
Command Reference: SetWellSystemFromList()

Set well system parts from data in a list file

StateCU and StateMod Command

Version 4.00.00, 2016-05-19

The `SetWellSystemFromList()` command sets well system part identifier data for a well (a CU Location that corresponds to a location with well supply, or StateMod well station). Well systems are specified using a list of part identifiers as follows:

- Part type is `Ditch` – the collection includes wells that are associated with a list of ditches, identified using ditch water district identifiers (WDIDs). The list of ditches is used for the full period.
- Part type is `Parcel` – the collection includes wells that are associated with a list of parcels. The division and year must be specified in the command because well to parcel relationships are determined for specific years.
- Part type is `Well` – the collection includes wells identified by well WDID or well permit receipt. The `PartIdTypeColumn` parameter must be specified to indicate the part ID type.

To facilitate processing, the list of parts is specified in a delimited list file. Systems by convention have their water rights fully represented in output – to aggregate water rights at a location, use an aggregate (see the similar `Aggregate` commands). See also the **StateDMI Introduction** chapter, which provides additional information about systems and other modeling conventions. System information should be specified after well locations are defined and before their use in other processing, such as reading data from HydroBase.

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

Edit SetWellSystemFromList() Command

This command sets a Well System location's information from a list file.
The Well aggregate part type "Parcel" is provided for historical compatibility but may be phased out in favor of using Well with WDID and Receipt.
 Each System is a location where individual parts are combined into a single feature.
 An "Aggregate" is used with SetWellAggregateFromList() when water rights will be aggregated into classes.
 A "System" is used with SetWellSystemFromList() when individual water rights will be maintained.
 For example, well-only groups of wells or parcels may be grouped as a single identifier.
 Wells associated with ditches are grouped by specifying ditch identifiers for the parts.
 When grouping wells using parcels, specify parcel identifiers for the parts and indicate the year and water division for the parcel data.
 When grouping wells using well identifiers (WDIDs or permit receipt numbers), specify the column for PartIDTypeColumn.
 Columns should be delimited by commas.
 It is recommended that the location of the file be specified using a path relative to the working directory.
 The working directory is: C:\owf-gitrepos\cdss-app-statedmi\test\regression\commands\SetWellSystemFromList

List file:

System part type: Required - the type of features being aggregated.

Year: Required if part type is Parcel - year for the parcels.

Water division (Div): Required if part type is Parcel - water division for the parcels.

ID column: Required - column for the Well System IDs.

Name column: Optional - column for the Well System name.

Part IDs column: Required - first/only column for the part IDs.

Part ID type column: Required for Well System part type.

Parts listed how: Required - are part IDs listed in row or column?

Part IDs column (max): Optional - maximum column for part IDs if in row (default is use all).

If not found: Optional - indicate action if no ID match is found (default=Warn).

Command:
 SetWellSystemFromList (ListFile="Data\SP_GWAgg_04212016.csv", PartType=Well, IDCol=1, PartIDsCol=2, PartIDTypeColumn="3", PartsListedHow=InColumn)

SetWellSystemFromList

SetWellSystemFromList() Command Editor

The command syntax is as follows:

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

Command Parameters

Parameter	Description	Default
ListFile	The name of the input file to read, surrounded by double quotes.	None – must be specified.
PartType	Indicate the type of features being aggregated and specified by PartIDs, one of: <ul style="list-style-type: none"> Ditch – the PartIDs (ditch WDIDs) indicate ditch service areas supplemented by wells. Parcel – the PartIDs (parcel numbers from GIS processing) indicate parcels irrigated by wells, with no surface water supply. 	None – must be specified.

Parameter	Description	Default
	<ul style="list-style-type: none"> Well – the PartIDs indicate wells (WDIDs and permit receipt), with no surface water supply. 	
Year	The year defining the parcels.	Required when PartType is Parcel because parcel identifiers from well matching are specific to the data year.
Div	Water division for the parcels in the system.	Required when PartType is Parcel because parcels require the division.
IDCol	The column number (1+) containing the well system identifiers.	None – must be specified.
NameCol	The column number (1+) containing the well system name.	None – optional (name will remain as before).
PartIDsCol	The column number (1+) for the first column having part identifiers.	None – must be specified.
PartIdTypeColumn	The column number (1+) or name for the column having part ID type. Recognized values in the column cells are WDID to indicate water district identifier and Receipt indicating a well permit receipt. Values are not case-sensitive.	Required when specifying system using Well part type.
PartsListedHow	If InRow, it is expected that all parts defining a system are listed in the same row. If InColumn, it is expected that the parts defining a system are listed one per row, with multiple rows defining the full system (PartIDsColMax is ignored in this case).	None – must be specified.
PartIDsColMax	The column number (1+) for the last column having part identifiers. Use if extra columns on the right need to be excluded from the list.	Use all available non-blank columns starting with PartIDsCol.
IfNotFound	<p>Used for error handling, one of the following:</p> <ul style="list-style-type: none"> Fail – generate a failure message if the aggregate identifier is not matched Ignore – ignore (don't add and don't generate a message) if the aggregate identifier is not matched Warn – generate a warning message if the aggregate identifier is not matched 	Warn

The following example illustrates a list file is used with PartType=Parcel and PartsListedHow=InColumn:

```
"UZONES", "PARCEL"
20URF0,16831
20URF0,16832
20URF0,16834
...
20URF0,18606
20URF24,10295
20URF24,10318
...
```

The following example illustrates a list file is used with PartType=Ditch and PartsListedHow=InColumn, with the name being provided in column 2:

```
# System_ID/Agg_Name/WDID
01_ADP037,South Platte River below Kersey Co North 2,0100643
01_ADP037,South Platte River below Kersey Co North 2,0100644
01_ADP037,South Platte River below Kersey Co North 2,0100835
01_ADP037,South Platte River below Kersey Co North 2,0104486
```

The following example illustrates a list file for PartType=Well and PartsListedHow=InColumn, with the part ID type specified in column 2, and part ID type in column 3:

```
# List file created by intersecting the well coverages (that are included in the CDSS
# irrigated acreage GDB) with the GW Aggregate Coverage,
# removing duplicates, and limiting the list to only wells tied to a GW only irrigated
# parcel in any of the acreage snapshots.
# Files/versions used include:
#   HydroBase_CO_20160407
#   SPDSS GIS Coverages 3/30/2016
#   Aggregate_03_2008.shp
#GWID,WELL_ID,ID_TYPE
01_AWP022,0000072A,RECEIPT
01_AWP022,0000218A,RECEIPT
01_AWP012,0003643,RECEIPT
01_AWP022,0004850C,RECEIPT
03_AWP001,0013828,RECEIPT
01_AWP003,0105001,WDID
01_AWP003,0105003,WDID
01_AWP002,0105005,WDID
01_AWP002,0105006,WDID
01_AWP027,0105012,WDID
```