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VISITATION PROCEDURES – COOPERATIVE OBSERVING STATIONS

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SUMMARY OF REVISIONS: This directive supersedes Weather Service Operations Manual Chapter B-73, Visitation Procedures - Substations, Issuance 73-7, dated March 1, 1973.

signed by November 7, 2003
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Director, Office of Climate,
Water, and Weather Services

Visitation Procedures – Cooperative Observing Stations

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1. Introduction. This instruction defines the guidelines and responsibilities for the National Weather Service (NWS) cooperative observing program (COOP) station inspection program. This instruction provides a common general guide for the inspection of COOP stations and establishes uniform standards for the national program. The procedures described should be considered as a guide to, and not in lieu of, good judgment and initiative on the part of the National Weather Service Representative (NWSREP).

2. General. The NWS maintains a vast network of cooperative weather observing stations. These stations include temperature, precipitation, river, evaporation, and other stations which meet the requirements of a cooperative station. While most of these cooperative stations are supported directly by the National Weather Service, many are maintained through use of reimbursable funds from other agencies, such as the Corps of Engineers and the Bureau of Reclamation. It is the goal of the cooperative station inspection program to maintain the efficient operation of these COOP stations and to promote regular and accurate records by the observers.

The COOP is vital to the climatology of the Nation, and although an interruption of observations at any particular station may have no immediate, serious effect, it leaves a gap in the climatological records which can never be satisfactorily filled. In cases of severe local storms, COOP stations are frequently the only reliable source of detailed information. Forecasting and warning of floods are still largely dependent upon a reliable network of COOP stations, and this service alone demands the best reports that can be obtained.

Most cooperative observers are unpaid; others receive a very nominal fee for reports or special services. The task of securing and retaining cooperative observers is a very difficult one, and it is necessary that diplomacy and good judgment be used in their selection and training.

The individuals serving as cooperative observers (paid or unpaid) do the major part of the "cooperating." Therefore, NWS personnel should treat them with respect and do everything possible to maintain their good will. The inspection of each COOP station should be unbiased, positive, polite, and thorough. COOP stations must strive to meet observational standards of accuracy and completeness. A simple commonsense technique, applied with patience and a genuinely friendly and helpful spirit, will go far toward assuring success.

3. COOP Networks. The COOP stations are classified on the basis of services rendered in several networks. These networks are described in NWSI 10-1307, Cooperative Station Management. Routine visits to cooperative stations are made for the purpose of observer training, equipment maintenance, and verification of station forms (e.g., Station Information Report (SIR). As a general guideline, temperature and non-recording precipitation stations are visited on an annual basis. Evaporation stations and those with recording rain gauges are visited twice a year.

3.1 Specific Responsibilities of National Weather Service Representative (NWSREP). The NWSREPs are normally assigned their duties usually by the Meteorologist in Charge of the Weather Forecast Office and in the Pacific Region by the Official in Charge of the Weather Service Office and the Data Collection Office. At times, NWS officials such as service hydrologists, interns, electronic technicians, facilities technicians, regional headquarters personnel, and others may perform functions or be assigned responsibilities within the scope of the COOP and are considered an NWSREP. The NWSREPs are responsible for the efficient operation of the cooperative stations within their assigned areas. Their duties may include:

3.1.1 Selection of Sites. The NWSREP in coordination with the Regional Cooperative Program Manager will determine the best sites for COOP stations with respect to location, exposure, and availability of COOP observers. Make the necessary arrangements with owners for the use of sites, negotiate contracts or cooperative agreements for space, and install the equipment. Document the COOP station and exposures by collecting the required metadata and entering the information into the Cooperative Station Service Accountability (CSSA).

Some of the prerequisites when selecting a site are:

a. Area not subject to flooding.

b. Availability of communications, such as a phone or computer.

c. Good exposure of instruments.

d. Access by observer. It may be necessary to settle for slightly less than the best possible location, if by doing so, it is more convenient for the observer.

e. The station location should be selected so the data collected will be representative of the area being sampled.

f. Continuity of data. It is extremely difficult to judge how much the data will be affected by moving instruments a short distance. Every effort should be made to avoid moving instruments, especially when a long period of record has been established.

3.1.2 Selection of COOP Observers. Establishing and maintaining a cooperative observer network is a difficult task. The main reason for this is the NWS is asking for volunteers to provide services that can at times be quite demanding for which we offer little or no compensation.

Some of the items to consider when selecting observers are:

a. Age. A person whose age makes it likely they will record data over a long period of time.

b. Daily Routine. An observer whose daily life fits the observational program with a minimum of inconvenience.

c. Interest. An observer who shows an interest in the NWS program and a public spirited attitude.

d. Dependability. A person who appears to be a conscientious individual.

e. Capabilities. An observer with the capabilities to take the required observations and then complete the required forms.

When enlisting new observers, the NWSREP should approach those people who may have use for our product. For example, a dam tender would appreciate getting our forecasts of inflow to his reservoir. Another example would be the outpost of a utility company where the attendant could use our general weather forecasts. Cooperating agencies, such as the Corps of Engineers and various river valley authorities, are usually willing to give us the reports collected by them from their precipitation networks.

When interviewing a prospect, the NWSREP should:

a. Explain the fundamental observing duties to the prospect and allow them to make up their own mind about accepting the position. Do not pressure them.

b. Explain the need for the data gathered and its various uses. Emphasize their importance in taking the observations.

c. Explain to paid observers the fee paid is a token of recognition for services, not as a salary.

d. Look for indications of dependability. Neighbors' opinions may be better than observers' general appearances or self-recommendations.

Once a selection is made, the NWSREP should:

a. Instruct the new observer thoroughly. Otherwise, a new observer may wish to resign because they are confused and feel they can't do the work.

b. Be liberal with compliments and make them public, if possible, when the observer is doing a good job. Everyone likes recognition of their work

The NWSREP serves as the authorized official for cooperative observers and negotiates required contracts for space for equipment.

3.1.3 Installation of Equipment. The NWSREP installs or supervises the installation of most cooperative weather observing equipment. Standards and details of installation may be found in other sections of the NWSI directive system. On occasion, installation directions are furnished with the equipment.

3.1.4 Training of Observers. The NWSREP trains cooperative observers in taking and recording observations, remaining with the new observers to demonstrate proper procedures until satisfied the observers are competent to carry on independently. Make follow-up visits to insure satisfactory observational standards and to correct any existing divergent practices. Diplomacy is required in dealing with observers in order to maintain their interest and to retain their services.

3.1.5 Inspecting and Servicing Equipment. The NWSREP inspects and services climatological and hydrological stations and stations that support meteorological forecast, warning, and public service programs. They must service, inspect, and calibrate NWS equipment used in the cooperative observing program.

3.1.6 Proper Documentation. It is essential that prompt and correct documentation be made of all cooperative stations. The SIR is intended to provide a complete and permanent record of a cooperative station. A report on this form should be prepared for the establishment, discontinuance, or any change in a cooperative station. Detailed instructions for the preparation of this form are given in the CSSA Manual.

3.1.7 Quality Control of Data. The NWSREP has the responsibility for improving the quality of cooperative station records. Probably the most helpful tool is the personal visit with an observer when their procedures and records can be examined and effort made to correct any problems that may be evident. Feedback on the quality of reports may be expected from the National Climatic Data Center (NCDC).

3.1.8 Planning of Travel. Travel should be planned carefully on a semi-annual and an annual basis for efficient coverage of the area. Anticipate and secure in advance spare parts, supplies, forms, and maintenance manuals that may be required during the planned trip. Coordinate travel plans with other offices that may be concerned with the cooperative stations.

3.1.9 Inspection Reports. The NWSREP should prepare and keep up-to-date routine cooperative station inspection reports, such as WS Form B-23 or a locally developed form. Inspection data is also entered into the CSSA and instructions for entering the data contained in the CSSA manual.

3.1.10 The Visitation Mission. Because of the infrequency of visits, each one should be complete and thorough in itself, insofar as possible, for meeting all of the needs prescribed for operating the station. This includes exposure evaluation; inspection, calibration, and maintenance of the instruments for data validity and continuity; consultation with the observer for adequacy of supplies and review of observational practices; documentation and recommendations by means of reports; and public relations liaison with the observer, community, associated agencies, and news media relative to the station, the data, observer recognition, etc., as indicated or required. Adequate trip preparation means anticipation of such needs, and successful trip execution means doing all that can be done at the site before moving on to the next station or returning to the WFO. In a large measure, the success of the COOP depends on the economy and efficiency of the single, multi-purpose visit.