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Meteorologist (Warning Coordination) 14

GS-1340-14

INTRODUCTION:

The employee functions as a Warning Coordination Meteorologist in a National Weather Service (NWS) Weather Forecast Office (WFO). Serves as the principal interface between the WFO and the users of WFO products and services in leading the effort to insure their evaluation, adjustment, and improvement. Is fully responsible for planning, coordinating, and carrying out the WFO area-wide public awareness program designed to educate the public to ensure the mitigation of death, injury and property damage or loss caused by severe natural hydrometeorological events. Also leads and coordinates WFO staff efforts and provides direction, guidance, instructions, and assistance to the staff in the conduct of weather service operations.

The warning, forecast and service programs of the WFO are provided for a service/program area which is characterized by a population area of at least one million people and two additional of the following factors; or a population area of three million people and one additional factor. The additional factors which are present in varying combinations are: service area of more than fifty counties; marine forecast program; state coordination; Center Weather Service Unit (CWSU) management; affiliation with joint center/special interagency center; and multi-state coordination.

I. MAJOR DUTIES AND RESPONSIBILITIES

1. Conducts area-wide evaluations of WFO products and services:

-Reviews WFO-produced products and services for adherence to established policy. Interfaces with all users of WFO products and services (e.g., the public, the media, users in the aviation, marine, agricultural communities, and forestry, land and water management interests) to evaluate the adequacy and usefulness of the services provided.

-Collaborates with the WFO Meteorologist-in-Charge (MIC) and with state/local agencies in developing, proposing, and implementing plans to develop, modify, or tailor products and services with the goal of service improvement or increased product usefulness.

-As designated, serves as the NWS user representative for the state in which located. Works with state government agencies having weather or weather-related interests in developing plans for promoting more effective utilization of NWS products and services throughout the entire state.

2. Conducts a WFO area-wide preparedness program.

-Identifies priority community preparedness objectives and develops area-wide warning projects to meet those objectives. In coordination with the MIC, establishes schedules for preparedness work accomplishment, including scheduling other WFO staff.

-Reviews WFO area-wide warning efforts and determines the adequacy of WFO preparedness activities. Frequently coordinates with the WCM's at surrounding WFO's to ensure uniformity of effort, collaboration, cost-effectiveness, and compatibility in overlapping areas.

-Coordinates meteorological and hydrologic preparedness operations with the WFO Service Hydrologist, with specific emphasis on the effectiveness of warning applications.

- Ensures the maintenance and accuracy of severe weather call lists, appropriate office severe weather policy or procedures, and other severe weather or dissemination methodologies or strategies. Conducts WFO drills and proficiency checks.

- Develops WFO plans and procedures to address the community emergency action needs for dealing with hazardous atmospheric events such as oil spills, toxic chemical leaks, etc.

- Prepares the WFO Monthly Storm Data report, analyzing and synthesizing information from the media, emergency management and public safety officials, etc.

- Serves as technical advisor and resource for the MIC on preparedness measures. Interfaces with regional and national headquarters on broad preparedness activities.

- As required, leads or serves as a full member of Weather and Flood Disaster Survey Teams. As necessary, conducts smaller-scale or informal surveys on the effects and public response to WFO severe or flood weather warnings for weather events of lesser magnitude than those requiring full disaster survey teams.

3. Conducts a WFO area-wide preparedness planning and citizen education effort with and through various local and state agencies and organizations.

- Works closely with local, county, and state emergency management agencies and other related agencies concerned with disasters to ensure a planned, coordinated, and effective preparedness effort in the WFO area.

- Conducts an ambitious public education program to promote individual recognition of the threat of severe storms, floods, flash floods, winter storms, high winds, dust storms, marine hazards, and other dangerous natural hydrometeorological phenomena, and to advise on and promote the exercise of appropriate recommended individual-specific actions for the protection of life and property.

- Addresses conventions, conferences, and meetings of emergency management agencies and community groups; appears on local radio or television as the NWS spokesperson and expert on severe weather-related actions and local natural disaster hazards.

- Interacts with representatives of local cities and towns to encourage the development of local preparedness plans, evacuations plans, etc., to assist the community in the event of a natural disaster. Advises and works with community leaders in the establishment of severe storm spotter networks and reporting networks. Ensures that storm spotter training is accomplished. Speaks at schools and other community institutions or organizations in need of on-site disaster preparedness planning.

- Encourages the establishment of local flood warning systems in local communities prone to floods and flash floods. Explains the technical assistance provided by the NWS to communities and the numerous benefits to local action decision-making where such real-time cooperative programs have been established.

- Encourages, promotes, and assists in the planning and conduct of community drills to test and exercise local disaster plans and WFO-local government interaction.

4. Serves as Senior Forecaster on shift duty in his/her absence, performing the full range of responsibilities of that position. This work may comprise approximately 25% of the time.

5. Leads or participates in the conduct of local staff hydrometeorological studies and developmental projects designed to capitalize on or incorporate the benefits of new science/technology/local techniques towards enhancing WFO preparedness objectives.

6. When designated, acts for the MIC during his/her absence, with full technical, managerial, and administrative responsibility for WFO programs, products, and services.

II. FACTOR LEVELS

Factor 1 – 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 hydrologic characteristics of rivers, streams, and drainage basins in the forecast area sufficient to enable the employee to perform the hydrologic service program duties assigned to the WFO.

Mastery of the principles, methods, practices and techniques of communication in order to function as the technical authority for the NWS within the service area, and to design, plan and execute a preparedness program of major scope and significance which conveys information about complex programs affecting a large and diverse number of people throughout the population. This includes exceptional skill in written and oral communication, particularly the ability to translate highly technical meteorological and hydrologic concepts into non-technical terms.

A basic understanding of the organization and functions of the national, state, and local agencies concerned with disaster preparedness.

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 briefers, 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 advice and guidance/performance to special 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 participate in development efforts designed to develop or incorporate the latest advances into warning and forecast program operations.

A basic understanding of the psychology of human response to emergency situations, especially relating to severe weather phenomena and official warnings calling for governmental and citizen action.

Highly developed tact and diplomacy to function in difficult public contact situations.

Factor 2 – Supervisory Controls

Works under the general supervision of the MIC, who provides general administrative and policy direction defining the assignment in terms of broad mission statements. The employee plans, designs, executes and evaluates the overall preparedness program, independently determining the methods and approaches to be used. The preparedness program is evaluated in terms of results achieved and objectives met. Decisions and plans are accepted as technically authoritative.

Factor 3 - Guidelines

Existing guidelines provide only a broad framework for conducting assigned functions. Such guidelines are operational procedures which define matters such as overall NWS preparedness efforts. Operational activity guidelines provide definition of 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 employee's professional expertise is the primary tool for accomplishing the work. He/She is expected to be frequently faced with new and unusual and non-standard situations, where the application of sound judgment is essential. Opportunities for new preparedness and services development activities abound. The employee is expected to exercise judgment in leadership tasks.

Factor 4 – Complexity

Assignments include service and product evaluation, and planning, designing, executing, and evaluating a public awareness/preparedness program to convey complex information about NWS programs and products, to establish and maintain effective working relationships with specialized groups and to develop recommendations to improve program and product effectiveness.

Decisions regarding what needs to be done involve analyzing the information needs of various segments of the NWS' publics; determining the most effective approaches to employ in reaching the specialized publics; modifying strategies or plans to more effectively communicate programs and products; and providing information to clarify products/services available or to refute undue criticism. In order to do this, the employee must combine a professional knowledge of meteorology and hydrology, applied research and data management techniques, with warning and forecast methods and human psychology in order to lead local public awareness and preparedness activities and participate in joint research efforts and local operational products/techniques development.

The work involves obtaining feedback from publics in developing new approaches to use in meeting communication needs of the public and the goals of the program.

Factor 5 – Scope and Effect

The purpose of the work is to conduct area-wide evaluations of WFO products and services and to develop and maintain a public awareness and preparedness program for the WFO service area which is characterized by a very populous area, and complicated by the presence of many different interested groups, some with competing priorities. The employee's work is 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 service area's economy.

The employee's performance in service evaluation and preparedness has a direct and major impact on the effectiveness and enhancement of NWS programs in the WFO area and on the ability of local community leaders and citizens served to forestall or mitigate the effects of significant weather which threatens damage and/or injury to life and property.

Factor 6 – Personal Contacts

Contacts within NWS are with employees at all levels in the region and in the National Centers. Outside contacts are with state and local officials with decision or planning responsibilities or authority for dealing with community response to weather threats and natural disasters. This may include elected officials such as mayors, governors, agency heads, etc. Additional contacts are with other Federal agencies, community action, other special purpose groups and cooperative storm spotters, citizens groups, civic organizations, the mass news media, other specialized users, and the general public.

Factor 7 – Purpose of Contacts

Intra-agency contacts are to coordinate products, services and preparedness plans with neighboring offices.

Contacts with state and local officials are to assist and advise them in their preparedness planning efforts, drills, evacuation plans, etc.; to advise the public about courses of action to be taken in the event of severe weather events in order to institute precaution for the safeguarding of life and property; and to 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.

Press, radio and TV contacts are to implement the Emergency Broadcast System (EBS) in the event of natural disasters such as tornadoes or flash floods. Though much of the employee'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.

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

Factor 8 – Physical Demands

The work is generally sedentary, although carrying of bulky projectors and other informational materials is occasionally required, along with some light travel. Routine duties require meeting tight deadlines.

Additionally, rotating shift work is occasionally required with the WFO in operation 24 hours a day, seven days a week. 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 hours longer than the usual shift, adding to mental and physical stress.

Factor 9 – Work Environment

The work environment most closely resembles that of an office with added specialized equipment.

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