This Section describes the general form of the input cards needed to define the Operations to be used in a Segment.

Operations must be input in the order they are to be executed. Data values needed by each Operation must have been read from data files or generated by a preceding Operation.

**Input Summary**

The input cards required to define the Operations Table for a Segment are as follows:

<table>
<thead>
<tr>
<th>Card</th>
<th>Format</th>
<th>Column</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A8</td>
<td>1-8</td>
<td>Identifier for the type of Operation. Available Operations and their identifiers are listed in Section V.3.2.</td>
</tr>
<tr>
<td>4X,A8</td>
<td>13-20</td>
<td></td>
<td>User supplied name for the Operation. All blanks and 'INPUT CO' are not allowed. A name is not required for the 'CLEAR-TS' Operation. The combination of the identifier and name must be unique for each Operation within a Segment (the 'CLEAR-TS' Operation is an exception).</td>
</tr>
<tr>
<td>2X,A8</td>
<td>23-30</td>
<td></td>
<td>Name of Operation in the previous definition of the Segment from which carryover values are obtained. Only needed for Operations that have carryover. This name is only used by the RESEGDEF command of the FCINIT program. The name determines whether the carryover for the Operation is obtained from an Operation of the same type used in the old definition of the Segment (referred to as carryover transfer) or whether the user will supply initial carryover values for the Operation.</td>
</tr>
</tbody>
</table>

Default is carryover obtained from the Operation with the same type and name in the previous definition of the Segment. If an Operation with the same type and name did not exist previously, the default is for the user to supply carryover.
<table>
<thead>
<tr>
<th>Card</th>
<th>Format</th>
<th>Column</th>
<th>Contents</th>
</tr>
</thead>
</table>

If initial carryover values should be obtained from an Operation used in the old definition of the Segment of the same type, but with a different name, enter the old name. Several Operations in the redefined Segment can obtain carryover from a single Operation in the old version of the Segment.

If initial carryover is to be supplied by the user, enter 'INPUT CO'. In this case, there will be no carryover transfer for this Operation.

2

The input cards for the Operation. The cards needed for each Operation are given in the appropriate subsection of Section V.3.3.

3  A4  1-4  'STOP'

Repeat cards 1 and 2 for each Operation in the Segment.

Sample Input

Sample input to define a Segment is shown in Figure 1.

Error Messages

The following error messages can be generated when defining Operations.

1. **ERROR** XXXXXXXX IS NOT AN ACCEPTABLE OPERATION IDENTIFIER.
   
   Action: Check the list of available Operations and identifiers in Section V.3.2.

2. **ERROR** THE P ARRAY IS FULL. THE REST OF THE OPERATIONS IN THIS SEGMENT WILL BE SKIPPED.
   
   Action: Reduce the number of Operations in the Segment or redimension the P array.

3. **ERROR** THE NAME OF A XXXXXXXX OPERATION IS ALL BLANKS OR 'INPUT CO'. THIS IS NOT ALLOWED.
   
   Action: Change the Operation name on Card 1, Columns 13-20.

4. **ERROR** AN OPERATION HAS THE SAME TYPE (XXXXXXX) AND THE SAME NAME (XXXXXXX) AS A PREVIOUS OPERATION. THIS OPERATION WILL BE IGNORED.
Action: Assign all Operations of a given type unique names.

5. **ERROR** THE OPERATION WROTE BEYOND THE END OF THE P,C, OR T ARRAY. THE REST OF THIS SEGMENT IS IGNORED.

   Action: An Operation is not programmed correctly. Call for assistance.

6. **ERROR** MORE SPACE IS NEEDED FOR DATA AND WORKING STORAGE IN THE D ARRAY THAN IS AVAILABLE.

   Action: Reduce the number of time series or working storage needed or redimension the D array.

7. **ERROR** TIME SERIES HAS NOT BEEN DEFINED. I.D.=XXXXXX

   Action: All time series used by Operations must be defined in the 'DEF-TS' section of the Segment input (see Section V.2.3).

8. **ERROR** A TIME SERIES DOES NOT HAVE THE PROPER DIMENSION FOR THIS APPLICATION--DIMENSION SHOULD BE=XXXX. I.D.=XXXXXX

   Action: Check input summary for the Operation in Section V.3.3 to determine what dimensions are allowed.

9. **ERROR** A DATA TYPE (XXXX) WHICH CAN CONTAIN MISSING VALUES IS USED FOR AN APPLICATION WHERE MISSING VALUES ARE NOT ALLOWED. I.D.=XXXXXX

   Action: Use a data type code that cannot contain missing values (see Section V.2.2).

10. **ERROR** A DATA TYPE WITH XX VALUES PER TIME INTERVAL IS USED FOR AN APPLICATION WHERE ONLY XX VALUES ARE ALLOWED. TIME SERIES I.D.=XXXXXX

    Action: Use a data type with the proper number of values per time interval (see Section V.2.2).

11. **ERROR** IN THE X ARRAY XXXX POSITIONS WERE REQUESTED, ONLY XX ARE AVAILABLE.

    Action: Reduce the number of Operations or redimension the proper array.

12. **ERROR** NO VALUES HAVE PREVIOUSLY BEEN ASSIGNED TO THE INPUT TIME SERIES (I.D.=XXXXXX) FOR THIS OPERATION.

    Action: All input time series for an Operation must contain data values. Values can be obtained by reading from disk as in the case of 'INPUT' or 'UPDATE' time series or from previous Operations in the Segment. Thus, the problem can be corrected by: reading the values from disk, adding an
Operations or rearranging the Operations Table.

Error messages for specific Operations are described in the appropriate sub-sections of Section V.3.3.
Figure 1. Sample Input for a Segment

- Column -

<table>
<thead>
<tr>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>55</th>
<th>60</th>
<th>65</th>
<th>70</th>
<th>75</th>
<th>80</th>
</tr>
</thead>
</table>

IDENTIFIER GLMSW    39.27 108.91
TITLE    CALCASIEU R-GLENMORA
UPSTREAM
DOWNSTREAM GLFSW
DEF-TS
GLMSW    MAP   6   INPUT
GLMSW    INFW   6
GLMSW    MAPE   24   INPUT
GLMSW    MAPE
GLMSW    STG   6   INPUT
GLMSW    STG
GLMSW    SQIN   6
GLMSW    QIN   6
GLMSW    SSTG   6   OUTPUT
GLMSW    SSTG    39.27 108.91 CALCASIEU R-GLENMORA
GLMSW    QINE   6   OUTPUT
GLMSW    QINE    39.27 108.91 CALCASIEU R-GLENMORA
END

SAC-SMA   GLMSW
SWTRIB1 @ GLENMORA   6   GLMSW    MAP     GLMSW    INFW
0   SUMS    0   0
1.0001.050 50.0 30.00.3300.0050.012   00.100
80.0 3.00 200. 30.0  40.0.170.00600.1500.300 0.10
GLMSW    MAPE   1.001.001.001.101.301.401.501.401.301.101.101.00
50.0  0.0 200.  1.6  32. 250.    0
UNIT-HG   GLMSW
CALCASIEU R-GLENMORA   620.   17     ENGL   0.000
GLMSW    INFW   6   GLMSW    SQIN   6
982.  1849.  2848.  4112.  5647.  7775.  8367.  8367.
7696.  6503.  5638.  4010.  3518.  3014.  2213.
CHANLOSS GLMSW
CALCASIEU R-GLENMORA   0.0   30. NOPE
GLMSW    SQIN   6
1.0
1.52 2.03 2.79 3.56 4.57 4.57 4.32 4.06 3.81 3.30 2.29 1.52
STAGE-Q STAGE
STG TO QIN - GLMSW   GLMSW   1
GLMSW    STG   6   GLMSW    QIN   6
ADJUST-Q GLMSW
CALCASIEU R-GLENMORA   1   0   0
GLMSW    QIN   6
GLMSW    SQIN   6
GLMSW    QINE
120
0
STAGE-Q FLOW
QINE TO SSTG - GLMSW   GLMSW
GLMSW    SSTG   6   GLMSW    QINE
PLOT-TUL GLMSW
1   0  101  0  200  6  6  5  3  I  -  0  0
25  25  F  U  M GLMSW
MAP ADJ-Q STAGE
GLMSW    MAP LIST   F5.2,   6   MEAN AREAL PCPN
GLMSW    QIN PLOT 0   6   OBSERVED FLOW
GLMSW    QINE BOTH A   F8.0,   6   ADJUSTED FLOW
GLMSW    SSTG LIST   F8.1,   6   FORECAST STAGE
GLMSW    SQIN PLOT S   6   SIMULATED FLOW
END
STOP