during an idle period on Service "C", it is to be noted that the circuit is comparatively free of other transmissions during the period 1415Z to 1445Z. If reports can be filed with the CAA communications office about 1410Z, transmission under normal conditions should be made within about 30 minutes. If stations other than those listed in Domestic Synoptic Weather Schedules, paragraph 11.2, have winter sports reports or forecasts to transmit, the Central Office should be informed so that schedules may be arranged.

A report should be submitted at the end of the season by all offices having a winter sports program. The report should contain a brief description of operations and services furnished, along with any information on outstanding developments which could be included in the annual report of the Weather Bureau.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

WB/Oc.
(File No. 000,210)

October 29, 1948

CIRCULAR LETTER NO. 97-48
(TO ALL STATIONS)

Subject: Fiscal Outlook and Weather Bureau Operating Plans

To inform field officials of the status of the Bureau's appropriations and the prospects with reference to our current and future services and administrative operations, the situation is briefly summarized below.

For more than a decade the appropriations of the Bureau have been substantially increased almost every year. These large increases were necessary to enable the Bureau to keep pace with the rapid developments in aeronautics and provide the needed expansions in airways weather services; also to make improvements in the national meteorological service as a whole in which developments had been slow during the many years of almost stationary appropriations.

Since the War new factors have come into consideration by the Government in its overall budgetary plans, and it is unlikely that the civil bureaus will in the future obtain the relatively large increases they have received in recent years. Not only are Government expenditures in general so high that some retrenchment is to be expected, but also requirements for the military preparedness program, for aid to European recovery, veteran's aid legislation and other considerations have added to the pressure to reduce normal Federal spending. Although there are several areas in which the Weather Bureau could show large benefits to the public through proposed expansion in meteorological services, it is unlikely that the Bureau will receive large increases in appropriations for general services during the next few years.

It is also unlikely that the public demand for weather information will decrease. On the contrary, improvements in weather services will bring increased demands from business and the general public, and it will be necessary to keep constantly in mind the relative importance and priority of the various demands for the Bureau's services and try to meet those which are most urgent. Expenditures for administration and incidental work should be kept to the minimum consistent with optimum effectiveness, and allotments for communications and travel should be utilized sparingly and in the most effective manner. There should be a more or less constant review of service operations with the view to curtailing those which have become less important in order to provide for new requirements of a more urgent nature. From time to time the Central Office will communicate with field stations on ways and means to accomplish these objectives in specific cases. This general policy is furnished for information and guidance of all concerned.

F. W. Reichelderfer.

F. W. Reichelderfer,
Chief of Bureau.

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-2.11
File No. (724.2)
(610)
(602)

November 15, 1948

CIRCULAR LETTER NO. 98-48
(To All First-Order Stations)

Subject: Resumption of Snow and Ice Bulletin

Snow and ice reports for the "Weekly Weather and Crop Bulletin" will begin this year with those for the 7:30 p.m., observation, Monday, December 6, 1948.

Stations that forwarded reports last year, either by special message or by adding snow depth or ice code groups to their weekly means message, will resume such reports based on the 7:30 p.m., observation, Monday, December 6, 1948. Coding will be in accordance with the "Instructions for Computing and Coding Weekly and Monthly Mean Temperatures, Total Precipitation, Degree Days and Snow and Ice Data, effective September 1, 1944." Reference is also made to Circular Letter No. 20-45, "Transmission of Weekly and Monthly Mean Data on Schedule (Service) C." The absence of the snow group will be taken to indicate bare ground and of the ice group that there is not sufficient amount to warrant telegraphing.

Section centers and other collecting points will arrange for opening service under the same conditions as last year. The composite message should reach the Central Office as soon as conveniently possible on Tuesday a.m., beginning December 7, 1948. A report, showing the station's number or order in the telegram, the elevation of each, and their positions plotted on a map, should be submitted by December 1, 1948. It is also desired that rivers, bays, harbors, etc., in which ice measurements are made be given.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-5.23
(File No. 610.4)

November 18, 1948

CIRCULAR LETTER NO. 100-48
(To All Stations)

Subject: Teletype identifications for locations in Mexico

The attached list of teletype identifications of Mexican weather stations has been submitted by Mexico to the International Civil Aviation Organization (ICAO). Although it is presently considered unofficial, reports from Mexico which are transmitted on civil teletype circuits bear the teletype identifiers contained therein and the list is forwarded for information.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNOFFICIAL LIST OF LETTER IDENTIFICATIONS FOR LOCATIONS IN MEXICO

STATIONS	3-LETTER IDENTIFIERS
Acapuclo, Gro.	ACA
Actopan, Hgo.	ATO
Aguadulce, Ver.	ADU
Aguascalientes, Aga.	AGA
Altar, Son.	ALO
Apatzingan, Mich.	AZG
Arteaga, Mich.	ATG
Ayutla, Gro.	AYU
Badiaraguato, Sin.	BAS
Bahia Magdalena, B. C.	BMB
Cacahuatepec, Oax.	CAZ
Campeche, Camp.	CPE
Cananea, Son.	CNA
Carmen, B. C.	CME
Carrillo Puerto, Q.R.	AYO
Champton, Camp.	CHC
Charcas, S. L. P.	CHP
Chetumal, Q. R.	CTM
Chihuahua, Chih.	CUU
Chilpancingo, Gro.	CHG
Choix, Sin.	CXS
Cintalapa, Chis.	CTA
Ciudad Camargo, Chih.	CCC
Ciudad Camargo, Tamps.	CCS
Ciudad Del Carmen, Camp.	CIA
Ciudad Guzman, Jal.	CGJ
Ciudad Juarez, Chih.	CUS
Ciudad Las Casas, Chis.	CLC
Ciudad Lerdo, DGO.	CLO
Ciudad Obregon, Gto.	COB
Ciudad Obregon, Son.	CEN
Ciudad Obregon, Tab.	OBG
Ciudad Victoria, Tamps.	CVM
Coatzacoalcos, Ver.	CTZ
Colima, Col.	CCC
Comitan, Chis.	COM
Cordoba, Ver.	CRM
Cozumel, Q.R.	CZM
Cuatro Cienegas, Coah.	CCM
Cuernavaca, Mor.	CUM
Culiacan, Sin.	CUL
Durango, Dgo.	DGO

MEXICO

STATIONS	3-LETTER IDENTIFIERS
Ensenada, B. C.	ENS
Esmeralda, Coah.	ESE
Guadalajara, Jal.	GDL
Guanjuato, Gto.	GUJ
Gusave, Sin.	GUV
Guaymas, Son.	GYM
Hermosillo, Son.	HMO
Hidalgo del Parral, Chih.	HDP
Huajuapan de Leon, Oax.	HJN
Huauchinango, Pue.	HUC
Huejucar, Jal.	HUJ
Huetamo, Mich.	HUE
Icaiche, Q.R.	ICA
Iguala, Gro.	IGA
Isla Cedros, B. C.	ICB
Isla Guadalupe, B. C.	GUD
Isla Margarita, B. C.	IMB
Isla Maria Madre, Nay.	ISM
Isla Mujeres, Q. R.	IMQ
Irapuato, Gto.	IPO
Ixtepec, Oax.	IZT
Jalapa, Ver.	JAL
Jamiltepec, Oax.	JAM
Jimenez, Chih.	XIM
Juxtalhuaca, Oax.	JUL
La Colorado, Zac.	RDA
Lagos, Jal.	LAJ
La Paz, B. C.	LAP
Las Choapas, Ver.	LHS
La Union, Gro.	LAU
Leon, Gto.	LEG
Linares, N. L.	LIN
Loma Bonita, Ver.	LBM
Los Mochis, Sin.	LTO
Mamulique, N.L.	LMM
Manzanillo, Col.	MZL
Mascota, Jal.	MAJ
Matamoros, Tamps.	MAM
Matias Romero, Oax.	MAO
Mazatlan, Sin.	MZT
Merida, Yucatan	MID
Mexicali, B.C.	MXL
Mexico, D. F.	MEX

STATIONS	3-LETTER IDENTIFIERS
Minatitlan, Ver.	MTT
Monclova, Coah.	MOV
Monterrey, N.L.	MTY
Morelia, Mich.	MLM
Mulege, B. C.	MLG
Nautla, Ver.	NAU
Navojoa, Son.	NVJ
Nazas, Dgo.	NZO
Nogales, Son.	NOG
Nuevo Casas Grandes, Chih.	NCG
Nuevo Laredo, Tamps.	NLD
Nuevo Rosita, Coah.	NRA
Oaxaca, Oax.	OAX
Ojinaga, Chih.	OAC
Ometepec, Gro.	OMT
Orizaba, Ver.	OZA
Pachuca, Hgo.	PAC
Pachutla, Oax	POC
Parral, Coah.	PAL
Parras, Coah.	PAR
Petatlan, Gro.	PEL
Piaxtla, Pue.	PIU
Piedras Negras, Coah.	PNG
Pilares de Nacozari, Son.	PNA
Pinotepa, Oax.	PNO
Pochutla, Oax.	PTL
Progreso, Yucatan	PGS
Puebla, Pue.	PEB
Puerto Angel, Oax.	PTO
Puerto Vallarta, Jal.	PVA
Punta Penasco, Son.	PPP
Putla, Oax.	PLO
Queretaro, Gro.	QET
Reynosa, Tamps.	RYN
Rio Verde, S. L. P.	RVS
Salina Cruz, Oax.	SAL
Saltillo, Coah.	SOC
San Blas, Nay.	SAB
San Ignacio, Sin.	SIS
San Jose de Cabo, B. C.	SJB
San Luis Acatlan	SLT
San Luis Potosi, S. L. P.	SLP

STATIONS	3-LETTER IDENTIFIERS
Santa Rosalia, B. C.	SRL
Santiago Papasquiaro, Dgo.	SPD
Sombrerete, Zac.	SOZ
Soto la Marina, Tamps.	SOM
Tacubaya, D. F.	TAC
Tampico, Tamps	TAM
Tamuin, S.L.P.	TMN
Tapachula, Chis.	TAP
Tayoltita	TAY
Teapa, Tab.	TET
Tecpan, Gro.	TEC
Tehuacan, Pue.	TEH
Temosachic, Chih.	TEM
Tenosique, Tab.	TEQ
Tepehuanes, Dgo.	TES
Tijuana, B. C.	TIJ
Tlaxcala, Tlax.	TLT
Toluca, Mex.	TCA
Tonala, Chis.	TON
Topolobampo, Sin.	TLO
Torreon, Coah.	TRC
Tula, Hgo.	TUH
Tulancingo, Hgo.	TOH
Tutotepec, Oax.	TPC
Tuxpan, Ver.	TUX
Tuxtla Gutierrez, Chis.	TGZ
Tepic, Nay.	TEP
Ures, Chis.	URS
Uruapan, Mich.	UPN
Valladolid, Yuc.	VAY
Veracruz, Ver.	VER
Villahermosa, Tab.	VSA
Villahumada, Chih	VAC
Zacatecas, ZAC.	ZAC
Zamora, Mich.	ZAM
Zihuantanejo, Gro.	ZIH
Zitacuaro, Mich.	ZIM

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

0-4.3
File No. 750, 601

November 30, 1948

CIRCULAR LETTER NO. 101-48
(To All Stations)

Subject: Dew point conversion scales, WB Forms 1187A and 1187B

Up to the present time, psychrometric observations in the United States have provided dew points with respect to ice at dew points below 32°F. or 0°C., and relative humidities with respect to ice at temperatures below 32°F. Effective January 1, 1949, dew points and relative humidities will be reported with respect to water at all temperatures in both surface and upper level observations. This is in conformity with resolutions adopted by the International Meteorological Organization at Toronto, Canada, and Washington, D. C., in 1947.

Over a period of years some countries have been using saturation with respect to water in the definitions of relative humidity and dew point at all temperatures. It is the intention of the I.M.O. to provide a uniform basis of reporting psychrometric data by all member nations.

Weather Bureau tables and slide rules used to the end of 1948 for the reduction of psychrometric observations give dew point and relative humidity with respect to ice under the conditions specified in the first paragraph. These are the paper Psychrometric Slide Rules, WB Forms 1181 and 1182 for Centigrade temperatures and WB Forms 1183 and 1184 for Fahrenheit temperatures; and the Psychrometric Tables, WB Form 235; and Relative Humidity Tables for Centigrade temperatures, WB Form 1071.

Beginning on January 1, 1949, when a dew point below 32°F. is obtained from any of these forms it will have to be converted to dew point with respect to water by means of Form 1187A or 1187B; and when a relative humidity at a temperature below 32°F. is obtained from any of these forms it will have to be converted to relative humidity with respect to water by means of a suitable table.

For purposes of conversion there are attached to this Circular Letter two copies each of Dew Point Conversion Scale, WB Form 1187A for Fahrenheit temperatures, and Dew Point Conversion Scale, WB Form 1187B for Centigrade temperatures. The graduations on the top side of each line of these forms represent dew points with respect to ice, and the graduations on the bottom side of each line represent dew points with respect to water.

Tables with Fahrenheit arguments for converting relative humidity from one basis to the other will be printed in the 6th Edition of Circular N, and a similar table with Centigrade arguments has been distributed to all raob stations. A new Dew Point Slide Rule, WB Form 1188, designed especially for aerological purposes for computing dew points in °C. with respect to water, also will be supplied to all raob stations prior to January 1, 1949.

A vinylite plastic circular-scale psychrometric calculator for data in Fahrenheit temperatures has been designed to give dew point and relative humidity directly with respect to water at all temperatures, and the results obtained by means of this device will require no conversion. It is hoped that the psychrometric calculators will be available for distribution to stations by, or shortly after, January 1, 1949, and upon their issue, will replace the linear paper psychrometric slide rules as well as the Psychrometric Tables, WB Form 235.

Forms 1187A and 1187B should be retained for possible future use such as the conversion of past records to a water basis, or the conversion of new records to an ice basis for comparison with past records. An attachment to this Circular Letter describes other possible uses of these forms, and provides a comparison of data computed on both bases. Additional Forms WB 1187A and 1187B may be obtained upon request to the Forms and Publications Unit of the Central Office.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

Attachment

Enclosures: 2 copies of WB 1187A
2 copies of WB 1187B

Technical Considerations Regarding Use of the Water Basis for Dew Point and Relative Humidity at All Temperatures

In clouds or fogs consisting of minute droplets of water at temperatures below 32°F., there is evidence to believe that, as a rule, the space between the droplets is very nearly saturated with respect to water. The relative humidity in such a space would be reported as 100% with respect to water, while the dew point with respect to water would be reported equal to the temperature.

In the case of surface psychrometric data secured in the United States up to the end of 1948, saturation with respect to ice forms the basis of the definitions of relative humidity and dew point at low temperatures as outlined in Circular Letter No.101-48. In such cases the relative humidity in a cloud or fog of supercooled water droplets would be over 100% with respect to ice by an amount depending on the temperature; while the actual dew point with respect to ice would exceed the true temperature of the cloud or fog at the place of observation. (See attached Table A.) The objectionable characteristics pointed out in the last sentence are avoided when relative humidity and dew point are defined with respect to water, as will be the case beginning January 1, 1949.

Effective on that date also, upper-air dew points obtained in raobs will be expressed with respect to water so that the difference between temperature and dew point will provide an indication of the difference between 100% and the existing relative humidity with respect to water. (Of course, the proportion between those two differences is not constant over a wide range.)

For a given moisture condition in the atmosphere the dew point with respect to ice has a higher value than the dew point with respect to water. (See Tables A and B.) Hence, when the air temperature is falling while moisture content remains constant, the dew point with respect to ice may be reached first, and then on further cooling, the temperature approaches and may subsequently reach the dew point with respect to water. The attached Forms 1187A and 1187B will enable one to convert from reported dew points with respect to water to dew points with respect to ice, and thus to ascertain possibility of formation of ice fog or ice crystal cloud which under certain favorable conditions may appear before water fog or cloud, and may thereby prevent development of the latter. The forms will therefore be useful to forecasters.

After January 1, 1949, a report of dew point with respect to water equal to the existing temperature will almost invariably provide a sign of water fog or cloud, hence of icing hazard and probability of rime or ice formation on exposed objects.

A circular letter concerning the climatological aspects of the change from ice to water basis will be issued shortly.

Relationship of relative humidity and dew point with respect to ice and water respectively

(A) When saturation exists with respect to water,

TABLE A

Temperature	R.H.$_w$	R.H.$_i$	D.P.$_w$	D.P.$_i$
32°F.	100%	100%	32°F.	32°F.
20°F.	100%	106.7%	20°F.	21.4°F.
0°F.	100%	118.9%	0°F.	43.3°F.
-20°F.	100%	132.5%	-20°F.	-15.1°F.
-40°F.	100%	147.4%	-40°F.	-33.8°F.
-60°F.	100%	163.1%	-60°F.	-52.8°F.

(B) When saturation exists with respect to ice,

TABLE B

Temperature	R.H.$_i$	R.H.$_w$	D.P.$_i$	D.P.$_w$
32°F.	100%	100%	32°F.	32°F.
20°F.	100%	93.7%	20°F.	18.5°F.
0°F.	100%	84.1%	0°F.	-3.7°F.
-20°F.	100%	75.5%	-20°F.	-25.4°F.
-40°F.	100%	67.8%	-40°F.	-46.6°F.
-60°F.	100%	61.3%	-60°F.	

R.H. Denotes relative humidity.
D.P. Denotes dew point
Subscript w denotes "with respect to water."
Subscript i denotes "with respect to ice."

WB Form 1187B

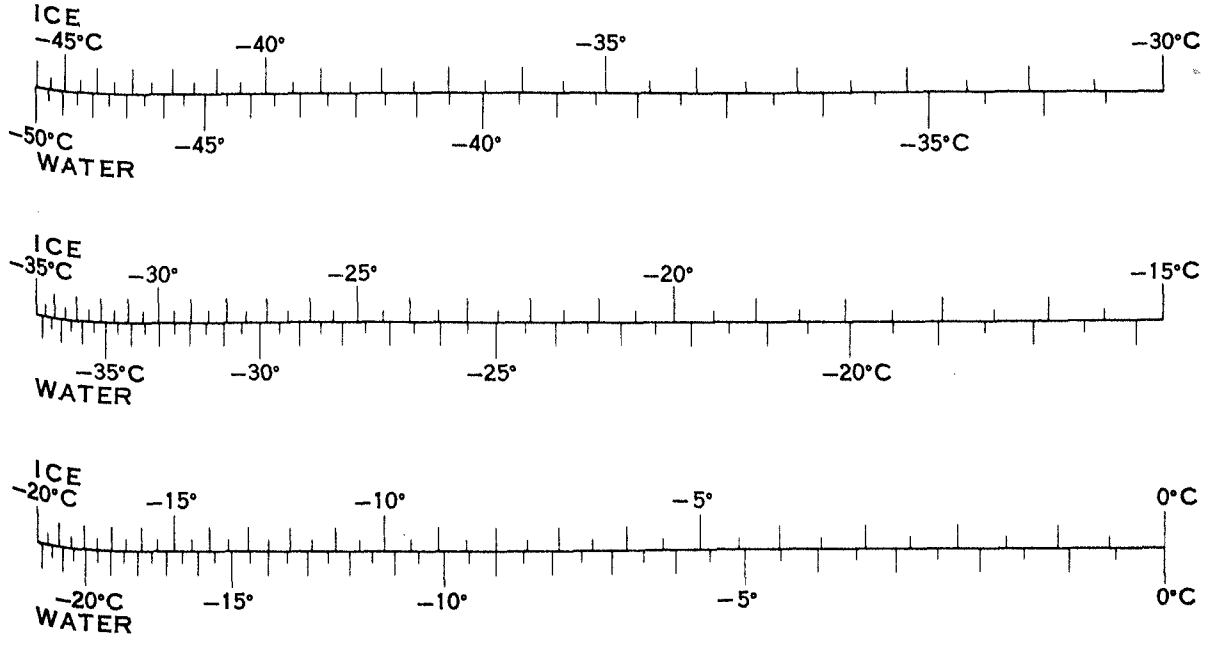
UNITED STATES DEPARTMENT OF COMMERCE, WEATHER BUREAU

DEW POINT CONVERSION SCALE

SHOWING RELATIONSHIP BETWEEN

DEW POINT WITH RESPECT TO ICE AND DEW POINT WITH RESPECT TO WATER

(CENTIGRADE TEMPERATURES)



NOTE: Saturation vapor pressures over ice and water, used in computing this scale, are based on formulas by J. A. Goff and S. Gratch, Trans. Amer. Soc. Heat. and Vent. Eng., vol. 52, page 95, (1946). Formula for saturation vapor pressure over water assumed to apply from −60°F. to 140°F.

WB Form 1187 A

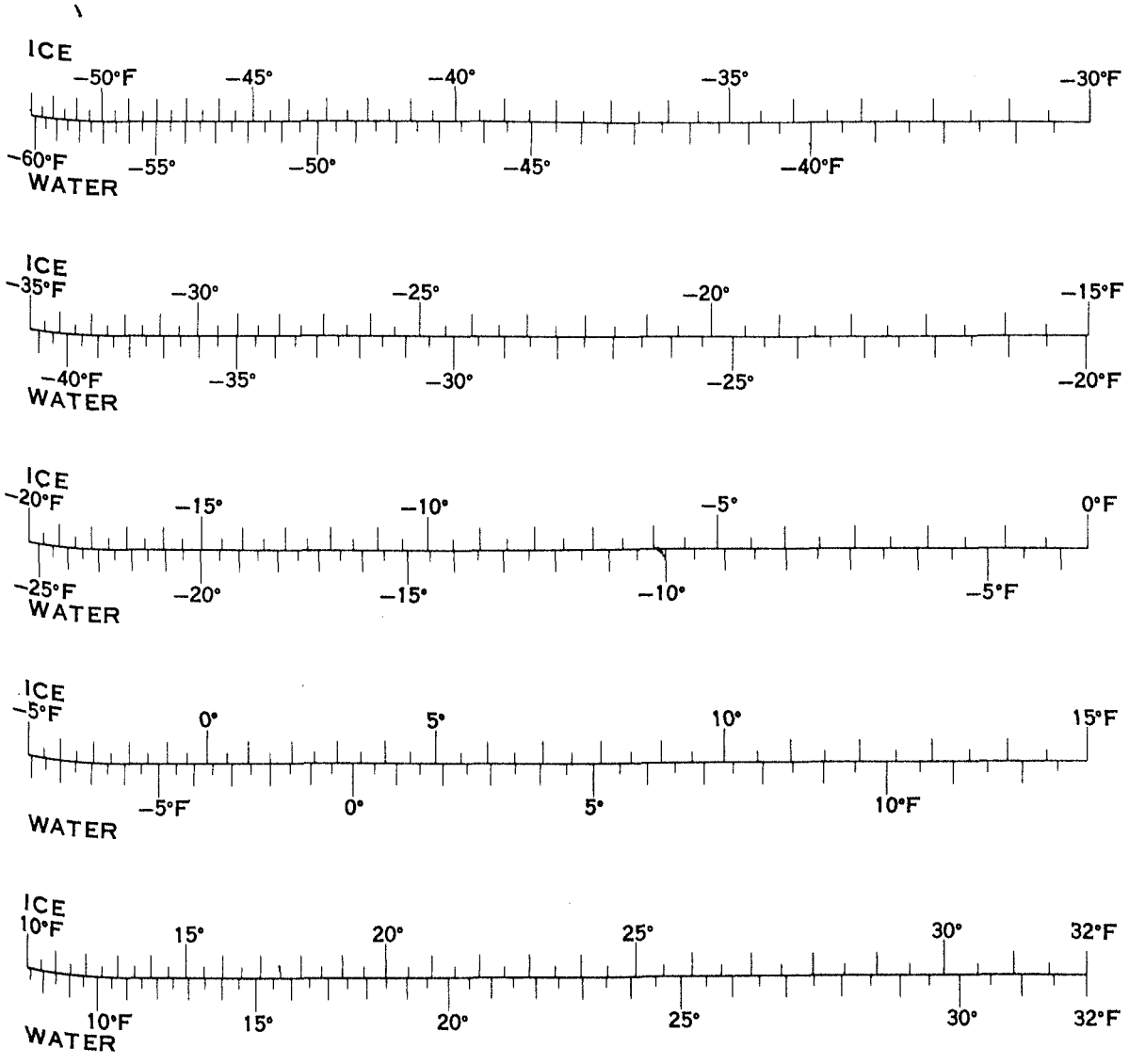
UNITED STATES DEPARTMENT OF COMMERCE, WEATHER BUREAU

DEW POINT CONVERSION SCALE

SHOWING RELATIONSHIP BETWEEN

DEW POINT WITH RESPECT TO ICE AND DEW POINT WITH RESPECT TO WATER

(FAHRENHEIT TEMPERATURES)



NOTE: Saturation vapor pressures over ice and water, used in computing this scale, are based on formulas by J. A. Goff and S. Gratch, Trans. Amer. Soc. Heat. and Vent. Eng., vol. 52, page 95, (1946). Formula for saturation vapor pressure over water assumed to apply from −60°F. to 140°F.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

R-3
(File No. 030.6, 700.1)

November 30, 1948

CIRCULAR LETTER NO. 102-48
(To All First-Order Stations)

Subject: Clearance of text for publication, talks or for local radio broadcasts.

Reference: Circular Letter No. 13-46

Weather Bureau employees are encouraged to publish the results of their studies in meteorology and climatology or related sciences whenever they have new contributions or constructive conclusions to present. Arrangements for clearance and publication were provided in station regulations issued more than a decade ago and subsequent statements have been issued from time to time, strongly encouraging research work and publication of results. In recent years, excluding the war years, the practice has been to liberalize the instructions on this subject and give as much latitude in publication as is consistent with the policy responsibilities of a government organization. This practice is continued in the following instructions which hereby supersede those of Circular Letter No. 13-46.

CLEARANCE IS NOT REQUIRED IN THE FOLLOWING CASES:

(1) Public statements, articles, or books prepared on personal time (entirely outside of official hours) on subjects not related in any way to functions of the Weather Bureau.

(2) Public statements or articles on weather observations or on factual material concerning Bureau operation or established principles of meteorology and related science. Such statements and articles may include factual subject matter obtained as a result of official work and may be presented by the employee in his official capacity if he desires.

(3) Papers for publication or presentation at scientific meetings, and books, when of a technical or scientific nature, prepared on personal time (entirely outside of official hours), using only such data and material which are also available to the general public, if the author uses his personal by-line and makes no reference to his official connection with the Bureau. The subject matter must not involve official views or policy.

(4) Papers for presentation before local scientific groups, such as local seminars of the American Meteorological Society, whenever the subject matter is not likely to involve the Bureau officially in controversy. See 5(b). (The burden of judgment rests with the employee in doubtful cases. In such cases he may prefer to refer the paper to the Central Office for decision before presentation at the meeting.)

CLEARANCE IS NECESSARY IN THE FOLLOWING CASES:

(5) Articles, books or talks containing material on Weather Bureau administrative, technical or scientific subjects:

(a) if preparation has been done on official time or has been made possible through the employee's official connection with the Bureau, or if the official connection of the employee is indicated, except for cases which come under (2) and (4) above.

(b) if the subject matter may be controversial and may therefore involve the Bureau officially.

In practice, clearance procedure will not be as exacting as might be inferred from the above paragraphs. Some provision for clearance is necessary, however, because the public usually assumes that papers published or presented at meetings by employees under their official titles, especially if the subject material pertains to official matters, have received official approval. It is possible, therefore, for an employee unwittingly to commit the Bureau and necessitate denials which are embarrassing both to the Bureau and the employee. In doubtful cases the author may follow the common practice of saying that the views expressed are his own and not necessarily those of the Weather Bureau. Mutual understanding and cooperation as outlined in this Circular Letter will make the policy work to the advantage of the employee and the Bureau.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-4.2
(File No. 740.5)

December 6, 1948

CIRCULAR LETTER NO. 103-48
(To All Stations)

Subject: 6th Edition of Circular N, Manual of Surface Observations

The 6th Edition of Circular N, Manual of Surface Observations, will be distributed during December. It is being forwarded in two parts: 1) the WBAN portion, consisting of instructions applicable to the Weather Bureau, Air Force, and Navy, which will be distributed approximately December 15; and 2) the Weather Bureau addendum, which was forwarded December 1. The new manual will be effective 0000 GCT, January 1, 1949.

Special attention should be given the changes in observational procedures that are listed below, together with the numbers of the corresponding paragraphs in the new manual. If the WBAN portion of the manual should not arrive prior to the effective date, only items 1 - 3 will be effective January 1, and the other items will be effective upon receipt of the necessary instructions. Since international agreements require that items 1 - 3 be effective on this date, the instructions for these items are furnished here in sufficient detail for implementation without reference to the new manual.

1. Cloud heights and ceilings of 10,000 feet or more will be reported in hundreds of feet to the nearest 1000 feet, in a manner similar to that in which heights below this value have been reported previously. Slants will no longer be used to indicate cloud heights. Examples:

	Previous Form of Report	Form of Report Effective Jan. 1, 1949
1.	DCA ⊕/15+ 078/36/29↘4/971/M140⊕	DCA M140⊕15+ 078/36/29↘4/971
2.	DCA ⊙/10 169/72/61↙5/001	DCA 180⊙10 169/72/61↙5/001
3.	DCA E45⊕/⊙ 154/47/40↗7/000	DCA E45⊕⊙ 154/47/40↗7/000/E150⊕

(par. 1410; 11103; 11104.2; Table 24)

2. Drifting snow (formerly "GS") has been redefined as snow lifted from the surface by the wind to a height less than six feet, and will therefore no longer be reported as an obstruction to vision. Blowing snow ("BS") has been redefined as snow lifted from the surface by the wind to heights of six feet or more (paragraphs 3508 and 3509).

3. The symbol "Q" will be used for squalls. Squalls occurring without precipitation will be reported by this symbol; if squalls are accompanied by precipitation, the appropriate precipitation symbol will be prefixed to the squall symbol, e.g., "RW- Q+" (paragraph 11106.12, Table 26).

4. A table of ascensional rates for 10-gram spherical ceiling balloons has been included (Table 4).

5. Frost and Freeze have been redefined (paragraph 3506).

6. Several additional meteorological phenomena have been defined in accordance with the 1949 synoptic code (pars. 3671 and 3691).

7. Instructions for computing dew point temperature and relative humidity with respect to water at all temperatures have been included (Section 6100).

8. Instructions for obtaining station pressure from altimeter setting indicators have been included (paragraph 7260).

9. Instructions for observing wind shifts have been revised slightly (pars. 8330 - 8335).

10. Requirements for special observations have been re-stated and revised slightly (pars. 9134.01 to .03).

11. All Weather Bureau stations at airports have been required to take local extra observations unless otherwise authorized (paragraph A9141). (Airport stations at which these observations appear unnecessary should request authorization from the Central Office to omit them.)

12. The order of elements in pireps has been re-arranged (paragraph 10320).

13. Special instructions for entries on Form 1130B by CAA stations have been included (paragraph A11001).

14. Instructions for entering additional climatological data on Form 1130B at designated stations have been added (Chapter A11).

15. Instructions for preparation of Forms 1001B and 1001C have been added (Chapter A12).

16. Instructions for evaluation of autographic records have been expanded (Chapter A13).

Chapters and paragraphs in the addendum have been assigned numbers, prefixed by the letter "A," that correspond to similarly numbered chapters and paragraphs pertaining to the same subject in the WBAN portion of the manual. For example, paragraph A1448 of the addendum, containing

instructions for the operation of the ceilometer, supplements paragraph 1440, "Methods of Determining Ceiling and Cloud Heights," in the WBAN portion of the manual. Moreover, in chapters pertaining to entries on forms, the tens and units digits of the paragraph number indicate the column number to which the instruction pertains. For example, paragraph A12123 pertains to entries in column 23 of Form 1001B. Each addendum chapter should be inserted after the corresponding WBAN chapter. Following Chapter A13, special instructions issued certain stations, such as instructions for solar radiation observations, radar observations, etc., will be inserted. Binders for the manual are being forwarded.

The 6th Edition of Circular N supersedes the 5th Edition, including all amendments and interpretations pertaining to it, and the following letters and publications:

(1) CL 91-46 and CL 101-46, subject "11th Amendment to Circular N."

(2) MAL February 7, 1947, subject "Provisional Instructions for Use of Ceilometer Recorder."

(3) CL 30-47, subject "Computation of the Height of the 850-Millibar Surface."

(4) CL 62-47, subject "Supplement 1 to Circular N."

(5) MAL dated December 12, 1947, subject "Provisional Instructions for Use of Telepsychrometer."

(6) CL 42-48, subject "Circular N, 5th Edition, Chapter 31 revised; and WBAN 10 revised."

(7) CL 73-48, subject "Additional Requirements for Special Airway Observations."

(8) CL 74-48, subject "Circular N, 11th Amendment, pars. 20161 and 20162."

(9) Instructions for meteorological forms, 1948 edition.

(10) Appendix II - Additive data. (Revised instructions pertaining to this subject are being issued, but not in the form of an appendix to Circular N.)

*(11) Appendix III - Helium.

*(12) Form 1044 - Condensed table of critical values.

*(13) Form 4061 - Explanation of teletype symbols.

*Revised editions will be issued.

Effective with the new edition, all interpretations and clarifications will be issued periodically to all stations by the Central Office. Regional Memoranda pertaining to Circular N will, therefore, no longer be necessary. At least two copies of Circular N will be maintained at each station in order that one copy will be available for training and study purposes.

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

A-4
(File No. 130.4, 153.2, 160)

December 6, 1948

CIRCULAR LETTER NO. 104-48
(To all Stations)

Subject: Reemployment Rights of Employees Following Military Service Under the Selective Service Act of 1948

References: Chapter Z1, pages 375-377, Federal Personnel Manual and Department of Commerce Administrative Circular No. 52

The portion of Chapter Z1 of the Federal Personnel Manual referred to above prescribes regulations relative to the rights of employees (other than temporary or temporary-indefinite workers) who enter on active duty with the armed forces under the provisions of the Selective Service Act of 1948. Administrative Circular No. 52 outlines the procedures that must be followed to protect the rights of such employees.

Each employee who enters the armed forces will be separated using the terminology "Separation-Military Service." Before the employee leaves his position his personnel office must be sure that he has a copy of his job description which is current and which actually reflects his duties and responsibilities. While absent on military duty the employee is entitled to be considered for any and all promotions for which he would normally have been considered had he remained in his civilian position. Adequate records must be maintained to assure such consideration during the time of his absence in order that he may be restored upon his return from military duty to a position of proper seniority, status and pay in view of this requirement. Usually, currently maintained records will be adequate and in other cases simple adaptation of such records should suffice.

An employee who returns from military service shall be restored to duty as soon as possible and in no event later than 30 days after the veteran's application for restoration (which must be made within 90 days after discharge from military service) is received by the Department.

It is presumed that the Civil Service Commission will eventually issue more detailed procedural instructions. In the meantime, personnel offices will use whichever of the following statements is appropriate in preparing fanfold actions separating employees for military service.

FOR INDUCTEES

"At the conclusion of your military service in conformance with applicable law and regulations, restoration to a position of at least equivalent seniority, status and pay will be made provided (1) you are qualified, (2) application for reemployment is made within 90 days after you are released from military duty or hospitalization, and (3) a certificate of satisfactory completion of training and service is furnished."

Note: It is not expected that any occupational deferments will be authorized for Federal employees subject to induction.

FOR ENLISTEES

"At the conclusion of your military service in conformance with applicable law and regulations, restoration to a position of at least equivalent seniority, status and pay will be made provided (1) you are qualified, (2) application for reemployment is made within 90 days after you are released from military duty or hospitalization, (3) a certificate of satisfactory completion of training and service is furnished, and (4) provided the enlistment is your first enlistment after June 24, 1948."

FOR RESERVES

"At the conclusion of your military service in conformance with applicable law and regulations, restoration to a position of at least equivalent seniority, status and pay will be made provided (1) you are qualified, (2) application for reemployment is made within 90 days after you are released from military duty or hospitalization, (3) a certificate of satisfactory completion of training and service is furnished, and (4) release from active duty occurs not later than 3 years after entrance into the armed forces or as soon thereafter as you are able to obtain release."

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.
December 6, 1948

(File No. 750, 903.1, 601)

0-4.2

CIRCULAR LETTER NO. 105-48
(To All Stations)

Subject: Revised Observational Records.

The 1949 synoptic code has necessitated revision of several observational forms. In addition, the requirements of the punch-card program have made desirable the revision of several other forms. The nature of these revisions and the types of stations using the revised forms are indicated in the following paragraphs. Unless otherwise specified, all changes will be effective 0000 IST, January 1, 1949.

Form 1083, Record of 3- and 6-hourly synoptic observations

Form 1083, which heretofore has been used by all second-order synoptic stations, by first-order stations for coding purposes, and by all stations for computation of 850-millibar data, will now be used by second-order synoptic stations only. First-order stations previously using this form for coding purposes will use Form 3024, which has been revised as indicated below. CAA and first-order stations previously using Form 1083 for computation of 850-millibar data will now use Form 1081 for this purpose.

The revised Form 1083 provides for entries of both 3- and 6-hourly synoptic data. Form 1082 will therefore no longer be used at any station. The first observation entered on the revised form will be that of 1930 EST, December 31, 1948. Supplies of the form and instructions for its preparation have been forwarded to the Regional Offices for distribution to all stations requiring them.

Form 1081, Computation of 850-Millibar data

A new computation sheet, Form 1081, will provide spaces for computation of the height of the 850-millibar surface. It will be used at all first-order Weather Bureau stations and CAA stations computing these data.

Because of heavy printing schedules, this form will probably not be distributed until mid-January. Instructions for its preparation and disposition will also be forwarded at this time. In the meantime, the present Form 1083 will continue to be used for this computation.

Form 3024, Weather report for transmission

Form 3024 has been revised to provide spaces for entry not only of airway observations but also of synoptic observations. The symbols for each element of the 1949 code are printed at the bottom of the form. This form will be used at all first-order stations transmitting either airway or synoptic observations. Instructions for its preparation are in Circular N. Copies of Form 3024 on which synoptic observations have been entered will be forwarded in lieu of Form 1083, to New Orleans in accordance with Circular Letter 8-47.

The revised forms will be sent during December to all stations requiring them. In the event that these forms are not received at some stations by January 1, the present Form 3024 will be continued in use and synoptic observations will be entered at the bottom of the form in the 1949 synoptic code.

Form 3069, Notification of observational errors

Form 3069, notification of observational errors, has been revised to conform with the new codes, but the forms and instructions for their preparation will probably not be available for distribution until February. Until the revised forms have been received, the present Form 3069 will be used and the order of elements indicated on it will be disregarded; if necessary, elements not listed on the form may be typed on it locally.

Forms 1130B and 1001B, Surface weather observations (daily)

Certain additional climatological data will be entered either on Form 1130B or 1001B, as provided in the Circular N Addendum, which is now being distributed. Form 1130B will be used at all first-order stations taking airway observations; at all other first-order stations, Form 1001B will be used. Forms 1001, 1001A, and 1014 will no longer be prepared.

Supplies of Form 1001B are now being forwarded to stations requiring them. Rubber stamps required for additional column headings on Form 1130B will be forwarded in mid-December.

Form 1001C, Surface weather observations (monthly)

All first-order stations will prepare Form 1001C in accordance with the instructions in the Circular N Addendum. Supplies of this form are also being forwarded.

General

Retained copies of Forms 1130A, B, D, and Forms 1001B and C will be bound in the metal-hinged, endlock binders provided by the Central Office. Stations preparing Form 1130B will bind Forms 1130A, B, D and 1001C for a six-month period

in a single binder. Stations preparing Form 1001B will bind Forms 1130D, 1001B and C for a one-year period in a single binder.

The revised forms have been prepared on the basis of several series of field tests at representative stations, from which many helpful comments and suggestions were received. As a result of these tests, it is believed that the revised forms are not only satisfactory and adequate replacements for the superseded forms, but also will reduce substantially the stations' workload. However, it is possible that at certain stations at which special types of observational programs have been authorized, it may be desirable to prepare certain forms not specifically required by the above instructions. For example, preparation of Form 1083 may still be desirable at a few city offices. Station officials who consider special circumstances warrant departure from the general plan outlined above should request authorization from the Central Office immediately, furnishing complete details concerning their special requirements.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

0-5.31
(File No. 740.1, 610.3, 601)

December 6, 1948

CIRCULAR LETTER NO. 106-48
(To all Stations)

Subject: Changes in Codes and Procedures, January 1, 1949.

At the IMO Conference of Directors, held in Washington in 1947, new codes were agreed upon for adoption January 1, 1949. Based on these agreements, new codes and instructions and new base maps and charts have been prepared by the Weather Bureau, some of which have already been distributed. Others will be sent out in the near future. Any station which, by December 15th, has not received copies of the new codes, instructions, and forms in accordance with this letter should immediately request them from the regional office, which will be supplied with extra copies. Base maps will be forwarded direct from the Central Office as explained in a separate paragraph of this letter.

Changes in codes, forms, and procedures, unless specific instructions to the contrary are received, will be effective at 0000 G.C.T., January 1, 1949 (1900 E.S.T., December 31, 1948). Following is a brief statement of changes that are scheduled. Reference is made in each case to sources from which additional details can be obtained.

SHIP CODE: Copies of publications entitled "Instructions for Recording and Coding Marine Meteorological Observations in the New International Code" (Provisional Edition), and "International Code for Radio Weather Reports from Ships" (W.B. No. 1046, Revised), effective January 1, 1949, have been mailed to all stations.

Radio reports from ships of U.S. registry will contain only the first 7 groups of the new code, as follows: $YQL_aL_aL_a$ $L_oL_oL_oGG$ Nddff VVwwW PPPTT $N_hC_Lh_hC_MC_H$ D_sv_sapp. Stationary ocean weather ships (and some foreign ships) will furnish messages in the complete ship code (FM 21).

It will be impossible to distribute the new codes and instructions so as to be received by January 1, 1949 on some vessels on long voyages, hence a few ships may continue to forward their radio reports in the present code. In order that radio messages received in the new ship code may be identified readily at collection centers at Washington and San Francisco, all U.S. vessels using the new code will be requested to insert the word "SHIP" before the group "$YQL_aL_aL_a$" of the message. In radio exchanges and teletype distribution of the reports, the reports will be grouped and headed by the identifiers FM 21 and FM 22 to indicate the new code form and F 232 to indicate the old code form.

For the convenience of cooperating vessel weather observers in

preparing radio messages and for recording data on Form 1210AB, a ship code card, "International Weather Code for Ships", has been prepared for distribution to merchant ships. A limited number are available, and copies will be furnished to District and Airway Forecast Centers and Coding and Editing Units on request to the Central Office.

RAOB CODE: The new publication entitled "Radiosonde and Rawinsonde Code 1949 Edition" has been printed and distributed to all Weather Bureau offices. It is requested that the actual figures for dew point be substituted for either relative humidity or mixing ratio in the plotting of radiosonde data on charts.

UPPER WIND CODE: The 1949 code is being printed and should be distributed to Weather Bureau offices well in advance of December 15th. In actual domestic practice very little change will be apparent in the 1949 upper wind code over that in use during 1948.

U.S. WEATHER ANALYSIS CODE: The new analysis code, replacing WB-1345, effective January 1, 1949, has been distributed to stations. An abridged code card was included with each copy.

SYNOPTIC CODE: The synoptic code, 1949 Edition, is being printed, and it is expected that copies will be on station by December 15th. It will be noted that the majority of elements reported in the new code are currently being reported in the 1942 Weather Code. Also, the coding procedures for these elements in most cases remain the same. Hence, the major changes in the synoptic code are the rearrangement of the order in which the elements appear in the coded report, the inclusion of two new groups, and the introduction of new units and code table specifications.

The major changes and additions are: (1) The reporting of wind direction (dd) to tens of degrees (00-36) instead of to 32 points of the compass (00-32) and wind speed in knots instead of Beaufort force. (2) The cloud group ($N_hC_Lh_LC_MC_H$) will always be included in the report even though there are no clouds present, and the individual elements of the group will be reported in accordance with paragraph 1805 of the Synoptic Code, 1949 Edition. (3) Tenths of millibars are reported for "pp" instead of "fifths" of millibars. (4) Code figure "00" is used to report a TRACE of precipitation and plain language words are used to report whole inches of precipitation. (5) The $8N_sC_{hs}h_s$ group will be reported only by those stations receiving special authorization. (6) The present Special Phenomena table remains unchanged except for the deletion of specifications for S_pS_p code figures 76, 83, and 84 and the inclusion of code figures "00" and "01" which provide for the reporting of maximum wind direction to tens of degrees and speeds in knots. (7) The wave group ($1d_wd_wP_wH_w$) will be reported only by currently authorized coastal stations. (8) Twenty-four hour precipitation is reported by the $3R_{24}R_{24}R_{24}R_{24}$ group instead of the currently added four figure group. (9) Both maximum and minimum temperatures are included in each report in the $4T_xT_xT_nT_n$ group. (10) Plain language words are added to the end of the message to report occurrences of record temperatures.

INSTRUCTIONS FOR CODING ww: The entire "ww" code has been revised. Certain specifications have been changed, and the numbers have been rearranged. A new edition of the "Observers Manual for Coding Present Weather, ww" is being prepared, but it will not reach the field by January 1st. The instructions given in the 1943 edition of this publication should be used where applicable in so far as they refer to definitions of hydrometeors, etc. Circular N is also a source of information concerning the limits which divide light, moderate, and severe classifications in the "ww" code.

PREPARATION OF WEATHER MAPS: The IMO did not recommend a revised station model for use with the new code. However, it did adopt a resolution specifying that the present international station model be used except for the changes necessary to bring it into conformity with the new code. Hence, the present ABBREVIATED U.S. Station Model will be continued except that "VV" will be substituted for "V"; no entry will be made for "h_Ch_C", as it will not be reported.

The Weather Bureau's publication "Preparation of Weather Maps" is being revised. Every effort is being made to have the new publication on station by January 1st. If this is not practicable, stations will use current instructions for plotting the individual elements in so far as applicable. The following instructions will apply if the revised edition is not received prior to January 1st:

ff - Reported in knots - plotted in the equivalent Beaufort forces.

VV - The code figures received will be entered to the left of "ww" in place of the one code figure currently being received.

h_Sh_S - Enter both code figures in place of h_Ch_C. (Optional)

C - Enter appropriate symbol to the left of h_Sh_S. (Optional)

N_S - Enter code figure to the left of C. (Optional)

$(S_pS_ps_ps_p)$ - Enter code figures enclosed in parenthesis under RR and immediately to the right of the center line of the station circle. (Optional)

$d_Wd_WP_WH_W$ - Enter to the left of $(S_pS_ps_ps_p)$ and to the left of the center line of the station circle. (H_W - enter actual height; P_W - enter mean value in seconds; d_Wd_W - enter arrow) (Optional)

A new version of the present sheet "Explanation of Code Figures and Symbols" is being prepared which will be entitled "Station Model and Explanation of Code Figures and Symbols". The layout of the new sheet will be similar to the old one with respect to the symbols and specifications, and in addition will give the symbolic form of the code and the station models. At the present time the printing schedule

provides for distribution of the 19" x 22" sheet "Station Model and Explanation of Code Figures and Symbols" about December 15th. The new symbols are given in Resolution 178 on Page 148 of the Mimeographed edition of the Final Report, Twelfth Conference of Directors, Washington, D.C., September 22 - October 11, 1947, a copy of which was mailed to all first order stations.

INTERNATIONAL INDEX NUMBERS: Individual station numbers for Canada and the United States will remain the same. Those for Alaska, Mexico and the Caribbean area, as well as for most other portions of the world, will change on January 1st. The new list of "International Station Numbers for North and Central America" is being printed. Copies will be distributed to all stations in the near future. The IMO Secretariat has issued a new edition of Fascicule II, IMO Volume 9 which contains the new world-wide list of station numbers. The Weather Bureau has purchased copies of Fascicule II for distribution to selected field stations requiring them. Copies will be distributed as soon as they become available. Service C and O Manuals will also be reprinted to show the new numbers.

ADDITIVE DATA ON SERVICE A REPORTS: Because the height of all clouds in airways reports will be given in numerical values after January 1st, the last 2 digits (h_+M_+) of the 6-figure cloud group will be dropped. The other additive data will continue as at present until a new edition of the "Manual of Instructions for Coding Additive Data Groups for Hourly Observations" can be issued. In the meantime reference to the 1942 Weather Code given in the present manual with respect to coding procedures and specifications will be understood to refer to appropriate instructions and specifications in the Synoptic Code, 1949 Edition.

For example: Code figure "CO" will be used to report a TRACE of precipitation, and plain language words instead of the "OOOR'R'" group will be used to report whole inches of precipitation; hence, if no precipitation is to be reported the "appRR" group becomes "app". Twelve-hour amounts of precipitation will no longer be reported.

Tenths of millibars will be reported for "pp". The "$T_n/_xT_n/_x$" group will be continued as at present. Twelve-hour maximum temperature will be reported at 0030 and 0630 G.C.T., and twelve-hour minimum temperature at 1230 and 1830 G.C.T.

It should also be noted that the specifications for C_L, C_M, and C_H have been changed.

REVISED BASE MAPS: All stations in the United States and Canada will retain their present index number assignments. Therefore, the majority of base maps will not be affected appreciably by the change to a new numbering system. In view of the considerable amount of work involved in making the necessary changes on the more extensive charts which are required at some forecast centers, charts which do not cover extensive areas of new station numbers will not be revised immediately.

Although work in connection with revision of the Alaskan, Asiatic, European, African and Central American portions of the larger charts could not begin until lists of the new station number assignments were received (late in October, 1948) progress is being made and it is expected that all revisions will be completed before January 1st. However, considerable difficulties and delays can be anticipated in printing and mailing due to the increase in volume of printing work in connection with the production of new codes and instructions and the seasonal increase in the volume of bulk mail handled by the Post Office during December, so it is possible that some of the revised charts may not arrive in time to be put into use on January 1st. In such cases it will be necessary to use maps on hand at the station until the new ones are received, either making the changes in station numbers on individual copies before plotting, or by referring to the new index number lists when entering reports.

Revisions to the following maps have been, or will soon be, completed and supplies will be forwarded to all users as soon as the charts can be printed: 1507, 1509, 1536, 1541, 1542, 1571, 1670, 1672. All other charts will be revised, but new editions will not be furnished until existing supplies at the Central Office have been distributed.

NATIONAL COMMUNICATION SCHEDULE: To make allowance for the additional length of significant codes on Service C a new NACOS will be effective January 1st. The new schedule will be distributed by the CAA.

CODES USED IN INTERNATIONAL AVIATION: Effective January 1, 1949 the following codes will be used in providing meteorological service to international aviation:

AERO CODE (Broadcast reports for aircraft).

POMAR CODE (Position, operational, meteorological aircraft reports, other than reconnaissance).

TAMET/TAFOT CODE (Terminal forecast code - international).

ARMET/ARFOT CODE (Area forecast code - international).

ROMET/ROFOT CODE (Route forecast code - international).

The Weather Bureau is preparing to issue these codes in mimeograph form. Details will be found also in Annex 3 to the Convention on International Civil Aviation, "Standards and Recommended Practices - Meteorological Codes".

INTERNATIONAL AVIATION PROCEDURES: The procedures for rendering weather service to international flights effective January 1, 1949 are contained in "Specifications for Meteorological Services to International Air Navigation (MET)", ICAO Document 5714-MET/511. Copies of the ICAO

Documents mentioned above have been sent to all main meteorological offices and dependent meteorological offices as well as to other forecast centers that prepare forecasts for international operations.

DOMESTIC AVIATION FORECASTS: Effective January 1, 1949 domestic aviation forecasts will be transmitted in two sections. The regional forecast (in a new abbreviated form) will be followed 45 minutes later by the terminal forecasts. The forecast period will be extended to 12 hours. Chapters III-B-20 and III-B-21 of the Weather Bureau Manual will contain instructions regarding domestic aviation forecasts. The chapters will be distributed to all stations by January 1st.

CIRCULAR M: The changed portion of Circular M has been issued as "Instructions for Recording and Coding Marine Meteorological Observations in the New International Code", referred to under SHIP CODE above. The next edition of Circular M will incorporate these changes.

CIRCULAR N: For the first time this is being prepared as a WBAN Manual, to which is attached an addendum of Weather Bureau procedures. It is scheduled for delivery from the Government Printing Office on December 10th. Delivery to field stations will be made promptly upon receipt. A Circular Letter has been issued summarizing the changes made in the new Circular N.

CIRCULAR P: Amendments to this Circular have already gone out in the form of a Multiple Address Letter to stations which are affected.

CIRCULAR R: This manual on "Preparation of Weather Maps at Sea" is being re-written and should become available during the Spring of 1949. Weather Bureau offices will not be affected by this change.

CIRCULAR S: The new manual on coding clouds is being reprinted. It is scheduled for delivery from the Government Printing Office on December 15th and will be forwarded immediately to field stations.

CIRCULAR T: Amendments to this manual have been printed and distributed. Stationary weather ships will, after January 1st, report their surface weather in the Merchant Ship Code and report upper wind data and radiosonde data in a code similar to that used by land stations.

NEW FORMS: A summary of instructions for use of new observation forms will be issued soon, to be effective January 1st.

DAILY WEATHER MAPS: The daily map, printed in Washington, will be plotted in the new station model and will carry a revised explanation. It is anticipated that a map-back will be released prior to January 1st explaining these changes.

IMO REGIONAL DECISION REGARDING THE 6th AND 7th GROUPS: Certain

data in the synoptic code have been left to regional decision. The following information is available:

Region II, Asia, will send $6D_Capp$ where D_C is defined as the direction of the lowest cloud observed. Group $7RRT_eT_e$ will be reported twice daily where T_eT_e is the extreme temperature. Group $3RRD_LD_M$, where D_L and D_M is direction of low and middle clouds respectively, may be used as an alternate group for $7RRT_eT_e$. The above agreements do not include U.S.S.R. which is expected to continue use of present codes and index numbers after January 1st.

Region III, South America, will send $6Eapp$ $7RRT_eT_e$ where E is the state of the ground and T_eT_e is maximum or minimum temperature.

Region IV, North and Central America, will transmit $6D_Capp$ and $7RRR_ts$ except that the Mexican Meteorological Service and possibly one or two others may report the rainfall group as $7RRRR_t$ in which RRR will be the precipitation in millimeters.

Region V, the Southwest Pacific, will use $6D_Lapp$ $7RRD_LD_M$, but tropical areas in the region will omit $6D_Lapp$.

Region VI, Europe, except U.S.S.R., will send $6Eapp$ $7RRT_eT_e$ at the 0600 and 1800 GCT observations. At other observations European countries, except U.S.S.R., will send $6a_Xapp$, in which a_X gives additional information on pressure change. RR in Region VI reports will represent 12-hour precipitation amounts.

Additional information concerning the practices adopted by other Regions and countries will be circulated as soon as it becomes available.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

Library

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

0-5.31
(File No. 740.1,
610.3, 601)

December 21, 1948

ADDENDUM I TO CIRCULAR LETTER 106-48
(To all Stations)

Subject: Changes in Codes and Procedures, January 1, 1949.

The purpose of this addendum is to advise stations of latest developments in plans for January 1st changes.

PROGRESS IN DISTRIBUTION OF CODES AND INSTRUCTIONS: Codes and instructions are being distributed directly to first order stations by the Central Office. Bulk copies are being sent to Regional Offices for distribution to other classes of stations. Copies for Alaska were sent by air.

The radiosonde code was in the mail by September 23rd. The ship code was sent out by December 10th. The weather analysis code, upper wind code, and synoptic codes were sent out between November 30th and December 15th, and the "International Station Numbers for North and South America" and the sheet "Station Model and Explanation of Code Figures and Symbols" were mailed on December 16th. "Preparation of Weather Maps", as indicated, will not be delivered for several weeks. However, sufficient information has been issued to enable stations to plot surface maps, using the new station model.

REVISED BASE MAPS: The printing of revised base maps is progressing, and some maps have been sent to stations. It is likely, however, that the revised bases will be delayed beyond January 1st in reaching some stations.

INTERNATIONAL INDEX NUMBERS: The supply of Fascicule II, IMO Volume 9 (Index Numbers), has not arrived at the Central Office. It is possible that delivery to stations selected to receive it will be delayed beyond January 1st. However, the Service C and O Manuals, which are scheduled for delivery prior to January 1st, will carry the 1949 numbers. In addition a list of international airdromes and their new numbers will be sent to stations which serve international aviation.

UPPER WIND CODE: Circular Letters 1-44 and 102-46 authorize the transmission of certain rabal and rawin data in the second transmission of radiosonde reports. This practice will continue under the provisions of paragraph 1501 of the Upper Wind Code.

SYNOPTIC CODE: A circular letter correcting several typographical errors in the Synoptic Code will be issued as soon as practicable.

Also the circular letter will contain some further clarification regarding the use of "-" and "/" in coding clouds, but this will not materially change present instructions.

The correct limits of a TRACE of precipitation and depth of snow on ground are given in paragraphs 1807.24, and 1807.43, respectively, of the Synoptic Code.

INSTRUCTIONS FOR CODING ww: "Instructions for Recording and Coding Marine Meteorological Observations in the New International Code" may also be used by first order station observers as a guide in coding "ww" until the new edition of "Observers Manual for Coding Present Weather, ww" is received.

DOMESTIC AVIATION FORECASTS: Chapters III-B-20 and III-B-21, relating to domestic aviation forecasts, were mailed on December 20th. Honolulu will deviate from domestic practice by forecasting surface wind speed in knots. In Chapter 21, page 6, line 5, change 100 to read 1000.

NATIONAL COMMUNICATION SCHEDULE: Publication of the Service C NACOS by the CAA has been delayed. If it is not distributed before January 1st, information concerning essential changes will be included in a WAMES prior to January 1st.*

IMO REGIONAL DECISIONS REGARDING THE 6th AND 7th GROUPS: United States stations in the Pacific will, until further notice, use the code groups $6D_Capp$ and $3RRD_LD_M$ (13th group of the code for Region II). In these groups the code figure 00 will be used in RR to report no precipitation, while 01 will be used to report a TRACE and .01 inch of precipitation.

CODING MEAN DATA: Attention is directed to paragraph 2003.1 of the Synoptic Code, 1949 Edition, which specifies that current instructions for adding weekly and monthly mean data groups to the synoptic message have not been changed.

PLOTTING MODEL FOR CAW-C AND POMAR REPORTS: Tentative agreement has been reached on a plotting model for the CAW-C and POMAR codes. The model has been printed by the Air Force and will be distributed soon after January 1st to all first order stations.

F. W. Reichelderfer,
Chief of Bureau.

* Later information indicates that publication has been completed and distribution is being made.

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UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

O-5.31
(File No. 740.1,
610.3, 601)

March 9,1949

ADDENDUM II TO CIRCULAR LETTER 106-48
(To all Stations)

Subject: Changes in Codes and Procedures, January 1, 1949.

The comments below provide further information regarding changes which took place January 1, 1949.

UPPER WIND CODE: Some stations have asked about use of the contractions RABAL and RAWIN. These contractions have been discontinued in upper wind reports by teletype, since it is the concensus of forecasters that the value is not great enough to justify the required teletype time.

IMO REGIONAL DECISION REGARDING THE 6th AND 7th GROUPS: Stations in the Philippines will report $6D_Capp$ and $3RRD_LD_M$. They will also report 24-hour precipitation in a four-figure, RRRR, group at 0000Z. When 6-hour precipitation exceeds 0.99 inch an extra group, 0000R, in which "R" is the number of whole inches of precipitation, will follow the $3RRD_LD_M$ group. RR = 99 will be coded for a trace of rainfall. The "7" group will be omitted from Philippine reports.

Information available to date from the USSR, Bulgaria, and Yugoslavia is to the effect that the codes and station numbers in use prior to January 1, 1949 will be continued until the middle of 1949. China, Spain, and some areas of Africa are also using the old codes and numbers. When further information is received all stations will be advised.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

December 8, 1948 0-4.2

(File No. 740, 601)

CIRCULAR LETTER NO. 107-48
(To All Stations)

Subject: Second Edition of Circular S, Manual of Cloud Forms and Codes for States of the Sky.

The second edition of Circular S, Manual of Cloud Forms and Codes for States of the Sky, will be distributed during December. It will be effective 0000 GCT, January 1, 1949. If the new manual should not arrive prior to the effective date, clouds will be coded in accordance with the code specifications in the 1949 Synoptic Code and the following abridged instructions.

As the revised title indicates, the new edition has two principal subdivisions: 1) Definitions and descriptions of cloud forms (pages 1-7), which in general are unchanged from the previous edition; and 2) Code Specifications (pages 9-43), which have been completely restated and in some instances significantly amended. Pictures, and additional descriptions where necessary, are included in the second subdivision. Particular attention will be given the following code changes:

1. Separate code figures have been provided for cumulonimbus whose tops lack clear-cut outlines but are not distinctly cirroform (L3) and for cumulonimbus whose tops are distinctly cirroform (L9).

2. Separate code figures have been provided for stratocumulus clouds (L5) and stratus clouds (L6).

3. The coding distinctions between (a) cumulus of fine weather and stratocumulus (formerly L7), and (b) heavy or swelling cumulus, or cumulonimbus, and stratocumulus (formerly L8), have been eliminated. Both combinations will now be coded L8.

4. Fractostratus and fractocumulus clouds of bad weather, which were formerly coded L6, will now be coded L7.

5. Separate code figures have been provided for dense cirrus (H2), and cirrus known to have been derived from cumulonimbus (H3). Both of these cloud forms were formerly coded H3.

6. The coding distinction between scattered and isolated cirrus (formerly H1), and abundant cirrus (formerly H2), has been eliminated. Both forms will now be coded H1.

Binders for the manual are also being forwarded. However, the manual may be bound with Circular N in the same binder at stations where this arrangement is more convenient.

The second edition of Circular S supersedes the first edition and all amendments and interpretations pertaining to it, including the Cloud Code Chart and the Guide to Cloud Coding. Revised copies of these two publications are being prepared.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

A-3.3
(File No. 030.04)

December 13, 1948

CIRCULAR LETTER NO. 108-48
(To All First Order Stations)

Subject: Half-Holiday on December 24, 1948.

Executive Order No. 10019 of December 2, 1948 provides for excusing employees from duty for one-half day on December 24, 1948.

Pursuant to the provisions of this Order, the Department of Commerce has issued instructions to the effect that all Department of Commerce installations, both departmental and field, shall be closed during the last half of the standard work day on December 24, wherever possible. All employees, whether working the standard work day or engaged in multiple shift activities, shall be excused from duty after completing one-half day's work, provided that employees may be required to perform a full day's work when necessary because of continuing operations, exigencies of service, or requirements of law. Accordingly, officials in charge are authorized to excuse all employees from duty for the last half of the work day for December 24, except those required to maintain essential operations such as forecasting and observing.

Employees required to perform duty during the half day for which they would otherwise be excused under this Order, are entitled to compensation at holiday rates for such duty up to four hours in excess of the first four hours worked on that day; for example, an employee starting a tour of duty at 7:00 p.m. December 23 and ending after three hours December 24 and another tour of duty at 7:00 p.m. December 24 and ending after three hours December 25 will be entitled to nine hours regular and seven hours holiday pay for the two tours of duty if the holidays fall within the employee's regular work week. Compensatory time off may not be granted for the last four hours worked on December 24.

Four hours annual or sick leave or compensatory time or eight hours LWOP will be charged if an employee does not work on December 24.

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-5.23
(File No. 610.4

December 16, 1948

CIRCULAR LETTER NO. 109-48
To All First Order Stations

Subject: Teletype Identifications Issued by the Canadian Meteorological Service

Effective January 1, 1949, all weather reporting locations in Canada, Newfoundland, and Labrador will bear two-letter teletype identifications.

The following list contains the names of the locations for which identification changes are being made, the present identifiers, the new identifiers, and the service, circuit or collective in which the reports appear.

SERVICE A

Name of Station	Present Identification	New Identification	Circuit
New Glasgow, N.S.	MNG	NG	8001
St. Johns, N.B.	JSJ	SJ	8001
Bagotville, Que.	MNB	BG	8001
Campbellton, N.B.	JCN	CN	8001
Summerside, P.E.I.	MNS	SU	8001
Debert, N.S.	JDB	DB	8001
Chatham, N.B.	JCH	CH	8001
Estevan, Sask.	LSV	EN	8006,8007,8011
Brandon, Man.	MNO	BR	8006,8007,8011
Old Glory Mountain, B.C.	LOG	OG	8007
Castlegar Arpt., B.C.	LCG	CG	8007,8011
Rocky Mountain House, Alta.	LRM	RM	8007,8011
Coronation, Alta.	LCN	CT	8007,8011
Gimli, Man.	LGI	GM	8007

SERVICE C

Collective Heading	Station	Present Identification	New Identification
PBCN BUF	Trout Lake, Ont.	KTL	TL
	Moosonee, Ont.	KMO	MO
	Rockcliffe, Ont.	RCK	RC
PB VR	Old Glory Mountain, B.C.	LOG	OG
PB WG	Prince Albert, Sask.	LPA	PA
	Suffield, Alta.	RSF	SD
FA QL	Moose Jaw Arpt., Sask.	LMJ	MJ

SERVICE O

Collective Heading	Station	Present Identification	New Identification
AW 103	Peace River, Alta.	MNE	PE
	Wagner, Alta.	LWG	WA
AW1 111	Prince Albert, Sask.	LPA	PA
	Dauphin, Man.	LDP	DP
	Hudson Bay Junction, Sask.	LHB	HB
	Yorkton, Sask.	OV	QV
AW 114	Seal Cove, P.R.	LSC	SC
	Kleena Kleene, B.C.	050	KK
	Hazelton, B.C.	LHZ	HZ
	Telegraph Creek, B.C.	959	TC
	Lytton, B.C.	LYT	LY
	Victoria, B.C.	LVI	VI
	Estevan Point, B.C.	894	EN
	Pachena Point, B.C.	113	PC
	Cape St. James, B.C.	107	CJ
	Chilliwack, B.C.	LCW	CW
	Kamloops, B.C.	887	KA
AW XD	Lac La Biche, Alta.	LLB	LB
	McMurray Arpt., Alta.	LFM	MM
	Embarras Arpt., Alta.	MNM	EM
	Ft. Smith Arpt., N.W.T.	LSM	SM
	Ft. Resolution, N.W.T.	LRE	FR
	Hay River Arpt., N.W.T.	MNY	HY
	Providence, N.W.T.	LPV	PV
	Fort Simpson, N.W.T.	LSI	FS
	Fort Good Hope, N.W.T.	LGH	GH
	Sawmill Bay, N.W.T.	LSW	SW
	Cambridge Bay, N.W.T.	LCB	CB
	Kittigazuit, N.W.T.	LKZ	KZ
AWNA ULF	Bagotville, Que.	MNB	BG
	St. John Arpt., N.B.	JSJ	SJ
	Campbellton, N.B.	JCN	CN
	Chatham, N.B.	JCH	CH
	Baie Comeau, Que.	MNC	BC
	New Glasgow, N.S.	MNG	NG
	Debert, N.S.	JDB	DB
	Botwood, N.F.	JBO	BO
	Argentia, N.F.	MMP	AR
	Stephenville, NF	UJT	JT
	St. Anthony, N.F.	JAY	AY
	St. Pierre, F.R.	JPM	PM
FA QM	Debert, N.S.	JDB	DB
	New Glasgow, N.S.	MNG	NG
	Chatham, N.B.	JCH	CH
	St. John Arpt., N.B.	JSJ	SJ

SERVICE O Continued

Collective Heading	Station	Present Identification	New Identification
FA XD	McMurray Arpt., Alta.	LFM	MM
	Fort Smith Arpt., N.W.T.	LSM	SM
PBCN EVO	McMurray Arpt., Alta.	LFM	MM
	Ft. Smith Arpt., N.W.T.	LSM	SM
	Ft. Simpson, N.W.T.	LSI	FS
	Sawmill Bay, N.W.T.	LSW	SW
	Aklavik, N.W.T.	LAK	AK
	Kittigazuit, N.W.T.	LKZ	KZ
	Resolute Bay, N.W.T.	KRB	RB
	Coppermine, N.W.T.	LCO	CO
	Cambridge Bay, N.W.T.	LCB	CB
	Eureka Sound, N.W.T.	MNU	EU
	Wagner, Alta.	LWG	WA
PBCN ULF	Dorval, Montreal	UL	DO
TH 111	Island Falls, Sask	920	IF
	Wabowden, Man.	LWB	WB
	Gillam, Man.	KGI	GI

Very truly yours,

F. W. Reichelderfer

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

O-5.31

File No. 620.11

December 17, 1948

CIRCULAR LETTER NO. 110-48
(To all First Order Stations)

Subject: New Form of Writing Aviation Weather Forecasts.

Enclosed are copies of Chapters B-20 and B-21 of the Weather Bureau Manual relating to terminal and regional aviation forecast procedure. These instructions will become effective 0000Z January 1, 1949 (1900E, December 31, 1948). At a later date these chapters will be printed in standard form for binding.

As the new instructions introduce a number of changes in the methods of writing domestic aviation weather forecasts it is requested that all Weather Bureau personnel using these forecasts or having occasion to do pilot briefing become thoroughly familiar with them before January 1st. For convenience the more important changes have been summarized below.

General

1. Forecasts of upper winds, icing, freezing level and turbulence will be transferred to the respective terminal groups.

2. Visibilities above 6 miles will not be mentioned in the forecasts.

3. Cirroform clouds (cirrus, cirrostratus, cirrocumulus) will be indicated only by the symbols ⊙, ⊕, ⊕, without use of the slant "/" or figures to denote heights. Other cloud layers will have bases and tops indicated. The figure(s) preceding the sky condition symbol will indicate the height of the base of the cloud layer and the figure following the sky condition symbol will indicate the height of the top of that cloud layer. The forecast will show the cloud layers in ascending order.

4. The slant "/" will no longer be used to indicate high scattered, high broken or high overcast, but serves only to separate the various groups and symbols.

B-20 Regional Forecasts.

1. The clouds and weather portion of the forecast will use authorized symbols, call letters, and contractions whenever possible.

2. In regional forecasts all cloud heights (bases as well as tops) will be in hundreds of feet above mean sea level.

3. The regional forecast will be a 12 hour forecast, and the further outlook will cover an additional 12 hours.

B-21 Terminal Forecasts.

1. In terminal forecasts the first layer of broken or overcast clouds will constitute the ceiling. The height of the ceiling and the height of the base of any scattered clouds below the ceiling will be indicated in hundreds of feet above the ground. When only scattered clouds are forecast, the height of their base will be above ground. The height of all other cloud bases and the height of all cloud tops will be in hundreds of feet above mean sea level.

2. Surface winds less than 15 miles per hour will not be mentioned.

3. Upper wind speeds will be forecast in knots instead of miles per hour.

4. Intensities of icing and turbulence will not be indicated.

F. W. Reichelderfer,
Chief of Bureau.

Enclosures

CHAPTER B-20. REGIONAL AVIATION FORECASTS

B-2001. General Style.

a. Form. Regional Aviation Forecasts will be prepared and distributed in the form prescribed herein. The purpose of utilizing this form for domestic aircraft operations in the continental United States, Alaska, and Hawaii is to insure a form which will be familiar to all concerned, will provide basic information for pilot briefing, and will require a minimum of teletype time.

b. Brevity. Forecasters must endeavor to keep forecasts as brief as possible and still maintain clarity. It is the responsibility of supervising aviation forecasters to review the forecasts frequently in order to avoid unnecessary words and phrases and to develop a clear, concise style of writing. It should be kept in mind that these forecasts are intended for the use of aircraft operators and pilot briefers; they are not primarily a medium for the exchange between forecasters of technical meteorological information.

c. Clarity. Forecasts will be phrased for maximum clarity consistent with brevity. Times should be indicated with time groups or as recognized parts of the day (i.e. early afternoon, near midnight, etc.) Time will not be stated with reference to the forecast period (i.e. close of period).

d. Symbols, abbreviations, and contractions. Standard teletype symbols, abbreviations, and contractions will be utilized whenever appropriate.

B-2002. Time of Issue. Regional forecasts will be prepared every six hours for the time shown in Table I. Forecasts will be filed with communications operators at least ten minutes before time for transmission.

B-2003. Periods to be Covered.

a. Forecast. Each forecast will include reference to specific weather elements and developments for a 12-hour period beginning approximately one half hour after release time.

b. Outlook. To the forecast will be added an outlook for twelve hours, phrased in more general terms.

B-2004. Areas Covered. Regional Aviation Forecasts will cover those states and portions of states assigned to the several forecast centers in accordance with Exhibits B-20-1A and B-20-1B.

B-2005. Arrangement of Elements in Forecast. Forecasts will be written in paragraph form in the following order:

a. Heading.

b. Forecast period.

c. Forecast area (or routes).

d. Synopsis.

e. Clouds and weather.

f. Outlook.

B-2006. Composition and Form of Each Element.

a. Heading. The heading will consist of three parts: the contraction FR meaning regional aviation forecast, the call letters of the forecast center, and a six-figure date-time group (GCT) showing the scheduled teletype transmission time. Example: FR SEA 180333Z.

b. Forecast Period. The 12-hour period covered by the forecast will be indicated on the line immediately below the heading by two six-figure date-time groups denoting the beginning and the ending of the period. See Table I. Except for the heading, all reference to time will be in LST with the exception that Alaskan Forecast Centers will use GCT exclusively. The time groups will always be followed with the appropriate letter denoting the time zone in use.

TABLE I

Time Periods of Regional Forecasts

Approximate Release Time		Forecast Period	Outlook Period
010933Z		010200 - 011400P	011400 - 020200P
		010300 - 011500M	011500 - 020300M
		010400 - 011600C	011600 - 020400C
		010500 - 011700E	011700 - 020500E
011000Z	(Alaskan)	011100 - 012300Z	012300 - 021100Z
010920Z	(Hawaii)	010000 - 011200H	011200 - 020000H
011533Z		010800 - 012000P	012000 - 020800P
		010900 - 012100M	012100 - 020900M
		011000 - 012200C	012200 - 021000C
		011100 - 012300E	012300 - 021100E
011600Z	(Alaskan)	011700 - 020500Z	020500 - 021700Z
011520Z	(Hawaii)	010600 - 011800H	011800 - 020600H

Table I (continued)

Approximate Release Time		Forecast Period	Outlook Period
012133Z		011400 - 020200P	020200 - 021400P
		011500 - 020300M	020300 - 021500M
		011600 - 020400C	020400 - 021600C
		011700 - 020500E	020500 - 021700E
012200Z	(Alaskan)	012300 - 021100Z	021100 - 022300Z
012120Z	(Hawaii)	011200 - 020000H	020000 - 021200H
020333Z		012000 - 020800P	020800 - 022000P
		012100 - 020900M	020900 - 022100M
		012200 - 021000C	021000 - 022200C
		012300 - 021100E	021100 - 022300E
020400Z	(Alaskan)	020500 - 021700Z	021700 - 030500Z
010320Z	(Hawaii)	011800 - 020600H	020600 - 021800H

c. Forecast Area. The areas covered by the forecast will be listed two lines below the forecast period. Example: WASH OREG NRN IDA. Certain forecast offices are authorized to issue route forecasts in lieu of regional forecasts if the needs of aviation are thereby better served. In these forecasts, the route designation will be stated instead of the area.

d. Synopsis. This portion of the forecast will be identified by the contraction "SYNS" and will begin two lines below the description of the forecast area. A brief statement of important synoptic conditions will suffice. The most important single feature of the synopsis should be mentioned first. Other features should follow in order of importance. Descriptions of fronts and squall lines should state the forecast positions at the beginning and end of the forecast period. Frontal positions should be described with reference to reporting stations, state boundaries or well-known geographical points using abbreviations and call letters where appropriate. Frontal positions will not be described by reference to some portion of the district, i.e., SRN BRDR DIST.

e. Clouds and Weather. This portion of the forecast will be identified by the term "CLDS AND WX" and will begin two lines below the synopsis. Heights of clouds, areas of significant weather and anticipated changes will be stated.

1. Cloud bases, cloud tops, cloud cover, visibility and weather/obstructions to vision will be indicated in symbolic form. The form used will be that prescribed for use in terminal forecasts (refer to paragraph B-2108d-1, 2, 3) except that all cloud bases and tops will be indicated above mean sea level and that a forecast of more than one cloud layer will be written as a series of figure-symbol groups arranged in ascending order, with a slant "/" separating the groups. The clouds and weather portion of the forecast will always be prefixed with the

4

statement "HEIGHTS MSL UNLESS NOTED". In mountainous areas or irregular terrain the forecast should be amplified by mentioning anticipated low ceilings and visibilities or obscurations in passes and over ridges.

2. It is recognized that any statement of anticipated weather conditions in an areal forecast must be accepted as representing a mean value. It is, therefore, desirable that the use of combined forms such as ⊕V⊕ be kept to a minimum. If necessary, figures to indicate ranges of variability of cloud bases and tops may be included. Cloud types will not be forecast unless necessary to clarify the forecast. Symbols will always be used to indicate cloud cover but plain language may be added if necessary. Visibilities above 6 miles will not be mentioned.

f. Outlook. This portion of the forecast will be identified by the contraction "OTLK" and will begin two lines below the clouds and weather portion. Following the contraction "OTLK" will be two date-time groups indicating the period covered by the outlook. (Refer to Table I).

Weather developments for the twelve hours immediately following the close of the forecast period will be described in a brief paragraph which will make specific mention of clouds and weather that will significantly affect aircraft operation. The statement should avoid excessive detail, and may refer if desired to data in preceding paragraphs of the forecast.

B-2007. Examples of Complete Regional Forecasts.

FR FTW 020333Z
012200-021000C

ERN NM OKLA TEX

SYNS COLD FNT SLN-TUL-AMA LINE 2200C WILL RCH FSM-ADM-LBB LINE BY 1000C.

CLDS AND WX HEIGHTS MSL UNLESS NOTED. 80D160/⊕ RW MTNS NE NM UNTIL 0400C. /⊕ ELSW. GF UPR TEX CST AFT 0300C WITH VSBY NEAR ZERO BY 0630C BUT DSIPTG BY 0800C. PTCHY GF VSBY 3-6 MIS INTR SE TEX AND LCLY IN NE TEX SE OKLA NEAR DABRK.

OTLK 021000-022200C /⊕

FR BOS 020333Z
012300-021100E

SYNS WK LOW GULF OF ME WILL CONT SLOLY NEWD. COLD FNT SRN ONT 2300E WILL RCH NW VT 0330E AND XG-LEB-PSF LINE 1100E.

CLDS AND WX HEIGHTS MSL UNLESS NOTED. 120@180 THRUT BCMG 80@120R- INVOF AND 30@60/80@120 TO REAR OF FNT. MTNS GNRLY OBSCD ABV 30

OTLK 021100-022300E FNT RCHG HUL-BID ATTENDED BY SIMILAR CNDS BUT IMPVG TO 250@60/@ 100 MIS REAR FNT

B-2008. Special Regional Forecasts.

Special regional forecasts should be issued when significant weather, differing materially from that originally forecast, occurs or is anticipated. The decision as to whether or not a special regional forecast should be issued must necessarily rest with the forecaster on duty. He should, in his decision, be guided by taking into consideration those weather changes that may be of particular significance to aircraft operations. The forecaster should feel free to issue special regional forecasts at any time he may consider it important to the safe and efficient operation of aircraft.

When special regional forecasts are issued, only those sections of the forecast that are amended should be transmitted.

Special regional forecasts will be written in the same form as the regularly scheduled regional forecasts, except that the heading will be preceded by the contraction "SPL". The release time will be the time of filing the forecasts (GCT). Special regional forecasts will extend only to the end of the current forecast period. The outlook period will not be covered.

EXHIBIT B-20-1A

AVIATION FORECAST REGIONS

Forecast Center	Forecast Region	Forecast Center	Forecast Region
Boston	New England	Fort Worth	Eastern New Mexico, Oklahoma, Texas
New York	New York, Pennsylvania, New Jersey	Denver	Southeastern Wyoming, Western Nebraska, Colorado, Western Kansas
Washington	Virginia, West Virginia, Maryland, Delaware, North Carolina	Billings	Montana, Western North Dakota, Western South Dakota, Northern Wyoming
Atlanta	Tennessee, Alabama, Georgia, South Carolina	Salt Lake City	Southern Idaho, Southwestern Wyoming, Northeastern Nevada, Utah
Miami	Florida, Eastern Gulf of Mexico	Seattle	Washington, Oregon, Northern Idaho
New Orleans	Arkansas, Louisiana, Mississippi, Western Gulf of Mexico	Los Angeles	Southern California, Southeastern Nevada, Arizona, Western New Mexico
Chicago	Southern Wisconsin, Michigan, Illinois, Indiana, Ohio, Kentucky	San Francisco	Northern and Central California, Nevada
Minneapolis	Eastern North Dakota, Eastern South Dakota, Minnesota, Northern Wisconsin, Northern Iowa	Kansas City	Eastern Nebraska, Southern Iowa, Kansas, Missouri

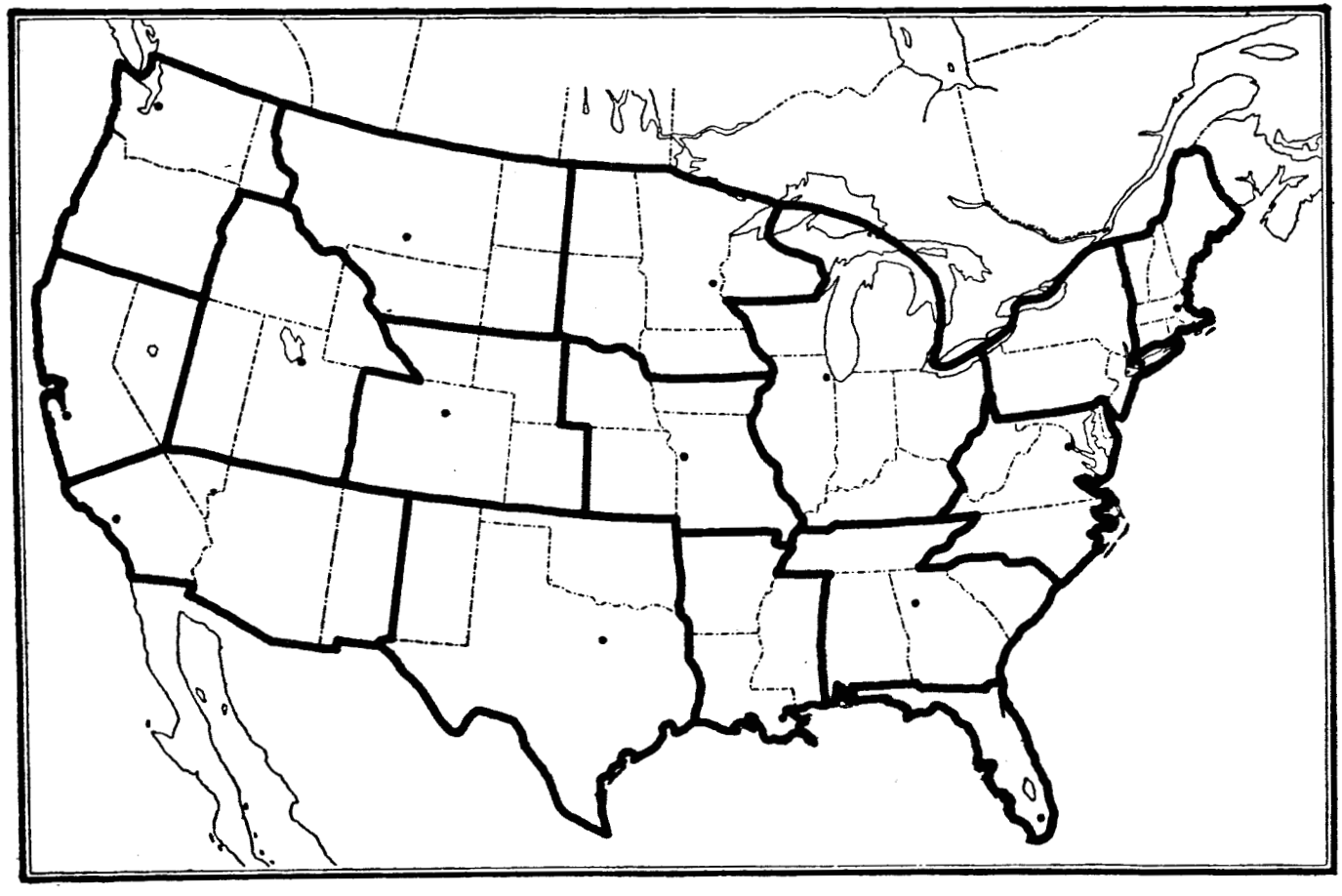

EXHIBIT B-20-1B

1-1-49

EXHIBIT B-20-1A continued.

DOMESTIC AVIATION FORECAST ROUTES

Forecast Center	Routes
Anchorage	Anchorage-McGrath-Bethel
	Anchorage-Kodiak
	Homer-Naknek-Bethel
	Anchorage-Yakutat
Fairbanks	Fairbanks-Snag,Y.T.
	Fairbanks-Anchorage
	Fairbanks-McGrath
	McGrath-Nome
	Fairbanks-Nome
	Nome-Kotzebue
Juneau	Annette Island-Yakutat
	Juneau-Yakutat
	Juneau-Sitka
	Juneau-Annette Island
	Ketchikan-Craig
	Juneau-Whitehorse
Honolulu	Barking Sands-Honolulu
	Honolulu-Puunene
	Puunene-Hilo
	Honolulu-Hilo

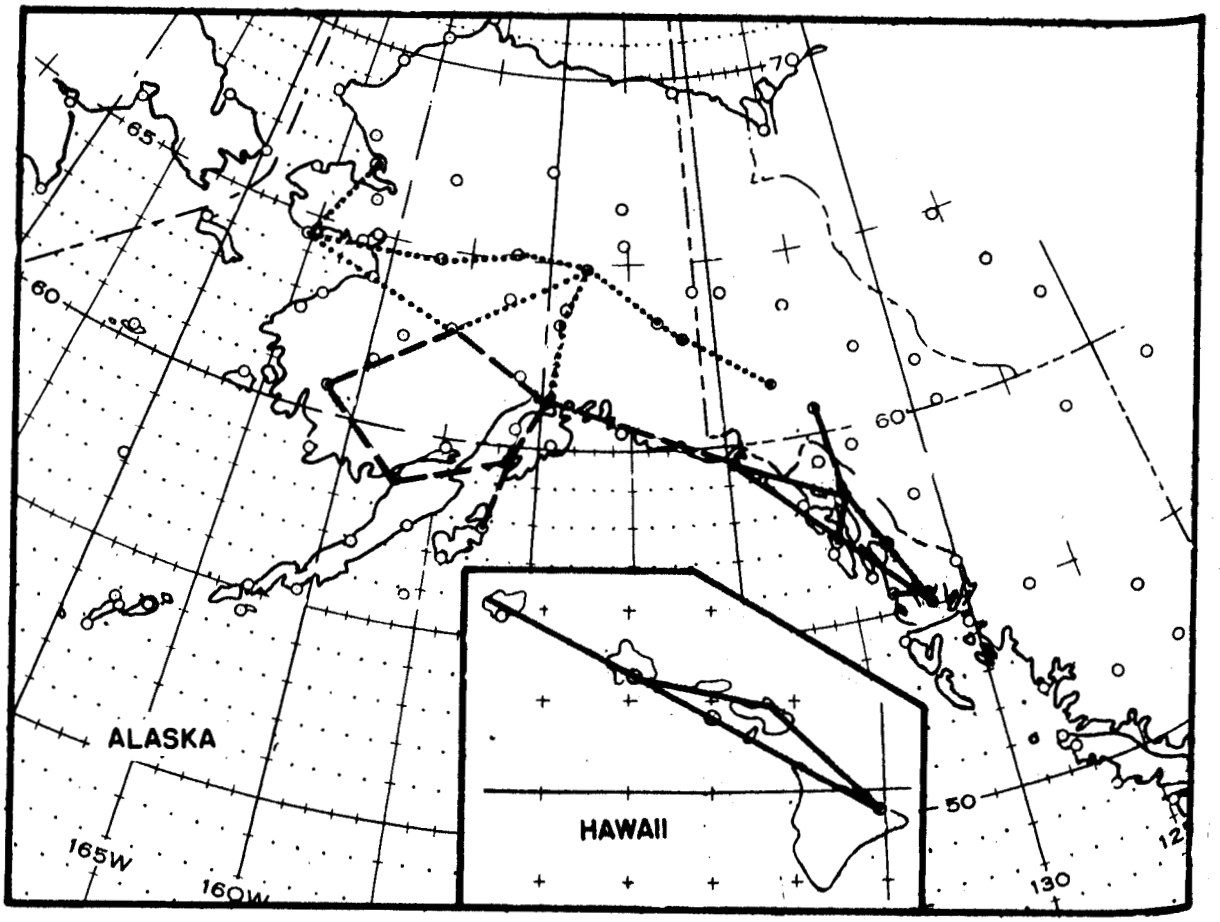

EXHIBIT B-20-1B

1-1-49

CHAPTER B-21. TERMINAL AVIATION FORECASTS

B-2101. General Style.

a. Form. Terminal Aviation Forecasts will be prepared and distributed in the form prescribed herein. The purpose of utilizing this form for domestic aircraft operations in the continental United States, Alaska, and Hawaii is to insure a form which will be familiar to all concerned, will provide basic information for pilot briefing, and will require a minimum of teletype time.

b. Brevity. Forecasters must endeavor to keep forecasts as brief as possible and still maintain clarity. It is the responsibility of supervising aviation forecasters to review the forecasts frequently in order to avoid unnecessary words and phrases and to develop a clear, concise style of writing. It should be kept in mind that these forecasts are intended for the use of aircraft operators and pilot briefers; they are not primarily a medium for the exchange between forecasters of technical meteorological information.

c. Clarity. Forecasts will be phrased for maximum clarity consistent with brevity. Times should be indicated with time groups or as recognized parts of the day (i.e. early afternoon, near midnight, etc.) Time will not be stated with reference to the forecast period (i.e. close of period).

d. Symbols, abbreviations, and contractions. Standard teletype symbols, abbreviations, and contractions will be utilized whenever appropriate.

B-2102. Terminals. Exhibit B-21-1 lists points for which terminal forecasts have been authorized.

B-2103. Grouping of Terminal Forecasts. Terminal forecasts will be written and transmitted in the groups indicated in Exhibit B-21-1. Within these groups a combined forecast may be written for two or more terminals if the forecaster feels that no materially better forecast for any one of those terminals will result by writing individual forecasts.

B-2104. Time of Issue. Terminal forecasts will be prepared every six hours for the times shown in Table I. Forecasts should be filed with communications operators at least ten minutes before time for transmission.

B-2105. Periods to be Covered. Each forecast will include reference to specific weather elements and developments for a twelve-hour-period beginning approximately one-half hour after release time.

B-2106. Elements Included in Forecasts. Each terminal forecast group will be in two parts. The first part, applicable to that portion of the forecast region within which the grouped terminals are located,

will refer to freezing level, icing, turbulence (if included) and upper winds. The second portion of the terminal group will refer to individual terminals or groups of terminals and will include information concerning cloud layers, visibility, weather/obstructions to vision, surface wind direction and speed (if expected to be 15 mph or more) and appropriate remarks.

TABLE I

Time Periods of Terminal Forecasts

Approximate Release Time		Forecast Period
011020Z		010300 - 011500P
		010400 - 011600M
		010500 - 011700C
		010600 - 011800E
	(Alaskan)	011100 - 012300Z
*010920Z	(Hawaii)	010000 - 011200H
011620Z		010900 - 012100P
		011000 - 012200M
		011100 - 012300C
		011200 - 020000E
	(Alaskan)	011700 - 020500Z
*011520Z	(Hawaii)	010600 - 011800H
012220Z		011500 - 020300P
		011600 - 020400M
		011700 - 020500C
		011800 - 020600E
	(Alaskan)	012300 - 021100Z
*012120Z	(Hawaii)	011200 - 020000H
020420Z		012100 - 020900P
		012200 - 021000M
		012300 - 021100C
		020000 - 021200E
	(Alaskan)	020500 - 021700Z
*020320Z	(Hawaii)	011800 - 020600H

* Transmitted immediately following the regional forecast.

B-2107. Terminal Forecast Groups will consist of:

a. Heading

b. Freezing level, icing, turbulence (if included), upper winds

c. Terminal identifications

d. Terminal conditions

B-2108. Composition and Form of Each Element.

a. Heading. The first line of the heading will consist of the contraction FT (terminal forecasts), the call letters of the forecast center, and a six-figure date-time group indicating the official forecast release time (GCT). On the second line will be two six-figure date-time groups (LST) indicating the beginning and the end of the forecast period. Two lines below will appear the group heading, consisting of the call letters of the forecast center, a hyphen (-) and the appropriate group number. The first two lines of the heading will be used only once for each transmission, but the group headings will precede each group.

EXAMPLE: FT MPS 181020Z
180500-181700C

MPS-1 -------

b. Freezing level, icing, turbulence, upper winds. Following the group headings, and starting on the next line will be the statements concerning freezing level, icing, turbulence (if included) and upper winds.

1. Freezing level and icing. The contraction FRLVL followed by a figure(s) or appropriate remarks will be used to indicate the height of the freezing level in hundreds of feet MSL. Changes in the height of the freezing level during the forecast period may be indicated if considered important.

EXAMPLES: FRLVL 40
FRLVL SFC
FRLVL 120 LWRG TO 80 BY 0600M

The icing forecast will follow immediately after the statement on freezing level. Icing will be indicated by use of the appropriate contractions ICG, ICGIP, or ICGIC and an indication of the base and top (if appropriate) of the icing layer. Figures used will show altitudes in hundreds of feet above sea level. Rime and clear ice may be indicated by prefixing "RIME" or "CLR" to the contractions ICG, ICGIP, or ICGIC. No attempt will be made to forecast the intensity of icing. Remarks may modify the figure groups if considered necessary. Absence of icing will be written "NO ICG".

EXAMPLES: ICGIC 40-90
RIME ICGIC 30-55
ICGIP ABV 60 OVR MTNS
ICGIC ABV 75 XCP OVR SRN ILL
ICGIP SFC-80

2. Turbulence. The intensity of turbulence in its effect on aircraft in flight is accepted as a variable which is intermittent in occurrence under similar meteorological conditions. In the absence of meteorological criteria for establishing the intensity of turbulence. It is accepted that the same degree of turbulence can cause widely differing effects on aircraft, depending, among other things, on the weight and flight characteristics of the aircraft under consideration. Therefore, no attempt will be made to forecast the degree of turbulence. The turbulence portion of the forecast will be included only when in the opinion of the forecaster, turbulence of an intensity sufficient to affect the safety of aircraft will occur. Such turbulence is often associated with such conditions as strong fronts, line squalls, thunderstorms, and strong winds over mountain ridges and through mountain passes. The turbulence forecast should not be inserted indiscriminately but should be used to call attention to turbulence that may be a hazard. The forecast of turbulence (if included) will be introduced by the contraction "TURBC". The qualifying terms light, moderate, heavy or severe will not be used. The location of areas of turbulence will be stated, and if possible, the heights. Heights will be in hundreds of feet MSL.

EXAMPLE: TURBC SFC-60
TURBC 80-120 NEAR TSTMS AND 40-70
IN FNTL ZONE NE OKLA

3. Upper Winds. This portion of the forecast will be introduced by the contraction "UWND". Upper winds will be forecast for levels from approximately the gradient level to 20,000 feet. Altitudes, in thousands of feet MSL, will be written as a 1 or 2-figure group and will be followed by a direction-speed group and separated from it by a dash (-). Wind direction will be written as a 2-figure group (tens of degrees, true) followed without space by the speed written as a 2 or 3-figure group (in knots). The figures "99" will be used to indicate direction variable. Speeds less than 10 knots will be written in the form 06, 04, etc.

Wind direction and speed groups will be stated only at selected levels (i.e., those levels at which significant changes in direction and/or speed occur), and with the levels selected so that linear interpolation between any two successive stated levels will give a close approximation of the expected wind at any level between those two points.

EXAMPLE: 2-2215 8-2625 14-2940 20-3045

Linear interpolation would indicate the 5000 foot wind to be from 240 degrees at 20 knots; the 10,000 foot wind to be from 270 degrees at 30 knots; while substantially uniform winds are expected from 14,000 feet to 20,000 feet.

The forecast of upper winds will be a forecast of the general wind direction and speed conditions expected at the time the forecast becomes valid. Significant changes in wind direction and/or speed during the

forecast period should be indicated by additional altitude-direction-speed groups applicable to the changing winds. Modifying terms (such as veering, backing, shifting, becoming) may be used when necessary to clarify the forecast or to describe changes in the upper wind conditions from one part of the area to another.

EXAMPLES: UWND 2-2230 5-2230 10-2710 20-2730
UWND 2-1630 6-2560 10-2560 20-2440 AHD
FNT SHFTG WITH FROPA 2-2945 7-2945 10-2760
UWND 3-9905 5-0225 BCKG 9-2815 20-2710 BCMG 3-0220
6-3025 12-3020 BY 0600M

c. Terminal identifications: The first element in each individual terminal forecast will be the teletype identification of the airport to which the forecast applies. If two or more terminals are combined the identifications will be listed in horizontal order.

EXAMPLE: STC ----
MPS STP ----
RST ----

d. Terminal conditions: The next item in the forecast will be a "terminal conditions" group consisting of one or more cloud layer groups, visibility, weather/obstructions to vision, and surface wind data.

1. Cloud layers.

(a) The height of bases and tops will be forecast for all cloud layers except cirroform clouds (cirrus, cirrostratus, cirrocumulus). Cirroform clouds will be indicated by the usual sky condition symbols without use of the slant (/), or figures to indicate tops or bases. Clouds other than cirroform will be indicated as follows: A figure(s) indicating the height of the base of the cloud layer, a symbol showing the amount of cloud cover, followed by another figure group indicating the top of the cloud layer. A forecast of more than one layer of clouds will be indicated by a series of figure-symbol groups arranged in ascending order, the groups being separated from one another by either a space or slant as prescribed in paragraph (b) below. The base of the layer that constitutes the ceiling and the bases of any layers below the ceiling will be in hundreds of feet above the ground. When only scattered clouds are forecast (in one or more layers) the heights will be in hundreds of feet above the ground. All other cloud bases and all cloud tops will be in hundreds of feet above mean sea level. Absence of clouds will be indicated by the O symbol.

(b) Each group made up of base, sky symbol, and top will be separated from the following such group by a slant except that preceding the group where MSL is first substituted for surface as a plane of reference for cloud bases, a space will be used instead of a slant.

(c) The intervals used in forecasting cloud bases and tops will be determined as follows:

If the figure group used to describe the cloud heights (base or top) is 50 or less, use intervals of 100 feet; if between 50 and 150 use intervals of 500 feet; and if 150 or greater, use intervals of 100 feet.

EXAMPLES: ⓪
12⑤25 35①60/①
10①18/25①40
45①70/90①130/⊕
40⑦/10①15 25⑩40/120①160

(d) Obscurations that constitute a ceiling will be indicated by the symbol X. Such obscurations will be forecast in the body of the terminal conditions group and treated in the same manner as cloud layers in so far as the indication of bases and tops are concerned.

EXAMPLES: OX15 50①90/1/4F
10X30 80①120/5K X DUE SMK LYR

Thin obscurations (those obscurations that do not constitute a ceiling) will be mentioned only in remarks.

EXAMPLES: FOG 100 FT DEEP
THIN SMK LYR ALF

2. Visibility. When the visibility is expected to be 6 miles or less a visibility figure (in miles) will follow the cloud layer forecast and will be separated from it by a slant. The following intervals will be used: 0, 1/4, 1/2, 1, 2, 3, 4, 5, 6. If the visibility is forecast, weather or an obstruction to vision must be given.

3. Weather/obstructions to vision. Standard abbreviation(s) to indicate weather or obstruction to vision will follow the visibility figure without space. If there is no visibility figure the weather abbreviation will follow the previous symbol or figure without space or slant.

4. Surface wind. When surface winds are expected to be 15 mph or more, a direction arrow, a speed figure (miles per hour) and, when appropriate, a symbol (- or +) to denote fresh or strong gusts respectively, will be added to the "general conditions" group without a space.

5. Remarks. Other details considered appropriate by the forecaster and not fully covered by other elements of the forecast will be expressed in words, abbreviations, and/or symbols, as may be appropriate.

6. Changes in weather conditions. Each individual terminal forecast will start with a "terminal conditions" group. Each significant

change in conditions will be indicated by the entry of a four-figure time group (LST) followed by another complete terminal conditions group. If necessary modifying phrases may be substituted for the time group. Examples of such phrases are "becoming _____ by _____", "lowering to _____ by _____", and "variable to _____". The time of a frontal passage may be indicated by use of the contraction FROPA, followed by a time group, and, if appropriate, a new "terminal conditions" group.

B-2109. Example of Complete Terminal Forecast.

FT 020420Z
020000-021200E

LGA-1
FRLVL 100. ICGIC ABV 100
TURBC SFC-80 FNTL ZONE

UWNDS 2-2720 12-2730 20-2660 BCMG 2-3430 10-3430 20-3140
WITH FROPA

PIT 40Ⓓ60 80Ⓓ120/6HK 0230E 40Ⓓ60/Ⓓ/6HK 0630E COLD FROPA
30ⒹVⒹ60 120Ⓓ150↘15
HAR 120Ⓓ140 0230E 40Ⓓ75/110Ⓓ140 0630E 4Ⓓ23/120Ⓓ150/5HK
1130E 30Ⓓ70/120Ⓓ160↘15
PIL Ⓓ/3HK 0330E Ⓓ/6HK 0930E 120Ⓓ160
MIV Ⓞ/5H 0130E Ⓓ/2F 0530E 150Ⓓ180/1/2F FOG 100FT DEEP
VSBY OCNLY NEAR ZERO 0730E 12Ⓓ25/150Ⓓ180/6H
RDG Ⓓ/4HK 0230E 40Ⓓ70/150Ⓓ180/2GF 0730E 140Ⓓ180/1VGF
0930E 120Ⓓ180/4HK

LGA-2
FRLVL 110 BCMG 80 BY 1200E. ICGIC FRLVL-180

TURBC SFC-90 FNTL ZONE

UWNDS 2-2625 7-2735 20-2660 BCMG 2-3435 10-3240 WITH
FROPA BCMG 2-3220 6-3225 BY 1200E

ERI 20Ⓑ35 50Ⓑ70/120Ⓓ200/5H 0230E COLD FROPA 15Ⓑ30
40Ⓑ70/110Ⓑ180/4H↘15 1030E 40Ⓓ70/120Ⓓ150↓↘15
BGM ELM 40Ⓓ70 120Ⓑ160/4H OCNL RW- 0330E 40Ⓓ65 110Ⓑ170/2F
Ⓘ OCNLY Ⓓ 0630E COLD FROPA 40Ⓓ70 130Ⓓ150↘15

LGA-3
FRLVL 100 LWRG TO 50 BY 1200E. ICGIC FRLVL-180

UWNDS 2-2425 10-2730 20-2660 BCMG 2-3440 10-3245
WITH FROPA BCMG 2-3225 6-3230 BY 1200E

8

BUF 10@20 50Ⓓ70/100Ⓓ130↗15 0430E COLD FROPA 8Ⓓ13/15@20
50@140R-↘25+ 1030E 20Ⓓ60 130Ⓓ160↘20-
SYR UCA 110Ⓓ150/4H 0230E 30Ⓓ70/110Ⓓ160/2GF 0430E
COLD FROPA 30Ⓓ75 120Ⓓ160↘18- OCNL RW-

LGA-4
FRLVL 120. NO ICG

UWNDS 2-2215 9-2625 20-2545

LGA EWR BDX Ⓓ/6K 0330E Ⓓ
IDL Ⓓ/3HK 0730E Ⓓ/1VHK↗15
ABL 30Ⓓ60/Ⓓ/4K 0230E 30Ⓓ60/180Ⓓ220/2K 0630E 30Ⓓ60/
160Ⓓ220/2GFK

B-2110. Special Aviation Terminal Forecasts. The forecaster on duty may issue special terminal forecasts any time he considers it necessary to the safe and efficient operation of aircraft, even though instructions in this manual may not specifically cover that particular situation. These instructions are intended as a guide; no set rules can take the place of initiative, discretion and good judgment on the part of the forecaster.

Supervising aviation forecasters may make adaptions supplementary to these instructions if desired. Copies of such local rules should be forwarded to the Central Office.

Special terminal forecasts should be issued when any one or more of the following changes from the current forecast are expected to occur or have occurred, or when forecast conditions are expected to be in error in time by two hours or more.

a. Change in Ceiling. A special forecast should be issued for a rise in ceiling to twice or more the forecast value or a lowering of ceiling to one-half or less of the forecast value, with the following exceptions:

1. If the ceiling was forecast 5000 feet or higher, no special forecast will be required for a rise in ceiling.

2. If the ceiling was forecast 10,000 feet or higher, no special forecast will be required unless the ceiling lowers to 5,000 feet or less.

3. If the ceiling was forecast 200 feet or lower, no special forecast will be required for a lowering of ceiling.

4. If the ceiling was forecast less than 200 feet, no special forecast will be required for a rise in ceiling unless that change is to a ceiling of 300 feet or more.

b. Changes in Visibility. A special forecast should be issued for an increase in visibility to twice or more the forecast value and for a lowering of visibility to one-half or less of the forecast value, with the following exceptions:

1. If the visibility was forecast three miles or higher, a change to twice or more the forecast value will not require a special forecast.

2. If the visibility was forecast as 1/2 mile or less, a special forecast will not be required for a lowering of visibility.

3. If the visibility was forecast less than 1/2 mile, no special forecast will be required for a rise in visibility unless that change is to one mile or higher.

c. Changes in Cloud Cover. A special forecast should be issued for a definite change in cloud cover from clear to broken and vice versa, and scattered to overcast and vice versa, provided that the base of this layer is within 5000 feet of the surface.

d. Thunderstorms. A special forecast should be prepared when, (1) thunderstorms were forecast and it later becomes quite certain that the forecast thunderstorms will not occur; (2) thunderstorms not forecast occur, or are expected to occur; except that when a thunderstorm occurs and was not forecast, no special forecast will be required if the forecaster has good reason to believe that the thunderstorm will not last over 1 hour.

e. Surface Wind. A special forecast should be issued when, (1) the surface wind was forecast less than 15 mph and reaches, or is expected to reach, an average speed of 25 mph or more, (2) the surface wind was forecast to be 25 mph or more and is, or is expected to be, more than 15 mph in error, except that if the wind was forecast to be more than 50 mph, the allowable error will be 20 mph.

f. Icing Conditions. A special forecast should be issued when, (1) there is a definite trend to a freezing type of precipitation at the surface and none was forecast; (2) a freezing type of precipitation was forecast and it becomes apparent that this condition will not occur; (3) icing aloft was forecast and it becomes apparent there will be no icing; (4) no icing was forecast and it becomes apparent that a dangerous icing condition is developing.

g. Frontal Passage. A special forecast is not necessary for frontal passages unless the changes associated with the frontal passage qualify under Sections a to f, inclusive.

h. Form of Special Terminal Forecasts. Ordinarily special terminal forecasts will include only the heading, terminal identification, and terminal conditions. Freezing level, icing, turbulence, or upper winds may be included, however, at the forecaster's discretion. Special terminal forecasts will be written in the same form as the equivalent portion of the regularly scheduled terminal forecasts except that the heading will be preceded by the contraction "SPL". The release time will be the time of filing the forecasts (GCT). Special terminal forecasts will cover a period from near the release time to the end of the current forecast period.

EXHIBIT B-21-1

Stations for which terminal forecasts have been authorized and order of grouping.

By Boston:

BOS-1
OLD PQI MLT AUG BTV ORH BOS
MHT CON BAF HFD PVD ACK

By New York:

LGA-1
PIT HAR PHL MIV RDG

LGA-2
ERI ELM BGM

LGA-3
BUF ROC SYR UCA ALB

LGA-4
LGA EWR IDL BDX ABL AVP IPT

By Washington:

DCA-1
DCA BAL ILG MRB EKN ROA LYH RIC

DCA-2
TRI AVL CLT GSO INT
DAN ORF ECG RDU IMN

By Atlanta:

ATL-1
BRR TYS CHA ATL

ATL-2
SPA GRL AGS CAE FLO CHS SAV

ATL-3
MSL BHM MGM DHN

ATL-4
MAC CSG ABY VLD

By Miami:

MIA-1
JAX TLH CEW PNS

MIA-2
DAB ORL TPA FMY VRB PBI
MIA EYW

By New Orleans:

MSY-1
MEI MOB

MSY-2
AEX BTR LCH MSY

MSY-3
JAN GRW MEM LIT TXK SHV
MLU FSM

By Dayton:

DAY-1
EVV SDF LEX CVG DAY CMH

DAY-2
FWA HUF IND LAF

DAY-3
HTW CHW PKB

DAY-4
TOL CLE CAK YNG

By Chicago:

CHI-1
DET YIP LAN

CHI-2
MKG GRR FNT SGW

CHI-3
KNR TVC LCS MSN MKE

CHI-4
MLI PIA SPI UIN CHI SBN

By Minneapolis:

MPS-1
SUJ SUX STC MPS STP RST DLH

MPS-2
BIS MOT GFK FAR PIR HON ATY

By Kansas City:

MKC-1
MKC TOP STJ SLN HUT ICT CNU
JLN SGF

MKC-2
DSM IOW BRL IRK CBI STL

MKC-3
OMA LNK GRI

By Fort Worth:

FTW-1
ICH FTW DAL TYR LLV

FTW-2
PNC TUL MKO OKC

FTW-3
ABI SJT ACT BUJ HOU GLS AUS
SAT LRD CRP BRO

By Albuquerque:

ABQ-1
ABQ LVS SAF AMA TCC LBB
ROW HOB ELP CNM BGS MAF

ABQ-2
INW DUG

By Denver:

DEN-1
SCT LBF CYS LAR

DEN-2
GJT FCL DEN COS PUB LHX

DEN-3
GCK DDC

By Billings:

BIL-1
BIL MLS SHR RAP CPR

BIL-2
LWT GTF CTB BTM BZN HLN MSO

By Salt Lake City:

SLC-1
SLC OGD FFU RKS PIH IDA BOI
CDC EKO DTA BYI

By Seattle.

SEA-1
BLI PDT EVE SEA SEC PDX TTD
SLE EUG MFR LMT YKM SPO GEG
RDM TDL ALW LWS

By Los Angeles:

LAX-1
BUR LAX EHA PSP DAG LGB SBA
SAN PMD PRC PHX TUS BLD LAS

12

By San Francisco:

SFO-1
RBL SFO OAK SAC MRY FNO RNO
BFL STH SIY SCK MOD SNS

By Anchorage:

ANC-1
MCG BET AKN HOM NHB RAINY PASS
LAKE CLARK PASS

ANC-2
ANC YAK CXD SRD GKN PORTAGE PASS

By Fairbanks:

FAI-1
TAL GAL MOS MKF OTZ UNK

FAI-2
WINDY PASS FAI BIG TSG ORT

By Juneau:

JNU-1
ANN

JNU-2
KTN WRG PSG CGA STK

JNU-3
WHITE PASS JNU GST

By Honolulu, T.H.:

HNL-1
BKH HNL HMD LAH MAU UFF HLO

UNITED STATES DEPARTMENT OF COMMERCE
Weather Bureau
Washington

Office of Chief/Oc. December 17, 1948
File No. 621

CONFIRMATION COPY
(Advance Copies Issued by Dispatch
Through Regional Offices)

CIRCULAR LETTER NO. 111-48

Subject: Emergency Warnings (Phrased in Dispatch Form)

Attention of all offices directed to vital importance of being on alert at all times for weather conditions involving danger to life and property. It is the responsibility of each Official in Charge to personally see that all employees read and are familiar with instructions in CL 90-48, 55-44, and in Cold Wave Manual (WB No. 1347) and other related instructions. As additional precaution all offices are instructed to immediately notify appropriate district forecast office of any unexpected and potentially dangerous weather conditions occurring locally which might require issue of provisional or emergency warnings. Examples of such conditions which might require notification if not already covered by forecasts or warnings are (a) sudden or decided fall in temperature (b) severe local storm (c) heavy or blowing snow (d) freezing rain (e) sudden or decided fall in barometer (f) strong winds. Such notification is to be sent by most expeditious means, usually by telephone, to attention district forecaster and report of action taken to be air mailed to Central Office SR&F Division.

Attention of district forecast centers directed to instructions for issuing provisional and emergency warnings and of necessity for covering all dangerous conditions both current and anticipated by appropriate warnings and advices. Issue of such advices should not be delayed because of time of day or night or because only limited distribution is possible in some areas at certain hours. The responsibility of the forecaster does not end when he has issued his routine forecasts. When unexpected conditions develop the forecaster is responsible within his district for issuing promptly any needed warnings and advisories to areas already affected and other areas which may be affected. Special distribution to local offices by telephone should be made if usual channels are not open. Supervising forecasters are responsible for seeing that these instructions are carried out at their district centers.

These are permanent instructions which will be amplified in another Circular Letter in near future.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
Weather Bureau
Washington

December 17, 1948

CWB:Oc.

MEMORANDUM
(To accompany Circular Letter No. 111-48)
(TO ALL STATIONS)

Subject: Background Information on Circular Letter No.111-48

1) Advance distribution of Circular Letter No. 111-48 on "Emergency Warnings" was made today by dispatch through regional offices. The contents are urgent and it is necessary to place the letter in the hands of field officials as promptly as possible. Confirmation copy is enclosed for reference and file. If it had been possible the Central Office would have discussed the subject personally with every employee who has responsibilities in forecasting, in order that circumstances and background would be fully understood by all concerned. Since that is impracticable, the salient facts are summarized in this memorandum.

2) Undoubtedly every employee of the Bureau knows that adequate warnings of dangerous weather conditions are vital for maximum protection of life and property. It is recognized that present-day techniques for weather forecasting do not in practice provide 100% accuracy, but this makes it all the more important for the Bureau to maintain at all times an alert system for issuing forecast revisions and emergency warnings with the greatest dispatch when warranted by weather developments. This requires constant vigilance and the closest cooperation between the local officials or observers and the district forecasters. The district forecast center must be prompt in advising local officials and in using appropriate channels of forecast distribution the minute the need for forecast revision or issue of warnings becomes apparent; likewise, the local observer or official in charge must report to the district forecast center immediately whenever local observations show the development of storm conditions not already forecast.

3) It is only through teamwork among all concerned that the Bureau can provide the most effective warning service which can be derived from our present-day techniques, communications facilities and staffs. In this work a high degree of personal understanding, judgment and initiative is involved, and these qualities cannot be created merely by issue of orders or instructions from an administrative headquarters; in fact, the Chief of Bureau prefers not to issue detailed instructions to cover all kinds of situations wherein success must rest primarily on professional and scientific ability, personal judgment and initiative. This thought calls to mind the old anecdote about the military officer, new to aviation, who was placed in charge of an air base, and becoming alarmed over the increasing number of aircraft accidents, peremptorily issued the order: "There shall not be any more airplane accidents"!

Circular Letter No. 111-48 has been issued because a recent review of storm situations brings to light certain cases where local officials or district forecasters, or both, have been hesitant to issue forecast revisions or warnings when it was obviously necessary. The Central Office realizes that some of these situations are difficult. For example, if the development is sudden and unexpected, it is sometimes impracticable for the local official or the forecaster to determine immediately what further developments will take place and how serious the condition will become. However, in such cases, it is possible to issue a provisional warning immediately, in terms somewhat as follows: "Strong winds and blowing snow reported over _____. Caution advised stockmen (motorists, etc.) in that locality. Watch for further advisory which will be issued at _____ o'clock." A provisional warning of this type serves to alert the public and give out promptly the information the Bureau has available, and it assures the public that the Weather Bureau is "on the job" and will look after their interests.

4) The Central Office has not overlooked the fact that excessive issue of provisional warnings, many of them unjustified, might lead the public to regard the Bureau's emergency warnings as false alarms. This is another reason why the Bureau must rely on the professional competence and good judgment of field personnel rather than depend on administrative orders and instructions. Nevertheless, long experience has shown that there are wide differences in forecasting ability and personal judgment in individuals, and the official responsibilities of the Bureau under the statutes are much too definite and far-reaching to justify emergency action or the lack of it wholly as a matter of judgment on the part of the individual employee. There must be an evaluation of the qualities of professional competence and judgment in the individual in carrying out the responsibilities for which the Bureau is held accountable. While this evaluation seldom can apply to a forecaster or other employee in failing to foresee what actually may not be foreseeable, nevertheless the employee can be held responsible for failing to issue information about severe conditions which are clearly contained in the observations.

5) In applying instructions regarding the handling of emergency situations, it is necessary, therefore, to keep in mind the difference between advisories based on forecasting and those based on current observations. Because the weather service involves a large element of scientific or professional ability in judgment, it has been a long-standing policy of the Weather Bureau, and one which we will continue, that the responsible official must not be handicapped by detailed rules which may prevent him from exercising his best professional judgment, but must be free to draw on all pertinent information in analyzing the facts and reaching his conclusions. "Regimentation" would straight-jacket scientific progress and professional competence. The Weather Bureau will firmly protect its forecasters from any interference of this kind. Nevertheless, the Bureau, as an organization, is responsible to the public by law, and must maintain a high standard of performance, coordination and

teamwork and adherence to operating instructions and procedures which are necessary to keep the level of performance as closely as possible to that of its most capable forecasters. The service of the Bureau must not be permitted to fluctuate from day to day with the differences in experience and ability of the individual forecaster who happens to have the duty watch. For this reason the Bureau aims to select employees of outstanding ability and experience in forecasting for the positions of supervising forecasters, and the forecasters who occupy these positions must keep more or less constantly in touch with current conditions and be in readiness to take the initiative in forecasting when an emergency arises in which a large element of uncertainty is involved. This does not prevent the competent staff forecaster from taking the initiative when the emergency conditions are clearly indicated, but it means that there must be the closest understanding and teamwork among the members of the forecasting staff.

6) In recent cases the Bureau has been called to account for delay or failure in the issue of information of storm conditions already in progress, and not covered by the forecast. In such cases, it is the responsibility of the Bureau to issue appropriate advice or warning without delay. Silence and inaction cannot be defended by the Bureau in cases where storm conditions are already in progress.

The potential values of meteorological service in protection of life and property and the Weather Bureau's responsibility for providing these services have always been recognized, and in recent years the growth of air transportation, the developments in modern meteorology and meteorological communications, and the wide publicity given to war weather services, have enormously increased the potentialities and responsibilities of the Bureau. With it has come a closer public scrutiny and a more positive requirement for accounability when advices, forecasts and warnings appear to be unsatisfactory. At one time the public more or less indulgently excused forecast errors because everyone knew that weather forecasting was a very uncertain thing. The public as well as the responsible administrative agencies of government still understand that the weather forecaster has a very difficult professional task and that personal skill and judgment are important subjective factors. Nevertheless, when the Bureau delays for several hours in issuing information and advices or fails to issue at least a provisional warning about storm conditions that are already in progress, the authorities expect an accounting for the failure and demand assurance that the necessary administrative steps have been taken to avoid a recurrence of avoidable failures, even to the extent of taking personnel action in cases where indifference or negligence is shown.

In the last decade the Weather Bureau has been successful in extending its services, increasing its staffs to meet new requirements, and improving the professional standing of its scientific staff; unless there is unfailing evidence that the Bureau makes the best use of its facilities and opportunities and neglects no service which is within its capabilities and the capacity of meteorology to render, the future of the Bureau and its personnel will suffer.

The Chief of the Bureau and the responsible heads in the Central Office will support to the fullest extent the efforts of forecasters and local officials to exercise their best individual professional judgments in matters of service decisions, but if the optimum is to be attained in this respect there must be an understanding on the part of the individual that it is the organization as a whole that is held accountable and the closest teamwork and mutual understanding are necessary to preserve the professional and administrative latitude which we believe essential to the best in Weather Bureau services.

F. W. Reichelderfer

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

(File No. 610, 610.3, 740.1) December 21, 1948 0-4.2

CIRCULAR LETTER NO. 112-48
(To All Stations)

Subject: Transmission of Code Group $8N_sCh_sh_s$ from designated stations.

Effective 0000 GCT, January 1, 1949, the stations listed below are hereby designated to transmit on Service A, with the airway weather observation, code group $8N_sCh_sh_s$ of the 1949 Synoptic Code. Stations listed in the left column will transmit this group with each record and special airway observation; stations listed in the right column will transmit the group with record observations only:

With each record and special observation	With each record observation only
Boston, Mass.	Albany, N. Y.
Washington, D. C.	Newark, N. J.
Philadelphia, Pa.	Buffalo, N. Y.
Baltimore, Md.	Pittsburgh, Pa.
Fresno, Calif.	Norfolk, Va.
Oakland, Calif.	
Sacramento, Calif.	
Salinas, Calif.	

In addition to the foregoing, stations at LaGuardia Field, Idlewild International Airport, and San Bruno, California will observe and encode the $8N_sCh_sh_s$ group with each record and special observation; however, these stations will not transmit this group on Service A, but will give it local dissemination only, in accordance with separate instructions.

The additional code group will invariably be transmitted as the final item in the report, following such information as miscellaneous remarks, other additive data, or field conditions. Slants will be used to separate group $8N_sCh_sh_s$ from the altimeter setting or remarks in accordance with par. 10030 of Circular N, (6th Edition); however, if other additive data, field or radio conditions, etc. are included, slants will not be used following these data. Data will be encoded in accordance with the instructions in Section 1808 of the 1949 Synoptic Code. If no significant cloud layer as defined in this section is observed, the group will be omitted. Under the circumstances outlined in par. 1808.23, two 8-groups will be transmitted. All groups will be recorded in Column 14 of Form 1130B in the same manner as other additive data.

The primary purpose of the additional group is to make available at San Francisco and New York data necessary for international exchanges and broadcasts of weather information. For this reason, arrangements are being made with CAA to delete these groups when the reports are relayed beyond the circuit of origin. The data may be useful as supplementary information, however, at stations on the circuit of origin and attention is therefore called in this manner to its availability.

F. W. Reichelderfer,
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

A-4.5
(File No. 451.2

December 23, 1948

CIRCULAR LETTER NO. 113-48
(To All First-Order Stations)

Subject: Ceilometer Maintenance Training

Surveys conducted recently show a need for training additional personnel in ceilometer maintenance. At the time the ceilometer maintenance program was established only one observer from a station could be selected for training, and it was expected that the training received would be passed on to at least one other observer at the station. However, with the transfer of trained employees from some stations and the transfer of equipment in several cases to other stations not having a trained maintenance employee, a consistently adequate program of on-station ceilometer maintenance has not been achieved.

The most logical answer to this problem of training personnel is through training classes. Pending the availability of funds for that purpose, it is desired that all ceilometer stations not having a second trained maintenance employee take action to train another person. This may be accomplished by the assignment of this person to ceilometer maintenance under the supervision of the observer or person who attended the Ceilometer Maintenance Training Conference. At stations where a ceilometer system has been installed since the Training Conference or where the maintenance program is not as effective as desired, on-station maintenance employees or trainees will be assigned, insofar as practicable, to tours of duty with the electronics technician at the time the latter visits the station.

Please furnish the Regional Office the name of the observer selected to assist with ceilometer maintenance and forward a report to that office sixty days later regarding the progress of his training.

The electronics technicians have been requested to evaluate the quality of the maintenance program at each ceilometer station. Where this program is considered inadequate, the technician will forward with his report to the Regional Office (copies to the Area Training Officer and the Central Office) recommendations for a more specialized training program locally.

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington

0-2.24

(File No. 603.21, 610.3) December 23, 1948

CIRCULAR LETTER NO. 114-48
(To All Stations)

Subject: Amendments to River Data Code 1944

Reference: Circular Letter No. 14-44

The need has risen for certain stations to report the water content of snow on the ground in connection with the river forecasting service. The River Data Code is amended to permit the transmission of this element in the CR sequence of Service "C", and in interoffice messages as required. The amendments listed on the attached sheet will become effective January 1, 1949.

F. W. Reichelderfer
Chief of Bureau

Attachment

ATTACHMENT TO CIRCULAR LETTER NO. 114-48

Amendments to "River Data Code 1944", February 1, 1944

Page 1, 3d paragraph, "Code Order"

Alter the symbolic form for "SNW CVR---", to "SNW CVR (s)(s)s $s_w.s_w$", so that Code Order reads:

(11) hhhts RRR_s SNW CVR (s)(s)s $s_w.s_w$

Creat hhhts, etc.

Page 3, 2d paragraph, "Third Group"

Revise to read as follows:

Third group - SNW CVR (s)(s)s $s_w.s_w$

Depth of Snow and/or Ice Cover on Ground, and Water Content

SNW CVR - Group identifier for "depth of snow and/or ice cover on ground, and water content" group.

(s)(s)s - Total depth of snow and/or ice cover on ground will be reported to the nearest whole inch. Depths of 0.5 inch or less, and patches of snow, (i.e., a TRACE) will be coded as "00".

$s_w.s_w$ - Water content of snow and/or ice cover on ground in inches and tenths. Will always be given as at least two figures with a decimal point, and will be separated by a space from the "(s)(s)s" group. Except for amounts of .05 inch or less of water content when the plain language word "TRACE" will be reported instead of figures.

NOTES: In general, if there is no snow cover, the "snow cover and water content" group will be omitted. However, in special cases where regular reports are required to indicate disappearance or absence of snow, the group will be coded "SNW CVR NONE". If water content of snow on ground is not measured at a station, the code group "$s_w.s_w$" will be omitted.

Examples of coding the third group:

Coded as:				Decoded as:
SNW	CVR	2	0.3	Snow depth, 2 inches; water content, 0.3 inch.
SNW	CVR	12		Snow depth, 12 inches; water content not measured.
SNW	CVR	115	15.1	Snow depth, 115 inches; water content 15.1 inches.
SNW	CVR	00	Trace	Snow depth, 0.5 inch or less, or in patches; water content, 0.05 inch or less.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D.C.

0-2.13
File No. 601, 903

December 27, 1948

CIRCULAR LETTER NO. 115-48
To all Stations.

Subject: Conversion of Dewpoint and Relative Humidity Records to an "Over Water" Basis for Comparative Data.

Effective January 1, 1949, surface dewpoint measurements below 32°F., and surface relative humidity measurements at temperatures below 32°F., will be made with respect to water rather than ice. This change has been discussed in Circular Letter No. 101-48, but it introduces a serious consideration in the publication of all future climatological records. Therefore, the following action will be taken after January 1, 1949, in connection with this change:

1. Appropriate reference notes will be made for all dewpoint and relative humidity records in all climatological publications through 1949, and in the next published Annual Meteorological Summary - Example:

> "As of January 1, 1949, dewpoint values below 32°F. and relative humidity values at temperatures below 32°F. are expressed with respect to water rather than with respect to ice, as used prior to that date. Therefore, these hygrometric values before and after January 1, 1949, cannot accurately be combined without necessary conversion."

2. In preparing summaries of surface dewpoint, all values below 32°F. obtained prior to January 1, 1949, will be converted to an "over water" basis by use of the dewpoint conversion scale, W.B. Form 1187 A, included with Circular letter No. 101-48, or equivalent table. Comparative dewpoint data are not required in the standard format of the Annual Meteorological Summary, although some stations do publish these data.

3. In preparing summaries of surface relative humidities, all values at temperatures below 32°F. obtained prior to January 1, 1949, will be converted to an "over water" basis by use of Tables 10A and 10B, Circular N, 6th Edition, with appropriate interpolation to the nearest whole percent. In the case of individual monthly average relative humidities for each of the four synoptic hours - 0130, 0730, 1330 and 1930 E.S.T., the average monthly dry-bulb temperature for each of those hours, respectively, will be used in obtaining the conversion of the relative humidity from an "over ice" to an "over water" basis. Conversions, of course, are not made when the average temperature is 32°F., or above, but will be made to each monthly average relative humidity (with respect to ice) having a corresponding monthly average temperature below 32°F. The average monthly

humidity will then be obtained by computing the mean of the individual converted monthly values. Conversion of singular relative humidity data, such as "highest" and "lowest" figures, can be made directly from the conversion tables when required.

The error inherent in this method is mainly dependent upon the number of temperatures above and below 32°F., the errors increasing to a maximum when about half of the hourly observations making up the monthly mean are above and half below 32°F. In testing 84 individual monthly average relative humidity values, the maximum error for any one month was found to be 1.7%. However, it is estimated that the errors involved in the humidity conversions of individual months (for synoptic hours) would generally not affect the average monthly relative humidity by more than one percent.

It should be noted that values converted by the method outlined in par. 3 are biased above the true average when the daily temperatures of which the monthly mean temperature is composed fell both above and below 32°F. This pattern of bias is due to the converted values being too high until fairly low temperature averages are reached, and should be kept in mind when any future work is undertaken with converted values. However, since the discrepancy is within the limits mentioned above, it is believed that the converted values will be sufficiently close to the true values for ordinary purposes.

F. W. Reichelderfer
Chief of Bureau

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-5.21
(File No. 610.3

December 27, 1948

CIRCULAR LETTER NO. 116-48
(To all First Order Stations)

Subject: Reporting Wind and Weather Data from sub-stations on the Great Lakes.

Reference: Circular Letter No. 131-43.

Effective with the 0730 EST (1230 GCT) report of January 1, 1949, selected first order Weather Bureau stations on the Great Lakes will enter sub-station reports of wind and weather data on teletype Services "A" and "C". Current arrangements for obtaining these data from the sub-stations continue in effect. The reports will be transmitted on Service "A" in accordance with the times given in CAA Drawing M-11 for the transmission of "Supplementary Reports" and on Service "C" in accordance with the times given in CAA Drawing M-10 for the transmission of "MT Reports".

The instructions given in Circular Letter No. 131-43 are rescinded at the effective time of this circular.

The first order stations will prepare the data obtained from the sub-stations for transmission as follows:

Service "A"

The sub-station wind and weather data will be entered as on Service "A" as "Supplementary Reports" in the airway symbol form. In the "Supplementary Reports" the wind direction is given in compass points, the wind speed in miles per hour, and the visibility in miles and fractions.

Service "C"

The sub-station wind and weather data will be entered on Service "C" as "MT Reports" on the next line following the report of the collecting station. The following code form will be used:

Symbolic form: Letter Identification ddffV VwwSD$_K$

Explanation of Symbols:

Letter Identification - Official letter location identifier of station.

dd - True direction, in tens of degrees, FROM which wind is blowing (00-36). (Par. 1802.2 and Code Table No. 3, Synoptic Code, 1949 Edition).

ff - Wind speed in knots. (Par. 1802.3 and Conversion Table B, Synoptic Code, 1949 Edition)

VV - Visibility. (Par. 1803.1 and Code Table No. 4, Synoptic Code, 1949 Edition.

ww - Present Weather. (Par. 1803.2 and Code Table No. 5, Synoptic Code, 1949 Edition).

S - State of Sea (or Lake). (See code table below).

D_K - True direction FROM which swell is moving. (See code table below)

Example: FGR 36206 03238

FGR = Letter location identifier for Fort Gratiot, Michigan

36 = Wind direction 360° (North)

20 = Wind speed 20 knots

60 = Intermittent slight rain (Present Weather)

32 = 4 miles (Visibility)

3 = Slight (State of Sea)

8 = North (Direction FROM which swell is moving)

CODE TABLES

Symbol S - State of Sea

Code Figure	Description of Sea
0	Calm, glassy
1	Calm, rippled
2	Smooth
3	Slight
4	Moderate
5	Rough
6	Very rough
7	High
8	Very high
9	Phenomenal*

Symbol D_K - Direction from which swell is moving.

Code Figure	Direction
0	No sea or swell
1	Northeast
2	East
3	Southeast
4	South
5	Southwest
6	West
7	Northwest
8	North
9	All directions, or no definite direction

*As might exist near center of storm with winds over 65 knots.

Missing Data

A slant or slants (/ or //) will be inserted in the 5-figure group in place of any missing datum. However, the order of the elements in the group and the order of the groups in the message will always be maintained.

F. W. Reichelderfer.
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

O-5.21
(File No. 740.1,
610.3, 601)

December 29, 1948

CIRCULAR LETTER NO. 117-48
(To all First-Order Stations)

Subject: Mexican Synoptic Code; 1949 Edition.

Effective with the 0030 GCT report of January 1, 1949, the Mexican Meteorological Service will introduce a new synoptic code in accordance with recent decisions of the International Meteorological Organization. The symbolic form of the new Mexican Code is as follows:

YGG	iiiT T d d	Nddff	VVwwW	PPPTT	N C hC C h L M H
6D app C	7RRRR t	8N Ch h s s s	9S S s s	QR R T T P P p p	c c m m
1T T T T x x n n	2h h h a 85 85 85 1	D F D F F d d x x x			

Essential Differences Between the Mexican Synoptic Code and the Weather Bureau's Synoptic Code

1. Group YGG

Symbol Y = Day of the week

Symbol GG = Hour of observation (90th Meridian Time)

Where code figure 00 = 0030 hrs.
" " 03 = 0330 hrs.
" " 06 = 0630 hrs.
" " 09 = 0930 hrs.
" " 12 = 1230 hrs.
" " 15 = 1530 hrs.
" " 18 = 1830 hrs.
" " 21 = 2130 hrs.

2. The instructions for coding the Mexican groups $iiiT_dT_d$ through $9S_PS_ps_sp_p$ inclusive, are identical to those for coding the same groups in the Weather Bureau code except:

(a) In the Mexican reports, temperatures are given in degrees Centigrade.

(b) In the Mexican group, $7RRRR_t$, RRR is the amount of precipitation in whole millimeters.

3. Group $OR_cR_cT_mT_m$

Symbol O = Indicator figure for the $OR_cR_cT_mT_m$ group.

Symbol R_cR_c = Precipitation Characteristic

Code Figure	Description
00	No precipitation
01	Intermittent drizzle or mist
02	Continuous drizzle or mist
03	Intermittent light rain
04	Continuous light rain
05	Intermittent showers
06	Continuous showers
07	Snow or sleet
08	Heavy showers (50 to 100 mm)
09	Heavy showers (more than 100 mm)

Symbol T_mT_m = Mean temperature of the previous day in degrees Centigrade. This group is included only at 1230 GCT. XX is coded for other observations.

4. Group $1T_xT_xT_nT_n$ = The instructions for coding this group are identical to those for the Weather Bureau's $4T_xT_xT_nT_n$ group, except that temperatures are given in degrees Centigrade.

5. Group $2h_{85}h_{85}h_{85}a$

Symbol 2 = Indicator figure for the $2h_{85}h_{85}h_{85}a$ group.

Symbol $h_{85}h_{85}h_{85}$ = Instructions for coding this symbol are identical to those given in the Weather Bureau code.

Symbol a_1 = 3 hourly barometric characteristic . When coded 0, the change is less than 10 millibars. When coded 1, the change is 10 to 19.8 mbs. When coded 2, the change is more than 20 mbs.

6. Group D F D F F
d d x x x

Symbol D_d = Dominant wind direction

Symbol D_x = Maximum wind direction

The following code table is used for coding Symbols D_d and D_x :

Code Figure	Direction
0	Calm
1	Northeast
2	East
3	Southeast
4	South
5	Southwest
6	West
7	Northwest
8	North
9	Unknown or variable

Symbol F_d = Intensity of dominant winds on the Beaufort Scale.

Symbol $F_x F_x$ = Maximum velocity of wind in knots.

(Note: The International Cooperative Station Reports transmitted through El Paso, Texas, use the Weather Bureau Synoptic Code; hence, the above differences do not apply to reports from the cooperative stations.)

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25, D. C.

0-5.21
(File No. 740.1,
610.3, 601)

December 29, 1948

CIRCULAR LETTER NO. 117-48
(To all First-Order Stations)

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YGG	iiiT T d d	Nddff	VVwwW	PPPTT	N C hC C h L M H
6D app C	7RRRR t	8N Ch h s s s	9S S s s P P p p	QR R T T c c m m	
1T T T T x x n n	2h h h a 85 85 85 1	D F D F F d d x x x			

Essential Differences Between the Mexican Synoptic Code and the Weather Bureau's Synoptic Code

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Symbol Y = Day of the week

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Where code figure 00 = 0030 hrs.
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2. The instructions for coding the Mexican groups $iiiT_dT_d$ through $9S_PS_Ps_Ps_P$ inclusive, are identical to those for coding the same groups in the Weather Bureau code except:

(a) In the Mexican reports, temperatures are given in degrees Centigrade.

(b) In the Mexican group, $7RRRR_t$, RRR is the amount of precipitation in whole millimeters.

3. Group $OR_cR_cT_cT_m$

Symbol O = Indicator figure for the $OR_cR_cT_cT_m$ group.

Symbol R_cR_c = Precipitation Characteristic

Code Figure	Description
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4. Group $1T_xT_xT_nT_n$ = The instructions for coding this group are identical to those for the Weather Bureau's $4T_xT_xT_nT_n$ group, except that temperatures are given in degrees Centigrade.

5. Group $2h_{85}h_{85}h_{85}a_1$

Symbol 2 = Indicator figure for the $2h_{85}h_{85}h_{85}a_1$ group.

Symbol $h_{85}h_{85}h_{85}$ = Instructions for coding this symbol are identical to those given in the Weather Bureau code.

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Symbol D_x = Maximum wind direction

The following code table is used for coding Symbols D_d and D_x :

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(Note: The International Cooperative Station Reports transmitted through El Paso, Texas, use the Weather Bureau Synoptic Code; hence, the above differences do not apply to reports from the cooperative stations.)

F. W. Reichelderfer,
Chief of Bureau.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25
December 31, 1948

File No. 130.3

CIRCULAR LETTER NO. 118-48
(To all First Order stations)

Subject: Leave Without Pay.

Reference: Weather Bureau Manual, Volume I, Chapter D-80, pages 8 and 9;*Administrative Order 202-17 amended; and*Federal Personnel Manual, Chapter R1, pages 19 and 20.

The following procedural instructions concerning the referenced chapter of the Weather Bureau Manual are to be used until a chapter is later written on the subject of "procedures" for all types of personnel actions.

D-8005-b. Requests for Leave Without Pay will include, in addition to Form 71, the following:

1. Statement of Justification by the employee.
2. Certificate from physician for Leave Without Pay due to illness or maternity.
3. Questionnaire for Leave Without Pay for educational purposes.*(See Multiple Address Letter January 21, 1947).
4. For cases forwarded to Central Office, Form 4074 prepared by Regional Office.

D-8005-e. In cases where fanfold is used to place the employee on Leave Without Pay, fanfold must be used for return to duty. In the cases covered by*Multiple Address Letter of August 31, 1948 regional offices will issue fanfold. For cases not covered by that Multiple Address Letter regional offices will forward Form 4074 to Central Office where the fanfold will be prepared.

In Item g(3), fanfold will be issued regardless of duration of period, by calendar days. If the period of Leave Without Pay is 90 calendar days or more, fanfold will be issued by the Central Office. If less than 90 calendar days, fanfold will be issued by Regional Office. In either case, an additional fanfold will not be required at the end of the calendar year.

It will be necessary for each regional office Personnel Unit to maintain a record of Probational Appointments and Conversions to Probational Status in order to keep an accurate check as probationary periods expire, for purpose of issuing required fanfold actions covering Leave Without Pay. Forwarded under separate cover is a sample of a card record which is being made up for use in recording probationary periods for employees under Central Office supervision.

Under present procedures, no fanfold action is issued to indicate change to permanent status at the expiration of probationary periods. On IBM punch card records there is no practicable system for changing the code at the appropriate time, from "probationary"

to "permanent", since Leave Without Pay exceeding 22 work days during the probationary period automatically extends the period and this leave may not be on record in the Central Office. For this purpose, it is requested that the regional office Personnel Units prepare a special report by memorandum, to the Records Section of the Central Office Personnel Division upon expiration of probationary periods. This report should include name of employee and date probationary period expired.

There is also forwarded under separate cover a list of employees in each region, who according to IBM punch card records as of November 30, 1948, were coded as "probationary". This list does not include appointments or conversions made in the last few weeks. The files and leave records on all these employees should be checked to determine if probationary period has been completed. If probationary period is already completed, please report that fact to Central Office. If not completed, a report to the Central Office of expiration of probationary period will be made at the appropriate time.

D-8005-g. All reports required by this item will be prepared by regional offices, regardless of grade of the employee. Nature of action will be indicated as "Leave Without Pay". If taken during probation add "(during probation)". Do not use Item 6, effective date, on Standard Form 50, but enter under Item 13, "remarks" the total number of "work days" Leave Without Pay taken during calendar year or during probation. Examples: "135 work days Leave Without Pay taken during calendar year 1948", or "24 work days Leave Without Pay taken during probation".

Fanfolds reporting leave without pay for employees who have been separated from the service for other than transfer, prior to the end of a calendar year will include an additional statement under "remarks" as to nature of separation action and effective date of separation. Example: "Employee separated by resignation November 30, 1948".

Fanfolds for Leave Without Pay taken immediately upon return from military furlough, in cases where employee does not actually enter on duty, will show nature of action as "Return from Military Furlough and Leave Without Pay". Under Item 6, effective date, give beginning and ending dates of Leave Without Pay by "calendar days" instead of "work days". Under "remarks" give appropriate explanation. Example: "Employee discharged from military service under date of _____. Returned to rolls in Leave Without Pay status for period indicated, for purpose of _____".

The fanfolds for Leave Without Pay exceeding 130 work days for the calendar year should be prepared in sufficient time to reach the Central Office by January 31.

All Leave Without Pay and return to duty actions already in progress will be completed under the old procedure.

F. W. Reichelderfer
Chief of Bureau

*Not available in field stations.