

7. Details on the products provided by the above listed offices and centers is available in FAA Advisory Circular 00-45, Aviation Weather Services.

d. Weather element values may be expressed by using different measurement systems depending on several factors, such as whether the weather products will be used by the general public, aviation interests, international services, or a combination of these users. FIG 7-1-1 provides conversion tables for the most used weather elements that will be encountered by pilots.

7-1-2. FAA Weather Services

a. The FAA provides the Flight Service program, which serves the weather needs of pilots through its flight service stations (FSS) (both government and contract via 1-800-WX-BRIEF) and via the Internet, through Leidos Flight Service.

b. The FAA maintains an extensive surface weather observing program. Airport observations (METAR and SPECI) in the U.S. are provided by automated observing systems. Various levels of human oversight of the METAR and SPECI reports and augmentation may be provided at select larger airports by either government or contract personnel qualified to report specified weather elements that cannot be detected by the automated observing system. The requirements to issue SPECI reports are detailed in TBL 7-1-1.

TBL 7-1-1

SPECI Issuance Table		
1	Wind Shift	Wind direction changes by 45° or more, in less than 15 minutes, and the wind speed is 10 kt or more throughout the wind shift.
2	Visibility	<p>The surface visibility (as reported in the body of the report):</p> <ul style="list-style-type: none"> Decreases to less than 3 sm, 2 sm, 1 sm, ½ sm, ¼ sm or the lowest standard instrument approach procedure (IAP) minimum.¹ Increases to equal to or exceed 3 sm, 2 sm, 1 sm, ½ sm, ¼ sm or the lowest standard IAP minimum.¹ <p>¹ As published in the U.S. Terminal Procedures. If none published, use ½ sm.</p>
3	RVR	The highest value from the designated RVR runway decreases to less than 2,400 ft during the preceding 10 minutes; or, if the RVR is below 2,400 ft, increases to equal to or exceed 2,400 ft during the preceding 10 minutes. U.S. military stations may not report a SPECI based on RVR.
4	Tornado, Funnel Cloud, or Waterspout	<ul style="list-style-type: none"> Is observed. Disappears from sight or ends.
5	Thunderstorm	<ul style="list-style-type: none"> Begins (a SPECI is not required to report the beginning of a new thunderstorm if one is currently reported). Ends.
6	Precipitation	<ul style="list-style-type: none"> Hail begins or ends. Freezing precipitation begins, ends, or changes intensity. Ice pellets begin, end, or change intensity. Snow begins, ends, or changes intensity.
7	Squalls	When a squall occurs. (Wind speed suddenly increases by at least 16 knots and is sustained at 22 knots or more for at least one minute.)