Command Reference:
LookupTimeSeriesFromTable()
Crate new time series by using an input time series and a lookup table
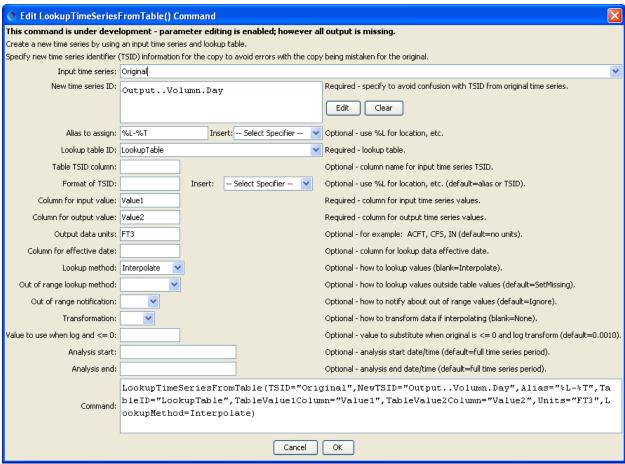Version 10.05.00, 2012-02-05

The `LookupTimeSeriesFromTable()` command uses an input time series and lookup table to create the output time series. Examples of using this command include:

- Converting reservoir elevation to storage and surface area.
- Converting river stage to discharge
- Converting a time series to category values

Each of the above examples uses a lookup table to facilitate the transformation of one time series' values to the new time series. In many cases the table will apply throughout the analysis period. However, it is possible that the table will change over time (e.g., as a stream channel changes or a reservoir fills with silt). In these cases, the command allows for an effective date to be specified – the table then is applicable on and after the specified date/time, until another effective date is encountered. The values in the table will be sorted in ascending order prior to lookup (this impacts the `AnalysisMethod` parameter). This command currently does not handle rating table shifts; however, this capability may be added in the future.

The following dialog is used to edit the command and illustrates the syntax of the command:

LookupTimeSeriesFromTable

LookupTimeSeriesFromTable() Command Editor

The command syntax is as follows:

```
LookupTimeSeriesFromTable(Parameter=Value,…)
```

Command Parameters

Parameter	Description	Default
TSID	The time series identifier or alias for the time series used as input.	None – must be specified.
NewTSID	The time series identifier for the time series being created. Use the **Edit** button to edit the time series identifier parts.	None – must be specified.
Alias	The alias to assign to the time series, as a literal string or using the special formatting characters listed by the command editor. The alias is a short identifier used by other commands to locate time series for processing, as an alternative to the time series identifier (TSID).	No alias.
TableID	The lookup table identifier.	None – must be specified.

Parameter	Description	Default
TableTSIDColumn	Table column name that is used to match the time series identifier for processing.	If not specified, it is assumed that the entire lookup table applies.
TableTSIDFormat	The specification to format the time series identifier to match the TableTSIDColumn column.	Time series alias if available, or otherwise the time series identifier.
TableValue1Column	Table column name for data values that correspond to the input time series (TSID).	None – must be specified.
TableValue2Column	Table column name for data values that correspond to the output (new) time series identifier (NewTSID).	None – must be specified.
Units	The data units to assign to the new time series.	No data units will be assigned.
EffectiveDateColumn	Table column name for the effective date.	If not specified, it is assumed that the lookup data apply to the entire period.
LookupMethod	Indicate how to select the value to use for output: • Interpolate – interpolate between points if input values do not exactly align with table values; if Transformation=Log, then interpolation will use the transformed values • PreviousValue – pick the previous (lower) value in the table • NextValue – pick the next (higher) value in the table	Interpolate
OutOfRange LookupMethod	Indicate the value to use when estimating values that are outside the range of the rating table: • Extrapolate – use the two known values at the end of the table to extrapolate; if Transformation=Log, then extrapolation will use the transformed values • SetMissing – set output to missing • UseEndValue – use the data value on the end	SetMissing
OutOfRange Notification	Indicate the notification to generate when a value is outside the range of the lookup table: • Ignore – do not generate warning or failure message • Warn – generate a warning message • Fail – generate a failure message	Ignore
Transformation	Indicates how to transform the data before interpolation, used when LookupMethod=Interpolate and OutOfRangeMethod=Extrapolate). Specify as None to compare raw values or Log (for $\log_{10}$) to transform values before	None (no transformation).

Parameter	Description	Default
	interpolation and extrapolation. If the `Log` option is used, zero and negative values are replaced with the value specified by the `LEZeroLogValue` parameter value for analysis (missing data values are ignored in the analysis).	
`LEZeroLogValue`	Value to use for data values less than or equal to zero when using a log transformation.	`.0010`
`AnalysisStart`	The date/time to start the analysis.	Analyze the full period.
`AnalysisEnd`	The date/time to end the analysis.	Analyze the full period.