

SUMMARY PROGRAM

PROGRAM: SUMMARY05a.EXE dated 8/17/2005

INTRODUCTION. The Summary program reads the HYSSR TABOUT file and the Study Characteristics file, and summarizes the data into tables. The Summary program uses a "PARMS" file to tell the program where to get the TABOUT and Study Characteristics files, and uses an interactive menu format so the user may select which data will be summarized. Data may be tabulated for individual projects or the system. The summary program will output up to 72 years of data.

INPUT. A PARMS file is created to tell the summary program where to get the TABOUT and Study Characteristics file. The PARMS file also includes the starting and ending periods and years to be summarized, how many projects, and which projects will be included in the summary. The PARMS file needs to be located in the directory, **C:\HYSSR\SORT\SUMMARY**, and the name of the file is **PARMS.dft**. The format for this file and a sample follow.

LINE 1:	COLS 1-8	Date
	COLS 9-16	Time
LINE 2:	COLS 1-35	Study Characteristics filename/location
	COLS 36-70	About file name and location
LINE 3:	COLS 1-11	Office symbol (default = CENPD-ET-WP)
	COLS 12-41	Study title
	COLS 42-61	Rest of study title if needed
LINE 4:	COLS 1-2	Number of periods per year
LINE 5:	COLS 1-2	Starting period (number)
	COLS 3-4	Ending period (number)
	COLS 5-6	Starting year (last 2 digits)
	COLS 7-8	Ending year (last 2 digits)
LINE 6:	COLS 1-3	Number of Projects to be summarized
LINE 7-9:	COLS 1-3, 4-6, 7-9, etc.	External Project Numbers

SAMPLE PARS.dft file:

```
03/06/9509:28:43
C:\HYSSR\DATA\STCHAR94.STY          C:\HYSSR\DATA\TABOUT.95
CENPD-ET-WPREFILL 93-94             BASE CASE
14
 9 8 2878
5
 3 10 16 19 31 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

For LINE 4, this is the number of periods per year to be summarized. Valid numbers range from 14 (the default) down to 2 periods per year. When the number of periods is 9, 10, 11, 12, or 13 the output is correct although not as nice in appearance, but since these are not commonly summarized special code was not developed for these. For LINE 5, specify which period the tables should begin and end in for each year. The program will only accept numeric values as input. The period numbers are as follows:

- 1 = JAN 4 = APR 7 = JUN 10 = AUG 13 = NOV
- 2 = FEB 5 = MAY 8 = JUL 11 = SEP 14 = DEC
- 3 = MAR 6 = JUN 9 = AG1 12 = OCT

For LINE 6, put in the number of projects (up to 78) to be summarized. To print all projects, enter "999". For LINES 7-9, put in the external project number for each project to be summarized. Each project is a 3-character field. There is a limit of 26 projects per line. If there are less than 26 projects, then put them all on LINE 7. If you have more than 26 but less than 53, put 26 projects on LINE 7 and the rest on LINE 8. If you have more than 53 projects, put 26 projects on LINES 7 and 8 and the rest on LINE 9.

The Summary program executes interactively, so the program prompts the user to enter the necessary information. The program is menu-driven, so the first screen asks for a selection of either:

- 1. PROJECT TABLES**
- 2. SUMMARY TABLES**
- 3. QUIT MENU**

Once a selection is made, the program will automatically create a TABOUT.SRT file, which is a sorted TABOUT file based on the TABOUT file entered in the PARS.dft file. The TABOUT.SRT file will be output to the C:\HYSSR\DATA directory and will be used to help create the summary tables. Depending on

the type of summary to be created, the program will display either a project menu or a system menu. These program menus prompt the user to provide the types of data to be summarized.

For project tables the following may be specified:

1. **MODIFIED, NATURAL FLOW**
2. **REGULATED FLOW**
3. **PLANT HYDRAULIC CAPABILITY**
4. **STORAGE CHANGE**
5. **END-OF-MONTH STORAGE**
6. **LIVE STORAGE**
7. **RULE CURVE**
8. **END-OF-MONTH ELEVATION**
9. **FLOOD CONTROL ELEVATION (ft)**
10. **REGULATED POWER GENERATION (MW)**
11. **SPILL (Mw)**
12. **PLANT CAPABILITY**
13. **PLANT kw/cfs**
14. **NET HEAD**
15. **VARIABLE REFILL CURVE**
16. **SPILL (cfs)**
17. **MANDATORY RULE CURVE (KAF)**
18. **TAILWATER ELEVATION**

For system tables the following may be specified:

1. **Firm Hydro Load - Mw**
2. **System Generation - Mw**
3. **Surplus Energy - Mw**
4. **Usable Secondary Energy - Mw**
5. **Usable System Storage - KAF**
6. **Plant Capability – Mw**
7. **Rule Curve Number**
8. **All System Tables (1 - 7)**

OUTPUT. The Summary program may produce two output files. All of the project tables are placed in **C:\HYSSR\DATA\PRJTBL.txt**, all of the system tables are placed in **C:\HYSSR\DATA\SYSTBL.txt**.

EXECUTION ON THE PC. The SUMMARY05a.exe file may be found in the directory \$Library/HYSSR/HYSSR 2004. To execute the Summary program, have a copy of **SUMMARY05a.EXE** in the local **C:\HYSSR\PGM** subdirectory. The program also requires that the Sort program, **SORTEX.EXE**, is available in the local **C:\HYSSR\SORT** subdirectory. The Sort program must have three sort control files, **AVEMED.CNT**, **XPROJ.CNT**, and **SUMMARY.CNT**, available in subdirectory **C:\HYSSR\SORT\SUMMARY**. Now type **SUMMARY05a** while in the **C:\HYSSR\PGM** subdirectory and program execution will begin.