

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

December 15, 1948

0-2.13

MEMORANDUM

TO: Regional Offices, Section Centers, River Centers, WRPC's, and CSA's.  
FROM: Chief, C&HS Division  
SUBJECT: Climatological Service Memorandum No. 1.

1. ANNOUNCEMENT CONCERNING THIS MEMORANDUM: This is the first of a series of memoranda which will be issued for the purpose of keeping all stations informed on the status and progress of improvements being made or contemplated in the Bureau's climatological program. In addition to information, the memorandum will occasionally contain suggestions, clarification of policy pertaining to the climatological program, and other bits of interest to Weather Bureau employees interested in the development of climatology and the Bureau's climatological program. The memorandum will be issued at appropriate intervals.

Those stations carrying a large climatological service load are invited to adopt a similar reporting procedure so that the Central Office can be kept informed of progress of applied climatology as it develops at the field stations. Please feel free to ask questions about the Bureau's climatological program. We will undertake to answer inquiries either by individual letters, or by a periodic "service memorandum" if there is sufficient general interest in the answer to your questions.

2. TWO-PHASED OBJECTIVE OF CLIMATOLOGICAL SERVICE IMPROVEMENT PROGRAM: It became evident during the war that the Bureau had lost ground in its climatological service program. One of the reasons for this loss of ground was the growing impossibility to manually handle the increasing volume of records which the Weather Bureau now currently collects. The other reason was the Bureau's inability to develop and apply new techniques to the solution of climatological problems. The second reason was in part brought about by the first reason.

After the end of the war, the climatological interests of the Central Office were regrouped within the C&HS Division which immediately began plans to (1) mechanize the checking, processing, and publishing of climatological data; (2) improve techniques for interpreting and applying climatological data to the solution of problems in which weather and climate exerted an influence.

Although much has already been done to realize both of these objectives, there remains much to be done. It can be said, however, that steady progress has been made during the past 18 months, and that this progress is continuing.

3. MECHANIZATION PROGRAM: Obviously, the first step to be taken in improving our climatological service program was to get ourselves into a position to handle, more flexibly, the volume of climatological data; i.e., the checking, tabulation, and publishing of millions of figures each month. This is the reason why the mechanization program has been given first priority in the climatological improvement program. (Hereinafter referred to as CSIP.)

Weather Records Processing Centers (WRPC's), equipped with modern punched card machines, were set up in each region for accomplishment of the first phase of the mechanization program. Because of staffing problems and delayed machine deliveries, the WRPC's began with a slow start, but these units are now shifting from "low to second gear", so to speak, and should be in "high gear" within the next nine months.

The WRPC's are designed primarily as current processing centers, equipped with machines which (1) edit weather records, in punched card form, for accuracy and reliability; (2) process these records using the punched cards and machines as processing mediums; and (3) prepare copy for photo-offset printing of weather summaries by use of automatic typewriters, operated by punched cards. Although this system is relatively new to the Weather Bureau and although it is obvious that considerable improvement in the system is still to be gained, the ultimate success of the system is already assured.

A brief history of the progress of WRPC operations, to date, (except in Region 4 where WRPC operations began well ahead of other regions), follows:

- (1) Began checking airway observations from first-order stations on punched cards about January 1, 1948.  
(Took over checking of Forms 1001 with March or April records.)
- (2) Completed taking over Form 1009 checking and processing for all states with August forms.
- (3) Combined the Climatological and Hydrologic Data bulletin for all states with September 1948 data.
- (4) Began preparing upper-air wind resultant tables for all pilot balloon stations in June and July.
- (5) Began machine preparation of WB 1114 with October 1948 data.

Tentative schedule of future WRPC operations are as follows:

- (1) Preparation of station monthly summaries from on-station punched cards with July 1, 1949 data or earlier.
- (2) Preparation of Annual Climatological Data Bulletins for 1948.
- (3) Preparation of annual Forms 1066 for climatological sub-stations.
- (4) Summarizing WB Forms 1173 beginning July 1949.
- (5) Preparation of first-order station annuals with 1949 data.
- (6) Machine checking and summarization of raob data July 1949.

There will be other similar jobs assigned to the WRPC's as plans can be completed. It can be seen from the above that the WRPC's are processing centers, designed to accomplish as much of the "clerical" work for the stations as possible. It is not contemplated that the WRPC become a service organization, but rather that they do everything possible to relieve the stations, particularly Section Centers, of clerical work so that stations can find time within their present staff pattern, to perform an active local service on a professional level. This objective will ultimately be attained.

4. IMPROVEMENT OF ANALYTICAL TECHNIQUES IN CLIMATOLOGY: This phase of the CSIP program cannot make rapid progress until the mechanization program is more smoothly operating. Action has been started, however, to get this phase of the program under way. Climatological Service Aides, men with special training in new climatological techniques, have been assigned to Regions 2, 3, 5, 6, and 7, for the purpose of assisting Section Directors and station officials in making use of the newer analytical techniques. As soon as funds and personnel become available, a Climatological Service Aide will be assigned to Regions 1 and 4.

The Climatological Service Aide in your region will visit most stations sometime in the near future. Please discuss your climatological service problems with him.

5. CAUTIONS TO BE OBSERVED AT PRESENT: There are some cautions to be observed at this time: (1) We do not yet have long records on punched cards; (2) We do not have unlimited machine capacity and if too many projects should be required at one time, priorities will, of necessity,

have to be set; (3) The WRPC's are to be considered as current processing centers only while a separate machine processing center will be operated at New Orleans for processing special requests, projects, etc. All requests for special punched card tabulations must be referred to the Central Office to determine: (1) Whether or not it has already been done; (2) Whether it is justified; (3) What priority is to be assigned to the project; (4) Whether or not there is to be a charge for the project in case it is being done at the request of a private individual or business concern. Any unusually large tabulation project should be reported to the Central Office, as a matter of course, prior to its acceptance.

6. THE NEW PRINTING PROGRAM: By direction of the Joint (Congressional) Committee on Printing, all Weather Bureau letter press printing plants are being closed except New Orleans and New York. In three regions (3, 6, and 7) all Weather Bureau printing is to be done at the G.P.O. field offices in Chicago, San Francisco, and Seattle. In Regions 1, 2, 4, and 5 the Weather Bureau was granted permission to establish its own photo-offset printing plants. These are to be located at Albany, New York; Chattanooga, Tennessee; Fort Worth, Texas; and Kansas City, Missouri. The new plants will be in operation on or shortly after January 1, 1949. These plants will take copy of weather summaries, prepared by the automatic typewriters at the WRPC, and print it by photo-offset methods. The Climatological Data bulletins will be published much sooner when the new plants are in operation.
7. MICROFILM PROGRAM: In order to alleviate some of the storage problems involving weather records and in order to make copies of these records readily available, the Weather Bureau is now currently microfilming all of its original records. It is planned eventually to equip all Section Centers and larger stations with microfilm viewers so that film can be used in records work wherever possible. This will also permit Section Centers to maintain copies of voluminous tabulations of data now in Central Office files but which cannot be printed because of lack of funds. Six film viewers are now available for use in pilot projects testing the usefulness of film records. It has been tentatively decided to locate these viewers at Springfield, Illinois; Des Moines, Iowa; Portland, Oregon; Houston, Texas; Helena, Montana; and Indianapolis, Indiana.
8. DUPLICATION OF EFFORT: Every means possible should be used to eliminate duplication of effort in tabulation of weather data. Except in cases where local service requires immediate tabulation of data, no station should undertake tabulation work which can be done by the WRPC. It should be kept in mind, also, that the particular tabulation or summary may have already been made elsewhere - a question which can be settled by inquiry to the Central Office.

9. CONSOLIDATION OF FORMS: The Central Office is interested in consolidation or eliminating recording forms wherever such is possible without impairing the climatological service. It will welcome any suggestions the field may have along these lines. Also suggestions for the elimination of as many carbon copies of climatological records as possible will be appreciated.
10. REPORTING OF SPECIAL OR UNUSUAL USES OF CLIMATOLOGICAL DATA: The Central Office is interested in reviewing the former practice of reporting special or unusual uses of climatological data. The Form WB 1077, however, is considered inadequate. It is requested, therefore that letters be used in lieu of any form until a new form is designed and tested. A rather detailed description of the nature of the problem, the data used, how tabulated, together with an estimate of monetary savings will be appreciated.
11. SUGGESTIONS FROM THE FIELD: For some time now climatological interests of the Central Office have adhered to the policy of submitting plans and proposed changes to the field for comment and suggestion whenever possible. This policy has proved valuable. Many suggestions from the field have been adopted outright. Many others have been adopted as modified to fit composite field comment. Of course not all field suggestions can be adopted, but they are adopted whenever possible. These field comments and suggestions are appreciated, and we want to encourage the field to continue its valuable contributions to the improvement of the climatological program. If you have a suggestion which may result in monetary savings and which is outside the scope of your job sheet, we suggest you submit it through the Employees Awards Program; otherwise the suggestion should be submitted directly.
12. MACHINE FORM 1066: The WB Form 1066 has been converted to a machine summary form; hence it will no longer be necessary to prepare this form manually. A small supply of the manual Form 1066 has been ordered for use outside the United States until the extra-continental territories can be brought into the machine program. In order to avoid as much duplication of printing as possible, we do not want to stock any appreciable supply of the manual 1066's at Section Centers. However, if any Section Center anticipates the requirement for manual Forms 1066, please advise us as to this requirement; and if any Section Center has an over supply of these forms, please take action to return them to the Central Office.
13. POLICY PROCEDURE FOR ASSIGNMENT OF STATION NAMES TO SUBSTATIONS: (a) Wherever practicable, stations should be designated by the name of the nearest Post Office or community name recognized in Rand-McNally, this name becoming a "Primary Name".

(b) The primary name for all first-order stations should be supplemented by the terms "WB Airport" or "WB City", to indicate the location of the Weather Bureau Office involved. "WBAS" or "WBO" should not be used.

(c) Wherever possible, the primary name should be supplemented by a locally accepted secondary name, to more completely identify and locate the station. Examples of secondary names: "University", "State Farm", "4th Street Bridge". Type of station, such as "River", "Evaporation" will not be used in the station name.

(d) If the above practices do not serve to distinguish between two or more stations:

(1) Use distance to whole miles and direction from the Post Office as a postscript for stations outside town or city limits, and at least 1/2 mile from Post Office.

(2) Use postscript numbers 1, 2, etc. to distinguish stations within the same town or city limits; or outside town or city limits, but less than 1/2 mile from Post Office.

(e) A station which has been participating in more than one program (such as climatological, hydrologic, river, or other programs) or which has a change of observer, should be considered as one station, with one name and one number, if the instruments are at approximately the same site, as clarified below.

If instruments are located or are moved to sites different or distant enough to affect the local climatological record, different station names and numbers should be used for each site. Criteria which can be used tentatively for decision are as follows:

(1) Distance between sites of 5 miles or more, or

(2) Difference in elevation of 100 feet or more, or

(3) Change in primary name, i.e., moved from one Post Office, town, or city to another; or, Post Office, town, or city name changed.

Since these criteria are a somewhat arbitrary attempt to resolve a difficult question (namely, "How much of a move is necessary to involve a new station?"), we would appreciate your comments; and if you have any questions, please submit them as soon as possible to the Central Office.

14. CHARGES FOR SERVICES: (Reference: Circular Letter 3-48): In accordance with Circular Letter 3-48, when a station is called upon to make special tabulations, transcriptions, etc. of weather records, it is necessary to determine whether a charge should be made for this special service. Such a determination in most cases requires considerable studied judgment on the part of the Official in Charge. The primary question to be answered is, "Does this special tabulation have sufficient public interest to justify its being done with public funds?". If the answer to this question is "no", or if there is a doubt, the matter should be referred to the Regional Office for final decision and proper authorization in accordance with present policy. Even if the answer to this question is "yes", the question of whether or not the special summary should be produced at the station at the expense of regular station duties must be answered. A station should not undertake special tabulation - even when justified - which becomes a drain on station personnel or which are likely to result in a demand for increased personnel. All such special tabulations will require prior Central Office approval.

One of the most logical practices in situations where large special tabulations are required (provided machine tabulations are not already available, or are not feasible) is to make the records available locally to the requestor so that he or his staff can do the tabulations. This practice should be encouraged whenever possible.

*Merrill Bernard*

Merrill Bernard, Chief,  
Climatological and  
Hydrologic Services.

GUIDE TO CLIMATOLOGICAL SERVICE MEMORANDUM NO. 1

<u>ITEM NO.</u>		<u>PAGE NO.</u>
1.	ANNOUNCEMENT CONCERNING THIS MEMORANDUM. . . . .	1
2.	TWO-PHASED OBJECTIVE OF CLIMATOLOGICAL SERVICE IMPROVEMENT PROGRAM. . . . .	1-2
3.	MECHANIZATION PROGRAM. . . . .	2-3
4.	IMPROVEMENT OF ANALYTICAL TECHNIQUES IN CLIMATOLOGY. . . .	3
5.	CAUTIONS TO BE OBSERVED AT PRESENT. . . . .	3-4
6.	THE NEW PRINTING PROGRAM. . . . .	4
7.	MICROFILM PROGRAM. . . . .	4
8.	DUPLICATION OF EFFORT. . . . .	4
9.	CONSOLIDATION OF FORMS. . . . .	5
10.	REPORTING OF SPECIAL OR UNUSUAL USES OF CLIMATOLOGICAL DATA. . . . .	5
11.	SUGGESTIONS FROM THE FIELD. . . . .	5
12.	MACHINE FORM 1066. . . . .	5
13.	POLICY PROCEDURE FOR ASSIGNMENT STATION NAMES TO SUBSTATIONS. . . . .	5-6
14.	CHARGES FOR SERVICES. . . . .	7