

Command Reference: ReadStateMod()

Read all the time series from a StateMod time series file

Version 10.26.03, 2033-11-16

The `ReadStateMod()` command reads all the time series in a StateMod time series file:

- Standard time series file (see the **StateMod Input Type Appendix**). Single time series can be read by using time series identifier (TSID) commands.
- Water rights files can be read and converted to time series, which is useful for visualization, water supply analysis, and to test well right processing. Considering all water rights for a location based on the administration number results in a step function of decree over time. Monthly and yearly time series use calendar year and a right is active if it is turned on anywhere in the month or year. Free water rights (e.g., those having administration numbers > 90000.00000) are treated like other rights and therefore may not impact the results in the current period because the corresponding appropriation date is in the future. If processing well rights and multiple years of parcel data are processed, this command executes the same logic as the `StateDMI MergeWellRights()` command.
- Output (*.x**) files, currently only *.xop is supported. The data type is set to Operational. Identifiers that include a period will have the period replaced with an underscore.

The following dialog is used to edit the command and illustrates command syntax for general parameters.

Edit ReadStateMod() Command

Read all the time series from a StateMod text input or output file (use `ReadStateModB()` to read binary output file).
The data source and data type will be blank in the resulting time series identifier (TSID).
Specify a full or relative path (relative to working directory).
The working directory is: C:\DevRiv\TSTool_SourceBuild\TSTool\test\regression\commands\general\ReadStateMod

StateMod file to read: Data\Sp2008L_H2.xop Browse

Input start: 1950-07 Optional - overrides the global input start.

Input end: 1953-11 Optional - overrides the global input end.

Alias to assign: -- Select Specifier -- => ;{ts:Destination} Optional - use %L for location, \${ts:property}, etc. (default=no alias).

Specify parameters specific to file type

Standard Time Series Water Right Input File Output (.x*) File

Standard time series files are used for daily, monthly, and average monthly time series.
This format includes most of the StateMod input time series files (*.ddh, *.rih, *.ddm, etc.) and *.stm files.

Command:
`ReadStateMod (InputFile="Data\Sp2008L_H2.xop", InputStart="1950-07", InputEnd="1953-11", Alias="%L-${ts:Source1}-${ts:Destination}")`

Add Working Directory Cancel OK

ReadStateMod

ReadStateMod() Command Editor

The following figure illustrates the command editor for water right file parameters:

Specify parameters specific to file type

Standard Time Series Water Right Input File **Output (.x*) File**

Water right files can be read to create a cumulative step-function of decrees for a location.
 The following parameters are enabled if the StateMod file has a file extension for water right files (*.wer, *.ddr, etc.).
 Specify the desired interval for the output water right time series.
 Water rights can be aggregated by location, for example well rights associated with parcel.
 Well right/parcel relationships can change every year. Specify a single year to extract rights for that year.

Interval: Optional for rights - interval for resulting time series (default=Year).
 Spatial aggregation: Optional for rights - spatial aggregation (default=Location).
 Parcel year: Optional for well rights - read a single irrigated lands year (default=read all).

ReadStateMod_Rights

ReadStateMod() Command Editor for Water Right Files

The following figure illustrates the command editor for output file parameters:

Specify parameters specific to file type

Standard Time Series Water Right Input File **Output (.x*) File**

StateMod output files have standard file extensions, which are used to determine how to read the file.
 Currently only the .xop file is handled. Use the ReadStateModB() command to read from the binary output files.
 Periods in the location ID will be replaced with underscores so as to not corrupt the TSID.

ReadStateMod_Rights

ReadStateMod() Command Editor for Output Files

The command syntax is as follows:

```
ReadStateMod (Parameter=Value, ...)
```

Command Parameters

Parameter	Description	Default
InputFile	The name of the StateMod time series file to read, surrounded by double quotes. The path to the file can be absolute or relative to the working directory. Global property values can be inserted using the syntax <code>\${PropertyName}</code> (see also the <code>SetProperty()</code> command).	None – must be specified.
InputStart	The start of the period to read data – specify if the period should be different from the global query period. Specify to a precision that matches the data. If reading water rights, the output time series will start on this date.	Use the global query period or if not specified read all data. The default for water rights is the date of the first right.

InputEnd	The end of the period to read data – specify if the period should be different from the global query period. Specify to a precision that matches the data. If reading water rights, the output time series will end on this date.	Use the global query period or if not specified read all data. The default for water rights is the date of the last right.
Alias	The alias to assign to the time series that are read. Use the format choices and other characters to define a unique alias. Time series properties can be specified with <code>{ts:property}</code> syntax. In particular, the properties prior to each time series in output (*.x) files are available for use in the alias.	No alias is assigned.
Interval	When reading a water right file, specify the interval for the resulting time series, one of Day, Month, or Year.	Year
Spatial Aggregation	When reading a water right file, indicate how time series are to be aggregated spatially, one of: <ul style="list-style-type: none"> Location – aggregate by the station identifier. Parcel – (only used with well rights) aggregate based on the parcel number and parcel year. None – do not aggregate spatially, which will result in constant value time series for each water right. 	Location
ParcelYear	When processing a well water right file, indicate the year of parcel data to process. Parcel configurations change from year to year, and a single year of parcel data can be processed if desired.	Process all parcel years.

A sample command file is as follows:

```
ReadStateMod(InputFile="ym2004.ddh")
```

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