

IX.4.3A INTRODUCTION TO THE PREPROCESSOR PARAMETRIC DATA BASE DESCRIPTION

Purpose

The Preprocessor Parametric Data Base (PPPDB) contains parametric data needed by the Operational Forecast Program Preprocessor Functions.

The data base contains station parameters, basin boundary parameters, area parameters, computational order information and other parametric information. The parameter records are created by program PPINIT. The Preprocessor Functions read the parameter records and create time series using the parametric data.

The PPPDB can be accessed using the routines described in Section IX.3.6 [[Hyperlink](#)]. How these routines are used is described in Section IX.5.4 [[Hyperlink](#)].

Physical Characteristics

The parameter records in the PPPDB are stored as variable length records. This allows parameter records of different lengths to be stored in the same file. There is an index for the PPPDB which contains control information for each parameter type and parameter record.

The PPPDB can have only one parameter file which would contain all parameter records for all types. However, in order to allow for efficient reading of parameters by the Preprocessor, certain types are stored in separate files. For example, in order to maximize the efficiency of the MAP Preprocessor, each different parameter type it requires should be in a separate file (parameter types PCPN, MAP and MAPS). Two special parameter types, Characteristics and Mean Monthly Max/Min Temperatures are kept in a separate file also to improve efficiency.

The computational order parameter records are kept separate since their size can change with each new ordering scheme. A special reset routine is provided to reinitialize the file containing the computation order records if they are the only parameter types in that file.

The number of files and the file in which the parameter types are stored can be changed by modifying the Parameter Type Directory which contains information used to determine the number and contents of the parameter files.

A list of the valid parameter types can be found in section IX.4.3C [[Hyperlink](#)].

Adding New Parameter Types

New parameter types can be added to the Preprocessor Parametric Data Base by making the following changes:

- o Add the new parameter type and the average parameter array length (in words) to routine PPPSIZ and change the variable that stores the number of parameter types (NPMARR).
- o Add the new parameter type to the BLOCK DATA routine PPIBLK. Change NMPTYP to be the new number of data types. If NMPTYP is greater than MXPTYP, then:
 - the variable MXPTYP must be increased and the value of variable IPXRC1 (the record number of the first index record) must be changed
 - the maximum number of data types that can be stored in the common block IPDTRD must be increased
- o Change the User's Manual Documentation for programs FILESIZE and FILECRAT (see Section I.5 [[Hyperlink](#)]) to include the new data type in the list of valid parameter types for the Preprocessor Parametric Data Base.
- o Change the User's Manual Documentation for the Preprocessor Parametric Data Base data files (see section IX.4.3 [[Hyperlink](#)]) to include the new parameter type.