

No. 6

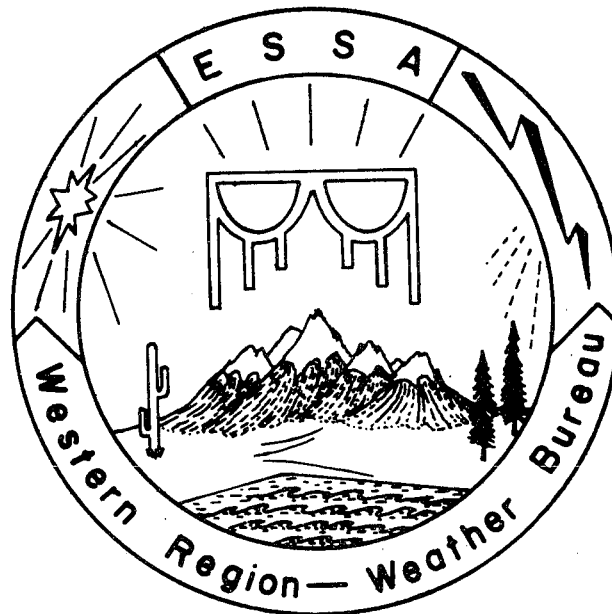
Western Region Technical Memorandum

IMPROVEMENT OF FORECAST WORDING AND FORMAT

by

C. L. Glenn

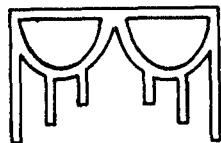
May 1966



ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
U. S. WEATHER BUREAU

Western Region Technical Memoranda:

- No. 1 "Some Notes on Probability Forecasting" by Edward D. Diemer
- No. 2 "Climatological Precipitation Probabilities" compiled by Lucianne Miller
- No. 3 "Western Region Pre- and Post-FP-3 Program" by Edward D. Diemer
- No. 4 "Use of Meteorological Satellite Data"
- No. 5 "Station Descriptions of Local Effects on Synoptic Weather Patterns" by Philip Williams, Jr.
- No. 6 "Improvement of Forecast Wording and Format" by C. L. Glenn



A western Indian symbol for rain. It also symbolizes man's dependence on weather and environment in the West.

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INTRODUCTION

The material presented here represents a gathering of miscellaneous instructional material that has been used in the Western Region. The first four pages contain an outline of some principles governing effective forecast wording, and a graphical example illustrating the complexity of forecasts.

The second section, starting with page 5, is a gathering of the "Suggestions for Improvement of Forecast Wording" that have appeared in the Western Region staff notes to date.

IMPROVEMENT OF FORECAST WORDING AND FORMAT

Influences acting to degrade our forecasts:

1. Forecasting has an inherent limit of accuracy.
2. Forecasts become out of date very rapidly.
 - a. Forecaster may fail to revise promptly.
 - b. Radio, newspaper, etc. may not carry the latest available forecast.
3. Announcers and editors may change the meaning or emphasis by editing.
4. The public listens carelessly--frequently misinterprets radio forecasts.
5. Announcers or editors may make facetious remarks, reducing public confidence.

How to build "deconstruct" mechanisms into your forecast that will destroy its effectiveness:

1. Hynoptize the listener with routine, trite wording which destroys attention before the important items are mentioned. Give a complete description of expected cloudiness, even though rain or sunshine are expected.
2. Start your forecast with unimportant items. This, in effect, tells the listener that there is nothing of importance to say and ensures that he won't listen any further.
3. Tie your listener in knots by jumping back and forth in time, space, and weather elements until he doesn't know what the forecast said.
4. Spread complete confusion. The forecaster has a wonderful medium to work with, and without half trying, he can write a forecast that is almost impossible to unscramble. After all, he is dealing with about three periods of time, four or five categories of space or area, and at least four weather elements, all intermixed in a single forecast of about 50 words.

All joking aside, writing of clear and understandable, yet reasonably accurate and complete, weather forecasts is a very demanding job. In fact, without very special attention to wording and format, the forecaster is almost sure to booby-trap his forecasts as described above. Following are some points to keep in mind for writing more effective forecasts:

1. Emphasis should be on the early part of the forecast period with detail decreasing for later portions.
2. Forecasts should not all start with sky condition. In fact, this item can be eliminated if it is implied by a forecast of rain, snow, or sunshine.
3. The term "partly cloudy" is overused. Substitutes should be used when possible.
4. "Sunny" or "partly sunny" should be used when appropriate.
5. If the day is forecast to be "sunny", the night is assumed to be "fair", so this does not need to be stated.
6. Showers and thundershowers should not be forecast unless they are expected to affect an appreciable area. These terms tend to be greatly overemphasized in the public mind if mentioned at all in the forecast.
7. Do not forecast warmer or colder unless an appreciable change (over 5°) is expected.
8. Use even multiples of 5 or 10 in temperature and wind velocity forecasts.
9. Limit forecast temperature range to the most important 10°. At times, two 10° ranges may be given. Terms such as "60's", "mid-70's", etc. suggest the approximate nature of forecasts and are very desirable.
10. Wind should be included when of importance--can be easily forgotten since it is not always included.

11. Use simple, concise wording. Do not try to include too much detail in public forecasts.
12. When important changes are occurring, leave out some of the less important items in order to maintain emphasis and simplicity.
13. When changing weather is forecast, use the "dynamic" type of wording expressing trend or movement. "Fixed period" wording is suitable for stagnant weather situations.
14. Review and edit your forecasts before issuing them. Do not depend on your first try to be the best you can do. Allow a definite amount of time for this refinement process.

On the following page is an analysis of forecast wording that will serve to illustrate some of the principles of simplifications. This is an actual forecast that was issued to the public, and while it has a number of defects, it is far from being the worst that could be found. The original forecast is given, together with a suggested rewording. Which forecast would be best understood by a reader or a listener? Why?

Original Forecast:

GENERALLY FAIR TONIGHT AND SOUTHWEST PORTION TUESDAY. PARTLY CLOUDY NORTH AND EAST PORTIONS TUESDAY AND OVER STATE TUESDAY NIGHT. SCATTERED LIGHT SNOWS MOUNTAINS AND EAST PORTION TUESDAY NIGHT. TURNING MUCH COLDER EAST PORTION TUESDAY NIGHT. WINDY EAST TUESDAY AND TUESDAY NIGHT. ETC....

41 words

"TONIGHT" used once
 "TUESDAY" used 3 times
 "TUESDAY NIGHT" used 4 times

Reworded Forecast:

FAIR TONIGHT. INCREASING CLOUDINESS TUES. WITH LOCALLY STRONG WIND EAST PORTION, MUCH COLDER WEATHER DEVELOPING EAST PORTION TUESDAY NIGHT ACCOMPANIED BY SNOW FLURRIES AND STRONG WIND. SNOWS ALSO NEAR MOUNTAINS TUESDAY NIGHT. ETC.

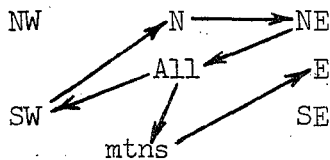
32 words

"TONIGHT" used once
 "TUESDAY" used once
 "TUESDAY NIGHT" used twice

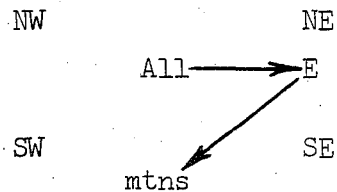
Following is an analysis of how frequently the reader of this forecast is called upon to change his viewpoint.

First - his viewpoint in space - how many times must he jump from one part of the state to another? Follow the arrows.

Original Forecast:

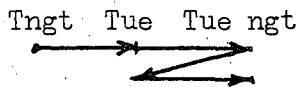


Reworded Forecast:

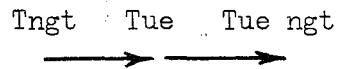


Next - his viewpoint in time - how many times must he jump from one part of the forecast period to another? Follow the arrows.

Original Forecast:

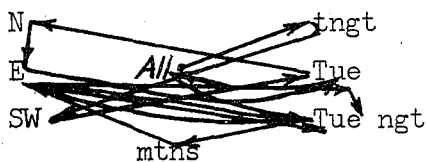


Reworded Forecast:

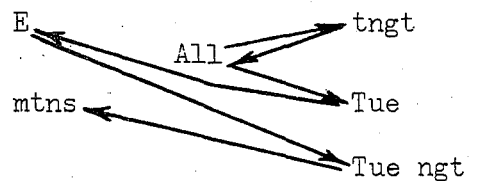


Now his viewpoint in both time and space:

Original Forecast:



Reworded Forecast:



SUGGESTIONS FOR IMPROVEMENT OF FORECAST WORDING
THAT HAVE APPEARED IN WESTERN REGION STAFF NOTES

1. Can you improve this forecast? "CLEAR TO PARTLY CLOUDY WITH A FEW SCATTERED SHOWERS OR THUNDERSTORMS AT TIMES MOSTLY IN AFTERNOON AND EVENING AND PRINCIPALLY OVER OR NEAR THE MOUNTAINS"? This carries wordiness to a rather extreme degree, but it serves to caricature a common fault in forecasting. In this forecast, some thunderstorms are predicted. Then seven different means are used to say that there will not be very many.

2. Do you ever use this expression in a forecast, "PARTLY CLOUDY TO CLOUDY"? It is so nearly all-inclusive that it should certainly be avoided. Use something more definitive, such as INCREASING CLOUDINESS or MOSTLY CLOUDY. Even VARIABLE CLOUDINESS is acceptable but it should be used only when numerous changes in cloudiness with time are expected, such as those accompanying unstable conditions.

3. Avoid the use of wording that is so awkward or unusual that it calls attention to itself rather than to its message.

Example 1: THUNDERSTORMS POSSIBLY LOCALLY HEAVY. This example has successive words ending in "LY". Eliminate the word "POSSIBLY".

Example 2: HIGH INCIDENCE OF THUNDERSTORMS TODAY. This usage is unfamiliar to most people. Say instead, FREQUENT (or NUMEROUS) THUNDERSTORMS TODAY."

4. Avoid unnecessary repetition of the day of the week in a forecast. Remember that repetitious wording becomes compounded when a radio broadcaster reads in succession a number of forecasts for adjacent areas or states.

Example:

Forecast: FAIR TODAY, TONIGHT, AND TUESDAY. WARMER TODAY AND TUESDAY. WINDY TUESDAY.

Try instead: FAIR THRU TUESDAY. WARMER AFTERNOONS. STRONG WIND TUESDAY.

5. Always edit your forecasts after they are written. Never depend on your first effort to be the best you can do. Write the forecast--then revise, refine and rewrite until you have

produced the best wording of which you are capable. We realize, of course, that this may not always be possible under difficult situations, but still we should make it our aim.

6. A number of Western Region people have sent in some very helpful suggestions and examples on forecast wording. These are always welcome and we want to encourage all employees to take part in this improvement program. Items from employees will be used in staff notes as space permits and in other phases of our program. Today's example (from one of our stations)--"CLOUDY WITH RAIN" is redundant. When rain or snow is forecast, the cloudiness is obvious and need not be mentioned.

7. Try using the expression "OVERNIGHT LOW---" for identifying the minimum temperature in forecasts and bulletins. It helps to add variety to the expressions "LOW TONIGHT---" and "LOW TOMORROW MORNING---", and it expresses quite clearly the period involved.

8. If important weather is expected in the early part of the forecast, do not lose your listeners' attention by starting out with unimportant items; e.g., STRONG SHIFTING WIND THIS AFTERNOON ACCOMPANIED BY PARTLY CLOUDY SKIES AND FALLING TEMPS, ETC. rather than PARTLY CLOUDY TODAY TONIGHT AND WEDNESDAY. STRONG SHIFTING WIND AND FALLING TEMPS, ETC.

9. When weather is changing, make use of statements which express trend or movement, so as to paint a mental picture for the listener; e.g. INCREASING CLOUDINESS TONIGHT. SNOW DEVELOPING THURSDAY, rather than FAIR TODAY. PARTLY CLOUDY TONIGHT. CLOUDY WITH SNOW THURSDAY.

10. Those who write forecasts involving contractions should be sure to use the approved FAA contractions in all cases. With a little study this will not be hard to do, and it will protect against misinterpretation by the reader.

11. Do not be afraid to leave out obvious items or unimportant detail in a forecast involving an important weather development. For example, the ending of a storm can often be covered by the simple word "clearing", even though this clearing may involve quite a sequence of events including decrease and ending of rain and a decrease in cloudiness, which could easily take up 10 or 15 words in a forecast.

12. The weather element most frequently overlooked in writing a forecast is the wind. Not every forecast includes wind. For

this reason, it is sometimes omitted even when it is of importance. Make it a point to always consider all three items: weather, temperature, and wind in writing a forecast.

13. An example of forecast simplification (an actual case):

BECOMING
VARIABLE CLOUDINESS TONIGHT ~~AND WEDNESDAY FORENOON~~. MOSTLY
CLOUDY WEDNESDAY ~~AFTERNOON WEDNESDAY NIGHT~~ AND THURSDAY WITH
SCATTERED ~~SNOW OVER MOUNTAINS AND A FEW~~ SHOWERS OR SNOW FLURRIES
~~LOWER ELEVATIONS~~ NORTH PORTION. FOG IN SOME VALLEYS TONIGHT AND
WEDNESDAY FORENOON. ~~LITTLE TEMPERATURE CHANGE TONIGHT AND~~
TREND BY
~~WEDNESDAY. SLOWLY RISING TEMPERATURES WEDNESDAY NIGHT AND~~ THURSDAY.
LOWS TONIGHT 5 TO 15 EXCEPT 5 BELOW HIGHER VALLEYS EXTREME SOUTH.
HIGHS WEDNESDAY IN THE THIRTIES.

14. When a forecast period covers a public holiday, it is a good idea to name the holiday in the radio scripts and local forecasts, e.g. SNOW WILL DEVELOP CHRISTMAS AFTERNOON, rather than SNOW WILL DEVELOP SATURDAY AFTERNOON. This adds pointedness to the material and provides variety in wording.

15. Certain words tend to be overused in forecasting, even though they may be valuable expressions when used discreetly. Some bad offenders are the following:

SHOWERS - "rain" is often much more proper.

SNOW FLURRIES - "snow" is usually more suitable.

PARTLY CLOUDY - more exact or definitive terms can often be substituted.

16. The diurnal temperature cycle makes forecast wording awkward at times. The expression "SLOWLY RISING TEMPERATURES TODAY" should be avoided since it could be interpreted as referring merely to the usual diurnal cycle. In fact, the expression "RISING TEMPERATURES" should be avoided in any forecast for a single day and should be used only when a period of at least two daytimes is covered.

17. Recently our attention was called to an early-morning direct weather broadcast that was given just at the end of a substantial snowstorm but in which no mention was made of the snow. Nearly every listener was hanging on the forecaster's words waiting to hear about the snowfall--only to be disappointed. To the forecaster, the storm was about over, so it was of no more interest to him. He failed to have an awareness of the listeners' viewpoint. We make the poorest possible impression on the public whenever our broadcast, forecast, or weather discussion fails to show an awareness of the latest weather or of important recent weather events.

18. We urge all employees who put out weather scripts or reports to the public to read Oscar Tenenbaum's article on Pages 24-27 of the January AMS Bulletin. This article includes some excellent suggestions on effective writing.

19. Avoid long statements in forecasts and releases. This is especially important in material that must be read over radio or TV. Sentences should not be so short as to be choppy, but should range from short to intermediate in length (fewer than 30 words).

20. The keynotes of good wording are simplicity and emphasis. The man who yells "FIRE" achieves both of these, though we suspect that there are some people who would choose something more like the following:

"It has come to our attention that rapid oxidation is taking place in the walls of the building with consequent production of high temperatures, which threatens to finalize the destruction of the entire structure and occupants within a short time."