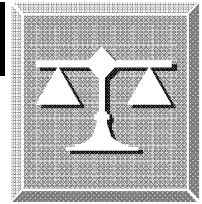


TS-6 June 1971

General Schedule
Position Classification Standards



WCPS-1 August
2001

POSITION CLASSIFICATION
STANDARD
FOR
METEOROLOGICAL
TECHNICIAN SERIES,
GS-1341



Workforce Compensation
and Performance Service



NOTE

This standard has been converted from the original paper format to electronic format without substantive change in series coverage or grading criteria. The standard was reviewed to correct errors that may have been introduced during the conversion process. In some standards minor corrections were made such as updating references to other documents that may have become obsolete, or correcting minor typographical errors in the original standard. Any errors that remain due to conversion to electronic format should be minor and are not intended to change the meaning of the original standard. If you find an error in any document on this CD, please send a FAX to HRCD - Perfection, 202-606-4891, or send a note to HRCD - Perfection, Office of Classification, U.S. Office of Personnel Management, 1900 E Street, NW, Washington, DC. Identify the document, page, and error. Thank you for bringing any errors to our attention.

If you find page references near the right hand margin of this standard they indicate the pagination of the official, printed version of this standard. For example, a notation "Page 2, 4/88, TS-87" would mean that (1) page two of the printed version begins here, (2) the date of issuance was 4/88, and (3) the Transmittal Sheet number was TS-87.

Meteorological Technician Series

GS-1341

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SERIES DEFINITION

This series includes positions that require application of (a) technical or practical knowledge of meteorological equipment, methods, and techniques and (b) skill in the development and operation of data collection, verification, information dissemination, observation, and forecasting services and systems. These positions do not require full professional knowledge of meteorology.

This standard supersedes and is to be substituted for the standard for the Meteorological Technician Series, GS-1341, issued in June 1959.

EXCLUSIONS

Excluded from this series are positions that involve primarily:

1. Application of professional competence in meteorology. Such positions are classified in the [Meteorology Series, GS-1340](#).
2. Application of statistical or mathematical techniques and methods to the collection, analysis or interpretation of numerical data in support of meteorological programs. Such positions are classified in an appropriate series in the [Mathematics and Statistics Group, GS-1500](#).
3. The study of water in the hydrologic cycle. Such positions are classified in the [Hydrology Series, GS-1315](#), or the [Hydrologic Technician Series, GS-1316](#), or other appropriate series.

BACKGROUND INFORMATION

Meteorological technicians perform specialized technical work in weather forecasting, observations, research, climatology or other areas of meteorology. Their work is primarily concerned with the observation and analysis of weather elements or the prediction of their effects upon the atmosphere, the surface of the earth and the varied human activities, social and economic, that occur each day.

Many meteorological technicians perform duties that are concerned with the provision of direct services to the public and specialized user interests. These services typically require a knowledge of forecast procedures and weather analysis and include aviation briefing, severe weather warnings, local weather advisories and forecasts and other meteorological advisory services. Some meteorological technicians take radar observations through the use of overlay techniques, analyze the returns, and prepare and distribute summaries of their radar findings. Others acquire meteorological data by direct observation, electronic systems, satellites, rockets and other sensory and telemetry devices and instruments.

Substantial numbers of meteorological technicians perform supportive duties in meteorological research organizations, while others are engaged in the establishment, operation and improvement of data acquisition programs, systems, and instrumentation. Large numbers of meteorological technicians collect, analyze, interpret, and archive climatological or other historical weather data; others are engaged in the charting and plotting of meteorological data on maps, charts, and other graphic materials; and some specialize in the verification and correction of meteorological data and records to assure their quality, accuracy, and utility.

TITLES

Meteorological Aid is the authorized title for positions at grade GS-1, GS-2, and GS-3.

Meteorological Technician is the authorized title for positions at grades GS-4 and above.

Supervisory Meteorological Technician is the authorized title for supervisory positions in this series.

GRADE-LEVEL COVERAGE

This standard provides grade-level criteria for nonsupervisory meteorological technician positions at grades GS-1 through GS-11. This grade-level range covers the nonsupervisory performance levels typically found in the meteorological technician occupation. Positions having duties and responsibilities that clearly and significantly exceed the criteria for grade GS-11 should be classified to the appropriate higher grade by extension of the criteria in this standard and the application of sound classification principles. For positions at grades GS-11 and above, the standard for the [Meteorology Series, GS-1340](#), should be used in conjunction with this standard.

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The classification criteria present factor patterns and illustrative assignments which are typical of positions at the various grade levels. Numerical criteria that are used, e.g., size or population of a service area, should be viewed as typical of the grade rather than an upper or lower limit. Positions may be weaker or stronger than that indicated as typical of the grade and still classifiable to the same grade. In each such case comparison needs to be made to the criteria which characterize the next lower or higher grade with emphasis on the qualitative rather than quantitative aspects. In this connection it should be kept in mind that each grade represents a wide band or range of difficulty and responsibility. Accordingly, it is likely and proper that some positions will involve work which is somewhat more difficult and responsible than that of other positions at that grade level or than that indicated in the standard as typical of the grade.

This is a one-grade interval series.

Supervisory positions in this series should be evaluated by reference to the [Supervisory Grade-Evaluation Guide](#), Part I.

CONTENT OF THE STANDARD

This standard is divided into two parts:

- Part I provides grade-level criteria for meteorological aid positions at grades GS-1 through GS-3. The criteria for meteorological aid positions are presented in a conventional narrative format.
- Part II provides grade-level criteria for nonsupervisory meteorological technician positions at grades GS-4 through GS-11. Using a factor comparison method, two factors and a grade determination chart are used to determine proper grade levels for these positions.

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GRADE-LEVEL CRITERIA PART I METEOROLOGICAL AID GS-1, 2, 3 FOR METEOROLOGICAL AID POSITIONS

Meteorological aid positions at grades GS-1, GS-2, and GS-3 are evaluated by using two broad classification factors, Responsibility and Complexity, which are treated in conventional narrative fashion. Responsibility includes the judgment exercised and the supervision received by the aid during the course of the work cycle and the intensity of review of completed work. Complexity includes the nature, variety, complexity, and difficulty of the assignment and the knowledges, skills, and abilities required to complete it.

METEOROLOGICAL AID, GS-1341-01

Responsibility

As trainees, Meteorological Aids GS-1 receive very close continuing supervision. Detailed instructions are furnished. Procedures, methods, and techniques are demonstrated. The aid's assignments are continuously observed, spot checked, and reviewed upon completion, as appropriate.

Complexity

Meteorological Aids GS-1 learn basic methods, techniques, and procedures for one or a few simple tasks. They learn how to make simple measurements and arithmetic computations, take simple instrument readings and record specific data on prescribed forms. They serve as helpers to higher graded employees by performing the simplest manual tasks. They also learn to recognize equipment, terminology, instruments, etc. Meteorological Aids GS-1 are not required to apply experience or familiarity directly related to specific technical tasks.

METEOROLOGICAL AID, GS-1341-02

Responsibility

Meteorological Aids GS-2 receive supervision which is initially as close as is typical of the GS-1 level, but which lessens as tasks recur. New methods, procedures and techniques are demonstrated or are written out in detail and given to the aid. Guidelines are very specific, detailed, and fully applicable. Unlike GS-1 aids, Meteorological Aids GS-2 performing repetitive assignments are expected to select and apply the appropriate guidelines from those they have used in the past. Assistance is readily available when problems arise. As routine tasks recur, supervision diminishes to the point where work is spot checked in progress, and upon completion.

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Complexity

Meteorological Aids GS-2 perform a limited number of simple repetitive tasks requiring a knowledge of simple work procedures performed on a fixed or prescribed sequence. They receive training to acquire specific subject-matter knowledge or skills of the type applied by GS-3 aids.

METEOROLOGICAL AID, GS-1341-03

Responsibility

Meteorological Aids GS-3 receive complete, explicit oral or written instructions at the beginning of each assignment that involves the performance of new or different tasks. These instructions are more complicated and voluminous than those found at the GS-2 level. This results from the increased difficulty and complexity of the work performed at the GS-3 level. The supervisor is available at any time for guidance, assistance, or instruction. Work in progress is closely reviewed by the supervisor if the assignment requires personal contacts outside the immediate organization. The technical adequacy of completed work and adherence to instructions are very closely reviewed and discussed in detail, as appropriate. Routine recurring tasks are spot checked occasionally, as appropriate.

Complexity

Meteorological Aids GS-3 perform work that is characterized by (a) required knowledge of the detailed procedures which are either established and repetitive or are explained by the supervisor at the time of initial performance, and (b) some readily acquired skill or subject-matter knowledge. By comparison, GS-2 aids perform simple repetitive tasks that require a knowledge of simple work procedures.

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GRADE-LEVEL CRITERIA PART II

METEOROLOGICAL TECHNICIAN GS-4 FOR NONSUPERVISORY METEOROLOGICAL TECHNICIAN POSITIONS

This standard uses two factors, Responsibility and Complexity and a grade-determination chart to evaluate nonsupervisory meteorological technician positions at grades GS-4 and above.

Responsibility is described in three levels, I through III. Complexity is described in six degrees, A through F.

The evaluation system involves:

- A determination of the proper level under Factor I, Responsibility;
- A determination of the proper degree under Factor II, Complexity;
- Use of the grade-determination chart on the final page of this standard to arrive at the proper grade level.

The coverage of the two grade-level factors, Responsibility and Complexity, is outlined below:

Responsibility

This factor includes the kind and degree of supervisory, technical, and administrative controls over the work performed, the responsibility for making recommendations and decisions, the extent of personal contacts and commitment authorities and the availability, applicability and utility of instructional and informational guides and precedents. This factor is described in three levels, I through III. These levels cover a range extending from the limited responsibility found in Level I to the extensive responsibilities expected of and assumed by the mature, experienced technician, as described in Level III.

Complexity

This factor includes the nature, variety, complexity, and difficulty of the work assigned and the knowledges, skills and abilities required to perform successfully the duties of the position. This factor is described by six degrees. These degrees range from the assignments of limited scope and difficulty, which involve the performance of relatively simple repetitive tasks found at Degree A to the complicated, technically demanding assignments which characterize the higher grade levels. Illustrative assignments included under the various degrees are not all-inclusive. Other elements or special conditions, which have a definite and identifiable impact on the complexity of the work performed, should be carefully considered in determining the proper complexity degree.

KNOWLEDGES, SKILLS, AND ABILITIES REQUIRED

The kinds of knowledges, skills, and abilities needed to perform successfully the duties assigned to meteorological technicians are reflected in the grade-level factors described above. Meteorological technician positions require, commensurate with the grade level involved, the following knowledges, skills, and abilities.

- (1) knowledge of meteorological methods, techniques, and practices;
- (2) ability to measure meteorological phenomena with scientific equipment and instrumentation;
- (3) ability to observe and record atmospheric characteristics, i.e., temperature, air movement, visibility, pressure, air density, cloud types, etc.;
- (4) ability to decode, plot, and systematically record data related to the physical characteristics of the atmosphere, i.e., charts, diagrams, cross sections, etc.;
- (5) ability to collect, analyze, interpret, adjust and verify atmospheric or other meteorological data to confirm and improve its accuracy and efficacy;
- (6) ability to establish, maintain and improve work relationships with employees, operating personnel, management officials and, as appropriate, special user groups and the general public;
- (7) ability to communicate effectively, orally and in writing by preparing effective written material such as technical reports and forecasts and making oral presentations of technical information to the general public or to special user groups; and
- (8) ability to work effectively in stress situations.

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LEVEL/DEGREE DEFINITIONS

Factor I -- Responsibility

Level 1 -- Routine assignments which involve conditions and methods familiar to the technicians are made in terms of the objectives to be achieved without explicit instructions as to work methods. When assignments involve new, more difficult, or unfamiliar areas of work, the technicians are given more specific guidance concerning the critical aspects of the work, potential problems and anticipated results. Completed work is reviewed for soundness, accuracy, and adequacy of results. Personal contacts are usually restricted or closely controlled and are not significant at this level, e.g., routinely supplying weather information and data. Opportunities to make recommendations and decisions are not found or are severely limited, usually to very specific work areas and on a prior approval basis. Instructional and

informational materials are available, appropriate and clearly applicable, deviations from these materials are not permitted.

Level II -- This level differs from Level I primarily in:

(1) the requirement for meaningful personal contacts; and (2) the opportunities to make recommendations and decisions. The supervisor provides instructions covering any new procedures to be used, departures from established work practices and any complications or special problems that can be anticipated. Completed work is spot checked to assure that the critical aspects of the work have been accomplished satisfactorily and that the decisions and recommendations made are technically sound.

Personal contacts usually involve the collection or presentation of technical information that is mostly factual and straightforward but which requires some interpretation or supplementation to meet user requirements.

The technician makes recommendations and decisions that involve routine, noncontroversial matters, e.g., adaptive forecasts, that are adequately covered by available guidelines or precedents.

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Level III -- This level differs from Level II primarily in: (1) increased freedom from technical supervision; (2) added requirements for the planning and scheduling of assignments; and (3) additional demands for resourcefulness and technical judgments placed upon the technician to interpret or adapt guidelines, instructions, and precedent material.

The supervisor provides very general instructions concerning the broad objectives of the assignment, advice on any unusual conditions or anomalies and general administrative matters such as new reporting formats, timing changes, equipment problems, etc. The technician receives little or no technical assistance during the course of the assignment. Review typically consists of an overall evaluation of the adequacy and timeliness of the completed work that is conducted when an identifiable unsatisfactory trend has developed over a substantial period of time. The relative freedom from technical supervision typically found at this level includes work situations requiring, on either a fixed or rotational basis, the performance of work when supervision is entirely absent or not readily available.

Level III responsibility covers, but is not limited to, situations where technicians make unreviewed decisions alone on a shift, e.g., to provide warnings of hazardous weather based on their judgment concerning the effect of changes in weather elements. They decide whether to confirm warning conditions by waiting for additional reports or to alert concerned public officials immediately.

Personal contacts typically are extensive and important at this level, constitute a significant aspect of the work and usually involve the presentation and discussion of complicated technical material that requires considerable supplementation, interpretation, or elaboration to meet user requirements. The technician

makes recommendations and decisions that are technically complex but largely covered by precedents or guideline material. Instructions and informational materials are usually available but are complicated and require interpretation or adaptation in their application to specific work assignments. In many instances, however, demanding production or operational requirements may preclude or severely restrict the practical availability of these guides.

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Factor II -- Complexity

Degree A -- The work involves the performance of a few complex but repetitive tasks that require the application of standard work methods and procedures that are performed in either a fixed sequence or with minor variations or in a manner specified by the supervisor at the time of the initial assignment. The most demanding aspects of the work are learning the proper procedural sequences and the operation of simple meteorological equipment and instrumentation. This degree requires knowledges, skills, and abilities typically provided by a limited experience or educational background in meteorology and related sciences.

The following assignments are illustrative:

1. Verifies surface observation listings from various foreign countries which are in a variety of formats to assure that the constituent elements are correct and consistent. Extracts required surface and upper air data from teletype messages and sorts surface observations by country and hour of observation.

Edits surface observations from teletype messages for completeness, legibility, and accuracy of identifier in preparation for card punching. Manually prepares climatological tabulations of desired elements when this is not practical by machine methods. As necessary, transposes alphabetic or symbolic weather observations to numeric codes for card punching and converts units of measurement as required, e.g., feet to meters.

2. Verifies surface weather observations taken by the unit, posts discrepancies noted and prepares observation forms for transmittal to a climatological center. Reviews each discrepancy with the section making the error. Maintains climatology records, prepares monthly climatological and astronomical data for local distribution and transmission to higher headquarters.

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3. Verifies a few basic elements (1 to 3) of meteorological observations from various sources for publication in monthly and annual climatological publications. Reviews and interprets precipitation records from cooperating substation observers. Computes, interpolates and edits hourly precipitation data to assure accuracy and format compatibility. Determines causes of missing or sparse substation data.

Degree B -- The work involves the performance of a variety of complex procedural tasks that require the application of standard, well-established work methods, procedures, and techniques. Requirements for accuracy, attention to detail and skill in the set up and use of meteorological equipment and instrumentation are higher than at Degree A. This degree requires some skill, judgment and knowledge to schedule work sequences and recognize deficiencies and inconsistencies in data.

The following assignments are illustrative:

1. Observes, measures, records, and transmits upper air data for use in scheduling ballistic missile tests, i.e., temperature, pressure, density, winds, etc. Performs pilot balloon observations and radiosonde and rawinsonde observations and computations. Makes local hourly observations to obtain temperature, wind velocity, weather and relative humidity data. Performs climatological measurements of temperature extremes and precipitation for transmission to higher headquarters. Provides meteorological data to all local units as requested.
2. Reviews, interprets, and stores the film output of several weather satellites and furnishes copies of film or related information to various organizations and individuals as requested. Examines satellite film reels for completeness, accuracy, and quality, notes discrepancies and notifies the parent organization of these deficiencies as appropriate. Maintains records of films received and type and quality of data or film furnished to requestors and visitors and consolidates this information into monthly reports for future planning purposes. Develops and maintains filing systems for complex meteorological data, including computer-generated mosaics. Responds to foreign and domestic requests for satellite film data; analyzes each request and either transmits the requested data or advises where the data can be obtained if not available on film; estimates costs of service.
3. Plots a variety of surface, upper air and auxiliary weather maps from information received in numerous meteorological codes via teletype facilities or other source documents. Accomplishes plots of the Northern and Southern Hemispheres and sections thereof from transmitted coded data or by self-computed data. Computes a variety of coded meteorological reports; plots adiabatic diagrams; salvages, by comparison or interpolation with known data elements, data that has been distorted, garbled or lost in transmission. Using rough or grossly depicted analyses and prognoses, traces or otherwise prepares finished plots for facsimile transmission. Prepares, in numerical or other meteorological code, properly sized and sequenced analyses and prognoses for teletype transmission.
4. Studies and interprets a variety of climatic information requests from Government agencies, research centers, private industry, universities, individual scientists and lay personnel. Determines exact needs; examines and selects source material including additional or substitutional data that may be beneficial to the user; and carries out work processes for filing the request to comply with specifications of the originator. Assures accuracy and completeness of information, e. g., tabulations involving four-dimensional summaries such as ceiling visibility, inversions, etc.

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Degree C -- Assignments require the application of work methods, techniques and procedures that are significantly more complex and less standardized than at Degree B. The primary difference is that at Degree B the work requires the use of established standard methods, techniques and procedures. Work at Degree C requires considerable planning, scheduling of work sequences and changing of plans while the work is in progress to adjust to conditions that could not be predicted adequately or program changes that could not be anticipated at the initiation of the assignment. Degree C requires a great deal more skill and judgment than Degree B, because the technician must plan and sequence his assignments, adjust or adapt work methods to the specific requirements of the assignment, and, in many instances, set up, operate, and maintain more complex equipment and instrumentation.

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The following assignments are illustrative:

1. Performs and records rawinsonde observations, upper air soundings and surface aviation and synoptic observations. Computes and prepares wind fallout information and plots radiosonde observations for the United States, marine areas, and foreign countries. Performs on-station maintenance of equipment. Assures that the data reported are complete and accurate. Prepares rawinsonde reports. Tests instruments and equipment. Disseminates meteorological information to special users and the general public and distributes warnings of severe and critical weather conditions and elements when necessary. Briefs pilots for domestic flights and provides advice on terminal and route forecasts and advisories of critical weather elements.
2. Prepares climatological data for archiving or current studies by either writing new or modifying existing programs and instructions. Selects, verifies and evaluates the technical accuracy and applicability of data from historical files and climatological records and studies. Transmits data in the format specified by the requester, evaluating and indicating any unusual findings or results, substitutions for sparse or missing data and the availability of additional pertinent data.
3. Analyzes surface, upper air and auxiliary weather data and maps from a wide variety of source documents. Accomplishes plots of hemispheric maps and sections thereof largely from self-computed or modified data. Arranges this material in final print format for inclusion in publications such as monthly and annual climatological bulletins, marine atlases, special reports, etc.

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Degree D -- The work is very demanding from a technical standpoint and requires: (1) considerable knowledge of work methods, techniques, procedures, and equipment; and (2) application of seasoned judgment and practical skills of a relatively high order. In most instances, work methods involve complicated routines or sequences, elaborate equipment or instrumentation, exacting data collection requirements or heavy public service schedules. Degree D differs from Degree C in the more demanding requirements for job-oriented skills and knowledges and the greater use of judgment brought about by the increased complexity of the problems and the work methods, equipment, and techniques used by the technician. Technicians at Degree D apply meteorological knowledge and

judgment in determining how local conditions and reports and observations from various sources affect the weather forecasts. The extent of change, and whether to take action to protect life and property.

The following assignments are illustrative:

1. At a military airport with mostly local or short distance flights, analyzes and interprets meteorological data and prepares aviation forecasts for military users, including flight weather, general local and destructive weather forecasts and other special forecasts as required. Briefs pilots of light, short-range low-speed aircraft on expected weather conditions for local hops or short flights, e.g., 320 kilometers (200 miles) over planned routes. Recommends techniques, methods, and procedures to enlarge and improve the unit's forecasting capability. Provides technical guidance and assistance to assure continuity and uniform application of established environmental forecasting practices and procedures within the unit.
2. Provides comprehensive public weather services for the general public, aviation interests, and special user groups and individuals within an assigned zone of responsibility. Prepares local adaptive, general weather forecasts, based on previously prepared guidance forecasts, facsimile analyses, more recent weather information, either locally observed or transmitted from higher authority, and special local requirements. Provides detailed advisory services to a variety of local users including climatological information, referral services and advice on the feasibility or availability of special forecasts, outlooks, climatological probabilities, etc. Based on flight advisory weather service forecasts and local current weather trends, prepares local aviation forecasts. Briefs pilots on current and expected weather conditions, prepares specialized trip forecasts, and advises on alternate routes. Provides intensive specialized weather services to other interested aviation personnel, e.g., controllers and dispatchers. Briefs marine interests on local and offshore weather and sea conditions.

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Conducts continuing surveillance of local and surrounding weather systems and their characteristics and movement. Monitors reports and observations from various information sources, in order to provide timely warnings of immediate hazards such as tornadoes and severe storms, high winds, hail, icing, heavy snow, river stage, and flash floods, etc. Exercises judgment in determining whether the hazard will affect his area, the severity, location, etc. On his own initiative develops and issues the formal and official warning, through established media, to the public, news, State and local officials, and other interested agencies.

The functions performed involve an area of responsibility with the following characteristics:

- The area served is characterized by homogeneous topographic, physiographic and climatic features that do not require substantial modification of the forecasts furnished by others.

- The population served generates few if any special demands. Requests from local interests for meteorological services and advice tend to be light in volume and do not require a wide variety of specialized user-oriented or interpretive weather and river information.
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- Aviation briefing involves predominantly light, low-speed aircraft engaged in local or short distance, e.g., 320 kilometers (200 miles), general aviation flights.
 - 3. Operates a long-range weather surveillance radar as a part of the observational network. Analyzes the returns and develops precise meteorological interpretations through a synthesis of the returns themselves and knowledge of the prevailing situations. Determines the nature, extent and severity of the phenomena and distinguishes between different precipitation types, intensities or rates of accumulation, and estimates probable range and duration of precipitation. Prepares and issues summaries of radar interpretations to other technicians, hydrologists and meteorologists.

Degree E -- The work involves the performance of a variety of complex assignments including the innovative adaptation of established procedures, methods, and techniques for use in new or novel applications or situations. By comparison, the work at Degree D requires considerable knowledge of work methods, techniques, procedures and equipment and practical skills of a relatively high order. Requirements for technical skills, resourcefulness, and ingenuity at Degree E are very high because of the need to plan and coordinate the phases of assignments, consider and select from various alternate methods or approaches, achieve acceptable meteorological compromises and make sound, acceptable decisions and recommendations.

The work performed by technicians primarily engaged in the provision of weather services to the general public, aviation, and special user groups is substantially more demanding and difficult than at Degree D and has a significantly greater impact. This results primarily from assignments that involve factors such as (1) much larger and more diverse populations serviced; (2) more demanding air traffic requirements; (3) greater variety in terrain, climatic regimes, weather characteristics, etc.; and (4) combined land and marine environments.

At Degree E, the technician applies a knowledge of the terrain, climatic regimes, weather characteristics, etc., for a large and varied geographic area. The technician must be aware of the effect of these physical and meteorological factors on local weather conditions and have the ability to translate this knowledge into useful and timely weather information and advice for a wide variety of user requirements.

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The technician adapts furnished weather forecasts for significantly larger areas than is common at Degree D. The larger areas and other additional variables found at Degree E increase the probability of errors and require greater skill and judgment to reduce these probabilities and resolve the more complex operating problems.

The following assignments are illustrative:

1. Develops assigned portions of the marine reporting program which provides first-hand reports on weather conditions at sea. Conducts continual surveys of existing ocean-going ship facilities. Arranges for radio weather reports for forecast purposes and mail reports for climatological purposes. Operates a quality control program to maintain and improve the accuracy level of weather observations taken aboard ships and at the marine center and other land stations by training personnel in observational techniques, advising on new reporting formats and basic meteorological practices, and inspecting facilities and equipment.
2. Provides comprehensive weather services for the general public, aviation interests, and special user groups and individuals within an assigned area of responsibility. The functions performed are similar to those described in Illustration No. 2 at Degree D but are more demanding and difficult because of factors such as (a) and/or (b) following:
 - (a) The geographical area is characterized by diverse topographic, physiographic, and climatic characteristics (e.g., large bodies of water, mountain ranges) that have a significant impact on local weather, producing significant changes in short time periods. The size and nature of the area are such that multiple weather types must be dealt with much of the time and require close weather watch, interim advisories, and differing treatment because of the differing weather problems encountered. The population served includes a major hub of commerce, such as a large urban economic and social center, e.g., several hundred thousand population, with diverse interests (e., g., recreation, industry, transportation, construction, agriculture, livestock, etc.), that result in heavy and varied demands for weather information and advice over areas broader than the immediate locale. Some of the service requirements involve specialized interpretations tailored to the specific demands.
 - (b) Aviation briefing functions regularly involve comprehensive information for a full spectrum of commercial, military, and general aviation elements. The air traffic is heavy and the specialist is responsible for interpretations of long-range, high-altitude forecasts with particular emphasis on significant upper-air phenomena such as icing, jet streams, turbulence. Advisories are normally for long distances, involving many terminals.
3. Provides comprehensive weather services such as that described at Degree D, Illustration No. 2, but where the range of interpretations, the scale of the weather watch, review of incipient weather systems, and resultant warnings and advisories are effectively increased through the use of long-range surveillance radar.

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Degree F -- Positions at this level of complexity are relatively rare. The comprehensive weather service work is unusually broad, varied and demanding. The work requires highly developed knowledges and skills and has an unusually significant impact on life and property.

The following assignment is illustrative:

Provides comprehensive public weather services of unusual scope, complexity and impact as would be represented by an assignment with characteristics as described in Illustration No. 2 at Degree E and either (a) or (b) following:

- (a) The responsibility and area of meteorological consideration and evaluation is effectively increased through the use of long-range surveillance radar, and the work is further complicated by the regularly recurring demand for:
 - 1. providing specialized adaptive forecasts and detailed information and judgments in support of special forecast programs assigned to the facility, such as fire weather, marine, and agriculture; and/or
 - 2. providing flood forecasts and warnings.

- (b) The area served includes a major metropolitan concentration e.g., a million population, with unusually extensive and diverse activities requiring weather services over a wide area and a very high air activity level terminal necessitating the specialist to interpret forecast material in time and space for a mix of commercial and general aviation flights involving numerous, regular transcontinental and international flights, typically including some intercontinental flights.

GRADE-DETERMINATION CHART

Factor combinations may be converted to the appropriate grade levels by using the chart below:

Factor I: Responsibility	Factor II: Complexity					
Level	Degree A	Degree B	Degree C	Degree D	Degree E	Degree F
I.	‘GS-4	GS-5	GS-6	*	*	*
II.	GS-5	GS-6	GS-7	GS-8	GS-9	GS-10
III.		GS-7	GS-8	GS-9	GS-10	GS-11
‘ Positions bellow the GS-4 level are covered in part I.						

*These combinations are not likely to occur.