

V.2.3 INPUT SUMMARY FOR DEFINING TIME SERIES USED BY OPERATIONS IN A SEGMENT

Input Summary

The input to define time series used by Operations in a Segment is as follows:

Card Format Columns Contents

1 1-6 'DEF-TS'

Repeat cards 2 and 3 for each time series to be defined.

2	A8	1-8	Time series identifier - the identifier cannot: <ul style="list-style-type: none">o be all blankso begin with 'END 'o begin with the following characters: @ .o contain the following characters: < > () -
	A4	12-15	Time series data type code (see Section V.2.2)
	I2	19-20	Time series data time interval in hours - valid values are 1, 2, 3, 4, 6, 8, 12 and 24

The combination of the time series identifier, data type code and data time interval must be unique for each time series used in a Segment.

A8	33-40	Time series type (default is INTERNAL): Enter 'INPUT' if this time series is to be read from a file before to execution of the Operations Table. Enter 'OUTPUT' if this time series is to be written to a file during or after the execution of the Operations Table. Enter 'UPDATE' if the time series data are read from a file, updated during execution of the Operations Table and then written to the same file. UPDATE time series are not allowed in the Calibration System programs. Enter 'INTERNAL' if the time series is only used internally within the Segment to transfer data from one Operation to another and is not read from or written
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Card Format Columns Contents

to a file.

A4 47-50 Type of file that the time series is read from or written to - not needed for INTERNAL time series (see Section V.2.4)

Defaults are:

- 'CARD' for the Calibration System programs MCP3 and OPT3
- 'FPDB' for the Operational Forecast System program FCST

The following fields are used to define Extended Streamflow Prediction (ESP) System time series:

A4 56-59 Type of ESP file that the time series is read from or written to:

- 'ESP ' for ESP time series file
- 'REPL' for replace time series. This option allows the time series identifier, data type and time interval to be replaced. The new time series type must be INPUT and is only valid when an instantaneous discharge time series is to be replaced with a mean daily discharge time series.
- 'MSNG' for time series will be filled with the missing data symbol (999.0)
- 'GENR' for time series that will be generated
- 'NONE' for time series type becomes INTERNAL (valid only for OUTPUT time series)
- 'CARD' for DATACARD file (see Chapter VII.2-DATACARD)

A8 61-68 ESP time series type - valid types are INPUT, OUTPUT, UPDATE and INTERNAL - needed only if different than time series type entered in columns 33-40

3 External location information for the file type that the time series is read from or written to - the specific information needed and the format for

Card Format Columns Contents

each file type is given in Section V.2.4
- not needed for INTERNAL time series

For ESP time series see Section V.2.3-ESP
for additional input.

Last 1-3 'END'

Sample Input

Figure 1 is sample input used to define time series in a Calibration System program.

Figure 2 is sample input used to define time series in the Operational Forecast System program FCINIT.

Error Messages

The following error messages can be generated when defining time series:

1. **ERROR** TIME SERIES TYPE CODE=XXXXXXXX IS INCORRECT - ONLY INPUT, OUTPUT, UPDATE, AND INTERNAL ARE ALLOWED.
USER I.D.=XXXXXXXX

Action: Check columns 33-40 on card 2 and correct the error.

2. **ERROR** AN UPDATE TIME SERIES CAN NOT BE USED IN THE CALIBRATION PROGRAMS. I.D.=XXXXXXXX TYPE=XXX DELTA T=XX

Action: Change time series type to INPUT, OUTPUT, or INTERNAL.

3. **ERROR** XXXX IS NOT AN ALLOWABLE DATA TYPE CODE FOR THE FORECAST COMPONENT. USER I.D.=XXXXXXXX

Action: See Section V.2.2 for allowable data type codes.

4. **ERROR** TIME INTERVAL=XX HOURS IS NOT ALLOWED.
USER I.D.=XXXXXXXX

Action: Only time intervals of 1, 2, 3, 4, 6, 8, 12, and 24 hours are allowed. Change time interval to an allowable value.

5. **ERROR** TIME SERIES I.D. IS NOT ALLOWED TO CONTAIN ALL BLANKS. (I.D.=XXXXXXXX TYPE=XXXX DT=XX HOURS)

Action: Check columns 1-8 on card 2 and correct the error.

6. **ERROR** THE IDENTIFIER (XXXXXXXX-XXXX-XX) ARE USED FOR MORE THAN ONE TIME SERIES.

Action: The combination of the user I.D., data type code, and time interval must be unique for each time series within a Segment.

7. ****ERROR**** FILE TYPE=XXXX HAS NOT BEEN DEFINED FOR THE FORECAST COMPONENT. INFORMATION IS NOT STORED FOR THE PRECEDING TIME SERIES.

Action: See Section V.2.4 for allowable file type codes. If the specified file type code exists, the error probably occurred because the calls to the read/write routines are not in the program being executed.

8. ****ERROR**** EXTERNAL LOCATION VALUES COULD NOT BE OBTAINED FOR THE PRECEDING TIME SERIES, THUS NO INFORMATION WAS STORED.

Action: Check for other error messages and check that the external location information (card 3) is correct.

9. ****ERROR**** THERE IS NOT ENOUGH SPACE AVAILABLE IN THE TS ARRAY TO STORE INFORMATION FOR THE PRECEDING TIME SERIES.

Action: Call your Focal Point.

Specific error messages related to each file type are given in Section V.2.4.

Figure 1. Sample Calibration Program Input for Defining Time Series

```

      10      20      30      40      50      60      70      80
-----+-----+-----+-----+-----+-----+-----+-----+
DEF-TS
BLANTYRE  MAP      6          INPUT
serfc/Blantyre_MAP
BLANTYRE  RAIM     6
BLANTYRE  SASC    24
BLANTYRE  INFW     6
BLANTYRE  ROCL    24
BLANTYRE  SMZC    24
BLANTYRE  MAT      6          INPUT
serfc/FrenchBroad_MAT
GREENVIL  PTPE    24          INPUT
serfc/E.Greenville_PTPE
ROSMAN    QINE     3          INPUT
serfc/FrenchBroad_QINE
BREVARD   QINE     3          INPUT
serfc/Davidson_QINE
BLANTYRE  SQIN     3
BLANTYRE  QME     24          INPUT
serfc/Blantyre_QME
BLANTYRE  SQME    24
BLANTYRE  QIN     6          INPUT
serfc/FrenchBroad_QIN
END

```

Figure 2. Sample Program FCINIT Input for Defining Time Series

```

-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      10          20          30          40          50          60          70          80
DEF-TS
AFTNC   MAP      6              INPUT          FPDB
AFTNC   MAP
AFTNC   MAT      6              INPUT          FPDB
AFTNC   MAT
AFTNC   RAIM     6              INTERNAL
AFTNC   SWE     24              INTERNAL
AFTNC   INFW     6              OUTPUT          FPDB
AFTNC   INFW    41.55    108.09    PECATONICA AFTNC
AFTNC   APIS    24              INTERNAL
AFTNC   AIAI    24              INTERNAL
AFTNCROQ SQIN     6              INTERNAL
AFTNCBFB SQIN     6              INTERNAL
AFTNC   BFR     24              UPDATE          FPDB
AFTNC   BFR    41.55    108.09    PECATONICA AFTNC
AFTNC   BFR     6              INTERNAL
AFTNCLOC SQIN     6              INTERNAL
AFTNC   RQME     6              INPUT          FPDB
AFTNC   RQME
AFTNC   PELV     6              INPUT          FPDB
AFTNC   PELV
AFTNC   SQME     6              INTERNAL
AFTNC   PELE     6              OUTPUT
AFTNC   PELE    41.64    107.93    LAKE AFTON POOL
AFTNC   SPEL     6
AFTNC   SRSO     6
RAINEVAP SQME     6              INTERNAL
DARNC   QINE     6              INPUT          FPDB
DARNC   QINE
BLBNC   QINE     6              INPUT          FPDB
BLBNC   QINE
DARNCRTD SQIN     6              INTERNAL
RESINFLO SQIN     6              INTERNAL
RESINFLO SQME     6              INTERNAL
AFTNC   AQME     6              OUTPUT
AFTNC   AQME    41.64    107.93    LAKE AFTON OUTFLOW
AFTNCCFS AQME     6
BLBTOAFT SQIN     6              INTERNAL
END

```