

Every code on the observation and the forecast, decoded from the current Aviation Weather Handbook's own tables — wind, visibility, present weather, sky condition, the TAF's change groups, and the flight-category colors — with the handbook's definitions quoted beside the codes, and an honest band for the codes it does not define.

1 · Wind

AWH 24.4.3.5 · TAF wind 27.4.2.5 **FAA GUIDANCE**

The handbook's own examples, gloss for gloss

15014KT Wind 150° at 14 kt
340112KT Wind 340° at 112 kt
28020G35KT Wind from 280° "true" (west) at 20 kt gusting to 35 kt.
VRB05KT Wind variable at 5 kt.
VRB15G30KT Wind variable at 15 kt gusting to 30 kt due to forecast convective activity.
00000KT Wind calm.

"In the wind group, the wind direction is coded as the first three digits (220) and is determined by averaging the recorded wind direction over a two-minute period. It is coded in tens of degrees relative to true north using three figures. Directions less than 100 degrees are preceded with a 0. For example, a wind direction of 90° is coded as 090. A wind from the north is coded as 360."
 AWH 24.4.3.5, p. 24-10

"Immediately following the wind direction is the wind speed coded in two or three digits (15). Wind speed is determined by averaging the speed over a two-minute period and is coded in whole knots using the units, tens digits, and, when appropriate, the hundreds digit. When wind speeds are less than 10 kt, a leading 0 is used to maintain at least a two-digit wind code. For example, a wind speed of 8 kt will be coded 08KT. The wind group is always coded with a KT to indicate wind speeds are reported in knots."
 AWH 24.4.3.5, p. 24-10

"Gusts are defined as rapid fluctuations in wind speed with a variation of 10 kt or more between peaks and lulls. The coded speed of the gust is the maximum instantaneous wind speed. Wind gusts are coded in two or three digits immediately following the wind speed. Wind gusts are coded in whole knots using the units, tens, and, when appropriate, the hundreds digit. For example, a wind out of the west at 20 kt with gusts to 35 kt would be coded 27020G35KT."
 AWH 24.4.3.5.1, p. 24-10

"Wind direction may be considered variable when, during the previous two-minute evaluation period, the wind speed was 6 kt or less. In this case, the wind may be coded as VRB in place of the three-digit wind direction. For example, if the wind speed was recorded as 3 kt, it would be coded VRB03KT."
 AWH 24.4.3.5.2, p. 24-10

"The directional variability is coded in a clockwise direction and consists of the extremes of the wind directions separated by a V. For example, if the wind is variable from 180 to 240° at 10 kt, it would be coded 21010KT 180V240."
 AWH 24.4.3.5.3, p. 24-10

"When no motion of air is detected, the wind is reported as calm. A calm wind is coded as 00000KT."
 AWH 24.4.3.5.4, p. 24-10

2 · Visibility & RVR

AWH 24.4.3.6–7 · TAF visibility 27.4.2.6 **FAA GUIDANCE**

The handbook's own examples, gloss for gloss

P6SM Visibility unrestricted.
1 1/2SM Visibility 1 and ½ SM.
4SM Visibility 4 SM.

"The visibility group is coded as the surface visibility in statute miles. A space is coded between whole numbers and fractions of reportable visibility values. The visibility group ends with SM to indicate that the visibility is in statute miles. For example, a visibility of 1½ SM is coded 1 1/2SM."
 AWH 24.4.3.6, p. 24-11

"U.S. automated stations use an M to indicate "less than." For example, M1/4SM means a visibility of less than ¼ SM."
 AWH 24.4.3.6, p. 24-11

"Visibility greater than 6 SM is encoded as P6SM."
 AWH 27.4.2.6, p. 27-10

"Although not used by the NWS in U.S. domestic TAFs, the contraction CAVOK (ceiling and visibility OK) may replace the visibility, weather, and sky condition groups if all of the following conditions are forecast: visibility of 10 km (6 SM) or more; no clouds below 1,500 m (5,000 ft) or below the highest minimum sector altitude (whichever is greater); no cumulonimbus; and no significant weather phenomena."
 AWH 27.4.2.6, p. 27-10

"RVR is reported whenever the station has RVR equipment and prevailing visibility is 1 SM or less, and/or the RVR for the designated instrument runway is 6,000 ft or less. Otherwise, the RVR group is omitted."
 AWH 24.4.3.7, p. 24-11

"If RVR is less than its lowest reportable value, the visual range group is preceded by M. For example, an RVR for Runway 01L of less than 600 ft is coded R01L/M0600FT. If RVR is greater than its highest reportable value, the visual range group is preceded by a P. For example, an RVR for Runway 27 of greater than 6,000 ft will be coded R27/P6000FT."
 AWH 24.4.3.7, p. 24-11

3 · Present weather — Table 24-3, cell for cell

intensity, then descriptor, then phenomena — the handbook's column order **FAA GUIDANCE**

1 · Intensity or Proximity	2 · Descriptor	3 · Precipitation	4 · Obscuration	5 · Other
- Light (no symbol) Moderate + Heavy VC In the Vicinity	MI Shallow PR Partial BC Patches DR Low Drifting BL Blowing SH Shower(s) TS Thunderstorms FZ Freezing	DZ Drizzle RA Rain SN Snow SG Snow Grains IC Ice Crystals (Diamond Dust) PL Ice Pellets GR Hail GS Snow Pellets UP Unknown Precipitation	BR Mist FG Fog FU Smoke VA Volcanic Ash DU Widespread Dust SA Sand HZ Haze PY Spray	PO Dust/Sand Whirls SQ Squalls FC Funnel Cloud, Tornado, or Waterspout SS Sandstorm DS Dust Storm

"The weather groups are constructed by considering columns 1 through 5 in Table 24-3 in sequence (i.e., intensity followed by description, followed by weather phenomena). For example, heavy rain shower(s) is coded as +SHRA."
 AWH Table 24-3 note 1, p. 24-12

"To denote moderate intensity, no entry or symbol is used."
 AWH Table 24-3 note 2, p. 24-12

"Tornadoes and waterspouts are coded as +FC."
 AWH Table 24-3 note 4, p. 24-12

"METARs/SPECIs contain no more than three present weather groups."
 AWH 24.4.3.8, p. 24-12

"Weather phenomena occurring beyond the point of observation (between 5–10 SM) are coded as in the vicinity (VC)."
 AWH 24.4.3.8.2, p. 24-13

"The descriptor freezing (FZ) is only coded in combination with fog (FG), drizzle (DZ), or rain (RA) (e.g., FZRA)."
 AWH 24.4.3.8.3, p. 24-14

4 · Sky condition — Table 24-4

cover, height, and what counts as the ceiling **FAA GUIDANCE**

Contraction	Meaning	Amount of layer
VV	Vertical Visibility	8/8
SKC or CLR	Clear	0
FEW	Few	1/8 – 2/8
SCT	Scattered	3/8 – 4/8

"Clear skies are coded in the format SKC or CLR. When SKC is used, an observer indicates no layers are present; CLR is used by automated stations to indicate no layers are detected at or below 12,000 ft."
 AWH 24.4.3.9, p. 24-16

"Vertical visibility is coded as VV, followed by the vertical visibility into the indefinite ceiling. An "indefinite ceiling" is a ceiling classification applied when the reported ceiling value represents the vertical visibility upward into surface-based obscuration."
 AWH 24.4.3.9, p. 24-15

Contraction	Meaning	Amount of layer	
BKN	Broken	5/8 – 7/8	"The height is coded in hundreds of feet above the surface using three digits in accordance with Table 24-5." AWH 24.4.3.9, p. 24-16
OVC	Overcast	8/8	"The ceiling is the lowest layer aloft reported as broken or overcast. If the sky is totally obscured with ground-based clouds, the vertical visibility is the ceiling." AWH 24.4.3.9, p. 24-16

The handbook's own examples, gloss for gloss

SKC No layers are present.
CLR No layers are detected at or below 12,000 ft AGL.
FEW004 Few at 400 ft AGL.
SCT023TCU Scattered layer of towering cumulus at 2,300 ft AGL.
BKN100 Broken layer (ceiling) at 10,000 ft AGL.
OVC250 Overcast layer (ceiling) at 25,000 ft AGL.
VV001 Indefinite ceiling with a vertical visibility of 100 ft AGL.

"At manual stations, cumulonimbus (CB) or towering cumulus (TCU) is appended to the associated layer. For example, a scattered layer of towering cumulus at 1,500 ft would be coded SCT015TCU and would be followed by a space if there were additional higher layers to code."
AWH 24.4.3.9, p. 24-17

5 · TAF change groups		what the forecast's subdivisions actually promise	FAA GUIDANCE
"A TAF is a concise statement of the expected meteorological conditions significant to aviation for a specified time period within 5 SM of the center of the airport's runway complex (terminal)." AWH 27.4, p. 27-6		"The forecast change indicators FM, TEMPO, and PROB are used when a change in any or all of the forecast elements is expected." AWH 27.4.2.10, p. 27-15	
Group	What it does	The handbook, word for word	
FM	A hard reset of the whole forecast: everything before it is done, and the group restates every element.	"The change group FMYGGgg (voiced as "from") is used to indicate when prevailing conditions are expected to change significantly over a period of less than one hour." AWH 27.4.2.10.1, p. 27-15 "The FM group will be followed by a complete description of the weather (i.e., self-contained), and all forecast conditions given before the FM group are superseded by those following the group." AWH 27.4.2.10.1, p. 27-15	
TEMPO	Brief excursions from the prevailing forecast — the three criteria below are the definition, and an element the group omits is unchanged.	"The change-indicator group TEMPO YGGG/YeYeGeGe is used to indicate temporary fluctuations to forecast meteorological conditions that are expected to: • Have a high percentage (greater than 50 percent) probability of occurrence; • Last for one hour or less in each instance; and • In the aggregate, cover less than half of the period YGGG to YeYeGeGe." AWH 27.4.2.10.2, p. 27-16 "A previously forecast element that has not changed during the TEMPO period is understood to remain the same and will not be included in the TEMPO group." AWH 27.4.2.10.2, p. 27-16	
PROB30	A thirty-percent chance, and the only probability group an NWS TAF uses.	"The probability group (PROB30 YGGG/YeYeGeGe) is only used by NWS forecasters to forecast a low-probability occurrence (30 percent chance) of a thunderstorm or precipitation event and its associated weather and obscuration elements (e.g., wind, visibility, and/or sky condition) at an airport." AWH 27.4.2.10.3, p. 27-17 "PROB30 is the only PROB group used in NWS' TAFs." AWH 27.4.2.10.3, p. 27-17	
NSW	How a TEMPO group says the weather it introduced is over — and the only place NSW belongs in an NWS TAF. (The handbook's joint-use airport examples also show NSW inside the military format's BECMG groups, which it never defines.)	"NSW is used in place of significant weather only in a temporary (TEMPO) group to indicate when significant weather [including in the vicinity (VC)] included in a previous subdivided group is expected to end." AWH 27.4.2.7, p. 27-10	
TAF AMD	An amendment replaces the whole forecast the moment it is issued.	"Whenever an amended TAF (TAF AMD) is issued, it supersedes and cancels the previous TAF. That is, users should not wait until the start of the valid period indicated within the TAF AMD to begin using it." AWH 27.4.2.4, p. 27-8	
BECMG	You will meet BECMG on international and military-field TAFs — but the frozen handbook never defines it. Its only appearances in the frozen text are inside the joint-use (civil/military) airport examples, and the NWS change indicators it does define are the three quoted above. This sheet won't decode a group its source doesn't.	No quote — on purpose. The frozen handbook doesn't define this group, so this sheet doesn't either.	

6 · Weather Flight Categories		the map colors — situational awareness, not minimums	FAA GUIDANCE
Category	Color	The handbook's definition	
LIFR	Purple	"Purple: LIFR = Low IFR, ceilings less than 500 ft and/or visibilities less than 1 SM." AWH 3.4.2.14, p. 3-28	"Most aviation weather websites use the following color codes and definitions for their display of METARs/SPECIs (and sometimes TAFs) on their website." AWH 3.4.2.14, p. 3-28
IFR	Red	"Red: IFR = Ceiling 500 ft to less than 1,000 ft and/or visibility 1 SM to less than 3 SM." AWH 3.4.2.14, p. 3-28	"The VFR Weather Flight Category is not to be confused with the basic VFR weather minimums given in 14 CFR § 91.155. Weather Flight Categories are only intended for situational awareness." AWH 3.4.2.14, p. 3-28
MVFR	Blue	"Blue: MVFR = Ceiling 1,000 to 3,000 ft and/or visibility 3 to 5 SM." AWH 3.4.2.14, p. 3-28	"While the "R" in the acronym means "rules," there are no 14 CFR part 91 MVFR weather minimums." AWH 3.4.2.15, p. 3-29
VFR	Green	"Green: VFR = Ceiling greater than 3,000 ft and visibility greater than 5 SM." AWH 3.4.2.14, p. 3-28	

7 · Codes the handbook does not define		verified absences — no source here, no claim here	TECHNIQUE
NOSIG Appended to METARs at many airports outside the United States. The frozen handbook does not contain this code anywhere, so this sheet does not decode it.	NSC A sky-condition code on many international reports. The frozen handbook does not contain this code anywhere, so this sheet does not decode it.	NCD A sky-condition code from some automated stations outside the United States. The frozen handbook does not contain this code anywhere, so this sheet does not decode it.	

Sources. Everything quoted or transcribed is from FAA-H-8083-28B, the Aviation Weather Handbook — edition established from faa.gov at retrieval (2026-09-01), frozen and hashed in the repository. The handbook is guidance, not regulation: where its text names a regulation, the regulation is the authority. Where a code has no basis in the frozen text, the row says so — this sheet decodes nothing its source doesn't. The interactive METAR reader at runuplab.com/tools/metar reads whole reports — remarks included — against its own frozen AIM source. This is a study aid — it does not replace the handbook, a weather briefing, or your CFI. Verify against the primary source before you act on it.