

VI.2.3A OPERATION FORECAST SYSTEM DATA ENTRY

Some of the items to be considered and some information that may be helpful when using the Operation Forecast System (OFS) data entry programs are given below:

- o There is very limited quality control built into the data entry programs. There is some checking of improperly entered values and there are some crude limit checks made when posting data to the PPDB (limit checks such as precipitation values below zero, temperatures above 150 DEGF, etc.). There is no comparison with previously entered values for the same station nor is there any checking of values between stations. Thus, the user should beware that bad data values can get posted. This has always been true, but the chances of bad data being posted is increased when the data are automatically processed.
- o In order to manually enter data into the Preprocessor Data Base (PPDB), the data must first be put into SHEF. Then the SHEF decode and post program can be used to enter the data (see Chapter VI.4). Manual data entry programs using other formats could be written by the user using the PPDB read/write routines described in Sections IX.3.4 and IX.5.2.
- o The PPDB utility program (PPDUTIL - see Section VI.6.3) can be used to display data or statistics and to edit data in the PPDB. Statistics are automatically updated for certain data types when the data are posted. Statistics are maintained for daily precipitation data and all RRS data. The PPDB utility program can also be used to reset the statistics whenever this becomes necessary.

Even though the Preprocessors Functions contain options to list the data values used, there are other reasons to periodically list data in the PPDB. The DUMPOBS command in the utility program can list data by types or by individual stations.

The EDITDLY command is used to edit data stored by days. The EDITTRS command is used to edit RRS data. These commands are used to make permanent changes to data in the PPDB. Another method that can be used to edit PPDB data is to post the data in SHEF with the revision indicator 'on'.

When posting data in SHEF an option is included to ignore the revision indicator. If this option is selected, then the last value entered for a given station and time, regardless of how the revision indicator is set, is the value stored in the PPDB. If the revision flag is used, the first value entered is retained unless it is replaced by a revised value. In general it is probably better to use the revision indicator, however, if the person that prepares the SHEF message ignores the use of the revision flag, updated values would not get posted.

- o Certain rules are followed when posting data to the PPDB that the user should be aware of. For data types stored by days the rules are:
 - The only new day for which data can be written to the PPDB is the day immediately after the most recent day on the file.
 - Precipitation and instantaneous temperature data can be entered for time intervals smaller than the time interval in which the data are stored (must divide evenly). For precipitation, all data values for the entire time interval stored must be entered; data are never added to what already exists for the time interval. For temperature, only values corresponding to the PPDB time interval are stored.
 - Since daily precipitation not only contains 24-hour values, but also summations from the previous morning until the current time, special rules must apply to this type. These are:
 - o If the ending hour of the value being posted is prior to the data on the file, the existing value is not changed, even if the revision flag is 'on'.
 - o If the ending hours are the same, the selected rule for use of the revision flag is used.
 - o If the ending hour of the value being posted is later than the data on the file, the new value is always entered.
 - A new day of future data will only be written if:
 - o it is on or after the last observed data day and
 - o it is not more than a preset number of days after the last observed data day or it is immediately after a future day currently on the file.
 - When future data are written, any days after the last day written are set to missing for the given station to avoid mixing forecasts.

For RRS data types the rules are:

- Data cannot be written for observation times that are more than the preset minimum days of data to be retained prior to the latest observation for a given station and data type.
- When new observations are written that extend beyond the first future data value, the hour of the last observed value is updated and all intervening future values are removed.

- When writing future data values:
 - o only values after the last observation can be entered
 - o all old future data are deleted before new future data are written to avoid mixing forecasts
 - o statistics are not updated
- For instantaneous data, a value that is closer to the hour than the existing value will always be posted.