Purpose

Command DEFINE BASIN is used to define or redefine basin boundary
parameters.

A basin boundary definition can be referenced by an Mean Areal
Precipitation (MAP) area, NEXRAD Mean Areal Precipitation (MAPX) area
and/or an Mean Areal Temperature (MAT) area.

Basin boundaries are used to compute the following parameters:

    o centroid of basin
    o station weights
    o MDR boxes assigned to the basin

Input Data

The general format of the DEFINE command is described on page
IV.3.3B-DEFINE. The input described here immediately follows the
DEFINE command.

If the 'PLOT(YES)' option has been specified on either the DEFINE or
SETOPT command, a map of the basin boundaries, centroid and grid
points will be plotted for each basin defined.

Card	Field	Required/ Optional 1/	Format	Description
1	1	R	A or A(A)	'BASN' or 'BASN(units)' 2/
	2	R	A8	Basin identifier
	3	R #	A20	Descriptive information
	4	R #	({R,R})	Latitude and longitude pairs defining basin boundary. The pairs must be entered in clockwise order, in decimal degrees and enclosed in parenthesis. 3/
	5+	O #	R	Basin area 4/ 'AREA(area)' in MI2 or KM2
	5+	O #	R	Mean basin elevation 5/ 'ELEV(elevation)' in FT or M

    Repeat card 1 to define additional basin boundaries.

Notes:

1/ A '#' indicates that the parameter value can be changed when redefining a basin boundary

2/ The units in which the data are being input can be specified in this field. If the parameters are being input in English units, the units code ENGL can be entered. If the parameters are being input in metric units, the units code METR must be entered. The default units code is ENGL.

3/ The latitude/longitude pairs are repeated within the parenthesis as many times as are needed to define the basin boundary. The points must be defined in a clockwise order.

4/ The specified basin area is compared against the area computed from the basin boundary definition. If there is a significant difference between the specified area and the computed area, a warning message is printed.

    If 'BASN(ENGL)' has been specified, the units of the area must be square miles (MI2). If 'BASN(METR)' has been specified, the units of the area must be square kilometers (KM2).

5/ If 'BASN(ENGL)' has been specified, the units of the elevation must be feet (FT). If 'BASN(METR)' has been specified, the units of the elevation must be meters (M).

Sample Input

To define a basin boundary with the following parameters:

    Identifier = POTMCLWR
    Description = LOWER POTOMAC
    Basin boundary pairs: Latitude Longitude
                            39.0   77.25
                            38.25   77.75
                            38.75   76.25
    Area = 3000. square miles
    Mean elevation = 100. feet

    the following input would be used:

    @DEFINE BASIN
    $ DEFINE BASIN PARAMETERS
    BASN POTMCLWR 'LOWER POTOMAC'
        (39. 77.25 38.75 76.25 38.25 77.75)
        AREA(3000.) ELEV(100.)

The following example would redefine a basin boundary:

    @DEFINE BASIN OLD
    BASN(METR) ROCKCRK 'ROCK CREEK'
        (38.9 77. 38.5 77.3 39.2 77.1)
        ELEV(30.)

The basin elevation is input as meters because 'BASN(METR)' has been

specified.