VI.3.6E ASSIGN FFG THRESHOLD RUNOFFS BY AREAS TO EACH HRAP BIN USING
         PROGRAM ZGRID

Purpose

Program ZGRID assigns existing threshold runoffs by areas (i.e. zones,
counties) to each HRAP bin within the boundary defined for the area.

Program ZGRID should be run if area (zones, counties) boundaries are
changed or their threshold runoffs are changed.

The input file is the file used to define the area parameters.

The input file format is described in Section VI.3.6C-INFILE-AREA
[Hyperlink].

The output files are gridro01, gridro03, gridro06, gridro12 and
gridro24 which contain the ASCII definitions of gridded runoffs that
become input for the FFGUID program; and a file containing the area
parameters with updated runoff.

Runoff Factors

Runoffs for durations other than 3 hours are computed using default or
user supplied factors applied to the 3 hour runoff. Options to
compute runoffs for durations other than 3 hours are controlled by the
following commands:

     Command   Function

     (None)   Compute runoffs using default factors applied to 3 hour
                runoff only when area runoff for a duration is 0.0.
                Default factors for 1, 3, 6, 12 and 24 hour durations are
                0.70, 1.0, 1.5, 2.0 and 2.5 respectively.

     mult   Compute runoffs using supplied factors applied to 3 hour
                runoff only when the area runoff for a duration is 0.0.
                For example: mult 0.65 1.0 1.5 2.0 2.5

     mul1   Compute 1 hour runoff using supplied factor applied to 3
                hour runoff.
                For example: mul1 0.6

     mul3   Compute all runoffs using supplied factor applied to 3
                hour runoff.
                For example: mul3 0.6 1.0 1.3 0 0

     zex3   Set area runoffs to 0.0 (except 3 hour) and compute
                runoffs using supplied factors.
                For example: zex3 0.65 1.0 1.4 1.8 2.3

Commands mull and zex3 must be the first record in the file. Commands
mult and mul3 apply to all area definitions following the command and

may be used anywhere in the input file.

Conversion From Headwater Definition

Program ZGRID can be used to convert a headwater parameter definition
file for zones/counties to an area parameter definition file from.

The commands for this option must be the first record in the input
file and are:

    cabb   Use first area identifier in headwater area for zone
              boundary identifier.

    rohd   Use headwater (zone) parameter definitions to create area
              parameter definitions:
                - sets the AFFG description to the HFFG description
                - sets the basin boundary identifier to the HFFG area
                  identifier
                - converts the unitgraph peak flow to area runoff for
                  each duration
                - outputs a file with AFFG parameters

    nopc   Replace any 1 hour percentages of 3 hour FFG with a 1 hour
              runoff using the default factor for 1 hour duration.

The input file is the file used to define the headwater parameters.

The input file format is described in Section VI.3.6C-INFILE-HEAD.

The output files are gridro01, gridro03, gridro06, gridro12 and
gridro24 which contain the ASCII definitions of gridded runoffs that
become input for the FFGUID program; and a file containing the area
parameters.