

DATA CHANGE PROGRAM

PROGRAM: CHANGE.EXE

INTRODUCTION. The Data Change program is used to convert or change data that is in standard HYSSR record format according to instructions given during program execution. The resulting converted or changed data is placed into an output file in standard HYSSR record format. The input data file is not changed.

INPUT. The Data Change program executes interactively, so the program prompts the user to enter the necessary information. The program requires two input files: the Study Characteristics file and the file containing the data to be changed or converted. The name of the output file for the changed or converted data must also be input to the program. The records in both the input and output data files use standard HYSSR format.

Once the file names have been input, the program prompts the user to provide change or conversion information. The data to be changed or converted may be referenced by: record code; project number; flow year; and period. When any of these reference values are omitted, the change or conversion applies to all cases. For example, to change all of the flow values for Hungry Horse for September, do not specify a flow year on the change record.. To make a change or conversion to all the data values in the input file, do not provide any reference values.

The change record has the following format:

CC PRJ YRPARO #####PARO ###PARO ###.# etc.

where **CC** is the record code of the data to be changed or converted in columns 1 - 2

PRJ is the project number in columns 8 - 10

YR is the flow year in columns 19 - 20

PAR is the period or parameter (up to 5 per record) in columns 21-23, 33-35, 45-47, 57-59, & 69-71

O is the operator (up to 5 per record) in columns 24, 36, 48, 60, & 72

is the value to be used by the preceding operator in columns 25-32, 37-44, 49-56, 61-68, & 73-80

The change parameters “**PAR**” are:

DEL delete
DAB delete all but
ALL change or convert all
month the actual period identifier

The operators “**O**” are:

+ **add** the value to the data
- **subtract** the value from the data
***** **multiply** the value times the data
/ **divide** the data by the value
S convert the data **from elevation in feet to storage in KAF**
E convert the data **from storage in KAF to elevation in feet**
D convert **total storage in KAF to storage draft in KSFD**
T convert **storage draft in KSFD to total storage in KAF**
B convert **total storage in KAF to total storage in KSFD (BPA's units)**
C convert **total storage in KSFD to total storage in KAF (Corps' units)**
R **replace** the data with the value
X **delete** the parameter and its data

NOTE: All parameters and operators must be in capital letters.

The **S**, **E**, **D**, **T**, **B** and **C** operators do not require a change or conversion value. However, if a value is present, the program will first replace the data value with the value input and then do the operation. Any change or conversion requested by these operators is limited by the storage upper bounds (SUB) and storage lower bounds (SLB) found in the Study Characteristics file for that project.

When multiple changes appear on one change record, the changes or conversions may be applied to the same data. In this case, the changes or conversions are performed in order from left to right.

Once all of the change information has been input on the change records, the user may enter “**NOPRINT**” to prevent listing each change to the screen. To signal that all change information has been entered, type “**DONE**” and the program will process the changes.

OUTPUT. The program has two output files: a file for error messages and a file containing the resulting changed or converted data. The error message file is called **C:\HYSSR\DATA\CHANG.MSG** and contains a list of the change records input and any error messages. A sample of this file follows:

SAMPLE OUTPUT MESSAGE FILE

```

                ALLE
DONE = DONE  PRINT = NOPR  DUMMY(1) =
n1,n2,n3,npar,n,num=  0  0  0 ALL  1  1
  NOPRINT
DONE = DONE  PRINT = NOPR  DUMMY (1) = NOPR
  DONE
DONE = DONE  PRINT = NOPR  DUMMY(1) = DONE
```

The other output file contains the results of the changes or conversions specified on the change records. The name of this output file was entered at the prompt with the input file names. A sample of the input data and its resulting output data may be found on page 4.

EXECUTION ON THE PC. To execute the Data Change program, have a copy of CHANGE.EXE in the local C:\HYSSR\PGM subdirectory. Now type CHANGE while in the C:\HYSSR\PGM subdirectory and the program will begin execution.

SAMPLE INPUT AND OUTPUT

change from storage content in KAF to elevation in feet

INPUT:

42	19	AG1	8993.0AUG	8993.0SEP	8993.0OCT	8993.0NOV	8993.0
42	19	DEC	8916.1JAN	8916.1FEB	6727.9MAR	4546.4AP1	5359.9
42	19	APR	5244.5MAY	7178.4JUN	8993.0JUL	8993.0	
43	10	AG1	1772.3AUG	1620.4SEP	1175.7OCT	1028.5NOV	876.3
43	10	DEC	684.5JAN	273.9FEB	178.5MAR	77.2AP1	63.5
43	10	APR	63.5MAY	63.5JUN	63.5JUL	63.5	

use **ALLE** as parameter and operator

OUTPUT:

42	19	AG1	1288.5AUG	1288.5SEP	1288.5OCT	1288.5NOV	1288.5
42	19	DEC	1287.6JAN	1287.6FEB	1257.8MAR	1221.1AP1	1236.1
42	19	APR	1234.2MAY	1264.3JUN	1288.5JUL	1288.5	
43	10	AG1	3498.8AUG	3489.9SEP	3461.4OCT	3450.2NOV	3438.0
43	10	DEC	3421.1JAN	3376.6FEB	3363.9MAR	3348.6AP1	3346.4
43	10	APR	3346.4MAY	3346.4JUN	3346.4JUL	3346.4	