



CALIFORNIA		151
<p>PORTERVILLE MUNI (PTV) 3 SW UTC-8(-7DT) N36°01.78' W119°03.76'</p> <p>442 B S4 FUEL 80, 100LL, JET A TPA-1442(1000)</p> <p>RWY 12-30: H5908X150 (ASPH-PFC) S-30, D-70, DT-110 HIRL</p> <p>RWY 12: VASI(V4R)—GA 3.0° TCH 29'. Road.</p> <p>RWY 30: REIL. VASI(V4R)—GA 3.0° TCH 60'. Road.</p> <p>AIRPORT REMARKS: Attended May-Oct 1500-0300Z, Nov-Apr 1600-0100Z. For arpt attendant call 559-782-7540. Self svc fuel avbl 24 hrs with credit card. HIRL Rwy 12-30 preset low intensity dusk-0700Z; after 0700Z‡ ACTIVATE—CTAF. ACTIVATE VASI Rwy 12—CTAF, VASI Rwy 30 operates continuously.</p> <p>WEATHER DATA SOURCES: AWOS-3 134.625 (559)784-3874.</p> <p>COMMUNICATIONS: CTAF/UNICOM 122.8</p> <p>RANCHO MURIETA FSS (RIU) TF 1-800-WX-BRIEF. NOTAM FILE PTV.</p> <p>TULE RCO 122.1R 109.2T (RANCHO MURIETA FSS)</p> <p>Ⓡ BAKERSFIELD APP/DEP CON 120.5 (1400-0700Z‡)</p> <p>L.A. CENTER APP/DEP CON 127.1 (0700-1400Z‡)</p>	<p>Fig. 14</p> <p>SAN FRANCISCO H-4H, L-3C, 9A IAP</p>	

Automatic Weather Observing Stations (AWOS) are found at many airports. You can listen to the weather broadcast on the frequency shown in the AFD. You can also call the listed number and get the same information by phone.

A typical ASOS or AWOS voice transmitted observation might sound something like the following:

“Denver, Denver Front Range airport, automated weather observation. One eight three three Zulu. Sky conditions six thousand five hundred scattered. Visibility greater than one zero. Temperature two two Celsius, dew point one niner Celsius. Wind three five zero at zero three (ASOS or AWOS winds received by radio are *magnetic* in direction). Altimeter two

Whither the Weather?

Having the current weather for airports along your route is valuable. But this is just one bean short of a hill if you’re planning tomorrow’s flight. Weather changes from day to day, hour to hour, minute to minute. It also changes while enroute. Pilots need a means of predicting this change.

Since pilots don’t have crystal balls (no matter what they may claim),

They are an excellent means of identifying the weather you can expect upon arrival at an airport. You can compare forecasts for airports along your route to obtain a better idea of how the weather is expected to change. When used in conjunction with METARs, TAFs provide you with a good idea of the present weather and how it’s expected to change.

TAFs are forecast weather for a 24 hour period (30 hours for some locations) and represent the expected weather within a 5 statute mile radius of the airport’s runway complex. They are issued four times daily (once every six hours starting at 0000Z). Much of the weather coding is similar to the METAR weather format (I knew that would make you happy). Since it’s relatively simple to read, we won’t need a memory-type acronym to interpret TAFs. If there are any major differences in the codes used by TAF compared to METAR, I’ll let you know. Let’s examine the TAF weather shown in Figure 15.

Station: (KLAX)

Same form and format as the METAR.

Date Forecast Issued: (091140Z):

The report was issued on the 9th day (09) at 1140 Zulu (UTC).

You would certainly invest one dollar to make a million dollars (we call this the Lotto), but you wouldn’t invest half a million dollars to make one dollar. So why then would you risk half a million hours of the rest of your life just to arrive home an hour sooner in your airplane?

niner seven eight. Remarks, density altitude seven thousand five hundred.”

Remember, just because it’s a machine doesn’t mean it won’t make mistakes. The entire airport might be surrounded by clouds with a single, solitary hole over the ASOS or AWOS-3 weather unit. You can bet that little puppy reports *all clear*. The entire airport may be shrouded in fog while the ceilometer (cloud height measuring device) reports no clouds at the airport. Fortunately, the visibility would provide a clue to the presence of fog. When a human weather observer supplements mechanical weather observations, these problems disappear. Use a little common sense when using an automated observation of the weather on which to base your decisions.

most of them look into the future through more conventional means such as one of several aviation forecasts that are available.

Terminal Aerodrome Weather Forecasts (TAF) – (also referred to as an *Aviation Terminal Forecast*) A terminal forecast sounds like it’s the last weather you’re ever going to get. Fortunately, this isn’t what a TAF is all about. TAFs provide a description of surface weather expected to occur at an airport.

TERMINAL AERODROME WEATHER FORECAST (TAF)

TAF
 KLAX 091140Z 0912/1012 22020KT 3SM -SHRA BKN020
 BECMG 0916/0919 33015KT
 FM100300 35014KT 2SM TSRA OVC015
 TEMPO 1006/1012 1SM +RA PROB40 1008/1009 1/2SM FG

Fig. 15

This figure is repeated from the previous page for your convenience.



Time of Forecast: (0912/1012)

This forecast's date and valid times are shown by two four-digit numbers separated by a slash (0912/1012). The first four numbers represent the date and the time the forecast period begins (the 9th at 1200Z). The last four numbers represent the ending time of the forecast period (the 10th at 1200Z). The forecast is valid from 1200Z on the 9th to 1200Z on the 10th (a 24 hour period). If midnight UTC is the beginning time period of the forecast it will be coded as 00. If it is the ending time, it is coded as 24. Therefore, a 24 hour forecast beginning and ending at midnight UTC would be indicated as: 0900/1024.

Forecast Winds: (22020KT)

This is presented in the same format as the METAR. Figure 15 shows winds forecast to be from 220 degrees true direction at 20 knots. Calm winds are encoded as 0000KT and expected gusts are followed by the letter G.

Forecast Visibility: (3SM)

This is the prevailing visibility expected in statute miles, up to and including 6 miles. Expected visibilities greater than 6 miles are forecast as P6SM (plus six statute miles).

Forecast Weather: (-SHRA)

The same five categories used in a METAR are used in a TAF for reporting weather phenomena, as shown in Figure 8. The letters -SHRA represent only operationally significant weather that's forecast for the stated time period. In other words, light rain showers are forecast starting at 1200Z.

TERMINAL AERODROME WEATHER FORECAST

TAF
 KLAX 091140Z 0912/1012 22020KT 3SM -SHRA BKN020
 BECMG 0916/0919 33015KT
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 TEMPO 1006/1012 1SM +RA PROB40 1008/1009 1/2SM FG

Fig. 15

Forecast Cloud Conditions: (BKN020)

This is the same as the METAR format. In this example, broken clouds are forecast at 2000 feet AGL. As in the METAR, ceiling layers are designated by the lowest layer that's BKN, OVC or shows

DECODED TERMINAL AERODROME WEATHER FORECAST (TAF)

TAF
 KLAX 101740Z 1018/1118 12020KT 4SM -RA OVC016
 FM101920 30015G25KT 3SM SHRA OVC015 PROB40 1020/1022 1/2SM TSRA OVC008CB
 FM102300 27008KT 5SM -SHRA BKN020 OVC040 TEMPO 1102/1105 00000KT 1SM -RA FG
 FM110800 VRB04KT 5SM -SHRA OVC020 BECMG 1112/1114 20010KT P6SM NSW SKC

Above TAF Decoded

KLAX 101740Z 1018/1118 12020KT 4SM -RA OVC016

- Station: Los Angeles
- Issued on 10th day at 1740 Zulu
- Forecast time beginning on the 10th at 1800Z ending the 11th at 1800Z
- Wind forecast 120° at 20 knots
- 4 statute miles visibility
- Light rain
- Overcast (ceiling) at 1,600 feet AGL

FM101920 30015G25KT 3SM SHRA OVC015 PROB40 1020/1022 1/2SM TSRA OVC008CB

- Letters FM (meaning From) indicate significant change in weather expected on the 10th at 1920Z
- Wind of 300° at 15 knots gusting to 25 knots
- 3 statute miles visibility
- Moderate rain showers
- Overcast (ceiling) at 1,500 feet AGL
- 40-49% probability between 2000Z & 2200Z (on the 10th) of 1/2 statute mile visibility with thunderstorms & rain with an overcast (ceiling) of 800 foot AGL & cumulonimbus clouds*
- *CBs are the only cloud type forecast in the TAF

FM102300 27008KT 5SM -SHRA BKN020 OVC040 TEMPO 1102/1105 00000KT 1SM -RA FG

- Letters FM (meaning From) indicate significant change in weather expected on the 10th at 2300Z
- Wind of 270° at 8 knots
- 5 statute miles visibility
- Light rain showers
- Broken clouds (ceiling) at 2,000 feet AGL & an overcast at 4,000 feet AGL
- A temporary change between 0200Z & 0500Z (on the 11th) is expected with calm winds and one statute mile visibility due to light rain & fog

FM110800 VRB04KT 5SM -SHRA OVC020 BECMG 1112/1114 20010KT P6SM NSW SKC

- Letters FM indicate another significant change in weather expected on the 11th
- Wind variable in direction at 4 knots
- 5 statute miles visibility
- Light rain showers
- Overcast clouds (ceiling) at 2,000 feet AGL
- Between 1200Z to 1400Z (on the 11th) the weather is forecast to become: winds of 200° at 10 knots, plus 6 miles visibility and no significant weather & a sky that's clear

Fig. 16

NEW! 30 Hour TAF Formatting

In its desire to remain internationally consistent, the FAA is adopting a 30-hour TAF format in lieu of its 24-hour cousin for 32 large airports in the United States (think Los Angeles, Denver, Chicago, etc.). The additional six forecast hours added to the TAF allow long-haul air carriers to better evaluate their flight planned routing. If you plan on landing at or near any of these 32 airports, you will now have an even better idea of the forecast weather.

The date/time value **0912/1018** tells us that the TAF forecast period begins on the 9th day of the month at 1200Z and ends on the 10th at 1800 Zulu (30 hours total). Starting at 1200 on the 9th, you can expect winds of 220 degrees at 20 knots with 3 miles visibility and light rain showers. **BECMG 0916/0919** tells us that between 1600Z on the 9th and 1900Z on the 9th, the winds will become (gradually, usually within a 2 hour period) 330 degrees at 15 knots. **FM100300** tells us that on the 10th day, beginning at 0300Z, a rapid change in weather is expected (winds 350 degrees at 14 knots, 2 miles visibility with thunderstorms and rain with a 1,500 foot overcast. **TEMPO 1006/1012** means a fluctuation in the weather (lasting less than 1 hour) will occur, resulting in a visibility of one mile and heavy rain. **PROB40 1008/1009** indicates a 40 percent probability that, between 0800Z on the 10th and 0900Z on the same day, the visibility will fall to ½ mile in fog.

TERMINAL AERODROME WEATHER FORECAST (TAF) - 30 HOUR

TAF

KLAX 091140Z **0912/1018** 22020KT 3SM -SHRA BKN020

BECMG **0916/0919** 33015KT

FM**100300** 35014KT 2SM TSRA OVC015

TEMPO **1006/1012** 1SM +RA PROB40 **1008/1009** 1/2SM FG

VV (vertical visibility) into an obscuration.

Expected Changes: (BECMG, FM, TEMPO, PROB)

When *gradual* changes in the prevailing conditions are expected (usually over a period not to exceed two hours), the abbreviations BECMG (becoming) is used. BECMG is followed by two, four-digit numbers separated by a slash. The first four digits indicate the date and time when the change is expected to begin and the last four digits indicate when it's expected to be completed. The weather conditions that follow are expected to change at a gradual rate over the depicted time period. Any weather condition forecast prior to BECMG that is not revised following the change time period is expected to remain the same. For example, our report showing **0916/0919** after BECMG means that, on the 9th (or 09) from 1600Z to 1900Z on the same day, the wind is expected to change to 330 degrees at 15 knots and all other weather is expected to remain the same.

FM is followed by a six digit number (the date and a four digit time value) that indicates the beginning time of a self contained portion of the forecast. This is used when a *rapid* (significant) change in weather (usually occurring in less than one hour) is expected. In our report, the sequence of **FM100300** says that on

the 10th, from 0300Z the following weather conditions should occur: winds 350 degrees at 14 knots, 2 miles visibility, thunderstorms and rain and an overcast ceiling of 1,500 feet. Weather that's omitted in the FM group isn't significant to aviation. (Since FM implies "one" hour or less of time, it only needs a beginning date and time, thus six digits.)

TEMPO indicates that fluctuations (temporary and usually lasting less than one hour) from the predominant weather conditions are expected. TEMPO is followed by two four-digit numbers separated by a slash (1006/1012) giving the date and time period that these variations are expected. In our report, a temporary condition of 1 mile visibility and heavy rain is expected to occur on the 10th, between 0600Z and 1200Z.

PROB (PROBability) is used when the likely occurrence of any weather phenomena falls in the 30 to 39% (PROB 30) or 40 to 49% (PROB 40) range of expectation. If the probability of the condition is 50% or higher, the terms BECMG, TEMPO or FM will be used. In our report the sequence, **PROB40 1008/1009 1/2SM FG** indicates that, on the 10th, between the hours of 0800Z and 0900Z there is a 40 to 49% probability of 1/2 mile visibility in fog. Figure 16 shows a detailed analysis of an airport's TAF.

Remember, TAFs are issued once every six hours. Make it a point to check the latest TAF for the most current forecast information. I make it a point to check the METAR against the TAF. If the TAF said that this hour was to be clear but the METAR showed clouds, then that particular TAF might be too optimistic. I might then be less inclined to place a great deal of trust in its accuracy. Once something isn't right, you're disinclined to trust it. That's why I never trusted my uncle's communications skills. When I was young he told our neighbor to drop me off at the nursery on her way to work. For an entire day I sat, surrounded by plants and trees.

Area Forecasts (FA) – Remember the anxiety you felt when you went to a drive-in theater and drove off without unhooking the speaker? Five blocks away you heard, "Attention, attention, the snack bar will be closing in 15 minutes." OK, perhaps this never happened to you, but you might feel a similar sensation when looking at the area forecast. It consists of a lot of words without vowels. This is part of the carryover from those days when Teletypes were slow and words were abbreviated to speed things up. With just a little practice you'll be interpreting these reports as fast as Einstein whipping through nonlinear differential equations.