

VI.5.3A INTRODUCTION TO THE OPERATIONAL FORECAST PROGRAM (FCST)

Purpose

The Operational Forecast Program (FCST) is the program used to produce both short-range river and flood forecasts and extended streamflow predictions.

The hydrologic products produced by program FCST are generated by running processes specified using the Hydrologic Command Language (HCL) that perform the steps needed to produce the forecast information. In HCL terminology, these processes are referred to as Functions. Program FCST currently contains several Preprocessing Functions, the Forecast Component Execution (FCEXEC) Function for short-range forecasting, the Extended Streamflow Prediction (ESP) Function for extended predictions and some Forecast Component utility Functions. Each Function uses Techniques to control run-time computation and display options.

For short-range forecasts, program FCST uses processed data (mean areal precipitation, temperature and PE, plus stage, discharge, etc.) that is generated by the Preprocessing Functions.

For extended predictions, program FCST uses existing historical time series of mean areal precipitation, temperature and PE that were produced as part of the model calibration process.

All of the parametric information needed by program FCST is defined and maintained by separate programs. The Preprocessor Initialization Program (PPINIT - Section VI.3.3 [[Hyperlink](#)]), Forecast Component Initialization Program (FCINIT - Section VI.3.4 [[Hyperlink](#)]) and Extended Streamflow Prediction Initialization Program (ESPINIT - Section VI.3.5 [[Hyperlink](#)]) are used to maintain parametric files for the Preprocessor, FCEXEC and ESP Functions, respectively.

Program FCST is controlled through the Hydrologic Command Language (HCL). Section VI.5.2 [[Hyperlink](#)] contains an overview of HCL and describes each of the commands.

Program Execution Information

See Chapter I.2 [[Hyperlink](#)] for program execution information.