
Command Glossary

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The following parameter names and terms are used throughout TSTool commands. A term indicated in **bold** font is a definition. A term indicated in **bold courier** font is a parameter name. Parameters that are infrequently used are listed with the corresponding commands. Common parameters are defined but long lists of corresponding commands are not provided.

a1, ... – Used with the `ARMA()` command.

b1, ... – Used with the `ARMA()` command.

Alias – A (generally) short identifier for a time series, used in place of the TSID, which simplifies commands. The Alias and TSID values are interchangeable when used as parameters to commands and may both be referred to as TSID in command editors. See also TSID.

Alias – A (generally) short identifier for a time series, used in place of the TSID, which simplifies commands. When used to create/read a time series, the syntax of a command is typically similar to: `TS Alias = command(...)`. See also TSID.

AddTSID – Time series identifiers for time series to add. See the `add()` command.

AddValue – A numerical value to be added to a time series. See the `addConstant()` command.

AdjustMethod – Indicates the method used when adjusting a time series. See the `adjustExtremes()` command.

AllowMissingCount – Indicate how many missing data values are allowed in an interval, in order to allow processing. See the `changeInterval()` and `newStatisticYearTS()` commands.

AnalysisEnd – A `DateTime` that indicates the end of an analysis.

AnalysisMonth – One or more months indicating which months should be processed in the analysis. See the `fillRegression()` command.

AnalysisStart – A `DateTime` that indicates the start of an analysis.

ARMAInterval – The data interval used in an ARMA analysis. See the `ARMA()` command.

AutoExtendPeriod – Indicate whether to autoextend the period of all time series to be the output period. See the `setAutoExtendPeriod()` command.

AverageEnd – A `DateTime` that indicates the end of an averaging analysis. See the `setAveragePeriod()` command.

AverageMethod – Indicate the method to use when averaging data. See the `runningAverage()` command.

- AverageStart** – A DateTime that indicates the start of an averaging analysis. See the `setAveragePeriod()` command.
- BlendMethod** – The method to use when blending time series. See the `blend()` command.
- BlendTSID** – Time series identifiers for time series to blend into main time series. See the `blend()` command.
- Bracket** – The number of days to search forward and back for a non-missing value. See the `newEndOfMonthTSFromDayTS()` and `runningAverage()` commands.
- CalculateFactorHow** – Indicate how to calculate the factor used when prorating values. See the `fillProrate()` command.
- CommandLine** – The command line for a program to run. See the `runProgram()` command.
- ConstantValue** – A numerical value used for filling, etc. See the `fillConstant()`, `setConstant()` and `setConstantBefore()` command.
- DatabaseName** – The name of a database, when making a database connection. See the `openHydroBase()` command.
- DatabaseServer** – The name of a database server, when making a database connection. See the `openHydroBase()` command.
- DataSource** – The data source to use when forming a TSID. See the `createFromList()` command.
- DataType** – The data source to use when forming a TSID. See the `createFromList()` command.
- DateTime** – A date/time value, typically represented as a string, which indicates a point in time. Date/time strings have a precision that is interpreted by the software. For example, the date/time string 1990 has a precision of year, whereas the string 1990-01-12 has a precision of day.
- DateTime** – A specific date/time associated with time series data. See the `setDataValue()` command.
- DayTSID** – Time series identifier for a daily time series. See the `newDayTSFromMonthAndDayTS()` command.
- DefaultFlow** – Indicate a default flow value to be used if observations or filled values cannot be found. See the `lagK()` command.
- Delim** – The delimiter character(s) used when processing delimited files. See the `createFromList()` command.
- DependentAnalysisEnd** – A DateTime that indicates the end of an analysis of dependent time series. See the `fillMOVE2()` command.

DependentAnalysisStart – A DateTime that indicates the start of an analysis of dependent time series. See the `fillMOVE2()` command.

Description – The description (name) for a time series. See the `newTimeSeries()` command.

DeselectAllFirst – Indicate whether to deselect all time series before processing the command. See the `selectTimeSeries()` command.

DiffFlag – A character flag used to indicate when time series values are different. See the `compareTimeSeries()` command.

Divisor – Indicate which time series is the divisor. See the `relativeDiff()` command.

DivisorTSID – Time series identifier for time series to divide another time series. See the `divide()` command.

ExtremeToAdjust – Indicates whether the maximum or minimum value in a time series should be adjusted. See the `adjustExtremes()` command.

ExtremeValue – The threshold value when adjusting extreme values. See the `adjustExtremes()` command.

FillDirection – Indicate which direction (Foreward or Backward) filling should occur. See the `fillProrate()` and `fillRepeat()` commands.

FillEnd – A DateTime that indicates the end of a fill process.

FillFlag – A character flag used to indicate when time series values are filled. See the `fillhistMonthAverage()`, `fillHistYearAverage()`, `fillMOVE2()`, `fillProrate()`, and `fillRegression()` commands.

FillNearest – Indicate whether missing data values should be filled with the nearest non-missing value. See the `lagK()` command.

FillStart – A DateTime that indicates the start of fill process.

FillUsingCIU – Indicate whether missing data values should be filled using “currently in use” (CIU) data from HydroBase. Additional zeros will be included in data. See the `fillUsingDiversionComments()` command.

FillUsingCIUFlag – A character flag used to indicate when time series values are filled with CIU information (see `FillUsingCIU`). See the `fillUsingDiversionComments()` command.

FillUsingDivComments – Indicate whether missing data values should be filled using diversion comments from HydroBase. Additional zeros will be included in data. See the `readHydroBase()` and `TS Alias = readHydroBase()` commands. Also see the `fillUsingDiversionComments()` command.

FillUsingDivCommentsFlag – A character flag used to indicate when time series values are filled. See the `readHydroBase()`, and `TS Alias = readHydroBase()` commands.

HandleMissingHow – Indicate how to handle missing data values when processing time series. For example, when adding time series, missing values can be ignored or can result in a missing value in the result. See the `add()`, `cumulate()`, and `subtract()` commands.

HandleMissingTShow – Indicate how to handle missing time series during processing. See the `createFromList()` command.

ID – The identifier to match in a file. See the `createFromList()` command.

IDCol – The column number (or name) to be read from a delimited file. See the `createFromList()` command.

IgnoreLEZero – Indicate whether values less than or equal to zero should be ignored when computing historical averages for time series. See the `setIgnoreLEZero()` command.

IncludeMissingTS – Indicate whether missing time series (e.g., from a query or read) should automatically be included using default information. See the `setIncludeMissingTS()` command.

IndependentTSID – Time series identifier for the independent time series being processed. See the `fillFromTS()`, `fillMOVE2()`, `fillProrate()`, `fillRegression()`, `setFromTS()`, and `setMax()` commands.

InflowStates – The inflow states (initial states) when routing a flow time series. See the `lagK()` command.

InitialValue – Indicate an initial value needed for computations. See the `fillProrate()` and `newTimeSeries()` commands.

InputEnd – A `DateTime` that indicates the end of a file read or a database query.

InputFile, InputFile1, InputFile2 – The name of an input file to read, used by many commands.

InputName – The input name to use when forming a `TSID`. See the `createFromList()` command.

InputStart – A `DateTime` that indicates the start of file read or a database query.

InputType – The input type to use when forming a `TSID`. See the `createFromList()` command.

Intercept – The intercept to be enforced when determining a line of best fit. See the `fillRegression()` command.

Interval – The data interval to use when forming a `TSID`. See the `createFromList()`, `readHydroBase()`, and `shiftTimeByInterval()` commands.

- K** – The attenuation factor used when routing a flow time series. See the `lagK()` command.
- Lag** – The lag term for routing a flow time series. See the `lagK()` command.
- Length** – The length of a time series trace. See the `createTraces()` command.
- ListFile** – The name of an input or output list (delimited) file to be written or read, specified using a relative or absolute path. See the `createFromList()` command.
- LogFile** – The name of the log file, specified using a relative or absolute path. See the `setLogFile()` command.
- LogFileLevel** – The level for messages printed to the log file. See the `setDebugLevel()` and `setWarningLevel()` commands.
- MatchDataType** – Indicate whether the data type part of a TSID should be matched when comparing time series identifiers. See the `compareTimeSeries()` command.
- MatchLocation** – Indicate whether the location part of a TSID (Alias) should be matched when comparing time series identifiers. See the `compareTimeSeries()` command.
- MaxIntervals** – The maximum number of intervals to process, typically used to limit a fill or analysis procedure. See the `adjustExtremes()`, `fillInterpolate()`, and `fillRepeat()` commands.
- MaxValue** – The maximum value in an analysis. See the `normalize()` and `replaceValue()` commands.
- Method** – A method used when processing data, used to more specifically control how a command functions. See the `analyzePattern()` and `disaggregate()` commands.
- MinValue** – The minimum value in an analysis. See the `normalize()` and `replaceValue()` commands.
- MinValueHow** – Indicate how to determine the minimum value in an analysis. See the `normalize()` command.
- MissingValue** – A numerical value used for missing data in time series. See the `writeStateMod()` command.
- MonthTSID** – Time series identifier for a monthly time series. See the `newDayTSFromMonthAndDayTS()` command.
- MonthValues** – Monthly values used for filling, etc. See the `setConstant()` command.
- MultiplierTSID** – Time series identifier for the time series to multiply the main time series. See the `multiply()` command.

Multiplier – Value(s) to multiply time series value(s) by when processing. See the `shiftTimeByInterval()` command.

NewDataType – The data type for a new time series, typically used where the data type must be explicitly defined and is not determined from a TSID. See also `NewTSID`. See the `changeInterval()` command.

NewInterval – The data interval for a new time series, typically used where the interval must be explicitly defined and is not determined from a TSID. See also `NewTSID`. See the `changeInterval()` command.

NewTimeScale – The new time scale (ACCM for accumulated data, INST for instantaneous data, MEAN for mean data) for a time series. See the `changeInterval()` command.

NewTSID – The new time series identifier for a time series, used with commands that create new time series. See the `copy()` and `newDayTSFromMonthAndDayTS()` commands.

NewUnits – The new data units for a time series. See the `converDataUnits()`, `TS Alias = readDateValue()`, `TS Alias = readMODSIM()`, `TS Alias = readNWSCard()`, and `TS Alias = readRiverWare()` commands.

NewValue – The new value in an analysis. See the `replaceValue()` and `setDataValue()` commands.

NumEquations – Number of equations to use when analyzing data (typically one or monthly equations). See the `fillMOVE2()` and `fillRegression()` commands.

ObsTSID – The time series identifier for an observed time series. See the `lagK()` command.

OdbcDSN – The Open Database Connectivity (ODBC) Data Source Name (DNS) for a database connection. See the `openHydroBase()` command.

OldTimeScale – The old time scale (ACCM for accumulated data, INST for instantaneous data, MEAN for mean data) for a time series. See the `changeInterval()` command.

OutflowStates – The outflow states (initial states) when routing a flow time series. See the `lagK()` command.

OutputEnd – A `DateTime` that indicates the end of output.

OutputFile – The name of an output file to be written, specified using a relative or absolute path.

OutputStart – A `DateTime` that indicates the start of output.

OutputYearType – Indicate the type of year (e.g., calendar year, water year) for output. See the `setOutputYearType()` command.

PatternFile – The file name for a pattern file. See `setPatternFile()` command.

PatternID – An identifier for a pattern (e.g., WET, DRY, AVG). See the `analyzePattern()` and `fillPattern()` commands.

Percentile – Percentile value(s) used when analyzing time series. See the `analyzePattern()` command.

Pos – The position in the time series list. See the `deselectTimeSeries()` and `selectTimeSeries()` commands.

pP – Used with the `ARMA()` command.

Precision – The precision (number of digits after the decimal point) used when comparing values or formatting values for output. See the `compareTimeSeries()`, `writeRiverWare()`, and `writeStateMod()` commands.

QueryEnd – A `DateTime` that indicates the end of a database query. The `InputEnd` parameter is preferred and is used in new commands.

QueryStart – A `DateTime` that indicates the start of database query. The `InputStart` parameter is preferred and is used in new commands.

qQ – Used with the `ARMA()` command.

Read24HourAsDay – Indicate that a time series with data interval `24Hour` should be automatically read as `Day`. See the `readNwsCard()` and `TS Alias = readNwsCard()` commands.

ReadEnd – A `DateTime` that indicates the end of a file read. See the `readNWSCard()` command. The `InputEnd` parameter is preferred.

ReadStart – A `DateTime` that indicates the start of file read. See the `readNWSCard()` command. The `InputStart` parameter is preferred.

RecalcLimits – Recalculate the data limits for a time series, usually when supplemental raw data are being supplied after an initial read. See the `fillUsingDiversionComments()` command (used with the State of Colorado's `HydroBase` input type).

ReferenceDate – The starting date for a time series trace. See the `createTraces()` command.

Reset – A `DateTime` field that indicates when to reset data values in a manipulation. For example, a time series may be set to zero at the start of each year when used with the `cumulate()` command. See the `cumulate()` command.

RunMode – Typically used to indicate whether the command should be processed in batch mode, via the GUI, or both. See the `openHydroBase()`, `processTSProduct()`, and `setWorkingDir()` commands.

Scale – A scale factor to be applied to data. See the `writeRiverWare()` command.

ScaleValue – A numerical value used for scaling time series. See the `scale()` command.

- Scenario** – The scenario to use when forming a TSID. See the `createFromList()` command.
- ScreenLevel** – The level for messages printed to the screen (console). See the `setDebugLevel()` and `setWarningLevel()` commands.
- SelectAllFirst** – Indicate whether to select all time series before processing the command. See the `deselectTimeSeries()` command.
- SearchStart** – A `DateTime` that indicates the search start date/time in an analysis. See the `newStatisticYearTS()` command.
- SetEnd** – A `DateTime` that indicates the end of a set process.
- Set_scale** – See the `writeRiverWare()` command.
- SetStart** – A `DateTime` that indicates the start of set process.
- Set_units** – See the `writeRiverWare()` command.
- ShiftDataHow** – Indicate how to shift time series traces. See the `createTraces()` command.
- SpecifyWeightsHow** – Indicate how to specify weights when processing time series. See the `TS Alias = weighTimeSeries()` command.
- Statistic** – A statistic to evaluate. See the `newStatisticYearTS()` command.
- SubtractTSID** – Time series identifiers for time series to subtract. See the `subtract()` command.
- Suffix** – The suffix to be automatically applied to the name of a file. See the `setLogFile()` command.
- TestValue** – A test value used in an analysis. See the `newStatisticYearTS()` command.
- Timeout** – The timeout when running an external program, after which processing will continue. See the `runProgram()` command.
- Tolerance** – A value (or values) used to indicate an allowable error/difference. See the `compareTimeSeries()` command.
- TransferHow** – Indicate how to transfer data during processing, either according to the date/time or sequentially. The latter can be used when time series do not align on date/time (e.g., due to a shift, leap year, etc.). See the `setFromTS()` command.
- Transformation** – Indicate whether the time series data should be transformed before processing. See the `fillInterpolate()`, `fillMOVE2()`, and `fillRegression()` commands.
- TSID** – Time series identifier, which is used to uniquely identify a time series. In full notation, this consists of a string similar to the following:
Location.DataSource.DataType.Interval.Scenario~InputType~InputName. In abbreviated form, the `InputType` and `InputName` are often omitted. The `InputType` and `InputName` are typically used only by read and write commands. Because a TSID may be long (especially when file

names are used for the `InputName`), an Alias may be assigned to the time series. The `TSID` parameter is typically used in commands for the time series that is being processed. See also `Alias`.

TSID – When used as a command parameter the time series identifier indicates the time series to be processed. The `TSID` or alias can typically be specified. See also `Alias`.

TSID1 – Time series identifier for the first daily time series in a command. See the `fillDayTSFrom2MonthTSAnd1DayTS()` command.

TSID2 – Time series identifier for the first daily time series in a command. See the `fillDayTSFrom2MonthTSAnd1DayTS()` command.

TSID_D1 – Time series identifier for the first time series in a command. See the `TS Alias = relativeDiff()` command.

TSID_D2 – Time series identifier for the second daily time series in a command. See the `fillDayTSFrom2MonthTSAnd1DayTS()` command.

TSID_M1 – Time series identifier for the first monthly time series in a command. See the `fillDayTSFrom2MonthTSAnd1DayTS()` command.

TSID_M2 – Time series identifier for the second monthly time series in a command. See the `fillDayTSFrom2MonthTSAnd1DayTS()` command.

TSList – Indicates how the list of time series is determined. Typical values are `AllTS` (process all time series), `AllMatchingTSID` (process all time series having identifiers that match the `TSID` parameter), `SelectedTS` (process all time series that have been selected with the `selectTimeSeries()` and `deselectTimeSeries()` commands). This parameter is being phased in to allow more flexibility when processing time series.

TSProductFile – The name of a time series product (`TSProduct`) file. See the `processTSProduct()` command.

Units – The data units for a time series. See the `newTimeSeries()`, `TS Alias = readNWSRFSFS5Files()`, and `writeRiverWare()` commands.

Version – Indicates the file version, to allow the software to handle different data formats. See the `readStateModB()` command.

View – Indicate whether a product should be graphically previewed (as opposed to simply writing an output file). See the `processTSProduct()` command.

UseStoredProcedures – Indicates whether stored procedures should be used (versus straight SQL calls). This is being used to transition `HydroBase` queries to stored procedures. See the `openHydroBase()` command.

WarnIfDifferent – Indicates whether a warning should be generated if data differences are detected. See the `compareTimeSeries()` and `compareFiles()` commands.

WarnIfSame – Indicates whether a warning should be generated if data differences are NOT detected. See the `compareTimeSeries()` and `compareFiles()` commands.

Weight – Weight(s) used when processing time series. See the `TS Alias = weighTimeSeries()` command.

Where1, Where2 – Input filter information used when reading/querying data. See the `readHydroBase()` command.

Year – Specify year(s) of interest. See the `TS Alias = weighTimeSeries()` command.