

SUMMER 1990

VOLUME 14, ISSUE 2



The State Climatologist

AN ASOS STATUS UPDATE: THE CLIMATE WORKING GROUP

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The mission of the Automated Surface Observing system (ASOS) program is to support the National Weather Service (NWS), Federal Aviation Administration (FAA), and the Department of Defense (DOD) modernization of surface observations during the 1990s. The NWS is the lead agency for the ASOS program. The ASOS national network of near continuous measurements will provide standardized and more objective observations through automation. Real-time data ingest will enhance the national capability to observe and transmit critical changing weather conditions and enhance improving warning/forecasting services such as aviation operations, and NWS severe weather, flash flood, and river flood forecasting programs.

A typical ASOS station will measure and report basic meteorological parameters of wind, temperature, dew point, pressure, sky condition (reported up to 12,000 feet), visibility (reported up to 10 miles), present weather (precipitation occurrence, type, intensity, amount, freezing rain), "obstructions to vision" (fog vs.

haze), and selected remarks pertaining to the observations. Software algorithms generate computer parameters. The sensor data will be stored at one minute intervals. ASOS will generate hourly and special observations. In addition, a computer-generated voice output of current conditions will be available for radio broadcast by the FAA. The system has been designed with flexibility to incorporate additional future instrumentation and features.

The ASOS program is currently in the preproduction development phase. Single contractor selection is scheduled for September 1990. Fifty-five initial site installations (16 NWS, 38 FAA, and 1 Navy) in coordination with the NWS Modernization Associated Restructuring Demonstration (MARD) are planned in the central U.S. during 1991. Following MARD, over 1,000 additional ASOS sites (250 NWS, 796 FAA, and 86 Navy) are planned to be installed nationally in the next five years. Figure 1 shows a map of the total ASOS deployment. Other DOD agencies such as the Air Force are considering using ASOS

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER IN COOPERATION WITH
AMERICAN ASSOCIATION OF STATE CLIMATOLOGISTS

"...these data also serve a critical role for climate monitoring..."

for their surface observation requirements as well.

As a result of ASOS implementation, fundamental changes in the methods and types of measurement/recording of data will occur. Although ASOS was primarily developed for operational needs, these data also serve a critical role for climate monitoring, research, and impact assessment. Therefore, any changes to the instrumentation or observational practices/procedures are of vital interest to the climate community. Thus, a Climate Working Group (CWG) was formed as an advisory body to the ASOS Steering Group, to voice these concerns and impacts on the national climatic database.

The CWG is chaired by D. R. Rodenhuis (CAC), with AASC representation by S. Williams (Univ. Alabama/Huntsville) and N. Canfield (Univ. Maryland). Other CWG members include J. Angell (NOAA/ARL), R. Bermowitz (NCPO), J. Bradley (NOAA/NWS), A. Gruber

(NOAA/ASB), R. Jenne (NCAR), J. Laver (CAC), R. Quayle (NCDC), and C. Ropelewski (CAC). The CWG first met on September 19, 1989, to discuss ASOS-climate related issues and formulate recommendations and questions to be addressed to the ASOS Steering Group. A draft report was prepared from CWG members and submitted to the ASOS program office. Members of the AASC Committee on Instrumentation and Data Standards, and the AASC Executive Board received a copy of the report for comment. The ASOS program office subsequently responded to the CWG report and is working with the CWG to describe the scope of NWS activity required. The NWS is currently preparing a draft of the ASOS Climate Plan (scheduled for CWG review by Summer 1990) which will address concerns raised by the CWG. A second meeting of the CWG is scheduled in late October 1990 as part of the Climate Diagnostics workshop in Asheville, NC. Final NWS approval of the

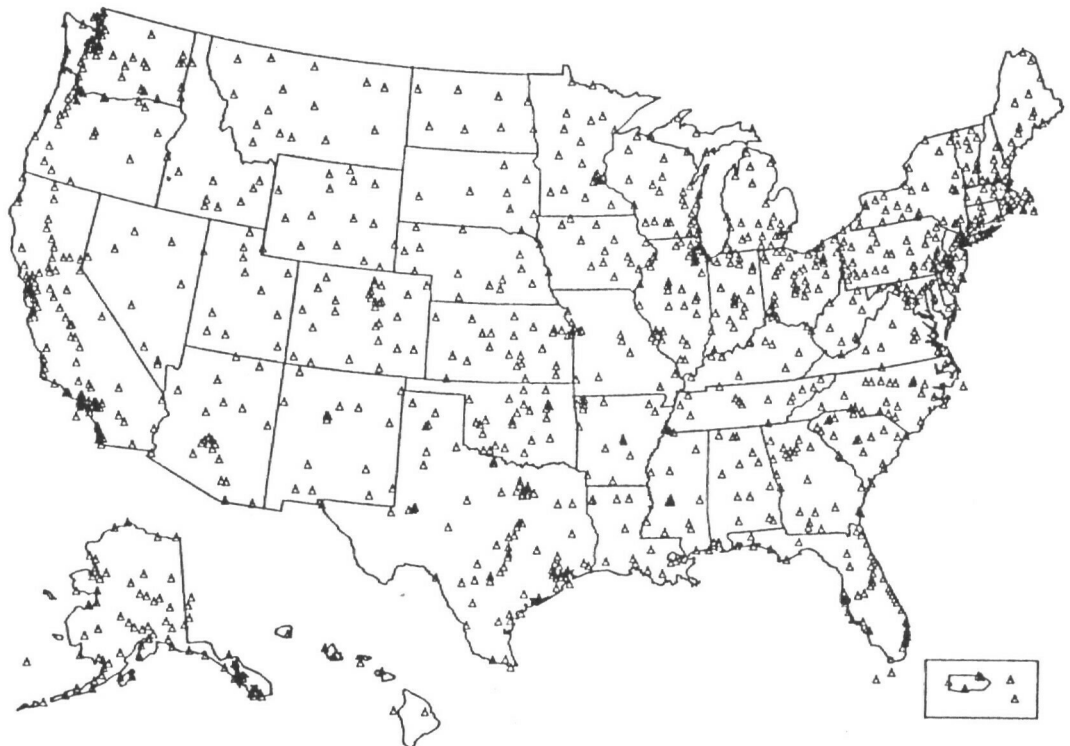


Figure 1.

ASOS Installation

NWS approval of the climate plan is scheduled for January 1991.

In coordination with other NWS offices, the ASOS Program Office is planning to present an overview and status of the ASOS program at the next AASC annual meeting in Atlantic City, NJ. Many of the issues raised by the CWG will be open to discussion by AASC meeting attendees.

Steve Williams

Asst Alabama State Climatologist

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Jack Suits Named Chief, OSD

Dr. Kenneth D. Hadeen, Director of NCDC, recently announced the selection of H. L. (Jack) Suits as Chief, Operations and Support Division (OSD). This is a new division created by the reorganization of the NCDC, which was effective October 8, 1989. The division consists of three branches: Systems Branch (previously ADP Services Division), Data Operations Branch (previously Data Operations Division), and Technical Services Branch (Printing Plant).

Jack received training in meteorology at Penn State (B.S. 1953) and graduate training in meteorology at the University of Washington in 1958 and 1959. Prior to his meteorology training, he graduated with a degree in Geography from Southern Illinois University (B.S. 1950).

Jack served ten years in the U.S. Air Force (January 1951 - April 1961), the last eight years as a weather forecaster at various locations in the U.S. and overseas at locations in England, Alaska, and Japan. From 1961 to 1964 he worked for ITT at Offutt AFB, NE, in a supervisory capacity for

...the State Climatologist position and duties become merely an additional title.

planning and control functions related to installation and checkout of an Electronic Command Control System for the Strategic Air Command (SAC). From 1964 to 1966 he was employed by Pan American World Airways at the Eastern Test Range, Cape Kennedy, FL, as a planner for acquisition of meteorological equipment to support Test Range functions. In August 1966 he joined the Federal Civil Service at the Global Weather Central (GWC), Offutt AFB, NE, as a Meteorologist, providing operational weather support for U.S. Air Force worldwide operations. In August 1974 he joined the National Oceanic and Atmospheric Administration as a Supervisory Meteorologist with the National Climatic Data Center, Asheville, NC. Since arriving at the NCDC, Jack has served as Chief, Information Services Division, and has actively worked to improve NCDC archiving procedures and service to customers.

Current Status of the State Climatologist

When federal support of the State Climatologist Program (as administered through the National Weather Service) was discontinued in 1973, the onus of funding responsibility shifted to state legislatures and public and private institutions. Unfortunately, many programs did not survive as funding was not immediately provided or "dried up" with time. In many instances, the State Climatologist position and duties became merely an additional title (and for some an additional burden). However, the American Association of State Climatologists (AASC), the National Climatic Data Center (NCDC) and others have

played a key role in maintaining interest in the State Climate Program. Several years ago the organization attempted to identify those characteristics peculiar to successful State Climate Programs that other states could use in their search for state and/or federal support.

Today's State Climate Programs vary widely in funding, services, and individual involvement. Recently, in coordination with Mark D. Shulman (New Jersey State Climatologist), an information gathering survey was conducted to identify the characteristics of successful programs so that State Climate Programs could be strengthened. A letter requesting information (such as successful proposals to state agencies) on State Climate Programs was sent during the summer of 1989 to the forty-seven State Climatologists listed by the AASC.

Twelve responses were received, seven of which indicated that the State Climate Program in the respondent's state either received no direct state funding and/or existed as a "title-only" volunteer position. Two of the seven indicated that some monetary support was provided through the Regional Climate Center, the local university, or cooperative extension. One state indicated that the State Climatologist position was approved "in principle," but no funding had yet been allocated. One letter was returned with no forwarding address available and was interpreted to mean the cessation of that state's program.

Only four of the responses (one-third) indicated "full-support" programs in operation. Two of the programs were established by act of state legislature as a "State Weather and Climate Program" or a "State

Climatological Survey." Two others are being supported by state universities with additional assistance from state agencies. The four programs share common structures and goals and entailed direct contact and cooperation with state and university officials for their initiation. Each program developed a specific list of functions of the program and the responsibilities of the State Climatologist for presentation to officials. The program functions provided for various combinations of: the maintenance and operation of a weather and climate information repository; public, private, and governmental access of, and service to, weather and climate information; the development of proposals to secure additional funding or grant support; the representation of, and reporting to, state agencies and providing consultation as needed; the coordination of climate activities between state, federal, and private organizations and the publication of weather and climate information and related research.

A well structured proposal and contact with the appropriate state and university officials were the most important factors in securing support for State Climate Programs. Often too, supporting evidence was provided with the proposals detailing the wide diversity and large number of users of climatic data and services, as well as letters of support from those users and high-ranking officials. Further, detailed information on the State Climatologists' responsibilities, the need for a support staff, and the total expenditures expected for salary, overhead, and services provided officials with a clear concept of the program to be implemented and the costs involved. In some cases, the proposal outlined the precise wording for the

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Over 65 years of observing!

Customers have found the system to be user-friendly.

legislative act creating the program.

It appears that the "climate" for support in the 1990s is favorable given the widely publicized environmental concerns of today (such as greenhouse enhancement and ozone depletion). However, it is also quite apparent that individual State Climate Programs need help in establishing support. That help could be provided by states with successful programs through the auspices of the AASC, and in cooperation with the Regional Climate Centers (currently up for renewal). A concerted effort may enable the re-establishment of a strong nationwide State Climate Program and possibly renew funding by state and/or federal agencies. This is justified by the need for maintenance of a quality database for use in assessing global change and related climate impacts.

Paul J. Croft
Asst State Climatologist New Jersey

Story Update

In the Spring issue of *The State Climatologist* an article was carried entitled "*Duties and Experiences of a Cooperative Observer.*" Several questions were asked about what happened to Mrs. Woods and the Palmetto, TN weather station. Bob Manning, the regional CPM Chief for the NWS Southern Region, submitted information that indicated that Mrs. Gertrude Woods received the first John Campanius Holm Award in 1960 and the first Thomas Jefferson Award in 1965. In addition, she received a 50-year observer pin. Her father began the observational program in March 1893. Mrs. Woods was the official observer from August 1905 until

December 17, 1970 when she passed away at the age of 97. Over 65 years of observing! A replacement observer was found but the station was closed for good in April 1977.

Steve Doty
NCDC

NCDC Introduces Automatic Facsimile Services

The National Climatic Data Center (NCDC) has recently installed a microcomputer-based facsimile system which allows customers with compatible fax equipment to call NCDC, press corresponding numbers on their keypad according to instructions given on the pre-recorded voice menu, and fax themselves selected summaries - all without manual intervention by NCDC personnel.

Currently the system has the capability to fax the following items: 1) the most frequently requested NCDC price sheets, 2) a series of sea surface temperature and analysis charts (available on the same day as they are produced in Washington!), and 3) regional "Preliminary Local Climatological Data" - derived monthly summaries. A new product, the Pre-Pub Local Climatological Data (LCD), should be available by the end of June. All of the data that are contained in the published LCD will be contained in the Pre-Pub LCD version and should routinely be available by the 15th of the month following the data month.

Customers have found the system to be user-friendly. To retrieve products, the user dials the number of NCDC's automated facsimile system from their fax machine. Our machine will answer with a greeting, "thank you for calling the . . .," it

...October 1, 1990
as National
Weather Day.

*The key to a
successful
program will be
the local awards.*

will give the user an option of several products along with a corresponding number of each. The user chooses the product of interest by depressing the corresponding key on his/her fax machine. More than one product may be chosen. Once all of the selections have been made, the user will be asked to listen for a tone then push start on his fax machine. After a short pause, the products will begin appearing on the user's fax machine. Average transmission time is approximately three minutes per product. Other than the initial subscription price and telephone connect times (billed to customers by their long distance telephone company), customers will not be charged any additional fee for the duration of their subscription.

Before ordering subscriptions to the service, customers are first asked to test fax themselves a set of sample products. The receiving fax machine must first have touchtone telephone service and the keypad of the receiving fax machine must first be set to "enable" mode. Customers should then lift their handset, dial (704) 259-0570, and listen to the instructions. If problems are encountered, customers should refer to their fax machine manual, especially the section on "remote polling." Once the customer is sure he can fax products to himself, subscriptions to the service may be ordered by calling (704) 259-0756 and using a credit card (Visa, Mastercard, or American Express). An 8-digit password plus multi-digit product code(s) will be given to the customer at the time payment is made. These passwords must be entered at the time the customer calls the NCDC fax system in order to gain access to the desired product(s). Obviously, price sheets can be obtained free-of-charge and

with no password.

For further information and to receive brochures describing the available products and prices, please call (704) 254-0756 or write:

National Climatic Data Center
Climate Services Division, Auto Fax
Federal Building
Asheville, NC 28801-2696

Sam McCown
NCDC

Centennial Notes

The Centennial Cooperative Weather Station Program (CCWSP) is now racing towards the official starting date of October 1, 1990. By this date we plan to have a Congressional resolution enacted naming October 1, 1990 as National Weather Day. This will also mark the beginning of a large scope program being coordinated by the National Weather Service called "*A Celebration of American Weather Services. . . Past, Present, and Future.*" Both the CCWSP and the Celebration run from October 1990 to July 1991.

Many of you have received the CCWSP document "Troika Guidelines for State Awards." It is hoped that this will spur CCWSP activity in each state. The key to a successful program will be the local awards! So you troika members need to get on with your planning.

Also, as part of the CCWSP, a grassroots effort is underway to digitize the historical (generally pre-1948) DAILY observations. Of the 558 centennial cooperative stations, some 150-200 are now being keyed. However, this still leaves over 350 to go. If we can't get them all, then let's at least get 2 per state.

Contact your Regional Climate Center or NCDC if you have data already keyed (and not yet in the NCDC database), or if you can help.

For more information or for a copy of the "Guidelines" please contact me at 704-259-0475.

Steve Doty
NCDC

*Remember
August 7-9, 1990*

New Super Computer Arrives at NMC

On January 29, 1990, one of the two Cyber computers was removed from National Meteorological Center's (NMC) NOAA Central Computer Facility (NCCF) to make room for a newly acquired Cray Y-MP8 Class VII supercomputer. The Cray Y-MP8 was installed in late February. It will operate for an interim period until such time as a more advanced system is procured and installed.

*Remember
August 7-9, 1990*

The Cray Y-MP8 increases the computational power by a factor of five over the Cyber 205. The system that NMC is seeking after 1992 should increase the power by a factor of 10 over the Cyber 205, which became saturated in 1989. Thus future model development at NMC will depend on the next generation of supercomputers.

*Remember
August 7-9, 1990*

On January 1, 1990, the NCCF consisted of three National Advanced Systems (NAS) 9000-series computers and two Control Data Corporation Cyber 205 Class VI supercomputers.

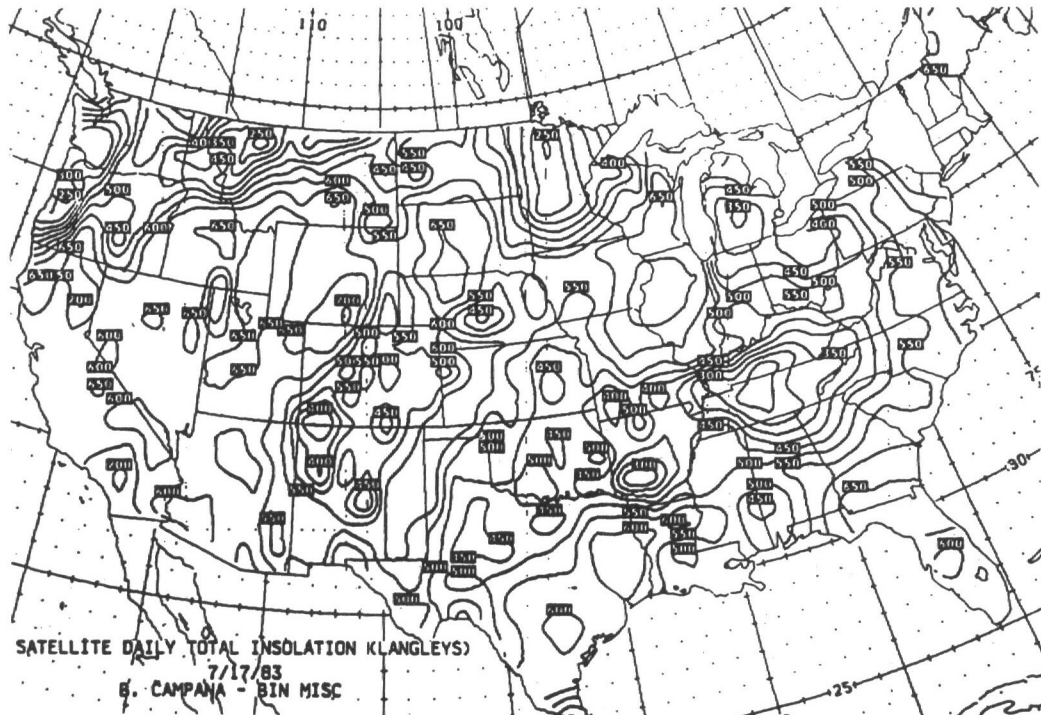
REMEMBER -

The Annual Meeting of the American Association of State Climatologists (AASC) is August 7-9, 1990, in Atlantic City, NJ. Room reservations are due July 6, 1990, to the Sands Hotel, Casino and Country Club (800-257-8580). Registration forms should be turned in by July 27, 1990 if you wish to save money. AASC fees are \$95 (\$15 late) and non-members \$105 (\$115 late).

From NWS's "Critical Path"
March 1990

NEEDS DAILY INSOLATION OVER THE UNITED STATES?

This map shows the distribution of estimated insolation for July 17, 1983 as calculated from GOES observations. These daily experimental values are available from NESDIS for the period 1983-present. Contact Dan Tarpley at 301-763-8042 for more information



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