



[ANNEX 3-59 WEATHER OPERATIONS](#)

WEATHER OPERATIONS PLANNING, EXECUTION, AND ASSESSMENT

Last Updated: 27 May 2015

Since [weather](#) operations affect [planning](#) and execution across the joint forces, [JP 3-59](#) and the [Joint Meteorological and Oceanographic \(METOC\) Handbook](#) are excellent references when planning, executing, and assessing weather operations. Weather and weather effects information should be incorporated into the planning, execution and assessment of military operations. A sound and comprehensive weather sensing strategy is essential to prevent a commander from having an incomplete or inaccurate understanding of their operational areas.

Weather Operational Planning

In any planning process, weather should be considered at the earliest possible stage of the plan. A combatant commander's planning staff should take into account weather effects and weather force lay-down during deliberate and crisis action planning. Weather forces should be collocated with key command and control elements to inject weather and weather effects information throughout the planning process. In addition to the guidance provided in the weather annex of the *Air Force War Mobilization Plan, Volume One*, planners should balance operational impacts with the benefits of reachback weather support to minimize the logistics footprint. When planning operations with the Army, weather requirements should be identified and passed to the Air Force for validation.

During plan development, the Army provides the Air Force with the Army's requirements for weather support and services in accordance with the joint force commander's operational objectives. In coordination with the Air Force, the Army includes and synchronizes Army-provided equipment used to support Air Force weather capabilities in the time-phased force deployment database (TPFDD).¹

Weather Operations Execution

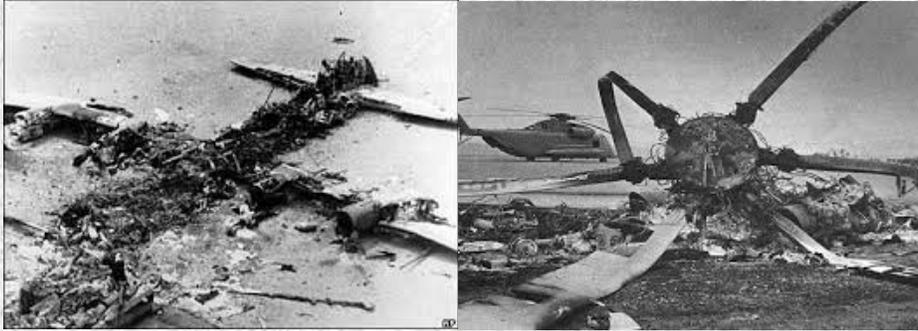
Air Force weather operations help predict when weather could affect friendly and enemy air, space, and surface operations, possibly offering friendly force commanders an exploitable asymmetric advantage. Air Force weather operators persistently monitor, assess, and report weather conditions.²

¹ Army Regulation 115-10, [Weather Support for the Army](#).

² Annex 3-0, [Operations and Planning](#).

Weather Operations Assessment

To assess operational effectiveness and technical performance, Air Force weather personnel [assess](#) their ability to accurately predict the weather (technical performance) and its impact on operations (operational effectiveness). In general, [operational weather squadrons](#) focus on evaluating [characterization](#) products for their technical assessment while Army support weather squadrons (WSs) and lower echelon Air Force weather entities evaluate the [exploitation](#) products on their operational effectiveness. Assessments are used to modify or create new techniques, procedures, products, and services.



Operation EAGLE CLAW: A Hard Lesson to Learn

Top-secret planning for what would be one of the most complicated and ambitious raids in American history, the Iranian hostage rescue attempt of 1980, lasted over five months but it fell short of fully considering an incorrigible foe: the weather.

Historical records pointed to winter as the optimal time for a mission of this type, as limited moonlight and suitable temperatures and densities represented favorable conditions for night RH-53D operations. Nevertheless, the mission was set for late April, introducing additional weather challenges such as suspended dust, which proved to be a factor in the subsequent mishap. This mission-impacting information was never briefed to JTF planners and decision makers.

Recommendations to use a WC-130 weather reconnaissance aircraft as a scout in advance of the RH-53Ds were discounted based on assumed favorable weather conditions and for security reasons. Additionally, it was determined that pilot reports from accompanying C-130s, flying the same route, could provide advance notice of unfavorable weather as needed. However, the C-130s ended up arriving at the destination, Desert One, well ahead of the helicopters and were unable to relay up-to-the-minute weather data to the RH-53D crews.

Weather operations personnel were excluded from planning and rehearsal exercises at the JTF training areas, eliminating their ability to work with the aircrews....

Furthermore, mission execution weather briefings, developed by weather operations personnel, were presented by J-2 intelligence officers who had little, if any, formal weather training or experience. Aircrew feedback was provided in the same indirect way. Pilots were thus unaware of the possibility of encountering suspended dust and were unprepared to handle it. Integration of weather information, a vital contributor to mission success, never occurred.

—Paul B. Ryan
The Iranian Rescue Mission: Why It Failed

Additionally, weather personnel reference Joint Lessons Learned Information System (JLLIS) during the planning process, archive weather planning and execution data, and document weather lessons learned in accordance with the joint lessons learned program (JLLP).
