## Command Reference: Subtract()

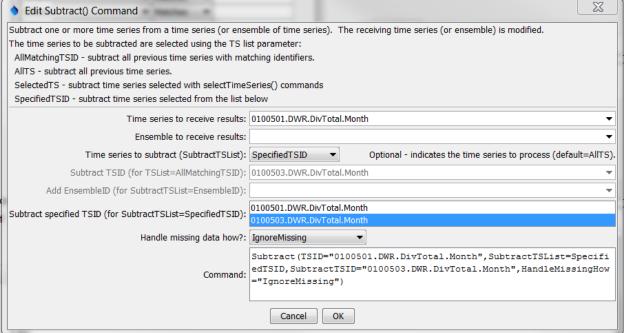
## Subtract one or more time series from another time series

Version 11.04.00, 2015-06-30

The Subtract () command subtracts time series of the same interval. The receiving time series will have data values set to its original values minus the data values in the indicated time series. If an ensemble is being processed, another ensemble can be subtracted, a single time series can be subtracted from all time series in the ensemble, or a list of time series can be subtracted from the ensemble (the number in the list must match the number of time series in the ensemble).

This command will generate an error if the time series do not have compatible units. If the units are compatible but are not the same (e.g., IN and FT), then the units of the part will be converted to the units of the result before subtraction. Missing data in the parts can be ignored (do not set the result to missing) or can set missing values in the result. The user should consider the implications of ignoring missing data. Time series being subtracted must have the same data interval.

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



Subtract() Command Editor

Subtract

The command syntax is as follows:

Subtract (Parameter=Value, ...)

Subtract() Command TSTool Documentation

## **Command Parameters**

Parameter	Description	Default
TSID	The time series identifier or alias for the time series to receive	TSID or EnsembleID
	the result. Can be specified using processor \${Property}.	must be specified.
EnsembleID	The ensemble to receive the result, if processing an ensemble.	TSID or EnsembleID
	Can be specified using processor \${Property}.	must be specified.
Subtract	Indicates how the list of time series is specified, one of:	AllTS (the time series
TSList	• AllTS – all time series before the command.	receiving the sum will
	• AllMatchingTSID – all time series that match the	not be subtracted from
	AddTSID (single TSID or TSID with wildcards) will be subtracted.	itself)
	• EnsembleID – the time series from ensemble will be subtracted.	
	• LastMatchingTSID – the last time series that matches	
	the TSID (single TSID or TSID with wildcards) will be subtracted.	
	• SelectedTS – the time series are those selected with the	
	SelectTimeSeries() command.	
	• SpecifiedTSID – the specified list of time series given	
	by the SubtractTSID parameter. If using version	
	8.02.00 or earlier, use SpecifiedTS.	
SubtractTSID	If the SubtractTSList parameter is SpecifiedTSID,	Must be specified if
	provide the list of time series identifiers (or alias) to subtract,	TSList=
	separated by commas. If the SubtractTSList parameter is	SpecifiedTSID,
	AllMatchingTSID, specify a single TSID or a TSID with	ignored otherwise.
	wildcards. Can be specified using processor \${Property}.	
Subtract	If the EnsembleID parameter is specified, providing an	Use if an ensemble is
EnsembleID	ensemble ID will subtract the ensembles. Can be specified using	being subtracted from
	<pre>processor \${Property}.</pre>	another ensemble.
Handle	Indicates how to handle missing data in a time series:	IgnoreMissing
MissingHow	• IgnoreMissing – create a result even if missing data are	
	encountered in one or more time series – this option is not as rigorous as the others	
	SetMissingIfOtherMissing – set the result missing	
	if any of the other time series values is missing	
	• SetMissingIfAnyMissing – set the result missing if any time series value involved is missing	

A sample command file to subtract data from the State of Colorado's HydroBase is as follows:

```
# 0100501 - EMPIRE DITCH
0100501.DWR.DivTotal.Month~HydroBase
# 0100503 - RIVERSIDE CANAL
0100503.DWR.DivTotal.Month~HydroBase
Subtract(TSID="0100501.DWR.DivTotal.Month", SubtractTSList=SpecifiedTSID,
SubtractTSID="0100503.DWR.DivTotal.Month",
HandleMissingHow="IgnoreMissing")
```