Command Reference: ReadHydroBase()

Read time series from a HydroBase database

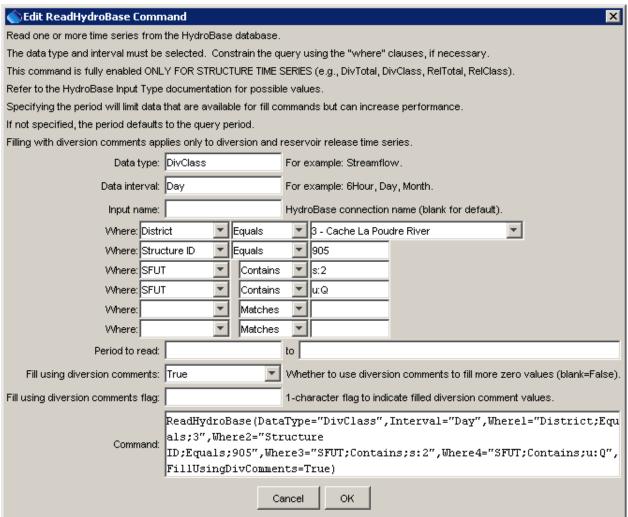
/ersion 08.15.00, 2008-05-09

The ReadHydroBase () command reads one or more time series from the HydroBase database (see the **HydroBase Input Type Appendix**).

The following special actions occur, depending on data type:

- 1. Daily diversion (DivTotal and DivClass) and reservoir release (RelTotal and RelClass) time series have their values automatically carried forward to fill data within irrigation years (Nov to Oct). HydroBase only stores full months of data when non-zero observations or non-zero filled values occur in a month. Therefore, this filling action should only provide additional zero values. Irrigation years with no observations remain as missing after the read. See the FillHistMonthAverage() command, which is often used to fill completely missing years.
- 2. Daily, monthly, and yearly diversion and reservoir release time series can optionally be filled using diversion comments, which indicate when irritation years should be treated as missing. See the FillusingDivComments parameter below. Note that diversion comments should not conflict with more detailed records but and provide additional information. The older FillusingDivComments() command is also available for filling.

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



ReadHydroBase() Command Editor

ReadHydroBase

The **Data type**, **Data interval**, and **Where** input fields are similar to those from the main TSTool interface. However, whereas the interactive interface first requires a query to find the matching time series list and then an interactive select for specific time series identifiers, the ReadHydroBase() command reads in one step the time series list and the corresponding data for the time series. This can greatly shorten commands files and simplify command logic, especially when processing large amounts of data.

Currently the **Data type** and **Data interval** must be entered manually (drop-down choices are not available), according to the **HydroBase Input Type Appendix**. Currently, only the structure data types (in particular diversions) are supported in the above dialog and have been tested. Support for other data types is under development.

The command syntax is as follows:

ReadHydroBase(Parameter=Value,...)

Command Parameters

Parameter	Description	Default
DataType	The data type to be queried, as documented in the	None – must
	HydroBase Input Type Appendix. The following	be specified.
	conditions apply:	
	 For diversions, use DivClass without the 	
	SFUT sub-type. The SFUT sub-type will be	
	added after data are queried.	
	• For reservoir releases, use RelClass without	
	the SFUT sub-type. The SFUT sub-type will	
	be added after data are queried.	
Interval	The data interval for the time series, as	None – must
	documented in the HydroBase Input Type	be specified.
	Appendix (e.g. Day, Month, Year).	
InputName	The HydroBase database connection input name to	Use the
	use for the connection, as initialized in	default
	OpenHydroBase(), which allows reading from	HydroBase
	more than one HydroBase in the same commands	connection.
III o roo N	file.	TC
WhereN	The "where" clauses to be applied when querying	If not
	data, matching the values in the Where fields in the	specified, the
	command editor dialog and the TSTool main	query will
	interface. The parameters should be named	not be
	Where1, Where2, etc., with a gap resulting in the	limited and
	remaining items being ignored. The format of each value is:	very large numbers of
	value is.	time series
	"Item;Operator;Value"	may be
	reem, operator, varae	queried.
	Where Item indicates a data field to be filtered on,	querieu.
	Operator is the type of constraint, and Value is the	
	value to be checked when querying.	
	1 3 8	
	Warning: Currently the >= and <= operators will	
	produce errors – this issue is being evaluated.	
	Work around by using the Less Than and	
	Greater Than operators with appropriate	
	Value.	
InputStart	Start of the period to query, specified as a date/time	Read all
	with a precision that matches the requested data	available
	interval.	data.
InputEnd	End of the period to query, specified as a date/time	Read all
	with a precision that matches the requested data	available
	interval.	data.
FillUsingDivComments	Indicate whether to fill diversion and reservoir	False
	release time series using diversion comments.	

Parameter	Description	Default
FillUsingDivCommentsFlag	If specified as a single character, data flags will be	No flag is
	enabled for the time series and each filled value	assigned.
	will be tagged with the specified character. The	
	flag can then be used later to label graphs, etc. The	
	flag will be appended to existing flags if necessary.	

A sample command file is as follows (read all reservoir releases to structure 0300905):

```
readHydroBase(DataType="DivClass",Interval="Day",
Where1="District;Equals;3",
Where2="Structure ID;Equals;905",Where3="SFUT;Contains;s:2")
```