

AFSC 15W4*, Staff
AFSC 15W3*, Qualified
AFSC 15W1*, Entry

WEATHER AND ENVIRONMENTAL SCIENCES
(Changed 30 Apr 23)

1. Specialty Summary. Commands, manages, and performs weather and environmental operations for Air Force, Army and Space Force support organizations and activities. Integrates current and forecast atmospheric and space weather conditions into operations and operational planning. Develops, directs, and coordinates meteorological, geophysical environment and space weather studies and research. Supports and executes weather operations through leadership and management of weather groups, squadrons, flights, detachments and operating locations. Supports the Air Force core weather responsibility to provide meteorological and space weather information for DoD air, ground, and space operations. Related DoD Occupational Group: 250200.

2. Duties and Responsibilities:

- 2.1. Provides current analysis and predictive environmental information as well as timely knowledge of the effects of those physical environmental factors on friendly and adversary joint capabilities across the range of DoD operations. This is accomplished through the processes of collection, processing, analysis, prediction, tailoring, dissemination, and integration. Manage AF weather personnel and resources. Analyze and evaluate environmental data and prepare forecast products. Integrate weather analyses and reports with radar and satellite imagery interpretations to support operations. Brief aircrew and staff personnel on current and future environmental conditions, weather, and their effects on operations in all DoD domains. Instruct personnel on interpretation and use of environmental products and their application to DoD missions. Perform global analysis and forecast duties at centralized weather, space and climate organizations. Provide weather warnings, watches, and advisories for mission-limiting environmental effects for designated military installations worldwide. Provide mission tailored forecasts for special and joint operations. Direct taking, recording, reporting, and decoding of meteorological, space weather, and other geosciences observations, analysis of data, preparation of forecasts and other prognostic products and use of meteorological equipment. Produce and direct studies to improve forecasting techniques and abilities. Advise commanders and their staffs on capabilities and limitations of weather operations.
- 2.2. Conduct and direct meteorological, space weather, climate, hydrological and geophysical research efforts. Prepare and integrate specialized forecasts, space weather, climatology, and other geophysical environmental information (e.g., drought, wildland fires, flooding, volcanoes, tropical cyclones etc.) for operational use. Identify weather and environmental sensitivities and shortfalls, conduct testing of meteorological systems and equipment. Recommend modifications of instruments, equipment, and products to improve weather service to weapon systems and technologies. Recommend changes in weather operations dictated by advances in military weapons, tactics, and doctrine. Provide meteorological consultation and data for research activities. Coordinate atmospheric space weather, and geophysical environment research activities with military and civilian agencies. Develop and leverage environmental sensing strategies and capabilities. Integrate weather effects based on critical weather thresholds across the spectrum of mission profiles and into intelligence and operational preparation of the environment, command and control, and military decision-making processes.
- 2.3. Provide technical meteorological services. Prepare and direct weather resources to support operational objectives. Write directives on operational techniques and procedures to observe, analyze, and forecast meteorological, solar, astrophysical and geophysical phenomena. Direct and prepare studies and reports to evaluate weather support requirements.
- 2.4. Lead weather units and elements in support of Air Force, Army, Space Force, Special Ops, and Joint missions. Provide decision-makers environmental information and focus on exploitation that provides the warfighter an asymmetric advantage. Serve as staff weather officer to commanders and is the focal point for all weather sensitivities in and around designated military operating areas. Lead weather personnel in training exercises, and contingency operations.

3. Specialty Qualifications:

- 3.1. Knowledge. The following knowledge is mandatory for award of the AFSC indicated:
 - 3.1.1. 15W3. Knowledge of Air Force weather meteorological observing and forecasting techniques, and procedures. Knowledge of space weather, climate, and the geophysical environment. Leadership of small weather teams.
 - 3.1.2. 15W3A. Knowledge of Air Force advanced meteorological and environmental activities.
- 3.2. Education. The following education is mandatory for entry into the AFSC indicated:
 - 3.2.1. 15W1. For entry education requirements see [Appendix A, 15W CIP Education Matrix](#).
 - 3.2.2. 15W3A. Completion of a master's or PhD program with an emphasis in one or more of the following: meteorology, climatology, hydrology, analysis and forecasting, atmospheric electricity, cloud and precipitation physics, instrumentation, meteorological computer software development, meteorological satellite instrumentation, numerical weather prediction, operations research, computer science/software engineering, physical meteorology, radar meteorology, radiative transfer, satellite meteorology, solar and space sciences, statistics/mathematics, and tropical meteorology. Completion of 30 semester hours of graduate work in these areas also fulfills the requirement.
- 3.3. Training. The following training is mandatory for award of the AFSC indicated:
 - 3.3.1. For award of 15W3, completion of the Weather and Environmental Sciences Officer Course (WESOC) (E3OBR15W1 0A1C) is required.
 - 3.4. Experience. The following experience is mandatory for award of the AFSC indicated:
 - 3.4.1. 15W3. Completion of one 15W duty position qualification.
 - 3.4.2. 15W3A. Qualification and possession of 15W3.
 - 3.5. Other.
 - 3.5.1. Specialty requires routine access to Tier 5 (T5) information, systems, and/or similar classified environments. For award and retention of AFSCs 15WXX, completion of a current T5 Investigation IAW DoDM 5200.02 and AFMAN 16-1405, *Air Force Personnel*

Security Program, is mandatory (see note 1).

3.5.2. Ability to clearly speak and communicate in the English language.

3.5.3. Selection for the Basic Meteorology Program (BMP) is not automatic. The number of personnel selected is contingent on course availability and acceptance by the educational institution. Selection must also be approved by the assignments team before member is accessed as a 15W.

3.5.4. Individuals are encouraged to choose course work or minors in space physics, climate, hydrology, geosciences, statistics, computer science, data science, artificial intelligence, machine learning, cloud computing and data assimilation as the career field prepares to use Special Experience Identifiers in these areas.

NOTES

1: Award of the entry level without a completed T5 Investigation is authorized provided initial T5 Investigation paperwork has been submitted according to DoDM 5200.02 and AFMAN 16 -1405.

4. *Specialty Shredout:

Suffix Portion of AFS to Which Related

A Advanced Weather Activities