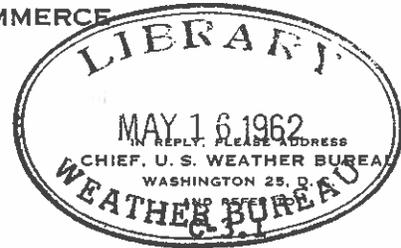


UNITED STATES DEPARTMENT OF COMMERCE
U.S. WEATHER BUREAU
WASHINGTON

April 25, 1962



FILE: 922 MEMO

MEMORANDUM

TO : Area and State Climatologists, NWRC, WRPCs, Field Aides (HC), Field Aides, River Forecast Centers, River District Offices, and Area Engineers (with copies to Regional Administrative Offices and Advisory Agricultural Meteorologists for information)

FROM : Director, Climatology

SUBJECT: Climatological Services Memorandum No. 93

1. CONSOLIDATION OF WEATHER RECORDS PROCESSING: The Weather Bureau plans to consolidate its climatological records processing activities at the National Weather Records Center (NWRC) in Asheville, N. C., over a period of the next two years.

At the present time the NWRC serves as the official meteorological archives for the United States. Meteorological data collected by the Weather Bureau, the military services and other cooperating organizations are deposited there in order to facilitate their summarization for research or commercial application. In general, such work is of a unique nature and most of the studies are designed for a specific result. To accomplish this it has been necessary to equip the center with modern high speed electronic data processing equipment.

The routine processing of records necessary for publication of climatological data has been performed at three Weather Records Processing Centers located at Chattanooga, Tennessee; Kansas City, Missouri; and San Francisco, California. These centers are equipped with electric accounting machines and utilize punched card techniques for processing the data. About 30 people are employed at both Chattanooga and Kansas City and about 40 people in San Francisco. It is this processing that the Weather Bureau plans to move to Asheville. The Weather Bureau will make every effort to reassign these individuals to suitable positions either at the combined facility in Asheville, N. C., or in other Weather Bureau installations.

The advantages to be gained by this change are as follows:

- (1) Utilization of higher order machines will result in greater efficiency. The ever-increasing number of stations requires greater processing potential. It is only through greater efficiency that the additional work load can be accomplished without increase in staff.
- (2) Use of the modern machines will make possible a new level of operation from which the Bureau can proceed to develop more and more useful by-products from its routine processing.

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- (3) Location of data processing in the proximity of the NWRC printing plant will facilitate the earliest possible release of published data with a minimum of difficulty because all problems related to the photographic copy can be resolved locally.
- (4) Consolidation will eliminate the difficulties associated with the somewhat different processing procedures in practice at the three currently operating units. This developed from the fact that work loads are different and each unit was forced to have at least one of each type of the basic machines. Thus it became more efficient for a given processing center to follow a procedure utilizing its least-loaded piece of equipment rather than to use a machine simply because it was done that way at an ideal center.
- (5) Consolidation at one location will make current records more readily available for emergency use. At the present time it is not uncommon to call for records at a time when it is impossible to be certain of their location; they are upon many occasions in transit to the NWRC after basic processing at one of the local centers.
- (6) Moving the entire program to the NWRC will practically eliminate the difficulties of the peak annual load now experienced at the present centers. The NWRC simply has so much more potential that such extra work can become just one more non-routine job.
- (7) Administration will be simplified. Instead of having the work administered through three or more Regional Administrative Offices the entire administration will take place at the NWRC under the direction of the Office of Climatology.
- (8) Other administrative functions (management of the station networks that have naturally descended upon the present centers) would be returned to the Regional Administrative Offices where they belong and where they can properly be controlled by the Observations and Station Facilities Division.

2. WEATHERWISE FOR COOPERATIVE OBSERVERS: Re: CSM 91, Item 6 and CSM 92, Item 9. Comments have been received from a number of observers concerning the value of Weatherwise to them.

The responses in general indicate that the observers benefit considerably by receiving the magazine. Sample comments follow:

"very useful and informative"

"is WB investment in better quality observations"

"creates interest in weather and probably helps improve observations"

"keep the stories non-technical" (A number of comments were along this line and the Editor has been advised.)

"I save all my copies for reference"

"Copies are passed on to local school (or college or neighbors) when I finish"

"I think you could put that (cost of Weatherwise) on paying the observers a little".

3. WEATHERWISE OR OTHERWISE: The Illinois State Climatologist, William L. Denmark, prepared an article on the Climate of Illinois with the above title. He started the article with the following poem which emphasizes some of the many ways in which we are all affected by the weather:

"The facets of your climate can mean so much to you,
Influence where and how you live and your vocation, too.
The house you build and how it's sealed,
The crops you plant, how much their yield,
The clothes you wear or else might shed,
Vacation spots and what you're fed,
Your changing mood, your health, endeavor,
Are all affected by your weather."

4. THE NATIONAL WEATHER RECORDS CENTER: The following is taken from the March 15, 1962 Congressional Record:

"Extension of Remarks of Hon. Roy A. Taylor of North Carolina in the House of Representatives, Thursday, March 15, 1962. Mr. TAYLOR. Mr. Speaker, on February 27, 1962, a ceremony was held commemorating the 10th anniversary of the National Weather Records Center at Asheville, N. C. Dr. H. E. Landsberg, Director, Climatology, Weather Bureau, Department of Commerce, delivered a short but informative address and I include it here as information to my colleagues:

"ADDRESS BY DR. H. E. LANDSBERG, DIRECTOR OF CLIMATOLOGY, WEATHER BUREAU, AT THE NATIONAL WEATHER RECORDS CENTER, ASHEVILLE, N. C. Mr. Mayor, honored guests, ladies and gentlemen, your presence here this morning pleases us greatly. We are celebrating the 10th anniversary of weather records activities here in the Arcade Building. You have been most hospitable neighbors to this growing organization and its people.

"Under this name and at this locality, the National Weather Records Center is a young installation. Yet it has ties to the early history of science in this country. Weather has always fascinated people and records of it were even kept in colonial days. Thomas Jefferson was an early advocate of a systematic climatic survey of the country. But neither he nor Dr. James Tilton, the Surgeon General of the Army, who ordered the keeping of weather records at Army posts in 1814, could have foreseen the scope this activity has taken today.

"Literally tens of thousands of observations are made each day throughout the land. Many of them first serve for the day-to-day forecasts, but this does not end their usefulness. Accumulated observations from various locations are the raw material for the description of climate. They provide the

statistics for planning of activities in which weather plays a role. This touches on almost all efforts of mankind. It encompasses the design of housing, heating, air conditioning, agriculture in all its aspects, water resources management, and air pollution control. It also is essential information for design of weapons, fallout from nuclear explosions, and other aspects of modern warfare.

"One of the most direct roots of this Center were agricultural and maritime climatic activities in the midthirties which required analysis of vast amounts of accumulated weather data. These could be handled best by the use of machine methods and an activity for this purpose was set up by the Weather Bureau with the help of the Works Progress Administration in New Orleans. When World War II started, the Armed Forces found themselves in need of information of climatic conditions on a worldwide basis. Our troops had to fight in strange environments from the subarctic to the tropical jungles. We were engaged on three continents, on all oceans, and in the air. Clothing, food, weapons, aircraft were all weather dependent. No major strike or invasion could be planned without taking the weather factor into consideration. The New Orleans facility offered a nucleus to handle some of these problems.

"After the war, peaceful as well as defense pursuits still needed climatic analyses. The demands grew to such an extent that the old Army warehouse where the Center was located became inadequate. Asheville offered space and resources, not the least of which were well-educated people.

"At this point it may be appropriate to pause a moment and pay tribute to the late first director of this Center, Mr. Leslie Smith, who only recently passed away. He had been associated with these activities from the beginning and handled the transition from New Orleans to Asheville. His enthusiasm and hard work contributed much to the success of this group.

"Since the move to this locality, the scope of work has steadily expanded. More and more sophisticated methods of modern electronic data processing have been brought to bear on the problems. And the ultimate is not in sight.

"Particular worldwide attention was focused on this installation when it became part of the World Data Center during the International Geophysical Year. Information from all parts of the globe flowed here and a fruitful exchange with many nations ensued. This breached even the political iron curtains.

"Internally, this center is a fine example of cooperation among civilian and military agencies in pursuance of common goals.

"Of course we would all like to cast an eye toward the future at the end of this first decade. With new data streaming here from all corners, now even including observations from weather satellites, there is more work to be done than ever. New systems of automation are to be expected. Storage and recall of information is one of the most active fields in the data processing area. New methods of analysis are also yet to come. Research and development

will remain on the upgrade--it must remain on the upgrade--if we are to keep our place in the modern world. The enviable record that has been established here by the men and women working at this center has made it the mecca of climatologists throughout the world. They come here to learn our methods. Many look to this place for having work performed here. As the reputation grows, so does the workload. We hope this will remain a healthy and steady trend.

"Today our people here are glad to display some of their work to you. We hope you will gain some insight into our activities. We hope you will feel with us that the work here contributes to the health and welfare of the Nation.

"We thank you for taking time to attend this open house and trust you will like what you see."

5. CD NARRATIVE SUMMARIES: Ref: WB Manual C-0502, Volume III. During 1961 there were 198 narrative summaries out of a total of 540 monthly CDs published. The 4-year average has been 202 CDs with summary each year.

This average of 37% with summaries seems to be in the right range. Extremes range from one state with no stories in 4 years to 2 states with 47 stories in 48 months. It would appear that the intent of C-0502 (a story whenever unusual weather has occurred) is not being followed in these extreme cases. The subjective decision whether or not to include a narrative depends upon the unusual or significant features of the month's weather. Naturally in larger states or those where weather is more variable, the frequency of narrative summaries will be higher.

Perhaps the most potent reason for writing a summary is to describe the features of weather likely to interest future research people. For example, a research man wanting to know the manner in which the drouths of the 1930's ended depended heavily on the CD narratives of the time. These were particularly important because he was trying to relate subjective drouth evaluations to numerical weather data.

In many cases there are cumulative effects on changes in weather pattern which are not easily apparent from the data but important enough to highlight in a narrative.

When a SC is uncertain whether a particular month's weather merits a summary, the decision should probably be to prepare the narrative but to limit it to the important features. Extraneous material, excessive detail, or a mere repetition of data from the tables tend to obscure rather than enhance the usefulness of the narrative summaries.

6. CLIMATOLOGICAL INFORMATION ON TORNADOES: State Climatologists and others who have climatological information about tornadoes that they may have prepared or which is available in their offices are requested to furnish the information to the Weather Records Processing Center at Kansas City, Missouri. The material will be returned promptly after review.

The subject of tornadoes for the "Key to Meteorological Records Documentation Series" is being prepared by M. O. Asp at the Weather Records Processing Center, Kansas City. This series has been established to provide guidance information to research personnel making use of climatological data. Information desired are such items as the paper "Tornadoes in Iowa" prepared by Spohn and Waite, "Tornadoes in Illinois" by Changnon and Stout of the Illinois State Water Survey, and a graph showing the occurrences of tornadoes in Kansas for almost a century by Mr. A. D. Robb of that state. Information as to the criteria used for recording tornadoes, funnel clouds, wind storms, etc., and how these criteria have changed over the period of record would be especially helpful.

7. STATE CLIMATOLOGIST HONORED: Mr. Horace S. Carter, Georgia State Climatologist, was saluted March 29, 1962, by radio station WDOL as "Citizen of the Day" for his fine work with the U. S. Weather Bureau.

8. COMMEMORATIVE POSTAGE STAMP: May 2, 1964, will mark the 150th anniversary of the order by Dr. James Tilton, Surgeon General of the United States Army, directing hospital surgeons to take weather observations. This order represents the official beginning of broad-scale weather observations in the United States and it formed the basis for the Nation's meteorological program.

The Department of Commerce has proposed to the Post Office Department that a special postage stamp be issued on May 2, 1964, in commemoration of this order.

State and Area Climatologists may know of local organizations and associations that would gladly indorse this proposal, and such indorsement is welcome. Letters and resolutions on this subject should be addressed to Honorable J. Edward Day, Postmaster General, Washington 25, D. C.

9. CORRECTION: In item 17 of CSM No. 92 the authors of "The Evaporation Problem" should be van der Bijl and Bark.

10. PUBLICATIONS DISTRIBUTED TO AREA AND STATE CLIMATOLOGISTS AND WRPCs SINCE CSM 92:

"A Selected Annotated Bibliography on Automotive Air Conditioning", J. Allen Wallace, Jr., Office of Climatology

"Comparative Evaluation of Evaporation Instruments" - Nordenson and Baker. Journal of Geophysical Research, Volume 67, No. 2, February 1962

"Discussion: Use of Weather Factors in Short-Run Forecasts of Crop Yields", R. F. Dale. Reprinted from Journal of Farm Economics Proceedings Issue, Vol. XLIII, No. 5, December 1961


H. E. Landsberg

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