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Hydrometeorology Technician (Risk Reduction) 11

GS-1341-11

Meteorological Technician, Hydrometeorology Technician (Risk Reduction)

I. INTRODUCTION

This position is that of a Hydrometeorological Technician at the Weather Forecast Office at Norman, Oklahoma. The primary functions of this office are to provide timely and accurate warnings and forecasts of a variety of weather and hydrologic situations to the public and other interests served within the WFO area of responsibility. This position provides a full range of technical support and assistance to WFO shift operations and in efforts to fulfill other basic activities of the WFO.

This position is being established for a term period to cover the Norman Risk Reduction phase of the National Weather Service (NWS) Modernization and Restructuring (MAR). The primary objective of this risk reduction project is to measure the capability of an emulated WFO to provide required services, and to develop interfaces to the new observing systems.

The incumbent of this position will serve as a Meteorological Technician at least 25% of each working day involved in the development and implementation of prototype technologies that will affect not only the Norman, Oklahoma facility but NWS facilities nationwide. He/she will participate in various risk reduction activities which have been designed to test the validity of the new operational concept, and will play a major role in documenting and evaluating the results of the planned activities. The results of the various concepts being tested at this prototype office will have a major impact on the future operations of the Agency. In fulfilling these responsibilities, the incumbent will participate in activities that can be divided into four categories: Development and evaluation, data management, public service and user interaction.

II. MAJOR DUTIES AND RESPONSIBILITIES

A - DEVELOPMENTAL AND EVALUATION ACTIVITIES

The incumbent:

1. Evaluates the manner in which meteorological and hydrological data is being supplied by new unproven technology, and makes recommendations as appropriate concerning format, frequency, priority, etc.
2. Participates in the development of new work procedures and priorities appropriate for the hydrometeorological technician series utilizing on the job experience; participates in on the job tests of such procedures and priorities.
3. Assesses job tasks, the resources and time associated with tasks, adequacy of systems support in reducing or eliminating repetitive functions, etc. Makes recommendations concerning the appropriateness of assigned duties and responsibilities associated with this new position, and participates in developing recommendations concerning changes, additions, or deletions which may be needed to promote more effective utilization of this new position.

B - DATA MANAGEMENT ACTIVITIES

The incumbent:

1. Analyzes and evaluates local synoptic scale and mesoscale weather and hydrologic data available from multiple data sources at the WFO while on an operational shift. Based on the incumbent's experience and technical knowledge, and his/her assessment of the current and near-term weather situation, identifies inconsistent or questionable data and independently resolves or corrects such discrepancies.
2. Identifies, recruits, and cultivates sources of corroboration throughout the WFO service area, and obtains the necessary corroborating real-time evidence or ground-truth information from those sources to assure the accuracy of data in potential severe weather or flood warning situations.
3. Assists the Data Acquisition Program Manager (DAPM) in planning, developing, monitoring, managing, assuring and controlling the quality of numerous mesoscale data sources in the WFO area, to include:
 - o Cooperative, climatological, and hydrologic sub-stations/networks;
 - o Spotters and local flood warning observers;
 - o Other federal, state, or local agency data sources;
 - o Local Flood Warning Networks;
 - o River gage stations; and
 - o Supplementary and Limited Aviation Weather Reporting Stations (SAWRS and LAWRS).
4. Conducts field visits as required by the DAPM, assuring and/or certifying the quality and adequacy of the cooperative and second order observational programs and instrumentation in the WFO service area.
5. Collects, distributes, quality controls, and processes real-time weather and hydrologic data and observations (including ASOS and augmentations) from the WFO service area for use by forecasters.
6. Maintains the local observation attributes data base resident in AWIPS.
7. Participates in verification studies, storm surveys and other development projects by developing, collecting, and assessing data for ground-truth purposes.
8. Where applicable, takes upper air observations.
9. maintains appropriate WFO archives and climatological records.

C - PUBLIC SERVICE AND USER INTERACTION ACTIVITIES

The incumbent:

1. Serves as the first point of contact between the WFO and the users served. Provides appropriate advice, guidance and explanations, weather briefings and answers to questions as requested by the public, the media, and other interested users of meteorological and hydrologic products and services.
2. Provides necessary and applicable real-time weather and hydrologic service products, information, data, interpretations, and support to emergency management agencies and other governmental agencies.
3. Monitors and updates products broadcasted over NOAA Weather Radio and other public weather dissemination systems to ensure that information is current and acceptable for use by the public and other users.

D - FORECASTER ASSISTANCE

1. As designated by the Senior Forecaster, prepares, issues, or provides certain scheduled and unscheduled meteorological and hydrologic products for the WFO service area.
2. Prepares, issues, and monitors scheduled weather and hydrologic summary products for distribution to the public and other users in the WFO service area.
3. Monitors the NEXRAD Unit Control Position. Activates and uses appropriate diagnostic procedures to ensure the provision of NEXRAD data to associated and non-associated users. Changes the operational NEXRAD system configuration in accordance with the instructions of the Senior Forecaster.

III. FACTOR LEVELS

Factor 1. KNOWLEDGE, REQUIRED BY THE POSITION

Detailed knowledge of a wide variety of technical methods, principles, and processes of the fields of meteorology and hydrology necessary to assess weather situations and associated meteorological and hydrologic data to provide the necessary information, interpretations and advice to the public and other users.

Ability to collect, analyze, interpret, adjust, and verify complex and conflicting meteorological hydrologic information and data, especially data indicating extreme weather or flood situations.

Detailed knowledge of the physical and political geography and orography of the WFO area and adjacent WFO areas.

Ability to communicate effectively, orally and in writing in order to prepare written technical material such as meteorological and hydrologic advisory products and summaries, and presenting and explaining such kinds of technical material to the public or other users.

Ability to measure a variety of meteorological and hydrologic parameters through NWS instrumentation systems.

Skill in establishing, maintaining, and improving cooperative working relationships with users of WFO products and services, and in gaining cooperation from voluntary weather observers, spotters, and other verifying sources within the communities served by the WFO.

Skill in the assembly and routine maintenance of weather instruments and shelters.

Knowledge of the basic operating characteristics of NWS electronic and computer systems used in data acquisition, communications, information processing, and dissemination activities, including control procedures associated with the WSR-88D system.

Familiarity with basic climatological reference sources and methods related to conducting local climatological studies.

Factor 2. SUPERVISORY CONTROLS

In performing the developmental and evaluative activities associated with MAR, the incumbent will operate in an entirely independent manner. The incumbent's evaluation of the operation of this position is fully dependent upon the experience of the incumbent. The combination of activities, the operational feasibility, the adequacy of staff hours associated with major tasks, the use of new technology and systems, all will be assessed by the National Weather Service based on the incumbent's participation and recommendations resulting from this risk reduction exercise.

When not working on MAR associated activities, the incumbent is provided very general instructions on unusual or anomalous conditions and on general administrative matters by the WFO Data Acquisition Program Manager (DAPM). Since the DAPM and the incumbent are not routinely scheduled to work during the same hours, the incumbent operates with an extraordinary degree of freedom from supervision. This independence reflects the degree of reliance placed upon the incumbent for technical accuracy.

While performing operational shift functions, the incumbent works with a Senior Forecaster and the General Forecaster and may receive general guidance and direction from the Senior Forecaster on duty as it pertains to office operational priorities and emergency courses of action to be taken in severe weather situations. The Senior Forecaster is responsible for controlling the work of the shift team and may alter the incumbent's assigned work. However, in view of the massive quantities of data and advisory products to be issued each shift, little opportunity exists for the Senior Forecaster to conduct a review of the incumbent's work until after its effects have been felt. The incumbent bears responsibility for planning and carrying out his/her work.

Factor 3. GUIDELINES

The guidelines that are available to the incumbent are the basic policies and procedures laid out in the Weather Service Operations Manual system and in the WFO Duty Manual. While these directives cover the basics of operational policy and procedure, they only address typical situations and do not provide guidelines for dealing with the anomalous or unanticipated situations. It is expected that the incumbent will use his/her experience, coupled with initiative and resourcefulness, to deal with those situations differing from the typical or the norm.

Factor 4. COMPLEXITY

The incumbent's activities are complicated by the fact that he/she must work with technology which is largely unproven. The incumbent must be able to adapt rapidly to circumstances which may be totally unexpected, and to use his/her own initiative to cope with such situations and still be able to satisfactorily accomplish the Agency's public safety mission.

The incumbent often performs duties under rigid deadline constraints, requiring quick and accurate assessments and decisions. It is often necessary for the incumbent to establish priorities of effort during rapidly developing severe weather situations in order that all users and the public receive the appropriate and timely instructions, interpretations, and information suitable for the situation. The incumbent frequently must switch attentions from

data management activities, to public or user interactions, to cope with such situations and still be able to satisfactorily accomplish the Agency's public safety mission.

Factor 5. SCOPE AND EFFECT

The incumbent's developmental and evaluative role is instrumental in establishing the duties and responsibilities of this new position. Such evaluations may form the basis for decisions which have long-lasting and far-reaching resource implications in terms of positions required, and human resources budget.

The role of the WFO hydrometeorological technical is vital to the ability of the WFO and its staff to perform its basic public safety mission. The work of the incumbent is a critical factor to the correct and rapid assessment of current and impending, perhaps very severe, weather conditions with a potential for destruction to life and property. A significant degree of reliance is placed upon the incumbent to convey the most effective and instructive weather information to the public and other users. Errors in technical assessment or in communicating critical weather information and interpretations may have a major negative effect on the safety of those served or on their economic well-being.

Factor 6. PERSONAL CONTACTS

The primary contacts of this position are with the general public, the various media and disseminators of weather information within the WFO area, other interested users, and various federal, state, and local governmental agencies having interest in or responsibility for weather and weather-related impacts. These contacts are often in a setting which requires the incumbent to react or respond to specific requests for information, interpretation, advisories, or other technical judgments.

Factor 6. PURPOSE OF CONTACTS

The incumbent provides information and technical judgments to the public and other users which are often relied upon by the requesters as a basis for their own actions. The incumbent may be placed in the position of attempting to influence or persuade a user to take a course of action to avoid damage or danger. Further, the incumbent will be called upon to be persuasive in recruiting and maintaining appropriate secondary sources of information.

Factor 7. PHYSICAL DEMANDS

While the work is primarily sedentary in nature, it is normally performed in a rotating shift environment, where weather warning conditions can be quite stressful and extended hours without rest may be required. Additionally, some travel is required, and the physical rigors of the routine maintenance of instruments and instrument shelters will also be involved.

Factor 9. WORK ENVIRONMENT

The work is usually performed in an office setting but occasional travel to remote field instrument sites will be required.

This position is considered to be Exempt from the provisions of the Fair Labor Standards Act.

IV. UNIQUE POSITION REQUIREMENTS

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