

SOUTHERN WATER AUTHORITY

DIRECTORATE OF OPERATIONS

WALLINGFORD PROCEDURE USERS GROUP APRIL 1985

USE AND INTERPRETATION OF HYDROGRAPH PLOTS

The WASSP package has been mounted on the SWA ICL 2900 series mainframe computer since its release early in 1982, and has since been available to Divisional and Headquarters users through terminals providing on-line and batch running. Updates to the package are implemented centrally by the Operations Directorate, so that a common version is available to all staff at any one time.

Early on in the use of the package the advantage of graphical output was apparent and programs were therefore written by SW staff to access the hydrograph data output by the Simulation and Hydrograph models. Flow values from gauges and the imposed rainfall hyetograph, can be plotted in up to 4 different colours on Calcomp 81 flat-bed plotters sited locally, or alternatively on a drum plotter at the central Computer Unit. A large number of different symbols are available to distinguish between gauges but in practice not more than 5 traces are plotted on the same A4 size paper. Scaling is automatic according to maximum flow and rainfall values, and duration of model run.

Until recently the results of sewer flow surveys have been drawn manually for overlaying on Simulation gauge flows, as part of the model verification process. Problems have been experienced in obtaining compatible data tapes from survey contractors but with the acceptance of a tape format specification early in 1985 it is expected that flow survey data will in future be more readily entered on to the mainframe computer. A plotting procedure to handle this data in a similar manner to the model output was written in 1984 and it is now possible to obtain computer drawn hydrographs of observed and simulated flows, at the same scale, for use in the verification process.

It is not intended that this facility should replace or remove the need for the graphical results incorporated in the more advanced data processing software used by some contractors, such as Insight. These have the important functions of quality control and selection of events, as well as the assessment of sewerage system performance. However the incorporation of plotting facilities for survey data with the model package does facilitate the comparison of measured and simulated flows for the one or two selected events.

The plotting of hydrograph data is only one of a number of possible enhancements to the package. In this case it has been a user-produced facility and responsibility for updating through the various versions of WASSP lies with that individual user. The general theme of graphical presentation is one which could with advantage be widened, and whilst individual hardware facilities may limit the extent to which a nationally produced package can be developed in this respect, there would appear to be a case for some of the future enhancement effort to be directed to this area.

GAB/SH
82/83
18th March 1985

RUN D3

1YEAR 45MINUTE

