LAR02 PROGRAM
(F0601)

HYDROLOGY PROGRAM MANUAL

BY

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This program uses the Los Angeles County Flood Control District program source code for the F0601 series programs. It also includes an independent program module which assists the user in preparing an input data file for use by the F0601 program.

MANUALS REQUIRED (Before running program)

Two manuals are published for the F601 program. Either one of the following manuals may be used depending on the county location:

1 - Los Angeles County Flood Control District HYDROLOGY MANUAL, December 1971.

2 - Later Editions of the LACFCD Manuals.

PROGRAM OPERATION

The program requires a PC using WINDOWS 95 through Windows XP.

To install the program, run the "INSTALLF" program located on the program floppy, the program files will installed in the "C\CIVILD" directory, You may use Windows Explorer to drag the program icon to your desktop. Start the program by double clicking the icon.

RUNNING THE PROGRAM

The program prepares and uses the following input data files:

   Layout Input file - extension is .INL for L. A. Co.
   Page Heading file - extension is .TTL
   Input Hydrograph (If Used) - extension is .HIN
   Standard Rainfall Mass/Soil Coefficient Files:
          LADEP.SUB (English Units) L.A. Co.
          LAMETR.SUB (Metric Units) "   "

When running the program the following main menu optios   are
displayed:

                     PROGRAM OPTIONS:

    1 - BUILD New File
    2 - RUN Data File
    3 - CORRECT Data File
    F - EXIT PROGRAM

   Enter program option desired >

     DATA INPUT UNIT OPTIONS:
     The program permits use of Metric (SI) or English (In-Lb)
     data input options. This data includes channel lengths,
     conduit sizes, flow rates, and the units used in rainfall
     and soil data files.

 Input Data Unit Option
 Enter 0 for English Units, 1 for Metric Units

 Rainfall File and Soil Data File Unit Option
 Enter 0 for English Units (In.), 1 for Metric Units (mm)

If building or correcting the input data files, the program asks for the following additional data:

   PROGRAM DATA REQUIREMENTS:

   The following job number will be used on all data lines

   Enter Job Number >

The program uses the following File Name and applies file extensions to data file as explained in the program and this manual.

   Specify Input File Name (up to 6 characters)   >

If the input data file is being edited, then program immediately prepares backup files of the old file before proceeding and displays the following message:

   The following BACKUP files have been prepared:
   Standard INPUT - _____.INL(or .INV) backed up as - _____.BAK
   Standard TITLE - _____.TTL Backed up as - _____.BTL
   If you desire to save these files, rename or copy the files
   to another name at system level.

The program presents the following options:

   SOIL AND RAINFALL DATA FILE OPTIONS:
   The program uses the standard L.A. rainfall
   and soil coefficient data files.

If running the input data file, the program presents the following options:

   PROGRAM RUN FILE OPTIONS:
    1 - RESULTS to screen
    2 - OUTPUT Data File
    3 - DIRECT to Printer

   Enter program option desired >

 PROGRAM RUN FILE UNIT OUTPUT OPTIONS:
 Your data file is in English (In-Lb) Units
  0 - Prepare OUTPUT Data File in English (In-Lb) Units
  1 - Prepare OUTPUT Data File in Metric (SI) Units
           or,.....
 Your data file is in Metric (SI) Units
  0 - Prepare OUTPUT Data File in Metric (SI) Units
  1 - Prepare OUTPUT Data File in English (In-Lb) Units

 Enter program output unit data option desired >

Following a program run to an output file, the program displays this message:

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   The following output files have been prepared
      Standard output - _____.OUT
      Hydrograph output (If requested) - _____.HYD
      Input Hydrograph File (If requested) - _____.HHD
If  the  .HHD file is to be input as a hydrograph in a subsequent run
with this program, it must be re-named with a .HIN file extension.
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The program has a file input routine which assists in preparing an
input data file for the program.

This routine automatically sets the job number, rainfall year and
rainfall zone for all data lines. These may be changed using either
a word processor or the program itself.

NOTE: The program includes calculation of the burn factor for L.A.
County. If this option is desired, use a soil number 200 higher
than the original soil number. For example, use soil number 204 for
soil number 4 with a burn factor.

The file editor routine displays the following questions upon entry:

  FILE EDITOR - F0601 INPUT DATA
  Rainfall Year Data Entry Options:
  The following Storm Event Year Options are available:
  0 - Enter On Each Line, or set all data lines with
  (If L.A. County)
  10, 25 or 50 year storm

  Enter year storm option number desired >

Enter hydrograph days option desired >

Then the program presents the following editor menu:


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FILE EDITOR - F0601 INPUT DATA; OPTIONS:
NOTE: Recommend the layout sheet be completed first.
 1 - Location Layout Sheet (Code 006)
 2 - Page Heading Layout Sheet (Code 005)
 3 - Return to SAVE & Run File
 4 - NONE - EXIT PROGRAM

Enter program option desired >
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Location Layout Sheet (Code 006)

If the Location Layout sheet (006) is selected, (This should be selected first when building a new data file), the following display is presented:

Location Layout Code 006; Job No = _____
Entry No. ___   ITEMS:

1	2	3	4	5	6	7	8	9	10	11	12	13
Loc.	P	S	Soil	Imp	Area	TC	Zone	Freq	Conv	Length	Slope	Z
No.	R	E	No.	%	Ac.	M.		Year		Feet		
1	A		5	50	23	11	k	10	3	1000	001000	

14	15	16	17	18	19	20	21	22	23	24	25	26	27
B.W.	Q Rem	Pro	Days	Hyd	Conf	Zero	Hdg	RD	TDS	Botm	Side	Mx	Mx
Size D	or %Q	Opt	1-4	Opt	Opt	Prim	End	Hy	Stm	"n"	"n"	Dp	V
						G	1						

Enter <CR> next; or [-1] for EDIT/INSERT/DELETE, or [-2] REVIEW
Field Number for entry or correction of line data

To enter data in a field, enter the Field Number, then the program explains and asks for the individual field data.

The above display shows an input in line 1 (location 1), the primary stream is A, soil number is 5, impervious ratio is 50%, area is 23 acres, TC is 11 min., conveyance is 3 for street, length is 1000 feet, all stream hydrographs are zeroed out with a G entry, and the user has selected a heading printout option. NOTE: The heading itself must be entered on the page heading layout sheet Code 005.

All of the applicable data should be entered for each layout line in sequence, then enter "Enter" and the next line will be presented.

If a mistake is made, type the letter "B" and the previous line will be displayed for editing.

After all of the layout lines are entered, type the letter "F" and the program will return to the edit menu.

If the number -2 is entered, the program will shift to a review mode and display 10 data lines at a time. In this mode, a specific line number may be selected for edit. Use RETURN [CR] to view the next

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10 lines, or B to go back to the previous 10 lines.

If the number -1 is entered the following menu will be displayed:

  LINE INSERT/DELETE OPTIONS:
  1 - EDIT this line
  2 - DELETE this line
  3 - INSERT line at this point

  Enter option desired (0 = no change) >

If the edit option is selected, the line will be edited by the
program and any possible errors in the line will be listed.

Page Heading Layout Sheet (Code 005)

A page heading line must be ebtered whenever a heading is call for,
or whenever a hydrograph printout is requested.

The program searches the location layout sheet entries for these
items and automatically prepares the entries for these locations
except for the text data. The following is displayed:

   Page Heading Layout Code 005 Job No = _____
   Entry No. _____ ITEMS:

1	2	3
Loc.	P	S
No.	R	E
1	A	

   | 4
   | Page Heading
     STOKES TRACT STUDY

   Enter <CR>, next line; or -1 for insert/delete or -2 REVIEW or
   Field Number for entry or correction of line data

The above display shows the user entered "STOKES TRACT STUDY" for
the heading text data.   The other entries were entered by the
program.   The same inserting and deleting options are available for
this type of line as for code 006 lines.

All of the applicable data should be entered for each layout line in
sequence, then enter "Enter" and the next line will be presented.

If a mistake is made, type the letter "B" and the previous line will
be displayed for editing.

After all of the layout lines are entered, type the letter "F" and
the program will return to the edit menu.