8. Unscheduled Forecasts. Unscheduled terminal forecasts are issued on an as-needed basis as amended, delayed, or corrected messages. They contain the same elements and use the same format as scheduled issuances except for different date and time of forecast origin (YYGGgg) and different beginning valid times (for amended and delayed forecasts only). The entire text of each individual terminal forecast, not just the amended, corrected, or delayed portion, shall be transmitted.

Amended, delayed, and corrected forecasts shall include the appropriate "BBB" group in the WMO abbreviated heading. Amended, delayed, and corrected forecasts are counted ("lettered") independently. For example, the first correction to a scheduled forecast would be "CCA". If that same corrected forecast needed to be amended, the amendment would be "AAA", indicating it is the first amendment of the scheduled forecast, etc. The following table demonstrates the procedures for multiple combinations of corrected, amended and delayed forecasts:

TIME (UTC)	FORECAST ISSUED	"BBB" INDICATOR
0530 UTC	scheduled terminal forecast (NIL)	none
0615 UTC	first delayed terminal forecast	RRA
0714 UTC	first amendment to terminal forecast	AAA
1042 UTC	second amendment to terminal forecast	AAB
1045 UTC	first correction to terminal forecast	CCA

8.1 Amended Forecasts. NWS offices that prepare terminal forecasts shall keep the current weather and forecasts under continuous review to ensure that necessary terminal forecast amendments are issued promptly. Terminal forecasts should be amended whenever they become, in the forecaster’s judgement, unrepresentative of existing or expected conditions, particularly regarding those elements and events detailed in Appendix H. Forecasters should strive to amend terminal forecasts prior to the occurrence of changes that meet these criteria. Amendments shall be issued promptly whenever conditions meeting one or more of the criteria occur, and in the forecaster’s judgement, will persist. At a minimum, forecasters shall amend terminal forecasts based on the amendment criteria listed in Appendix H. Forecasters should also refer to Appendix C, Section 3 (Amendment Criteria) and Section 4 (Amendment Philosophy). The amendment criteria apply to both manual and automated observing sites.

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Amendments shall be issued when expected or observed conditions: 1) meet amendment criteria for the specified forecast elements, 2) are expected to persist, **and** 3) in the forecaster's judgement, there is sufficient, reliable information, **using the total observation concept,** on which to base a forecast. If this third test is not met, an amendment stating "NIL" shall be issued. Forecasters may amend any portion of a terminal forecast for an unattended part-time site when there is sufficient information to determine that a criterion has been met or that the forecast for that element has become unrepresentative of actual conditions.

An amended terminal forecast should be considered in situations where a TEMPO group has been used and the forecaster determines that (1) the actual probability of occurrence is, and will remain, less than 50 percent; or (2) the occurring TEMPO conditions will account for one half or more of the forecast group's valid period.

An amended terminal forecast shall be identified in the WMO abbreviated heading by the contraction AAx following the date-time group, where x is the letter A through X, as described in Section 7.1. For example, AAA would indicate the first amendment of a particular scheduled terminal forecast, AAB, the second amendment of the same scheduled forecast, etc. An amended forecast shall also be identified by TAF AMD (in place of TAF) on the first line of the forecast text.

The international requirement states that the date-time group in the WMO abbreviated heading of an amended terminal forecast shall be the same as that of the original terminal forecast being amended. **NWS offices not using AFOS equipment** to prepare nor transmit terminal forecasts are required to prepare amended terminal forecasts which meet the international requirement, as shown in the non-AFOS example below.

At NWS offices using AFOS, due to software limitations, the forecaster is not required to manually enter the time of the original terminal forecast into the WMO abbreviated heading of an amended forecast. The forecaster may elect to allow AFOS to automatically "time-stamp" the date-time group in the WMO abbreviated heading with the actual time the amendment is transmitted, as shown in the AFOS examples below. The NWSTG will assign the proper time to the amended terminal forecast when it builds the appropriate collective(s), in order to meet the international requirement.

The amended forecast shall cover all of the remaining valid period of the original scheduled forecast. Expired portions of the forecast being amended or references to weather occurring before the issuance time shall be omitted from the amendment.

In an amended forecast, the date and time of the forecast origin group (YYGGggZ) shall reflect the time the amended forecast was prepared. In the forecast valid period group ($Y_1Y_1G_1G_1G_2G_2$), the first four digits ($Y_1Y_1G_1G_1$) shall reflect the UTC date and time of the beginning of the period of validity of the amended terminal forecast. With an *issuance time* (YYGGggZ) of H+00 to H+29, use the current hour (based on UTC) to denote the beginning *valid time* ($Y_1Y_1G_1G_1G_2G_2$); for H+30 to H+59, use the next hour (based on UTC). In either case the forecast shall be valid from the time of forecast origin (YYGGgg) to the valid period ending time of the original scheduled terminal forecast.

non-AFOS Example of amended terminal forecast:

Original	Amended
FTAK31 PANC 030500	FTAK31 PANC 030500 AAA
TAF	TAF AMD
PAEN 030540Z 030606 etc.=	PAEN 031012Z 031006 etc.=

The *scheduled* forecast, for Kenai Municipal Airport, was prepared and transmitted by a non-AFOS office. The date-time group in the WMO abbreviated heading of the *scheduled* terminal forecast indicates the time of the full hour (0500 UTC) preceding the transmission of the forecast. The scheduled forecast was prepared at 0540 UTC on the 3rd day of the month (shown in the date-time of forecast origin in the forecast text of the *scheduled* forecast) and transmitted between 0500 and 0600 UTC (shown in the date/time group in the WMO abbreviated heading). Four and one-half hours later, the forecaster prepared the *first amendment* to that forecast (indicated by "AAA"), at 1012 UTC on the 3rd day of the month. The amended terminal forecast shows the time of the original scheduled forecast in the WMO abbreviated header (0500 UTC), as specified in the international requirements.

(optional) AFOS Example of amended terminal forecast :

Original
```
PDXTAFPDX
TTAA00 KPDX 101124
TAF
KPDX 101123Z 101212 32004KT P6SM SCT100
      FM1500 32009KT P6SM SCT050 TEMPO 1519 BKN050
      FM2200 33005KT P6SM SKC BECMG 0002 00000KT=
```

Amended
```
PDXTAFPDX
TTAA00 KPDX 101441 AAA
TAF AMD
KPDX 101440Z 101512 30006KT P6SM BKN030 TEMPO 1517 SCT030
      FM1700 32009KT P6SM SCT050 TEMPO 1721 BKN050
      FM2200 33005KT P6SM SKC BECMG 0002 00000KT=
```

The *scheduled* terminal forecast, for Portland International Airport, was prepared and/or transmitted using AFOS equipment, and the forecaster opted to allow AFOS to "time-stamp" the forecast in the WMO abbreviated heading. The *scheduled* forecast was prepared at 1123 UTC on the 10th day of the month (shown in the date-time of forecast origin in the forecast text, and typed in by the forecaster) and transmitted at 1124 UTC (shown in the date/time group in the WMO abbreviated heading, "time-stamped" automatically by AFOS). Three hours later, the forecast was *amended* for the first time (indicated by "AAA") at 1440 UTC (typed in by the forecaster) and "time-stamped" automatically by AFOS (in the WMO abbreviated header) at 1441 UTC.

The *amended* forecast is valid from 1500 UTC on the 10th until 1200 UTC on the next day (the 11th). Note the initial time period forecast of the *scheduled* issuance (valid from 1200 UTC until 1500 UTC) has been omitted from the amendment.

To summarize, the only parameters regarding times that change in an *amended* terminal forecast are:

1) date-time of forecast origin (YYGGgg) in the forecast text of the terminal forecast, and
2) the beginning of the forecast valid period group ($Y_1Y_1G_1G_1G_2G_2$) in the forecast text of the terminal forecast, and
3) (at NWS offices using AFOS only): the date/time group in the WMO abbreviated heading, and
4) expired portions of the forecast being amended or references to weather occurring before the issuance time shall be omitted from the amendment

Instructions on issuing a correction to an amended forecast are included in Section 8.3.1. Also refer to the table shown in Section 8.

8.2 Delayed Forecasts. Delayed forecasts shall be issued as soon as possible after (1) correction of the problem (electrical, mechanical or other) that caused the delay or, for sites with part-time manual or part-time augmented automated observations, (2) resumption of observations (two consecutive observations not less than 30 minutes nor more than about one hour apart).

A delayed terminal forecast shall be identified in the WMO abbreviated heading by the contraction RRx following the date-time group, where x is the letter A through X, as described in Section 7.1. For example, RRA would indicate the first delayed issuance of a particular scheduled forecast. Only offices issuing terminal forecasts in collectives would need to issue a second (or greater) delayed terminal forecast. **There is no contraction in the forecast text to indicate that a forecast is delayed; the contraction RRx only appears in the WMO abbreviated heading line.**

The international requirement states that the date-time group in the WMO abbreviated heading of a delayed terminal forecast shall be the same as that of the original scheduled terminal forecast. NWS offices **not using AFOS** equipment to prepare or transmit terminal forecasts are required to prepare delayed terminal forecasts which meet the international requirement, as shown in the non-AFOS example below.

At NWS offices using AFOS, due to software limitations, the forecaster is not required to manually enter the time of the original terminal forecast into the WMO abbreviated heading of a delayed forecast. The forecaster may elect to allow AFOS to "time-stamp" the date-time group in the WMO abbreviated heading with the actual time the delayed terminal forecast is transmitted, as shown in the AFOS examples shown below. The NWSTG will assign the proper time to the delayed terminal forecast when it builds the appropriate collective(s), in order to meet the international requirement.

The delayed forecast is valid from the UTC date and time of actual forecast origin (YYGGggZ) until the end of the previously scheduled terminal forecast valid period. The date and time of actual forecast origin (YYGGggZ) should be determined by the UTC date and time of the issuance of the delayed forecast. With an *issuance* time of H+00 to H+29, use the current hour (based on UTC) to denote the beginning *valid* time ($Y_1Y_1G_1G_1G_2G_2$); for H+30 to H+59, use the next hour (based on UTC). The forecast shall be valid from the time of forecast origin (YYGGgg) to the valid period ending time of the original scheduled terminal forecast.

non-AFOS example of delayed terminal forecast:

Original	Delayed
FTPA31 PHNL 030500	FTPA31 PHNL 030500 RRA
TAF	TAF
PHMK 030540Z 030606 NIL=	PHMK 031012Z 031006 etc.=

The *scheduled* forecast, for Molokai Airport, was prepared and transmitted by a non-AFOS office. The date-time group in the WMO abbreviated heading of the *scheduled* terminal forecast indicates the time of the full hour 0500 UTC, preceding the transmission of the forecast. The forecast was prepared at 0540 UTC on the 3rd day of the month (as shown in the date-time of forecast origin in the forecast text of the *scheduled* forecast) and transmitted between 0500 and 0600 UTC (as shown in the date/time group in the WMO abbreviated heading). Four and one-half hours later, the forecaster prepared the first *delayed* forecast (indicated by "RRA"), at 1012 UTC on the 3rd day of the month (as shown in the date-time of forecast origin in the forecast text of the terminal forecast). The *delayed* terminal shows the time of the original scheduled forecast in the WMO abbreviated header (0500 UTC), as required internationally.

(optional) AFOS example of delayed terminal forecast:

Original	Delayed
SEATAFSEA	SEATAFSEA
TTAA00 KSEA 170541	TTAA00 KSEA 170641 RRA
TAF	TAF
KSEA 170540Z 170606 NIL=	KSEA 170641Z 170706 etc.=

The *scheduled* terminal forecast, for Seattle-Tacoma International Airport, was prepared and/or transmitted using AFOS equipment, and the forecaster opted to allow AFOS to "time-stamp" the forecast in the WMO abbreviated heading. The *scheduled* terminal forecast was prepared at 0540 UTC on the 17th day of the month (as shown in the date-time of forecast origin in the forecast text of the terminal forecast, and typed in by the forecaster) and transmitted at 0541 UTC (as shown in the date/time group in the WMO abbreviated heading, and "time-stamped" automatically by AFOS). One hour later, the forecaster prepared the first *delayed* forecast (indicated by "RRA") at 0641 UTC on the 17th day of the month (typed in by the forecaster). The *delayed* terminal forecast was automatically "time-stamped" by AFOS in the WMO abbreviated header at 0641 UTC.

8.3 Corrected Forecasts. Corrected forecasts shall be issued as soon as possible after discovery of an error (typographical or other mistake). A corrected terminal forecast shall be identified in the WMO abbreviated heading by the contraction CCx following the date-time group, where x is the letter A through X, as described in Section 7.1. For example, CCA would indicate the first correction of a particular scheduled forecast, CCB the second correction of the same scheduled forecast, etc. **There is no contraction in the forecast text to indicate that a forecast is corrected; the contraction CCx only appears in the WMO abbreviated heading.**

The international requirement states that the date-time group in the WMO abbreviated heading of a corrected terminal forecast shall be the same as that of the original scheduled terminal forecast. For NWS offices **not using AFOS** equipment to prepare/ transmit terminal forecasts, the date-time group in the WMO abbreviated heading of a corrected terminal forecast shall be the same as that of the original terminal forecast **unless the date-time group in the WMO abbreviated header contained the error.** Refer to the non-AFOS example below.

At NWS offices using AFOS, the forecaster is not required to manually enter the time of the original terminal forecast into the WMO abbreviated heading of a corrected forecast, due to AFOS software limitations. The forecaster may elect to allow AFOS to "time-stamp" the date-time group in the WMO abbreviated heading with the actual time the corrected terminal forecast is transmitted, as shown in the AFOS example shown below. The NWSTG will assign the proper time to the corrected terminal forecast when it builds the appropriate collective(s), in order to meet the international requirement.

The date-time group of actual forecast origin (YYGGggZ) in the forecast text of the terminal forecast shall reflect the time the corrected forecast was prepared, and is typed in by the forecaster. The forecast valid period ($Y_1Y_1G_1G_1G_2G_2$) of a corrected forecast shall be the same as that of the original terminal forecast issuance unless the valid period contained the error.

non-AFOS example of corrected terminal forecast :

Original	Corrected
FTAK31 PAFA 030500	FTAK31 PAFA 030500 CCA
TAF	TAF
PAOM 030540Z 030606 etc.=	PAOM 030551Z 030606 etc.=

The *scheduled* forecast, for Nome Airport, was prepared and transmitted by a non-AFOS office. The date-time group in the WMO abbreviated heading of the *scheduled* terminal forecast indicates the time of the full hour, in UTC (0500 UTC), preceding the transmission of the forecast, as required internationally. The *scheduled* forecast was prepared at 0540 UTC on the 3rd day of the month (as shown in the date-time of forecast origin in the forecast text of the terminal forecast) and transmitted between 0500 and 0600 UTC (as shown in the date/time group in the WMO abbreviated heading). Eleven minutes later, the forecaster discovered an error and prepared the first *corrected* forecast (indicated by "CCA"), at 0551 UTC on the 3rd day of the month (typed in by the forecaster). The *corrected* terminal forecast shows the time of the original scheduled forecast in the WMO abbreviated header (0500 UTC), as required internationally.

(optional) AFOS example of corrected terminal forecast:

Original	Corrected
MSPTAFDLH	MSPTAFDLH
TTAA00 KDLH 170532	TTAA00 KDLH 170630 CCB
TAF	TAF
KDLH 170530Z 170606 etc.=	KDLH 170629Z 170606 etc.=

The *scheduled* terminal forecast, for Duluth International Airport, was prepared and/or transmitted using AFOS equipment, and the forecaster opted to allow AFOS to "time-stamp" the forecast in the WMO abbreviated heading. The *scheduled* terminal forecast was prepared at 0530 UTC on the 17th day of the month (as shown in the date-time of forecast origin in the forecast text of the terminal forecast, and typed in by the forecaster) and transmitted at 0532 UTC (as shown in the date/time group in the WMO abbreviated heading, and "time-stamped" automatically by AFOS). Some time later, the forecaster discovered an error and prepared the first correction ("CCA", which is not shown here). Roughly an hour after the scheduled terminal forecast was sent, the forecaster discovered another error and prepared and transmitted a *second correction* (indicated by "CCB") at 0629 UTC on the 17th day of the month (as shown in the date-time of forecast origin in the forecast text of the terminal forecast, typed in by the forecaster). The *second corrected terminal forecast* was automatically "time-stamped" by AFOS in the WMO abbreviated header at 0630 UTC.

The corrected terminal forecast shall consist of the entire original terminal forecast (having corrected the error(s)) and **shall cover the entire original valid period**. This is true even if the correction is transmitted hours into the valid period and part of the forecast has expired.

Complete example of corrected terminal forecast:
(AFOS and non-AFOS offices shall follow similar procedures)

Original
CLETAFCLE
TTAA00 KCLE 170535
TAF
KCLE 092330Z 100024 P6SM BKN060 TEMPO 0004 -SHRA OVC030 etc.=

Corrected
CLETAFCLE
TTAA00 KCLE 170218 CCA
TAF
KCLE 100215Z 100024 19008KT P6SM BKN060 TEMPO 0004 -SHRA OVC030 etc.=

The *corrected terminal forecast* shown above was issued more than two hours after the scheduled forecast. The valid time of the *corrected* forecast remains the same as it was in the *scheduled* forecast, from 0000 UTC on the 10th until 0000 UTC on the 11th. Also, the TEMPO 0004 time period remains the same in the correction as it was in the scheduled forecast, even though the correction was prepared at 0215Z.

8.3.1 Correcting Amended or Delayed Forecasts. If an amended or delayed forecast contains an error, it should be corrected following the same procedures described earlier in Section 8.3. An example of a corrected amendment is shown below:

Example of corrected amendment:
(AFOS and non-AFOS offices shall follow similar procedures)

Amendment (containing an error)

```
TOPTAFMHK
TTAA00 KTOP 271524 AAA
TAF AMD
KMHK 271522Z 271512 VRB03KT P6SM SCT012 TEMPO 1517 BKN012
     FM1700 11000KT P6SM SCT035
     FM0100 10003KT P6SM SKC BECMG 0810 3SM BR=
```

Corrected amendment

```
TOPTAFMHK
TTAA00 KTOP 271604 CCA
TAF AMD
KMHK 271602Z 271512 VRB03KT P6SM SCT012 TEMPO 1517 BKN012
     FM1700 11005KT P6SM SCT035
     FM0100 10003KT P6SM SKC BECMG 0810 3SM BR=
```

The *amended* terminal forecast for Manhattan Municipal Airport was prepared on the 27th day of the month at 1522 UTC (as shown in the date-time of forecast origin in the forecast text of the amended terminal forecast), and valid from 1500 UTC on the 27th until 1200 UTC the next day (the 28th). The amendment contains an error in the FM1700 group: winds incorrectly encoded as 110 degrees at 00 knots. The forecaster notices the error, and prepares the first *correction* ("CCA") of the terminal forecast at 1602 UTC (as shown in the date-time of forecast origin in the forecast text of the corrected terminal forecast). Note the following in the *corrected amendment*: 1) the "CCA" replaces the "AAA" in the WMO abbreviated heading which appeared in the first amendment; 2) the first line of the forecast text remains "TAF AMD"; 3) the forecast valid period ($Y_1Y_1G_1G_1G_2G_2$) in the forecast text is the same as the original amendment (1500 UTC - 1200 UTC); 4) the error in the FM1700 group has been corrected.