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Meteorologist (Senior Forecaster) 13

GS-1340-13

INTRODUCTION

This position is that of a Senior Forecaster in a National Weather Service (NWS) Weather Forecast Office (WFO). Serves as shift leader, routinely supervising at least one GS-12 full performance level Meteorologist (Forecaster) and one GS-11 Hydrometeorological Technician. Ensures the provision of general weather information, warnings, advisories, and forecasts to the general public and special user groups in the WFO service area. As shift leader, is responsible for all NWS service products, warnings, and advisories produced on the shift, and for their coordination with other NWS offices. Also leads and coordinates WFO staff efforts and provides direction, guidance, instructions, and assistance to the shift staff.

MAJOR DUTIES

1. During an assigned shift, the senior forecaster is responsible for the quality and timeliness of all warning and forecast products prepared and issued by the WFO shift staff. Reviews and/or approves public, aviation and other weather forecasts, information and products prepared by shift staff before issuance.
 - Provides the overall weather situation assessment for all shift staff at the onset of the shift. Decides the appropriate weather assessment when staff members disagree. Serves as the primary contact with adjacent WFOs, the National Centers, RFCs, CWSUs, and other NWS facilities for the purpose of coordinating forecast products for larger weather systems which progress across various NWS office service boundaries.
 - In conjunction with shift responsibilities, serves as the primary contact with other Federal, state, and local agencies such as FAA, DCPA, FEMA, and emergency management and law enforcement officials over matters involving the initiation and implementation of immediate/emergency public health and safety measures based on NWS warnings and watches.
 - Exercises judgment on behalf of the Meteorologist-in-Charge (MIC) as to the need for additional staff during the shift or in preparation for the upcoming shift. Handles general office administrative matters which may occur on shift. Exercises call-back authority and authorizes expenditures of funds for overtime for additional or augmenting WFO staff, as appropriate.
 - Collaborates with the MIC in assessing subordinate staff performance. Formulates and/or provides input to performance ratings of subordinate staff and recommends recognition as appropriate.
2. Develops, prepares and issues all warning, forecast and service products assigned to the WFO. Develops and/or issues scheduled and unscheduled products, and official forecast products for the general public and specialized users in the area of responsibility.
 - Prepares and issues warnings for the service area (and coastal waters, if applicable) concerning a number of hazardous weather conditions, such as severe weather, high winds, flash floods, (marine effects,) and winter storms.
3. Conducts a weather watch which involves interpretation of Doppler radar data and satellite imagery, and the analysis of other meteorological and hydrologic data. Assesses and decides the appropriate and relevant data sets and ensures the resolution of questionable or conflicting data sets to determine: 1) need of warnings, statements, or advisories; and 2) need for issuing or updating local public, aviation (or marine, if applicable) forecasts.

- Maintains a continuous weather surveillance of the service area using the NEXRAD system and other technologies, such as ASOS. Expands the use of NEXRAD data and products in the daily forecast and warning environment through the application of experience and locally developed studies and techniques. Fully integrates NEXRAD product and data advancements into the preparation of all WFO warning, forecast and service products, including individual briefings.
- 4. Provides weather advice and guidance to emergency managers at the local and state levels during severe and hazardous weather situations. Also insures adequate access of weather guidance to the general public, and to agricultural, commercial, transportation and recreational interests. Provides forecasts and weather briefings to press, radio, and television stations.
- 5. Supervises and/or provides hydrologic service products for assigned WFO area, including forecasts and warnings of floods and river stage for the public and numerous users dealing with water resources and/or land management, transportation, emergency management, river and flood plain control, etc.
- 6. Leads or participates in the conduct of local studies and developmental projects designed to capitalize on or incorporate the benefits of new science/technology/local techniques into WFO operations.
- 7. Serves as Special Program Meteorologist/Focal Point as assigned by the MIC in order to ensure services improvement in relationship to user requirements.

KNOWLEDGE REQUIRED BY THE POSITION

Mastery of theoretical meteorology, including the dynamics of the atmosphere, mesoscale meteorology, and the application of computer methods of numerical weather analysis and prediction.

Mastery of applied meteorology, equivalent to several years of forecasting experience in the more challenging of forecast situations or environments.

Knowledge of the principles and theories of hydrology and the hydrologic characteristics of rivers, streams, and drainage basins in the forecast area sufficient to enable the senior forecaster to perform the hydrologic service program duties assigned to the WFO.

A highly advanced level of knowledge of aviation meteorology for the production of specialized aviation forecasts and advisories for the aviation community, for guidance of National Weather Service and FAA pilot briefing, and for special users, such as balloonists, soaring clubs, crop dusters, meteorological staffs at FAA ARTCC (CWSU), etc.

(If appropriate) Advanced knowledge of marine meteorology and/or tropical meteorology with special emphasis on hurricanes and/or coastal flooding, and the near shore marine environment.

Advanced knowledge of meteorological principles pertaining to other assigned special programs, such as agricultural, and fire weather, to provide forecast products and expert advise and guidance/performance to specialized users.

In-depth knowledge of NWS operational procedures and instructions, and real-time guidance products pertinent to the production of weather forecasts and services, river and flood forecasts, and other special purpose products.

Thorough knowledge of operational characteristics of complex electronic and electro-mechanical equipment utilized in data acquisition, communications, and service programs assigned to the WFO. This includes the meteorological skills necessary to properly utilize sophisticated Doppler weather surveillance radar equipment and to interpret and apply its output in a real-time operational environment.

Knowledge of applied research methods and data management techniques sufficient to enable the senior forecaster to participate in local development efforts and to incorporate the latest technological advances into the WFO operational forecast and warning program.

Proven ability in communications techniques, including effective writing and public speaking.

SUPERVISORY CONTROLS

The senior forecaster works under the general guidance and supervision of the MIC. However, the incumbent performs most operational tasks in an independent fashion, with the wide latitude for the exercise of professional judgment and delegated authorities. The work is generally reviewed after the fact for effectiveness and consistency with the assessment of the weather situation at the WFO and surrounding NWS offices.

GUIDELINES

Existing guidelines provide only a broad framework for conducting forecast functions. Such guidelines are operational procedures which define matters such as format of forecasts, forecast and warning language which will be universally accepted and understood, conditions for warnings versus advisories, etc. Numerical and graphic guidance are currently applicable in terms of assessing synoptic scale weather systems, but their use is rapidly expanding to mesoscale systems. The senior forecaster's professional expertise is the primary tool for accomplishing the operational work, especially at the mesoscale level. The employee is expected to be frequently faced with new and unusual situations in this "modernized" office, where the application of new systems is unprecedented. Opportunities for new forecast techniques development abound. General policy guidelines are found in the Weather Service Operations Manual, Regional directives, and other related NOAA manuals. The senior forecaster is expected to exercise judgement in shift leadership responsibilities.

COMPLEXITY

While some standard procedures and techniques are available to accomplish the variety of complex tasks involving forecasts and warnings, new communication systems, data acquisition systems, and systems to integrate the variety of meteorological data have opened up new areas for forecast procedures development. Duties are frequently performed under rigid deadlines, yet important facts must be sifted from a wealth of information and organized for rapid decision making. The senior forecaster must combine a professional knowledge of meteorology and hydrology, applied research, and data management techniques, with warning and forecast methods in order to lead or participate in local development activities and local operational techniques development.

Diverse community activities demand diverse applications of meteorology. The senior forecaster must have a good understanding of the working procedures, needs, jargon, and problems of various types of users in order to explain how NWS products could be used most effectively and clarify misunderstandings regarding NWS products and services. The meteorological and hydrologic requirements of the pilot, farmer, building contractor, lawyer, mariner, news media, shipper, and government official differ; and versatility is needed to respond promptly and effectively to service requests.

SCOPE AND EFFECT

Accurate and timely forecasts and warnings issued under the lead of the incumbent are essential to the safety of the public and can prevent the loss of life and property in extreme events such as tornadoes and flash floods.

Products issued by the WFO provide day-today guidance to the public and specialized users, and can have a significant impact on the area's economy.

The quality of the senior forecaster's performance in operational and leadership activities and forecast techniques development has an impact on the effectiveness and enhancement of NWS programs in the WFO area.

PERSONAL CONTACTS

Intra-agency contacts are with employees in the immediate WFO, employees at nearby NWS offices, with meteorologists at National Centers (Hurricane, Severe Storm, NMC), and with hydrologists at the RFC.

Additional contacts may include state and local officials with decision authority in the event of weather threats and natural disasters.

Contacts with other agencies include the FAA, FEMA, State emergency management, environmental and air pollution agencies, NASA, Corps of Engineers, agricultural agencies, community action, other special purpose groups and cooperative storm spotters, the Coast Guard, the Environmental Protection Agency, and the Forest Service.

Contacts are made also with the general public, the mass news media, and specialized users.

PURPOSE OF CONTACTS

Contacts are to provide routine and special weather and hydrologic information to the general public and to warn the public and "action agencies" of the imminent threat of natural disasters of a meteorological or hydrological nature.

Intra-agency contacts are to coordinate products with neighboring offices, and to coordinate with National Centers (NMC, NSSFC, NHC) regarding the local effects of broad scale weather developments.

Contacts with state and local officials are to advise them of the timing and scope of significant storms in order to institute precaution for the safeguarding of life and property, implement disaster preparedness action plans for the safeguarding of life and property because of the threat of natural disasters, such as tropical storms,

tornadoes, floods, flash floods, severe storms, affecting areas served by the WFO; at times evacuation of threatened communities is necessary.

Press, radio and TV contacts are to coordinate the routine dissemination of public and marine forecasts, and to implement the Emergency Broadcast System (EBS) in the event of natural disasters such as tornadoes or flash floods.

Contacts with other agencies are to provide specialized support for aviation (FAA), fire weather (USFS, BLM, or State Forestry) air pollution (EPA and state agencies), and other specialized users.

Though much of the senior forecaster's general public contact is through the mass media, the public and specialized users may contact the WFO directly for general and specialized advice on existing and forecast weather conditions.

PHYSICAL DEMANDS

The work is generally sedentary, although there is considerable moving about among various desks and equipment. Routine duties require meeting tight deadlines. During periods of threatening weather or rapidly changing weather conditions, the increase in workload and the necessity for rapid dissemination of weather warnings and updates requires periods of acute mental alertness and produces considerable mental stress. Adverse weather conditions often require the senior forecaster to work hours longer than the usual shift, adding to mental and physical stress.

Working on rotating shifts is routinely required with the WFO in operation 24 hours a day, seven days a week.

WORK ENVIRONMENT

The work environment most closely resembles that of an office with added specialized equipment for communications, radar, and NOAA Weather Radio.

FAIR LABOR STANDARDS ACT

The work of this position reflects professional responsibilities; therefore, it is exempt from the provisions of the Fair Labor Standards Act.

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