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Meteorologist 12 (General Forecaster)

GS-1340-12

INTRODUCTION

This position is that of a general forecaster at the National Weather Service (NWS) Weather Forecast Office (WFO). The incumbent provides general weather information, warnings, advisories, aviation and public forecasts to the general public and to special user groups in the WFO service area. The incumbent is responsible for the coordination of NWS products, warnings, and forecasts with the Senior Forecaster on duty, the Service Hydrologist, and the hydrometeorological technicians on duty. The forecaster provides professional advice and assistance to peers and lower grade staff members.

A. MAJOR DUTIES

1. During an assigned shift, the forecaster is responsible for integrating all meteorological data available from a variety of sources, and for analyzing and assessing the current and forecast weather situation at both the synoptic and meso-scale levels. The incumbent devises and formulates all necessary warning, advisory, and forecast products assigned to his/her forecast "desk" during the shift, with emphasis on meeting the needs of the users.

- Participates in all forecast and service programs 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 WFO service area (and coastal waters, if applicable) concerning a number of hazardous weather conditions, such as severe weather, high winds, flash floods, marine effects, winter storms, etc.

2. Conducts a weather watch which involves interpretation of Doppler radar data and satellite imagery, and the analysis of other meteorological and hydrologic data. Determines appropriate and relevant data, identifies questionable or conflicting data (resolving those if possible) and analyzes all integrated data sets to determine: 1) need of warnings, statements, or advisories, and 2) need for issuing or updating local public, and aviation (or marine, if applicable) forecasts.

- Maintains a radar surveillance of the service area using the NEXRAD system. 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 public service products, including individual briefings.

3. As needed, provides weather advice and guidance to the general public, and to agricultural, commercial, transportation and recreational interests. Provides forecasts and weather briefings to press, radio, and television stations.

4. 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.

5. Conducts 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. Applies this developing body of knowledge and experience to the warning and forecast environment.

6. Participates in fostering improved service through the establishment of relationships with users of special program forecasts or in Focal Point activities as assigned by the MIC.

KNOWLEDGE REQUIRED BY THE POSITION

- An advanced level of knowledge of theoretical meteorology. This includes knowledge of the dynamics of the atmosphere, mesoscale meteorology, and the application of computer methods of numerical weather analysis and prediction.
- Extensive training and experience in operational meteorology, or an advanced level of knowledge of applied meteorology equivalent to several years of forecasting experience.
- 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 incumbent to perform the hydrologic service program duties assigned to the WFO.
- An 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.
- 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 incumbent to participate in local development efforts and to incorporate the latest technological advances into the WFO operational forecast and warning program.
- Ability in communications techniques, including effective writing and public speaking.

2. SUPERVISORY CONTROLS

The incumbent operates under the general guidance/supervision of the MIC or the Senior Forecaster on shift. However, the incumbent performs most operational tasks in an independent fashion, with the wide latitude for the exercise of professional judgment. Often there is little opportunity to review the incumbent's work due to the perishable nature of the information to be disseminated. In these instances, the work is reviewed after the fact for adequacy of results and consistency with the assessment of the weather situation at the WFO and surrounding NWS offices.

3. GUIDELINES

Existing guidelines provide only a broad framework for conducting the full range of forecaster 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 applicable only in terms of assessing synoptic scale weather systems. The incumbent's professional expertise is the primary tool for accomplishing the operational work, especially at the mesoscale level. He/she 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.

4. 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 incumbent must combine a professional knowledge of meteorology and hydrology, applied research, and data management techniques, with warning and forecast methods in order to participate in local development activities and local operational techniques development.

Diverse community activities demand diverse applications of meteorology. The incumbent should have some 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.

5. SCOPE AND EFFECT

Accurate and timely forecasts and warnings issued by 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 incumbent 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 incumbent's performance in operational activities and forecast techniques development has an impact on the effectiveness and enhancement of NWS programs in the WFO area.

6. PERSONAL CONTACTS

Intra-agency contacts are: (1) with employees in the WFO, (2) with employees at neighboring offices, (3) with meteorologists at National Centers (Hurricane, Severe Storm, NMC), and (4) 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, DCPA, State Environmental and Air Pollution agencies, NASA, Corps of Engineers, agricultural agencies, community action, other special purpose groups and cooperative observers, and could include EPA and Forestry Service.

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

7. PURPOSE OF CONTACTS

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 (1) to coordinate products with neighboring offices, and (2) to coordinate with National Centers (NMC, NSSFC, NHC) regarding the local effects of broad scale weather developments.

Contacts with state and local officials are (1) to advise them of the timing and scope of significant storms in order to institute precaution for the safeguarding of life and property, (2) 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 (1) to coordinate the routine dissemination of public and marine forecasts, and (2) 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 others.

Though much of the incumbent'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.

8. 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 incumbent to work for periods 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.

9. 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 (FLSA)

The determination has been made that the duties of this position reflect professional responsibilities; therefore, this position is EXEMPT under the Fair Labor Standards Act.

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