Command Reference: ReadTableFromFixedFormatFile()

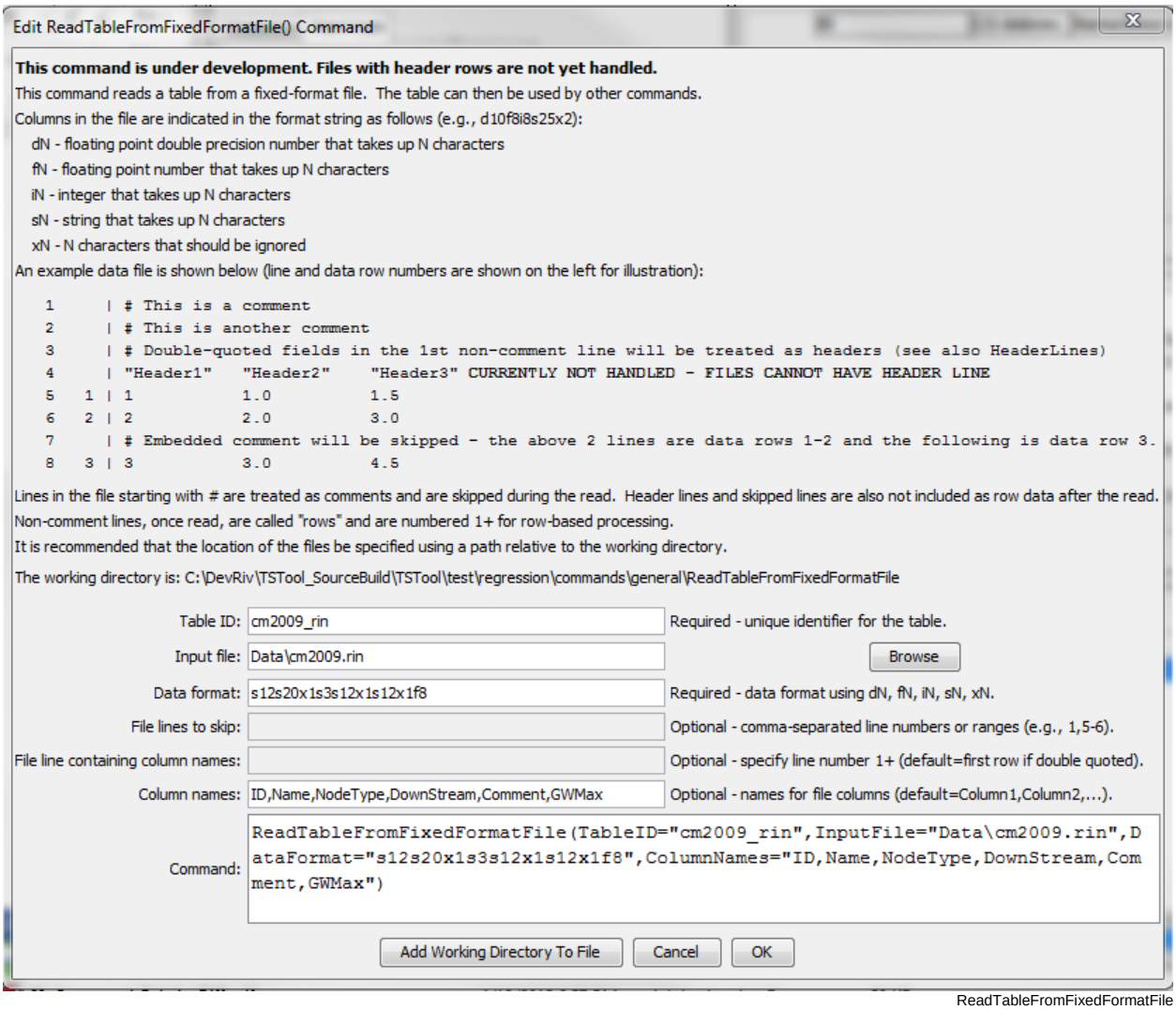
Read a table from a fixed-format file

Version 10.28.00, 2014-03-31

The `ReadTableFromFixedFormatFile()` command reads a table from a fixed-format file, for example input files to scientific models. Columns are indicated by a column type and width. Files have the following characteristics:

- Comments indicated by lines starting with `#` are stripped during the read.
- Extraneous lines in the file can be skipped during the read using the `SkipLines` parameter (not yet implemented).
- Files cannot have header lines (see the `ColumnNames` parameter) – header lines will be handled in the future.
- Data in columns are assumed to be of consistent type (i.e., all numerical data or all text), based on the format specifier (see `DataFormat` parameter).
- Missing values can be indicated by blanks in the input file.
- Values in adjacent columns that have no intervening space are read properly.

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



ReadTableFromFixedFormatFile

ReadTableFromFixedFormatFile() Command Editor

The command syntax is as follows:

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

Command Parameters

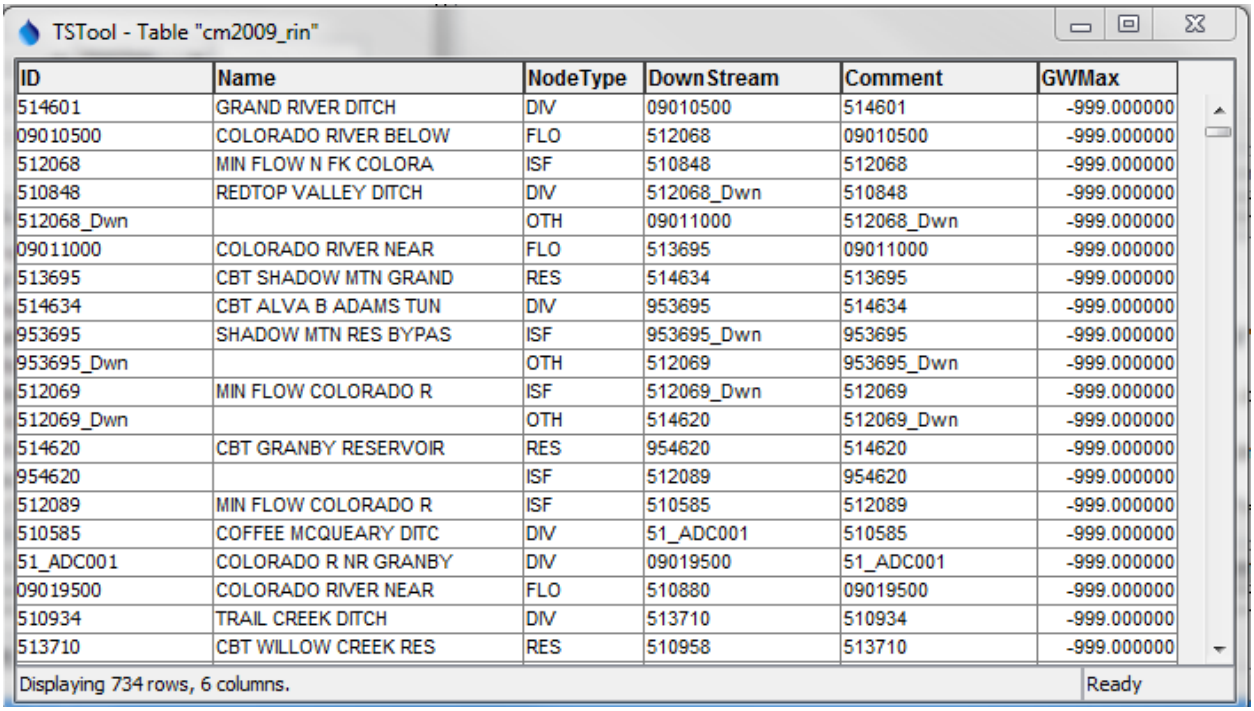
Parameter	Description	Default
`TableID`	Identifier to assign to the table that is read, which allows the table data to be used with other commands.	None – must be specified.
`InputFile`	The name of the file to read, as an absolute path or relative to the command file location.	None – must be specified.
`DataFormat`	The data format, using a combination of the following specifiers (`N` is a number to be inserted and indicates the column width): • `dN` – floating point double-precision number `N` characters wide	None – must be specified.

Parameter	Description	Default
	• fN – floating point number N characters wide • iN – integer N characters wide • sN – string N characters wide • xN – N characters that should be ignored	
SkipLines	Indicates the number of lines in the file to skip, which otherwise would interfere with reading row data. Individual row numbers and ranges can be specified, for example: 1,5-6,17 Not yet implemented.	No lines are skipped.
HeaderLines	Indicate the rows that include header information, which should be used for column names. Currently this should only be one row, although a range may be fully supported in the future. Not yet implemented.	If the first non-comment line contains quoted field names, they are assumed to be headers. Otherwise, no headers are read.
ColumnNames	The names to assign to columns that are read.	Column1, Column2, …

The following example illustrates a fixed-format file. In this case the name includes a string name and a "node type" separated by an underscore. The following data format can be specified to ignore the underscore and read the parts: s12s20x1s3s12x1s12x1f8. The ColumnNames parameter is used to assign column names to the output table.

```
#> ******************************************************
#>  StateMod River Network File
#>  WARNING - if .net file is available, it should be edited and the .rin
#>  file should be created from the .net
#>
#>  format:  (a12, a24, a12, 1x, a12, 1x, f8.0)
#>
#>  ID           cstaid:  Station ID
#>  Name         stanam:  Station name
#>  Downstream   cstadn:  Downstream node ID
#>  Comment     comment:  Alternate identifier/comment.
#>  GWMax        gwmaxr:  Max recharge limit (cfs) - see iwell in control file.
#>
#>   ID                Name          DownStream     Comment    GWMax
#>---------eb----------------------eb----------exb----------exb------e
#>
#>EndHeader
#>
514601      GRAND RIVER DITCH    _DIV09010500     514601           -999
09010500    COLORADO RIVER BELOW_FLO512068        09010500         -999
512068      MIN FLOW N FK COLORA_ISF510848        512068           -999
510848      REDTOP VALLEY DITCH _DIV512068_Dwn    510848           -999
512068_Dwn                      _OTH09011000      512068_Dwn       -999
09011000    COLORADO RIVER NEAR _FLO513695        09011000         -999
513695      CBT SHADOW MTN GRAND_RES514634        513695           -999
514634      CBT ALVA B ADAMS TUN_DIV953695        514634           -999
953695      SHADOW MTN RES BYPAS_ISF953695_Dwn    953695           -999
953695_Dwn                      _OTH512069        953695_Dwn       -999
```

The following table in TSTool illustrates the resulting output:



TSTool - Table "cm2009_rin"

ID	Name	NodeType	DownStream	Comment	GWMax
514601	GRAND RIVER DITCH	DIV	09010500	514601	-999.000000
09010500	COLORADO RIVER BELOW	FLO	512068	09010500	-999.000000
512068	MIN FLOW N FK COLORA	ISF	510848	512068	-999.000000
510848	REDTOP VALLEY DITCH	DIV	512068_Dwn	510848	-999.000000
512068_Dwn		OTH	09011000	512068_Dwn	-999.000000
09011000	COLORADO RIVER NEAR	FLO	513695	09011000	-999.000000
513695	CBT SHADOW MTN GRAND	RES	514634	513695	-999.000000
514634	CBT ALVA B ADAMS TUN	DIV	953695	514634	-999.000000
953695	SHADOW MTN RES BYPAS	ISF	953695_Dwn	953695	-999.000000
953695_Dwn		OTH	512069	953695_Dwn	-999.000000
512069	MIN FLOW COLORADO R	ISF	512069_Dwn	512069	-999.000000
512069_Dwn		OTH	514620	512069_Dwn	-999.000000
514620	CBT GRANBY RESERVOIR	RES	954620	514620	-999.000000
954620		ISF	512089	954620	-999.000000
512089	MIN FLOW COLORADO R	ISF	510585	512089	-999.000000
510585	COFFEE MCQUEARY DITC	DIV	51_ADC001	510585	-999.000000
51_ADC001	COLORADO R NR GRANBY	DIV	09019500	51_ADC001	-999.000000
09019500	COLORADO RIVER NEAR	FLO	510880	09019500	-999.000000
510934	TRAIL CREEK DITCH	DIV	513710	510934	-999.000000
513710	CBT WILLOW CREEK RES	RES	510958	513710	-999.000000

Displaying 734 rows, 6 columns. Ready

ReadTableFromFixedFormatFile_Output

ReadTableFromFixedFormatFile() Output Table Example