

## VI.5.3C-ESP-TECH PROGRAM FCST FUNCTION ESP HCL TECHNIQUES

This Section describes the Hydrologic Command Language (HCL) Techniques used by the Operational Forecast Program by Function ESP.

A detailed description of each Technique is in Section VI.5.3D [[Hyperlink](#)].

The Techniques used by Function ESP can be categorized as those:

- o often used
- o not often used
- o not used for forecasting

Technique   Notes   Description

### **Techniques Often Used**

Techniques to specify the type of run (specify only one):

CGROUP	<u>1/</u> <u>2/</u>	Specifies that run is a Carryover Group run and sets name of Carryover Group to be run
FGROUP	<u>1/</u> <u>2/</u>	Specifies that run is a Forecast Group run and sets name of Forecast Group to be run
ONESEG	<u>1/</u> <u>2/</u>	Specifies that run is a one-Segment run and sets name of Segment to be run

Techniques to specify the run period:

STARTESP	<u>2/</u>	Sets the time for start of run
WINDOWS	<u>2/</u>	Sets the times for start and end of windows
HISTWYRS	<u>2/</u>	Sets the historical water years to be used

Techniques to specify ESP options:

PERMWRIT	<u>2/</u>	Sets whether any time series are to be written to the ESP permanent time series files
HISTSIM	<u>2/</u>	Sets whether a historical simulation will be done
ESPOTDIR	<u>2/</u>	Sets the subdirectory for output ESP time series
ESPINDIR	<u>2/</u>	Sets the subdirectory for input ESP time series
PQPFTIME	<u>2/</u>	Sets the use of NWSRFS internal time for ESP internal time
PREADJ	<u>2/</u>	Sets the use of directory (\$scalb_area_ts_dir)/pre for time series input
PRSF	<u>2/</u>	Causes the PRSF flag to be written to the ESP

<u>Technique</u>	<u>Notes</u>	<u>Description</u>
		time series header; the PRSF flag will cause ESPADP displays to change
REGULATE	<u>2/</u>	Sets whether the reservoir operation will be used
NUMCOSAV	<u>1/ 2/</u>	Sets dates for carryover saving
MODS Techniques:		
MODUNITS	<u>1/ 2/</u>	Sets whether English or Metric units are used for input to most of the MOD commands
MODTZC	<u>1/ 2/</u>	Sets the time zone for MODs
MODWARN	<u>1/ 2/</u>	Sets whether MOD warnings will be printed
Techniques which change the BLEND-TS option (see Section V.2.3-ESP [ <a href="#">Hyperlink</a> ] defined with ESPINIT (see Section VI.3.5 [ <a href="#">Hyperlink</a> ]):		
BLENPREC	<u>2/</u>	Changes parameters for precipitation time series specified using the BLEND-TS option
BLENTEMP	<u>2/</u>	Changes parameters for temperature time series specified using the BLEND-TS option
SKIPBLND	<u>2/</u>	Sets whether to skip the blending specified using the BLEND-TS option
FCPRECP	<u>2/</u>	Sets whether to use actual future precipitation values or zero future precipitation values
Display and analysis control Techniques:		
FREQPLOT	<u>2/</u>	Sets whether to display frequency plots
DISPOFF	<u>2/</u>	Sets whether to produce displays
VAROFF	<u>2/</u>	Sets whether to analyze output variables
YRWEIGHT	<u>2/</u>	Assigns unequal weights to historical years
General control Techniques:		
METRIC	<u>1/ 2/</u>	Sets the English/Metric switch
WSUNITS	<u>2/</u>	Sets whether to use water supply units
NOUTDS	<u>1/ 2/</u>	Sets whether output should be in daylight or standard time
NOUTZ	<u>1/ 2/</u>	Sets the time zone for output
TSUNITS	<u>2/</u>	Sets the unit numbers used for the ESP permanent

<u>Technique</u>	<u>Notes</u>	<u>Description</u>
		time series files
PERMDATE	<u>2/</u>	Sets the date for which time series will be read from the ESP permanent time series files
HISTUNIT	<u>2/</u>	Sets the unit numbers for the ESP historical data files

### **Technique Not Often Used**

Technique which changes options defined with ESPINIT (see Section VI.3.5):

CRITERIA	<u>2/</u>	Changes the criteria value for output variable NDTO or NDIS
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### **Techniques Not Used for Forecasting**

Debug control Techniques:

FCDEBUG	<u>1/</u> <u>2/</u>	Sets the debug options for Forecast Component Operation routines
SYSDEBUG	<u>1/</u> <u>2/</u>	Sets the debug options for Forecast Component system routines
PLOTHYD	<u>1/</u> <u>2/</u>	Sets whether to display hydrograph plots
PRINTOUT	<u>1/</u> <u>2/</u>	Sets whether to display any printer output
PRINTSMA	<u>1/</u> <u>2/</u>	Sets whether to display output from the soil moisture accounting operation
PRINTSNW	<u>1/</u> <u>2/</u>	Sets whether to display output from the snow operation
TABLES	<u>1/</u> <u>2/</u>	Sets whether to display tabular output

Notes:

- 1/ The Technique is used by other Functions and will apply to all Functions unless changed between COMPUTE commands.
- 2/ Techniques are either Universal or Nonuniversal depending on whether their values can be changed during the COMPUTE of a Function. Universal Techniques are assigned a single value for the COMPUTE of a Function. Nonuniversal Techniques can be changed within the COMPUTE of a Function.

The Universal Techniques are:

ADJSIM  
BASEPER

CGROUP  
FGROUP  
HISTSIM  
HISTUNIT  
HISTWYRS  
METRIC  
MODTZC  
MODUNITS  
NOUTDS  
NOUTZ  
NUMCOSAV  
ONESEG  
PQPFTIME  
PREADJ  
PRSF  
SKIPBLND  
STARTESP  
TSUNITS  
WINDOWS  
WSUNITS  
YRWEIGHT

Nonuniversal Techniques are:

BLENPREC  
BLENTEMP  
CRITERIA  
DISPOFF  
ESPINDIR  
ESPOTDIR  
FCDEBUG  
FCPRECP  
FREQPLOT  
MODWARN  
PERMDATE  
PERMWRT  
PLOTHYD  
PRINTOUT  
PRINTSMA  
PRINTSNW  
REGULATE  
SYSDEBUG  
TABLES  
VAROFF