Appendix A

Input Description

Introduction

HEC-6 processes data from a single input data file. This introduction provides some basic information about an HEC-6 input data file and its records.

The HEC-6 Input Data Record

This appendix contains a detailed description of the data input requirement for each variable on each input record. In general, the descriptions of records are ordered as the records would appear in a data file. Many of the records described can be omitted if the options to which they apply are not needed.

HEC-6 input records follow the basic HEC-2 input record format. Each record is divided into ten fields of eight columns each, except Field 1. A variable in Field 1 may only occupy columns 3 through 8 since columns 1 and 2 (called Field 0) are reserved for record identification.

The location of the variables for each input record is shown by field number. The values a variable may assume and the conditions for each are described. Where the value of a variable is to be zero, unless otherwise noted, the field may be left blank since a blank field is read as zero. Any number without a decimal point must be right justified in its field. Any number without a sign is considered positive.

The location of variables on records is often referred to by an abbreviated designation; for example, X1.5 refers to the fifth field of the X1 record.

HEC-6 recognizes only the records described in this appendix. Any

Comment records may be used to annotate the input file. HEC-6 identifies any record with Field 0 blank as a comment record. These records are ignored by HEC-6 and will not be repeated in the output.

unrecognized or misplaced records will, in most cases, cause HEC-6 to terminate execution.

The HEC-6 Input File

A typical HEC-6 input file consists of 3 basic parts. The first part is the river system geometry; the second part is the sediment properties; and the third is the hydrology.

The records described in Section A1 are used to define the geometry of the river system being modeled. Title records (T1-T3) are required at the beginning of each stream segment. Each set of X1 through H (or HD) records are used to describe the geometry and special features of a cross section along a stream segment. The QT, $TRIB, and CP records are used to combine single stream segments into a river network.

The initial sediment properties and quantities for the model are defined using the records in Section A2. Each stream segment in the river network must be described with a separate set of T4-PF records. The information entered on the I1 through I5 records pertain to the whole network system. Therefore, they need only be entered with the mainstem sediment data records. If these records are entered with the sediment data for any other stream segment, they will be ignored. Local inflow data ($LOCAL and LQL-LFL records) are entered after the complete set of sediment records has been entered for the stream segment in which they are located and before the records for the next stream segment.

The records that make up the hydrology data are described in Section A3. The $HYD record is used only once to indicate the beginning of the hydrologic data section in the input file. The Q, Q, and W records are entered as a set for each time step (discharge) to be modeled in the hydrologic data. The T record is required with the first time step (discharge) and is optional thereafter. All other records are optional and are to be added to the appropriate time step(s). The $$END record should be entered as the last record of the input file and can also occur only once.

Section A4 describes records that can be entered to trigger one or more special options. These commands are inserted into the HYDROLOGIC data after the $HYD record and immediately before any Q record. They are entered one after another, inserted singularly, or used as many times as desired. Some require additional data as explained in the detailed instructions that follow.

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