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MEMORANDUM

TO: Section Centers, Hydroclimatic Inspectors, Field Aides, WRPCs, River District Offices, and Area Engineers. (With copies to Regional Offices for information.)

FROM: Climatological Services Division

SUBJECT: Climatological Service Memorandum No. 32

INSTRUCTIONS

1. PUBLIC SERVICE POLICY FOR COOPERATIVE OBSERVERS: Paragraph C-0305a of Chapter C-03, Volume III of the W.B. Manual has recently (10-1-52) been revised to outline more specifically our policy in regard to cooperative observers making a charge for their services.

This entire paragraph, C-0305a, should be carried in every Section Center newsletter so that all observers may have a copy of our policy on this matter. One copy of the newsletter carrying this paragraph should be mailed to Field Services Section of the Central Office.

Paragraph C-0305a was revised after we learned of one cooperator who was attempting to collect an exorbitant fee (\$1.00 for each day's record) for furnishing daily precipitation amounts.

2. ANNOUNCING THE PUBLICATION OF HOURLY PRECIPITATION DATA TO RECORDING SUBSTATION OBSERVERS: Inasmuch as the publication of hourly precipitation in the new publication will be on a delayed basis, and since the data are of interest mainly to specialized users, we do not plan to put each recorder observer on the mailing list. These observers should continue to receive Climatological Data but should be given "Hourly Precipitation Data" only if they request it.

We suggest that a letter similar to the following be sent from the Section Center to each observer at recorder stations:

"Hourly precipitation amounts were published in Climatological Data through September 1951. At that time, due to a reduction in funds available for this program, it was necessary to discontinue such publication.

"Recent developments have now made it possible to resume publication of hourly precipitation. The values are to be published in a new bulletin called 'Hourly Precipitation Data' and the first issue for this Section will be for October 1951.

"Hourly precipitation is of vital importance to those interested in soil conservation, run-off, floods, drainage, highway construction, land use, reclamation, and many other activities. Your cooperation in helping us to make the data available is very much appreciated."

3. W.B.O.s ON MAILING LIST FOR HOURLY PRECIPITATION DATA: Each first-order W. B. O. will be placed on the mailing list to receive Hourly Precipitation Data for the section in which the station is located.

Any W. B. O. desiring these bulletins for other sections should forward their request to this Division.

4. INTERPOLATING MISSING PRECIPITATION RECORDS WHEN THERE ARE OTHER GAGES IN SAME COMMUNITY: We have received inquiries regarding the use of the interpolation methods recently made effective when there is another gage in the same community. It is reasonable to expect that a missing record could be interpolated more accurately from another gage in the same community than from the average of the gage plus two others, many miles away. It is therefore recommended that, when such a situation exists, the normals for the two stations be compared. If they are within the 10-percent limitation specified in the original instructions for interpolation, the amount for the missing period may be obtained directly from the gage with the complete record. If the 10-percent limitation is exceeded, the amount from the gage with the complete record should be adjusted upward or downward by multiplying by the ratio of the normals for the two stations. Monthly and annual totals obtained by this method should be carried in the annual Climatological Data accompanied by the reference letter "E".

If there should be two gages besides the one with the missing record in the community, both should be used in making the interpolation, using either a 2-station-average or normal-ratio method based on the two stations.

If normals are lacking for one or more stations the average annual precipitation can be substituted in accordance with procedures outlined in C.L. 28-52.

The original instructions quite adequately cover the case of communities with four or more gages since they recommend the use of the nearest stations in making the interpolation, even when it is necessary to disregard the criterion for even distribution about the interpolation stations.

Multiplying the total of 5.62 in. at Station X by .32, the mean ratio, yields a two-day amount of 1.80 in. for April 29-30. The difference between 5.62 in. and 1.80 in. 3.82 in. is the amount estimated to have occurred during the period May 1-3. These estimates permit estimated totals for each of the two months, and the totals should be so indicated in the publications.

In some cases the selection of three stations with the same time of observation may require the use of some stations at unreasonable distances. In such cases it is preferable to use fewer nearby stations. For example, a single gage in the same community as the station with the accumulated amount would, in most cases, provide a better estimate than the use of more distant stations.

In the published annual Climatological Data the reference letter "E" should not be attached to the annual total unless there was actually some missing record which has been interpolated. Monthly totals in the annual Climatological Data obtained in the above manner will, however, be identified by the letter "E".

6. BOUND VOLUMES OF CLIMATOLOGICAL DATA NATIONAL SUMMARY (REFERENCE: CHAPTER 1-F-39 OF VOLUME 1A OF W. B. MANUAL): We are now preparing to have bound for each Section Center all issues of Climatological Data, National Summary. We find that copies of the issues for August, October, and December 1950 are in short supply.

Each Section Center that can spare the file copy for any or all of these three months should send them to the National Weather Records Center where the collating is being done. After bound volumes of the National Summary are received the separates, if no longer needed, should be sent to Asheville.

7. CIRCULAR B: The Government Printing Office has scheduled for delivery to the Weather Bureau about November 28, 1952. Circular B, "Instructions for Climatological Observers." Upon receipt of these circulars, shipment of copies will be initiated to the section centers and regional supply depots as soon thereafter as practicable. With few exceptions, the number to be shipped each section center agrees with estimates supplied by each center in response to Item 4, CSM No. 28.

Each section center will supply one copy to each substation within the section. In the case of multiple purpose stations, the section director may arrange to forward copies either directly to the substations or through the supervising offices. First-order stations (except section centers) will be supplied one copy each from regional office stock. Requests for additional copies of Circular B should be submitted to the regional office except for San Juan and Honolulu. The latter offices will obtain copies as required from the central office.

Persons desiring to purchase copies of Circular B, may obtain them for 50¢ a copy after December 1 from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

8. PREPARATION OF FORM 1009R AT RECORDER STATIONS NOW PREPARING FORM 1006 OR 1009: It will not be necessary for recorder stations preparing Form 1006 or 1009 to prepare Form 1009R since microfilm will be available at Asheville for use where necessary.

* Also see No. 21

GENERAL

9. REQUESTS FOR CLIMATOLOGICAL INFORMATION WHICH SECTION CENTERS ARE NOT ABLE TO ANSWER: There have been cases where a requester, seeking detailed or involved information not available at a Section Center, has been told to write the Central Office. This may result in additional correspondence with the customer in an attempt to find out what his problem is, since it may not have been clearly stated at the outset, or clarified in writing the Central Office.

Often the requester does not know exactly what information he wants or does not know how to express his wants in writing. In such cases we believe the Section Center could do the Central Office and the requester a real service in such cases by finding out just what is wanted and then passing the request on to us, possibly with suggestions for handling. Our reply would then be to the Section Center and would enable that office to maintain contact with the requester.

10. WORK SHEET FOR COMPUTING INTERPOLATED PRECIPITATION: This item is to remind all Section Centers that interpolated monthly and annual precipitation totals, as outlined in C.L. 28-52, will be desired at the Weather Records Processing Centers shortly after the end of the calendar year.

The San Francisco Weather Bureau Office has submitted a work sheet used there for computing interpolated precipitation. We believe the form will have practical application at all Section Centers and we are arranging to have a supply of similar forms furnished each Center for optional use.

11. TORNADO TECHNICAL PAPER: Technical Paper No. 20, "Tornado Occurrences in the United States" went to the Government Printing Office on October 20th. Delivery of the printed bulletin has been scheduled by the Government Printing Office for November 20th. Distribution to stations will be made soon after the bulletin is received.
12. USE OF NEWSPAPER AND RADIO FOR DISTRIBUTION OF WEATHER STORIES OF INTEREST: The end of the year affords an excellent opportunity for reviewing the weather over the state or section during the past 12 months. We believe that a well-written story summarizing the year's weather with special emphasis given to the more important features would be well received throughout the section. Dissemination can usually be arranged by radio, newspaper, or both. Some Section Directors are doing what we consider an outstanding job along this line and we encourage others to consider this as a means of improving current use of climatic information.

13.

W. B. FORM 614-1 (FORMERLY 4035--SEVERE STORM REPORT): In line with an employee's suggestion this form has been tentatively revised to simplify the compilation of data on Form 4035A. The proposed revision is shown below. Section Center comment on the revision is invited.

The "names of people killed" has been omitted at the suggestion of the Budget Bureau. If there are good reasons why these names are needed, please let us know.

Would it be simpler for the respondent to show dollar damage in question 3, rather than percent of total damage? Are there any other questions which should be included? Any which should be omitted? Is the revised form satisfactory?

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU

SEVERE STORM REPORT

We have information that a damaging weather disturbance affected your vicinity on or about The Weather Bureau is required by law to collect and publish information on weather happenings, and your cooperation in making our reports more accurate and complete will contribute to an appreciated public service.

Will you be good enough, within your knowledge, to supply the information requested below? A postage-free addressed envelope is enclosed for return of this report. (Your name will not be used in publishing any information furnished.)

If you are unable to give the desired information, kindly hand this inquiry to someone in your locality who has knowledge of this storm and the damage it caused.

If available, please attach press clippings concerning this storm.

Very truly yours,

.....
(Meteorologist in Charge)

1. Name and describe the place or area affected by the storm.
.....

2. Storm movement

- (a) Direction: from _____ towards _____
- (b) Length of path of destructive winds (or hail). . . _____
- (c) Width of path of destructive winds (or hail) . . . _____

3. Indicate the weather conditions that produced damage by entering in appropriate box (or boxes) per cent of total damage caused by each of the following:

- | | | | |
|-------------------------|---|--------------------------|---|
| (a) Tornado- - - - - | % | (d) Lightning- - - - - | % |
| (b) Other Damaging Wind | % | (e) Sleet or Ice Glaze - | % |
| (c) Hail- - - - - | % | (f) Blizzard - - - - - | % |
| | | (g) Other (Specify)- - - | % |

Example: Tornado 75%; Hail 25%
Percentages should total 100.

4. Casualties

- (a) Number of people killed. _____
- (b) Number of people injured and requiring medical attention
. _____

5. Conservative estimate of loss or damage

- (a) To buildings, automobiles, equipment and other property except crops and livestock. \$ _____
- (b) To livestock (include poultry). \$ _____
- (c) To crops growing or remaining in the field (name crops). \$ _____
- (d) To harvested crops or agricultural supplies in storage (Specify kind). \$ _____

6. Give the general limits of the area for which the above estimate of dollar loss or damage has been made.

7. If possible, please give names and addresses of individuals who would be able to supply other additional loss estimates not covered in this reply.

- (a)
- (b)
- (c)
- (d)

(Signature)

(Date)

(Address)

Additional information on special phenomena such as unusual cloud formations, size of hailstones, etc., will be appreciated.

TO WRFCs

14. AMENDMENT TO INSTRUCTIONS: Paragraph 1009.621: Add "The right hand margin of this text should not be justified." Note: Copy already prepared will not be retyped because of this change in instructions.
15. AMENDMENT TO INSTRUCTIONS: Paragraph 1009.631: Cancel the following sentence: "Do not enter extremes or averages for the period at the end of the table". Add as last sentence: "After past data have been weighted the record mean should be carried at the end of the table for temperature, precipitation, and snowfall". The words "All Years" should be entered in the year column, followed by the record means in the average temperature, average precipitation, and average snowfall columns.
16. AMENDMENT TO INSTRUCTIONS: Paragraph 1009.6371: Change this paragraph to "Snowfall should be entered on the first line, to tenths; snow on the ground should be entered on the second line, to whole inches; and water equivalent of snow on the ground should be entered on the third line, to tenths. The word "SNOWFALL" should be typed in capital letters in the second column in the same line as the station name. The legend SN ON GND in capitals should be typed underneath the word "SNOWFALL" and the legend WTR EQUIV underneath "SN ON GND" for those stations for which water equivalent is available. The following explanation should be carried in the reference notes: "WTR EQUIV" in Table 7 means the water equivalent of snow on the ground. It is measured at selected stations when the depth of snow on the ground is two inches or more."
- A line space should be carried between each station in this table.
17. AMENDMENT TO INSTRUCTIONS: Paragraph 1009.694 Change the note to be carried on the base maps to "Hourly precipitation data from recorder stations will be available in the publication "Hourly Precipitation Data".
- Paragraph 1009.812 Add: Data from recorder stations will be available in the publication "Hourly Precipitation Data".
18. AMENDMENT TO INSTRUCTIONS: Paragraph 1010.04 Change last two sentences to read: "The right hand margin should not be justified. The title 'Narrative Climatological Summary' should be entered in capital letters, centered at the top of the summary."

19. PRINTING OF LOCAL CLIMATOLOGICAL DATA ANNUALS: (REFERENCE: ITEM 12, C.S.M. NO. 28) We have a request from the Navy for 60 copies of 1952 issue of each Local Climatological Data annual. The number to be sent to Asheville for 1952 should therefore be 110 copies, which will provide a stock of 50 copies of each issue after the Navy is supplied.
20. CLIMATOLOGICAL DATA BASE MAPS: When Climatological Data base maps are reprinted, WRPC Printing Plants should increase by 30 the number requested by the Section Center. 15 copies should be sent to NWRC and 15 to the Central Office marked for Climatological Services Division. An additional negative should be prepared and forwarded to Asheville with their 15 copies.
- 21.* THERMOGRAPHS AT SUBSTATIONS: To obtain a better picture of thermograph distribution all Section Centers and River District offices are asked to report to us on the following points:
- a. Are any thermographs in use at substations in your section?
 - b. If so, how many are Weather Bureau instruments?
 - c. Indicate uses (if known) of hourly temperature data at substations equipped with thermographs.
 - d. How many charts are received at Section Centers? How many are corrected and worked up?
 - e. What routing, disposition, and filing of the charts?
 - f. Do you know of any first order station within the section (other than Section Center and River District office) having supervision over substations equipped with thermographs?
 - g. Comment on the value of thermographs at substations, and give your opinion on the advisability of expanding or contracting the existing program.



W. F. McDonald
Chief, Climatological
Services Division

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