

---

## 5 Viewing and Editing Data

Version 07.04.00, 2013-04-18

The **Data** menu allows data sets to be viewed and edited, with data being organized according to the major StateMod data types:



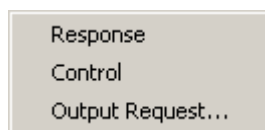
Menu\_Data

The **Data** menu items are listed in approximately the order of creation, similar to the CDSS StateDMI software. In particular, components that depend on other components are generally listed last.

The primary components each have a main display window, which may display data from one or more StateMod data files. For example, diversion data contains diversion station information, water rights, delay tables, and associated time series. Consequently, there are fewer **Data** menu items than there are StateMod files. See the StateMod software documentation for information about the model data. The StateMod GUI allows changes to data but in many cases cannot check for data connections (e.g., it does not know which delay table to use for return flows when adding a new structure). It is therefore important that users understand the implications of editing data and realize that changes in more than one window may be necessary for a working data set. The data windows do not allow adding new model features or deleting existing features. To do so, use the **Edit** menu, which enforces consistency between the model network and other files. Each edit feature is described in the following sections.

### 5.1 Control Data

The **Data...Control** menu allows viewing/editing of control file information:



Menu\_Data\_Control

Control data consists of important properties and also organizes the files in the data set. Each control data component is described in the following sections.

### 5.1.1 Response File

The **Data...Control...Response** menu displays the response file contents, which lists files being used for the current data set:

**StateMod - rgtwd - Response File Contents**

To rename a data set component, select a row and either type a new file name or use the Browse button.  
 If ARE DATA MODIFIED? is YES, data for the component have been modified by the file has not been written  
 Consequently, StateMod will not recognize the changes until the data are saved with File...Save.  
 The file with the original filename will remain even after the new file is saved.  
 Data set base name (from \*.rsp): rgtwd  
 Data set directory: C:\CDSS\_BeforeDVD\statemod\data\rgtwd\day2

DATA GROUP	DATA SET COMPONENT	FILE NAME	ARE DATA MODIFIED?
Control Data	Response	rgtwd.rsp	
Control Data	Control	rgTWD.ctl	
Control Data	Output Request	sam.out	
Stream Gage Data	Stream Gage Stations	rgTW.ris	
Stream Gage Data	Stream Gage Historical TS (Monthly)	rgTW.rih	
Stream Gage Data	Stream Gage Historical TS (Daily)	rgTWD.rhy	
Stream Gage Data	Stream Gage Base TS (Monthly)	rgtw.rim	
Stream Gage Data	Stream Gage Base TS (Daily)	rgTWD.rid	
Delay Table (Monthly) Data	Delay Tables (Monthly)	rgTW.dly	YES
Delay Table (Daily) Data	Delay Tables (Daily)	rgTwD.dld	
Diversion Data	Diversion Stations	rgTW.dds	
Diversion Data	Diversion Rights	rgTW.ddr	
Diversion Data	Diversion Historical TS (Monthly)	rgTW.ddh	
Diversion Data	Diversion Historical TS (Daily)	rgTWD.dhy	
Diversion Data	Diversion Demand TS (Monthly)	rgTW.ddm	
Diversion Data	Diversion Demand TS Override (Monthly)		
Diversion Data	Diversion Demand TS (Average Monthly)		
Diversion Data	Diversion Demand TS (Daily)		
Diversion Data	Irrigation Practice TS (Yearly)	rgtsp	
Diversion Data	Consumptive Water Requirement TS (Monthly)	rg.iwr	
Diversion Data	Consumptive Water Requirement TS (Daily)	rgTWD.iwd	
Diversion Data	Soil Moisture	rg.par	
Precipitation Data	Precipitation Time Series (Monthly)		
Evaporation Data	Evaporation Time Series (Monthly)	rgTW.eva	
Reservoir Data	Reservoir Stations	rgTW.res	
Reservoir Data	Reservoir Rights	rgTW.rer	
Reservoir Data	Reservoir Content TS, End of Month (Monthly)	rgTW.eom	
Reservoir Data	Reservoir Content TS, End of Day (Daily)	rgTWD.eoy	
Reservoir Data	Reservoir Target TS (Monthly)	rgTW.tar	
Reservoir Data	Reservoir Target TS (Daily)		
Instream Flow Data	Instream Flow Stations	rgTW.ifs	
Instream Flow Data	Instream Flow Rights	rgTW.ifr	
Instream Flow Data	Instream Flow Demand TS (Monthly)	rgTW.ifm	
Instream Flow Data	Instream Flow Demand TS (Average Monthly)	rgTW.ifa	
Instream Flow Data	Instream Flow Demand TS (Daily)		
Well Data	Well Stations	rgTW.wes	
Well Data	Well Rights	rgTW.wer	
Well Data	Well Historical Pumping TS (Monthly)	rgTW.weh	
Well Data	Well Historical Pumping TS (Daily)	rgTWD.why	
Well Data	Well Demand TS (Monthly)	rgTW.wem	
Well Data	Well Demand TS (Daily)		
Stream Estimate Data	Stream Estimate Stations	rgTW.ris	
Stream Estimate Data	Stream Estimate Coefficients	rgTW.rib	
River Network Data	River Network	rgTW.rin	
River Network Data	Network (Graphical)	rgtw.net	
Operational Data	Operational Rights	rgTW.opr	YES
Spatial Data	GeoView Project	gis\rgTW_StateMod.gvp	

Browse... Apply Cancel Close

Data\_Control\_Response

**Response File Data Window**

The response file display shows the primary data group, the specific data set component, and the corresponding file name in the response file. Relative paths are encouraged to promote portability of data sets. The **ARE DATA MODIFIED?** column indicates if data files have been modified within the StateMod GUI. If **YES** is indicated, then the associated files will need to be saved with **File...Save** before the StateMod software will recognize the changes in a run. If model file formats change over time, the data files may automatically be tagged as being modified when read. Saving the files will result in using the new file format.

There is typically no need to modify filenames and consistent filenames are encouraged. The names of files in a data set typically have the same base name, with file extensions following StateMod modeling conventions. In older versions of StateMod, it was often necessary to use an empty “dummy” file in the response file. This is no longer needed and the above figure illustrates how omitting a file name indicates that the data component is not used in the data set.

### 5.1.2 Control File

The **Data...Control...Control** menu allows viewing/editing the StateMod control data, which consists primarily of string and numeric properties for the data set. The control data are presented using a tabbed panel window, as shown in the following figures.

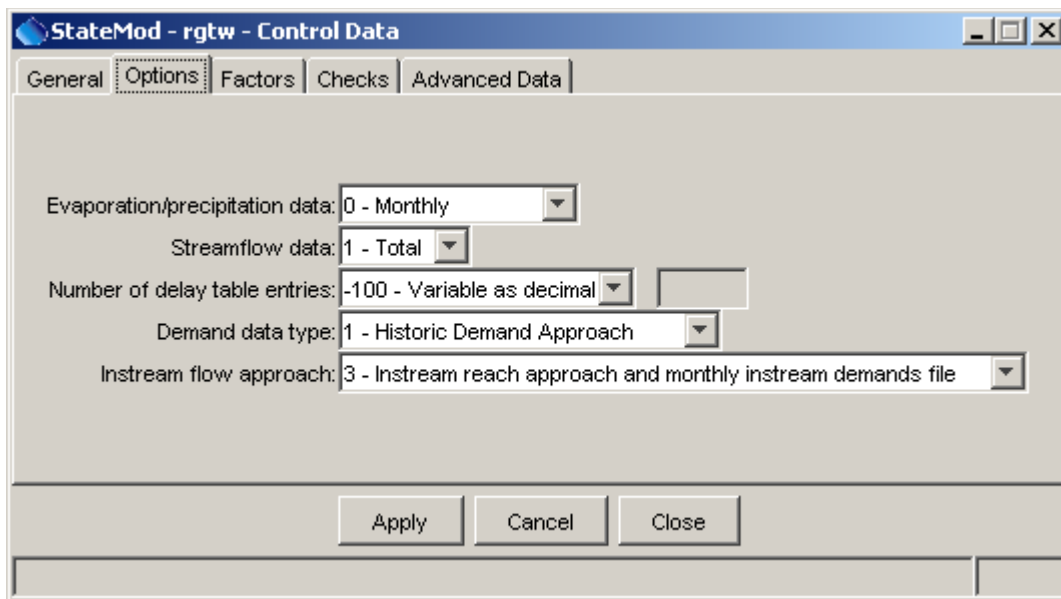
The screenshot shows a dialog box titled "StateMod - rgw - Control Data" with a blue title bar and standard Windows window controls. It features a tabbed interface with five tabs: "General", "Options", "Factors", "Checks", and "Advanced Data". The "General" tab is selected. The dialog contains several input fields and dropdown menus for configuring control data. The fields are as follows:

Field	Value
Title (1):	Rio Grande River Basin
Title (2):	Historic Scenario - Task 8 Model (RGTV)
Data start:	1950
Data end:	1997
Run start:	1950
Run end:	1997
Output units:	2 - ACFT for all
Year type:	CYR - Calendar Year (Jan - Dec)

Below the input fields, a note states: "Data start and end are determined from historical input time series." At the bottom of the dialog, there are three buttons: "Apply", "Cancel", and "Close".

Data\_Control\_Control\_General

**Control Data – General Properties**

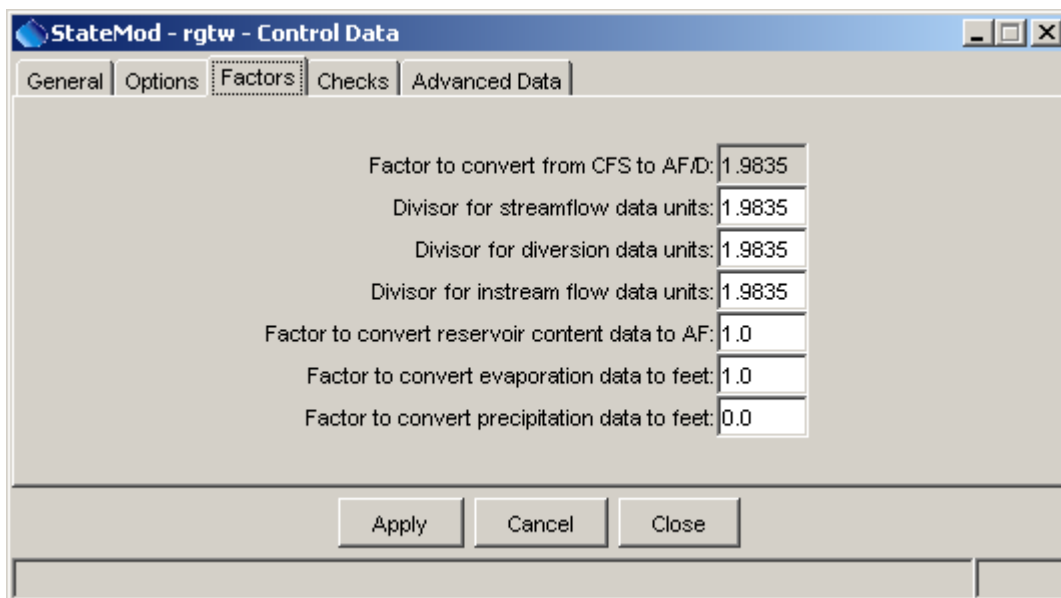


The image shows the 'StateMod - rgw - Control Data' dialog box with the 'Options' tab selected. The dialog has five tabs: General, Options, Factors, Checks, and Advanced Data. The Options tab contains the following settings:

- Evaporation/precipitation data: 0 - Monthly
- Streamflow data: 1 - Total
- Number of delay table entries: -100 - Variable as decimal
- Demand data type: 1 - Historic Demand Approach
- Instream flow approach: 3 - Instream reach approach and monthly instream demands file

At the bottom of the dialog are three buttons: Apply, Cancel, and Close.

Data\_Control\_Control\_Options

**Control Data – Option Properties**

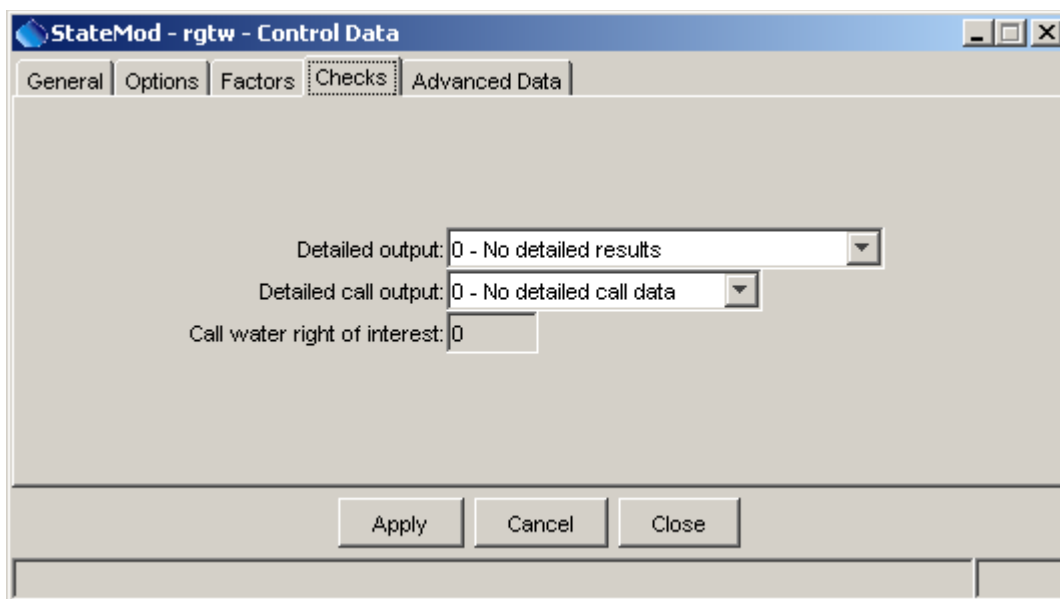
The image shows the 'StateMod - rgw - Control Data' dialog box with the 'Factors' tab selected. The dialog has five tabs: General, Options, Factors, Checks, and Advanced Data. The Factors tab contains the following conversion factors:

- Factor to convert from CFS to AF/D: 1.9835
- Divisor for streamflow data units: 1.9835
- Divisor for diversion data units: 1.9835
- Divisor for instream flow data units: 1.9835
- Factor to convert reservoir content data to AF: 1.0
- Factor to convert evaporation data to feet: 1.0
- Factor to convert precipitation data to feet: 0.0

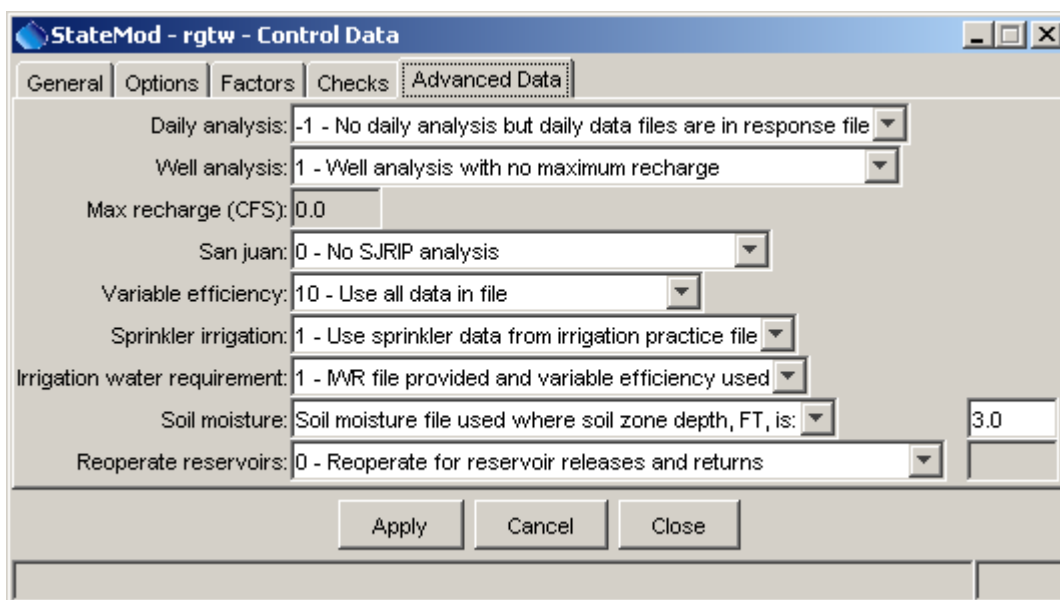
At the bottom of the dialog are three buttons: Apply, Cancel, and Close.

Data\_Control\_Control\_Factors

**Control Data – Conversion Factor Properties**



Data\_Control\_Control\_Checks

**Control Data – Data Check Properties**

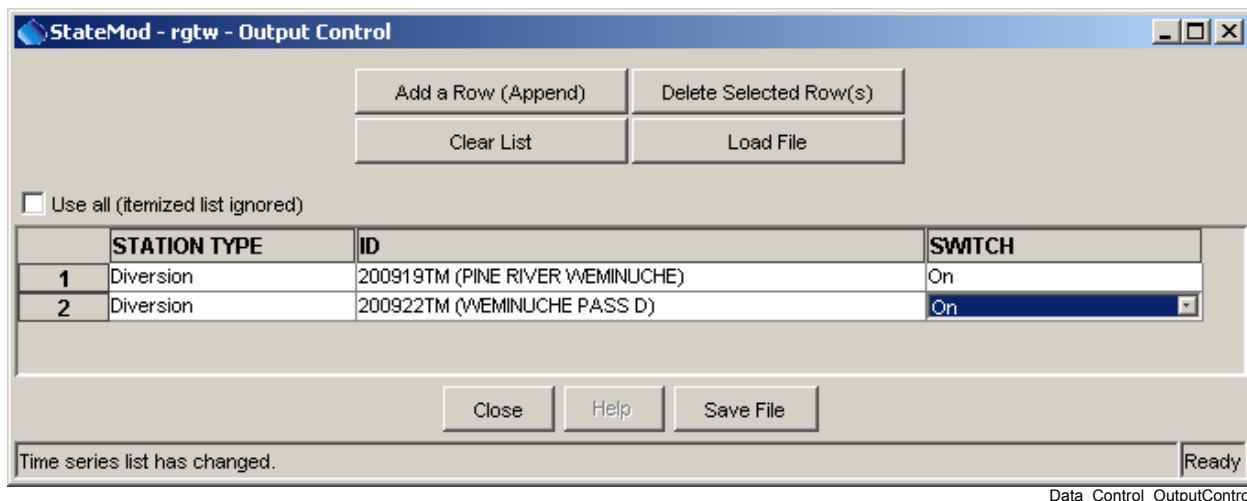
Data\_Control\_Control\_Advanced

**Control Data – Advanced Properties**

Refer to the StateMod documentation for more information about the meaning of control data. Changing the run period of record is one of the more useful features of this window and limits the model output (the graphing tool also uses the run period to determine the period to graph). The StateMod GUI determines the data period of record by evaluating all the input time series files and finding the maximum period of record (if time series are not read when selecting the data set, then only the streamflow time series file is used for the data period). The StateMod GUI shows standard choices for control data and will attempt to pass through unrecognized values. This allows for enhancement to the StateMod software.

### 5.1.3 Output Control File

The **Data...Control...Output Request** menu displays a dialog that controls how much output StateMod will produce.



**Output Control Window**

The output control interface edits the StateMod output control file. The purpose of the output control file is to limit the StateMod output to a few structures. This reduces model execution time but also limits the output that can be viewed after a run. The output control file name is usually left constant in the response file, being overwritten as needed. StateMod, when run in data check mode, will automatically create a template output control file with extension *.xou*. If the response file also uses this name, then a custom output control file may be overwritten when StateMod runs in check mode.

The output control window creates a list of stations that will have output generated when the model runs. Stations can be selected either by manually entering the identifiers or relying on the interface to generate the identifiers. An output control file also allows all structures to be output. Selecting the **Use all** checkbox turns on this feature and the structures in the list are ignored (but will be included in the output control file for subsequent manipulation of the file).

Adding a row initializes a new row in the list. Selecting a station type results in a selectable list of identifiers, which will be alphabetized and include stations for the selected station type. The switch should be set to **On** but can be set to **Off** to deactivate the item. When finished editing the contents of an output control file, select **Save File**. A file selector is displayed with a default file extension of *.tpo* (although the file extensions *.out* and *.xou* are also often used). To be recognized by StateMod, this file name should match the output control file in the response file. If necessary, rename the output control file outside the StateMod GUI or read a file and then re-save using a different name.

## 5.2 Consumptive Use Data

The **Data...Consumptive Use** menu displays the consumptive use locations and associated data:

The screenshot shows the 'StateMod - CU Locations' window. It features a list of locations on the left, a search section below it, and a detailed view of the selected location on the right. The detailed view includes fields for Location ID, Name, Latitude, Elevation, Region 1, Region 2, and Available Water Content. Below these is a 'Climate Stations' table.

ID	NAME
360645	GUTHRIE THOMAS DITCH
360649	HAMILTON DAVIDSON DI
360660	HIGH MILLER DITCH
360662	HOAGLAND CANAL
360671	INDEPENDENT BLUE DIT
360687	KIRKWOOD DITCH
360709	LOBACK DITCH
360725	MARY DITCH
360728	MAT NO 1 DITCH
360729	MAT NO 2 DITCH

Search above list for:

☒ ID

☐ Name

Find Next

Location ID: 360645

Name: GUTHRIE THOMAS DITCH

Latitude (decimal degrees): 39.84

Elevation (feet):

Region 1 (typically county): SUMMIT

Region 2 (typically not used): 14010002

Available Water Content (fraction): 0.08

STATION ID	STATION NAME	PRECIP WT	TE
3359	N/A	0.80	
5507	N/A	0.20	

Close

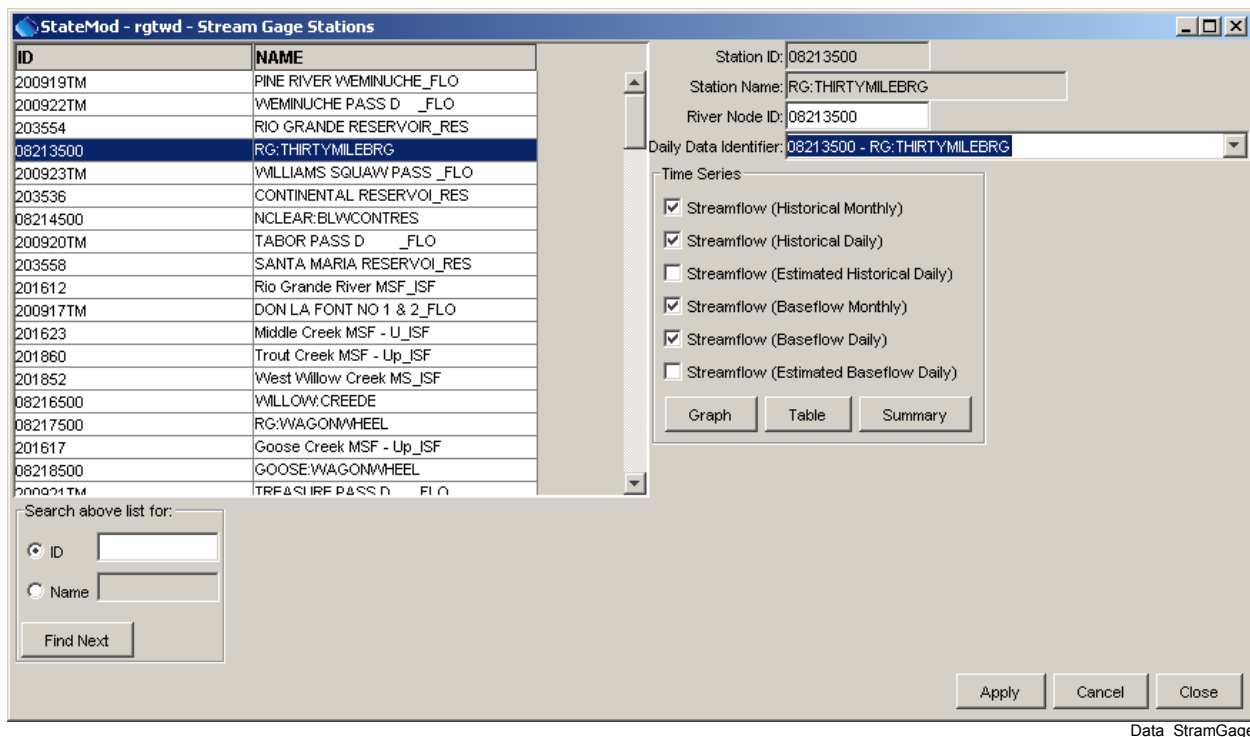
Data\_CULocation

**Consumptive Use Locations Data Window**

Consumptive use locations correspond to locations that supply consumptive use data (e.g., irrigation water requirement) data. Currently the data are read-only and the irrigation water requirement time series are not accessible from the window.

### 5.3 Stream Gage Data

The **Data...Stream Gage** menu displays the stream (river) gage stations:



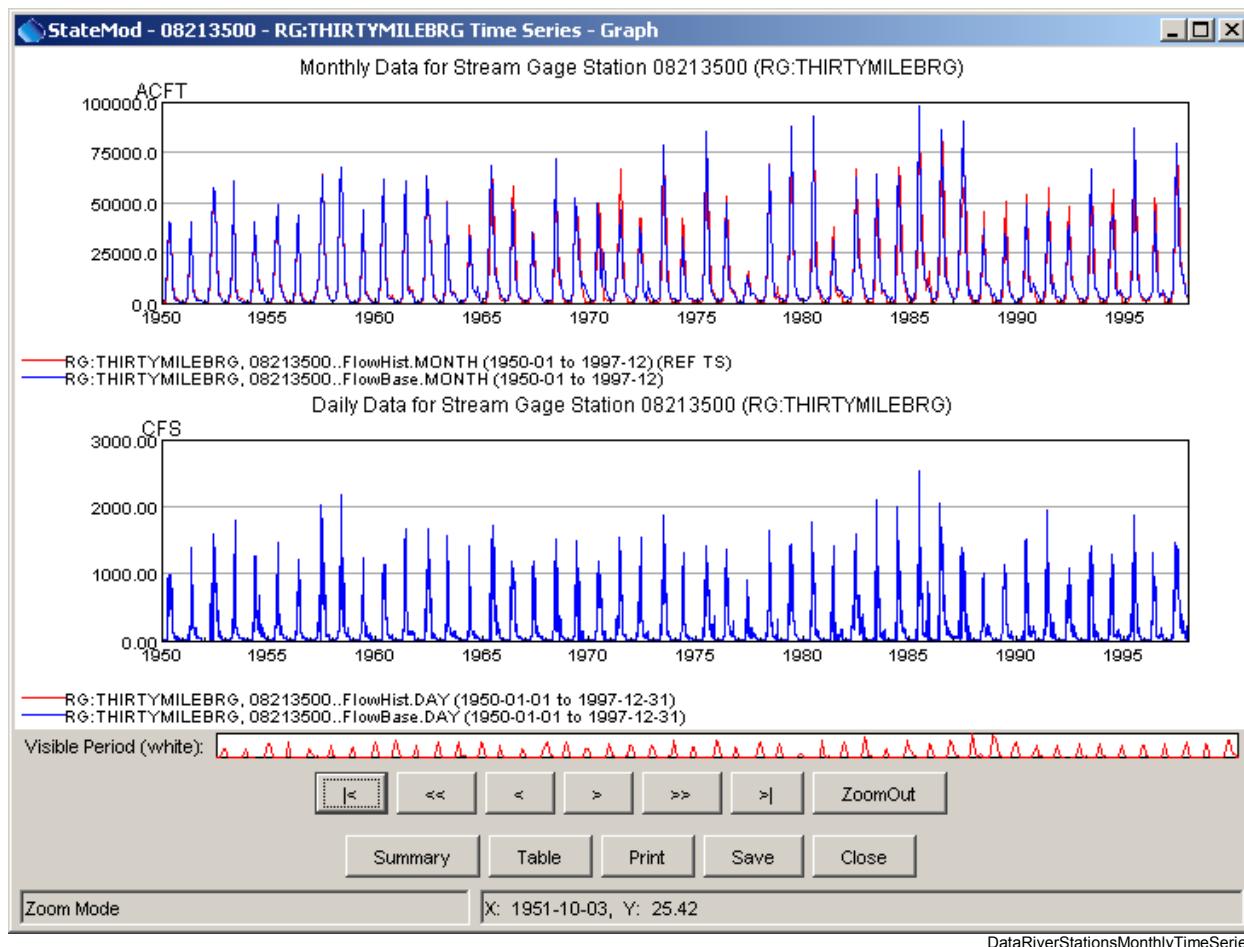
**River Stations Data Window**

River stations consist of points with historical streamflow data (the alternative being stream estimate stations where streamflow is estimated using baseflow coefficients – see **Section 5.12**). Selecting a station from the list on the left will display the station data on the right side of the window. The station data shown in the upper right can be edited and saved.

Use the **Edit** menu to add or delete a station.



A list of available input time series is shown and can be selected for display with the **Graph**, **Table**, and **Summary** buttons. If the data set does not contain certain time series, then checkboxes will be disabled. For example, a streamflow gage may have historical time series data and baseflow time series, which is created by running StateMod in baseflow mode. All available time series are shown on a single “page”, with separate graphs used to group similar data intervals, as shown in the following example:



**River Station Monthly Time Series Graph**

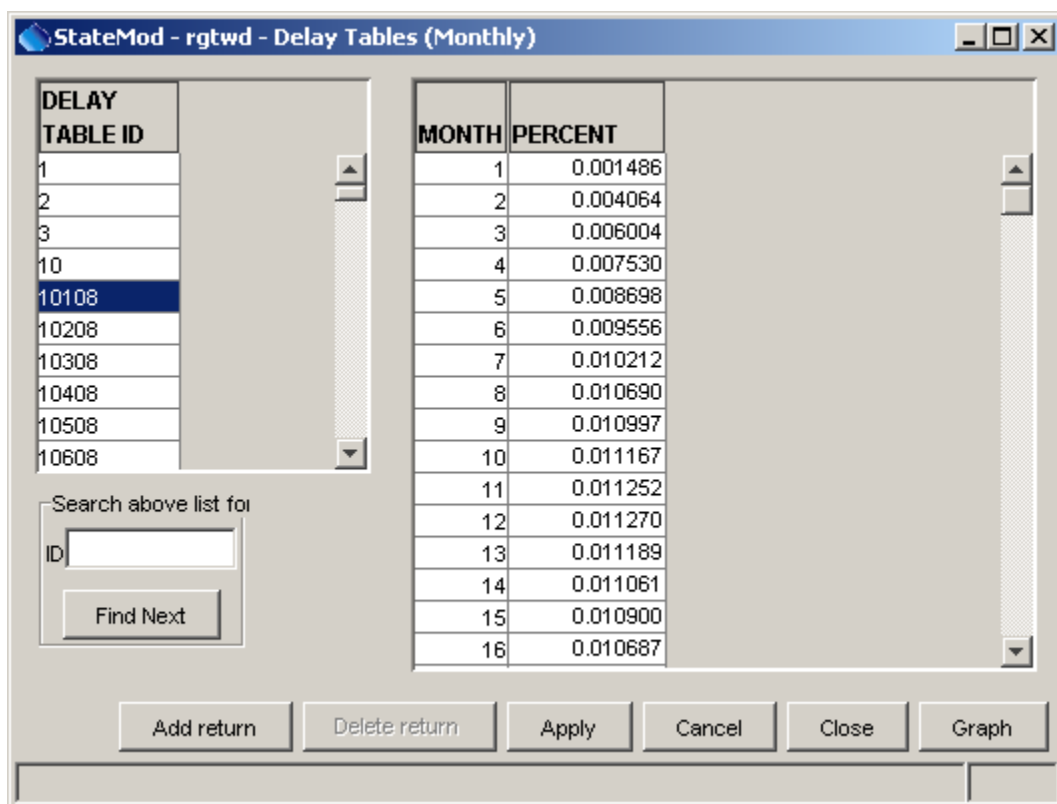
The data types for the time series are consistent with the nomenclature used in the **Results...Graphing Tool** menu, where possible. The **Summary** button can be used to display a text summary of the time series. The **Table** button can be used to view the time series in tabular form. Refer to the **TSView Time Series Viewing Tools Appendix** for more information about the graphing tools.

## 5.4 Delay Table Data

The **Data...Delay Tables** menu displays delay table information.

### 5.4.1 Delay Tables (Monthly)

The **Data...Delay Tables...Monthly** menu displays the list of monthly delay tables, which are used by diversion stations and well stations when indicating return flows or depletions.



Data\_DelayTables\_Monthly

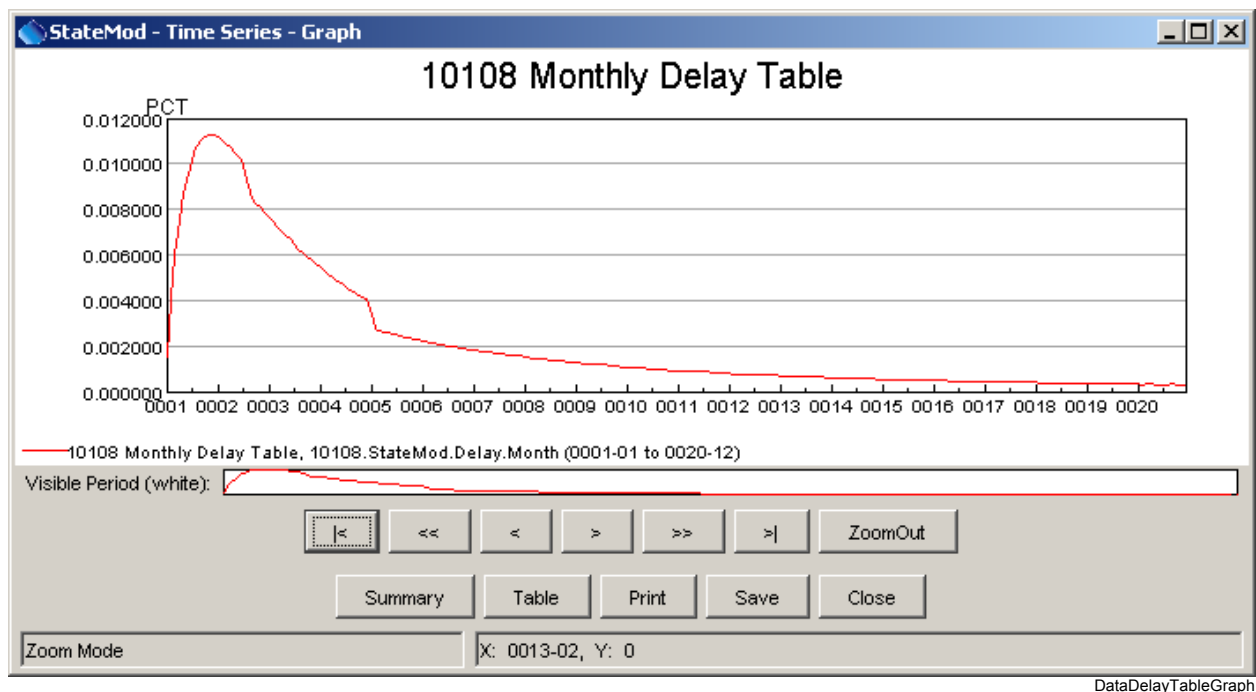
**Delay Table Data (Monthly)**

Delay table information can be specified as percent or fraction (decimal), depending on the *interv* control file parameter. To add a new delay table entry, select the **Add return** button. This will add a row to the display with default data above the highlighted row. If the last row is highlighted and a row is added, a prompt will allow adding the row above or below the last row. Fill in the data as appropriate. To delete a delay table entry, select a row and then press the **Delete return** button.

Care should be taken when modifying delay tables because delay tables can be used by more than one station. It may be necessary to modify the diversion or well station delay table assignments.

Use the **Edit** menu to add or delete a delay table.

Pressing the **Graph** button displays the delay table as shown in the following figure, treating the data as a time series where the initial year is one (the following example shows a delay table that spans twenty years):



Monthly Delay Table Graph

## 5.5 Diversion Data

The **Data...Diversions** menu displays information for diversions. The primary data component is diversion stations, and secondary components are water rights, historical time series, demand time series, return flows (delay table assignments).

**StateMod - rgtdw - Diversions**

ID	NAME
200505	ALAMOS A D
200511	ANACONDA D
200512	ANDERSON D
200513	ANNA RABER D
200517	ATENCIO D
200518	ATENCIO D 2
200528	BAUER D
200546	BILLINGS D
200552	BREY D
200556	BUTLER IRR D
200566	CENTENNIAL D
200582	COCHRAN PIONEER D
200583	COLE D 1 EX
200587	COSTILLA D
200588	DAVIES BROS D
200595	DEL NORTE TOWN D
20606	MCNEIL-DUPKE D
206614	EHROWITZ D
206622	EMBARGO D
206627	EXCELSIOR D
206631	FARMERS UNION CNL
206636	FISH D
206652	HAGADORN D
206671	HORNER YDREN D
206677	HUBBARD D
206680	INDEPENDENT D
206681	INDEPENDENT D 2
206682	JAMES MCLEARY D
206694	JOHN ANDERSON D
206699	KANE CALL AND

Search above list for:

☐ ID

☐ Name

Diversion ID: 200505  
 Diversion Name: ALAMOS A D  
 River Node ID: 200505  
 Capacity (CFS): 50.0  
 On/Off Switch: 1 - On  
 User Name: ALAMOS A D  
 Replacement Reservoir: -1 - Provide depletion replacement  
 Use type: 1 - Irrigation  
 Irrigated acreage: 1208.13  
 Monthly demand type: 1 - Monthly total demand  
 Demand Source: 1 - Irrigated acres from GIS  
 Daily Data ID: 4 - Unknown  
 Available Water Content: 0.0

System Efficiency

☐ Constant efficiency: 56.0

☒ Monthly efficiency

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0

Related Data

Time Series

☐ Historical Diversion (Monthly) ☐ Demands (Monthly) ☐ Irrigation Practice (Yearly)  
☐ Historical Diversion (Daily) ☐ Demands, Override (Monthly) ☐ Consumptive Water Requirement (Monthly)  
☐ Historical Diversion, Estimated (Daily) ☐ Demands, Average (Monthly) ☐ Consumptive Water Requirement (Daily)  
☐ Water Right (Monthly) ☐ Demands (Daily) ☐ Consumptive Water Requirement, Estimated (Daily)  
☐ Water Right (Daily) ☐ Demands, Estimated (Daily)

Data\_Diversions

**Diversion Data Window**

All diversion stations in the data set are listed on the left side of the window. Selecting a diversion from the list displays that diversion station's information in the window. Secondary data are displayed in additional windows accessed via buttons. Access to other data is disabled if the data were not read or are not a part of the data set. All data are editable except for the identifier and river node identifier, which are referenced in the network and other data. Press the **Apply** button after making changes. Changes are also applied if the **Close** button is pressed. Use the main **Edit** menu to add or delete diversion stations and optionally the secondary data.

The list of diversions can be search by entering the identifier or name in the appropriate search boxes located below the list. Any number of characters can be entered in the search box. Press **Enter** to perform the case-insensitive search, starting at the top of the list. The **Find Next** button, when pressed, will find the next station that matches the information.

The diversion efficiency is displayed for each month in the year. If the diversion has a constant efficiency, the same value is displayed in each of the twelve monthly fields. Variable efficiencies, if

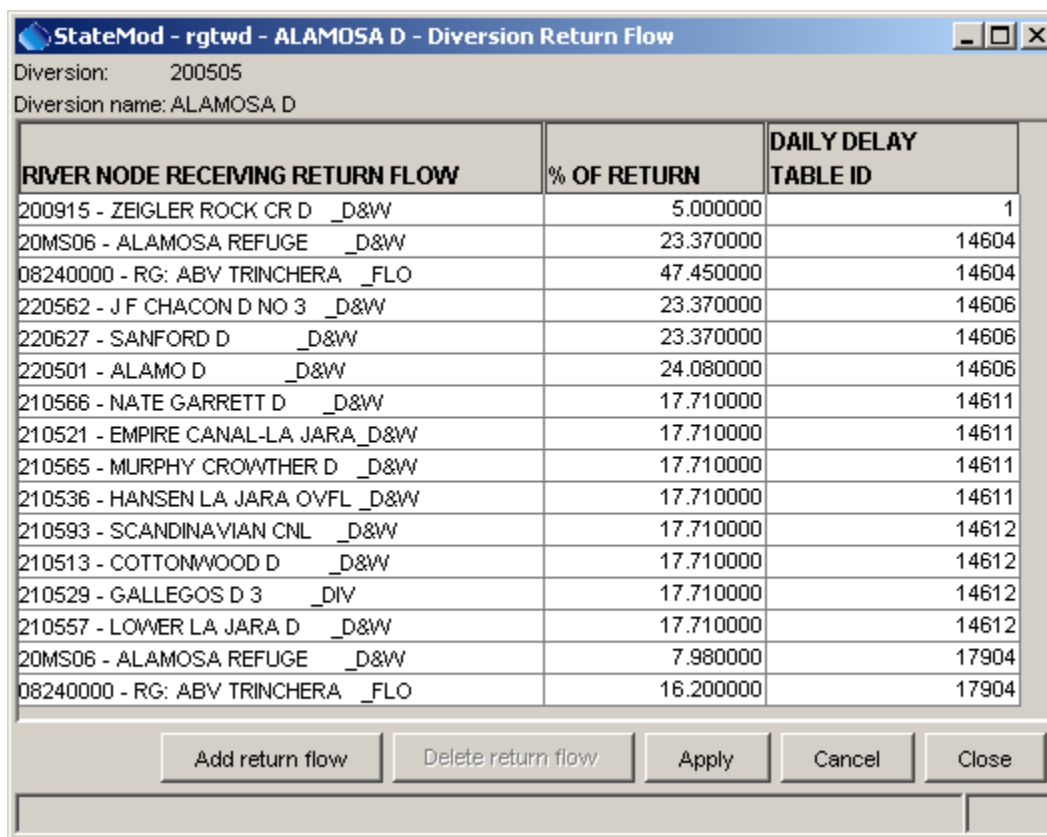
used in modeling, are not shown (only the average efficiencies shown in the diversion station file are shown).

The **Daily Data ID** is used to associate a daily time series with a diversion station. Changes to this value take effect when either a different diversion in the list is chosen or when **Enter** is pressed in the **Daily Data ID** text field. The following options are available:

- If the **Daily Data ID** exactly matches the **Diversion ID**, the pattern and values are the same.
- If the **Daily Data ID** is “0”, the pattern and values are again the same but are the average daily values, calculated using the monthly time series.
- If the **Daily Data ID** does not match the **Diversion ID** and is not “0”, the pattern time series corresponding to the **Daily Data ID** is displayed as-is. However, the values time series is calculated using the pattern and known monthly totals. The daily time series monthly total should agree with the monthly time series, but the distribution should correspond with the pattern. More than one diversion may reference the same pattern. For that reason, care should be taken when changing the pattern itself.
- Additional options may be available from StateMod. Refer to the StateMod software documentation.

### 5.5.1 Diversion Station Return Flows

Diversion station return flows (delay table assignments) are displayed by pressing the **Return Flow** button in the main diversions window:



RIVER NODE RECEIVING RETURN FLOW	% OF RETURN	DAILY DELAY TABLE ID
200915 - ZEIGLER ROCK CR D _D&W	5.000000	1
20MS06 - ALAMOSA REFUGE _D&W	23.370000	14604
08240000 - RG: ABV TRINCHERA _FLO	47.450000	14604
220562 - J F CHACON D NO 3 _D&W	23.370000	14606
220627 - SANFORD D _D&W	23.370000	14606
220501 - ALAMO D _D&W	24.080000	14606
210566 - NATE GARRETT D _D&W	17.710000	14611
210521 - EMPIRE CANAL-LA JARA _D&W	17.710000	14611
210565 - MURPHY CROWTHER D _D&W	17.710000	14611
210536 - HANSEN LA JARA OVFL _D&W	17.710000	14611
210593 - SCANDINAVIAN CNL _D&W	17.710000	14612
210513 - COTTONWOOD D _D&W	17.710000	14612
210529 - GALLEGOS D 3 _DIV	17.710000	14612
210557 - LOWER LA JARA D _D&W	17.710000	14612
20MS06 - ALAMOSA REFUGE _D&W	7.980000	17904
08240000 - RG: ABV TRINCHERA _FLO	16.200000	17904

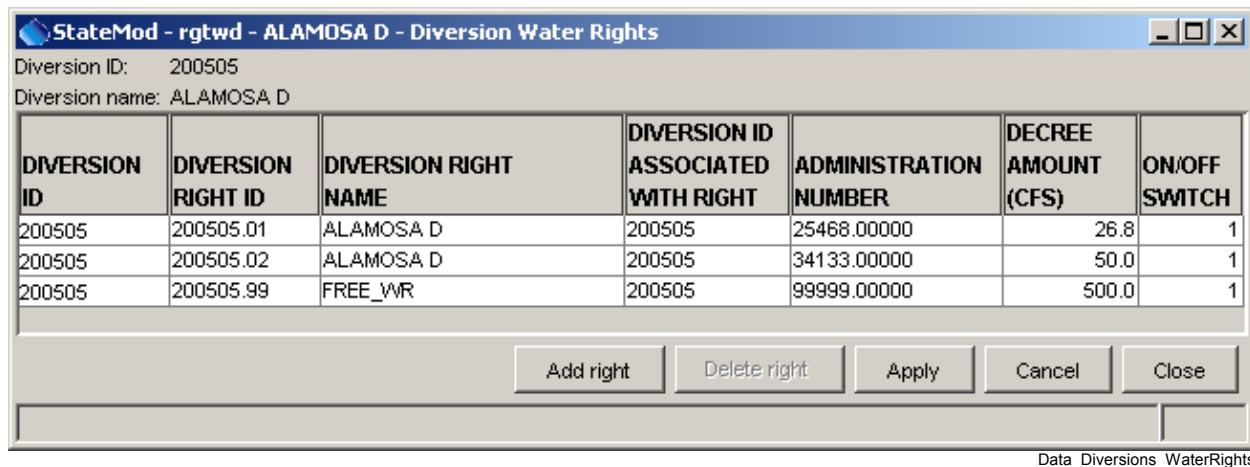
Data\_Diversions\_ReturnFlow

**Diversion Return Flow Data**

Press the **Add return flow** button to add a row to the display. Fill in the information as appropriate, using the choices that are provided. To delete a return flow, select a row and press the **Delete return flow** button. Press the **Apply** button to update the reservoir station data. The **Close** button will apply changes and close the window.

### 5.5.2 Diversion Water Rights

The water rights that apply to the diversion can be viewed by pressing the **Water Rights** button in the diversion data window, resulting in a display as shown in the following figure:



StateMod - rgtwd - ALAMOSA D - Diversion Water Rights

Diversion ID: 200505  
Diversion name: ALAMOSA D

DIVERSION ID	DIVERSION RIGHT ID	DIVERSION RIGHT NAME	DIVERSION ID ASSOCIATED WITH RIGHT	ADMINISTRATION NUMBER	DECREE AMOUNT (CFS)	ON/OFF SWITCH
200505	200505.01	ALAMOSA D	200505	25468.00000	26.8	1
200505	200505.02	ALAMOSA D	200505	34133.00000	50.0	1
200505	200505.99	FREE_WVR	200505	99999.00000	500.0	1

Add right Delete right Apply Cancel Close

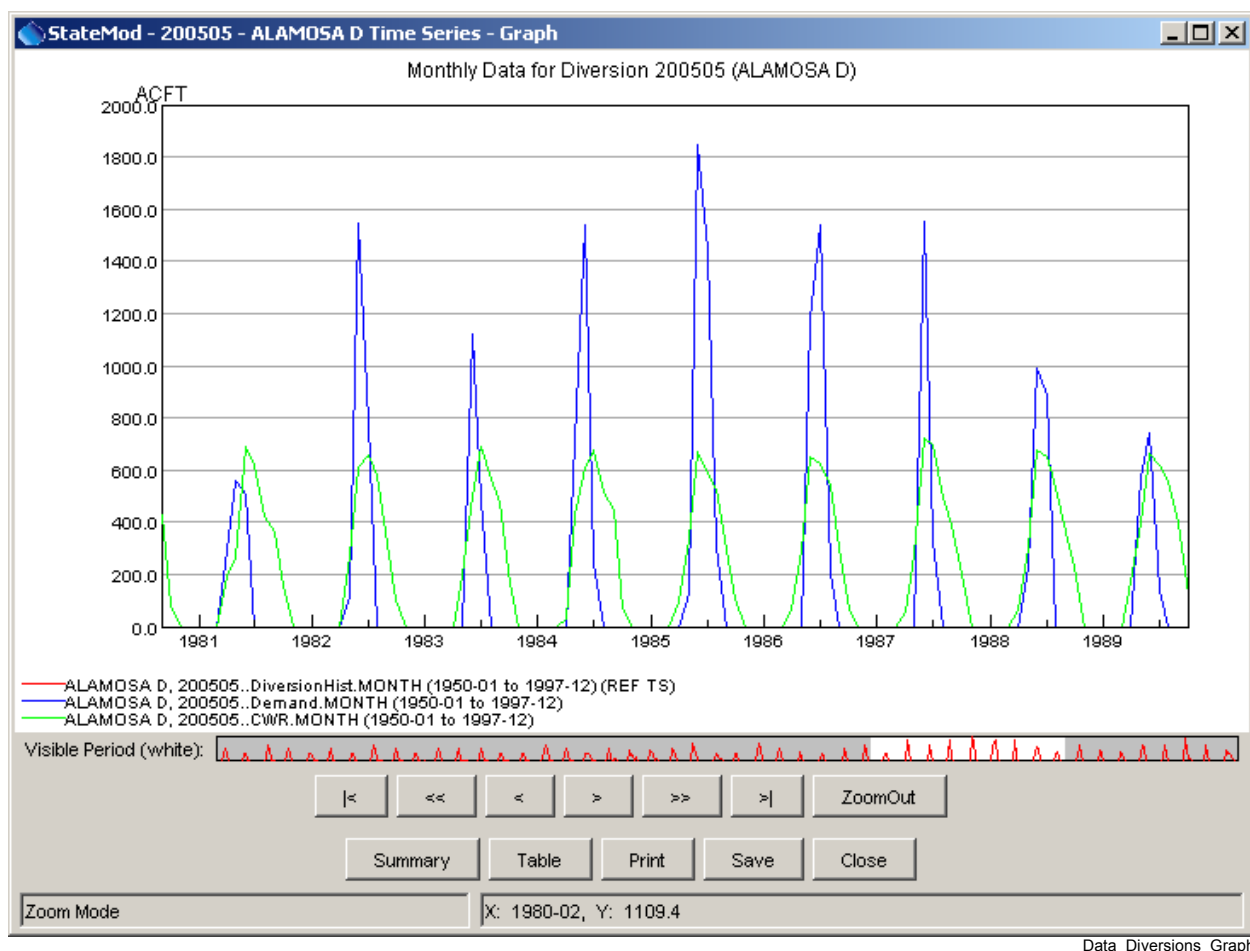
Data\_Diversions\_WaterRights

Diversion Water Rights Data Window

To add a water right, press **Add right**. This will add a row with default information, which should be updated as appropriate. To delete a water right, select the row and press **Delete right**. Press the **Apply** button to update the reservoir station data. The **Close** button will apply changes and close the window.

### 5.5.3 Diversion Time Series

The bottom of the main diversions window lists all time series associated with diversion stations. The checkboxes next to time series are enabled according to the data that are available for the currently selected diversion station. To view time series, select one or more time series and press the **Graph**, **Table**, or **Summary** buttons. The following figure illustrates a graph of monthly data:



Diversion Time Series (Monthly)

The data types for the time series are consistent with the nomenclature used in the **Results...Graphing Tool** menu, where possible. The **Summary** button can be used to display a text summary of the time series. The **Table** button can be used to view the time series in tabular form. Refer to the **TSView Time Series Viewing Tools Appendix** for more information about the graphing tools.

## 5.6 Precipitation Data

The **Data...Precipitation...** menu displays monthly precipitation data (average annual precipitation currently cannot be displayed). Precipitation data consist of precipitation time series and are used to compute net reservoir evaporation. Frequently, net evaporation is pre-calculated and is provided in the evaporation data. Refer to the next section for information about viewing evaporation data. The display features for precipitation and evaporation data are similar.

## 5.7 Evaporation Data

The **Data...Evaporation...** menu displays evaporation data. Evaporation data consist of evaporation time series and are used to compute net reservoir evaporation (based on reservoir surface area). Frequently, pan evaporation and precipitation time series are analyzed external to StateMod to produce a net evaporation time series (e.g., see the TSTool software). In this case, no precipitation time series will be provided to StateMod and only the evaporation time series will be used. The identifiers for the climate

stations in the time series files are referenced in reservoir station data. The StateMod GUI currently displays all monthly evaporation time series in a table (average annual evaporation currently cannot be displayed), from which a graph can be displayed. Enhancements are being considered to facilitate selecting specific time series for graphs.

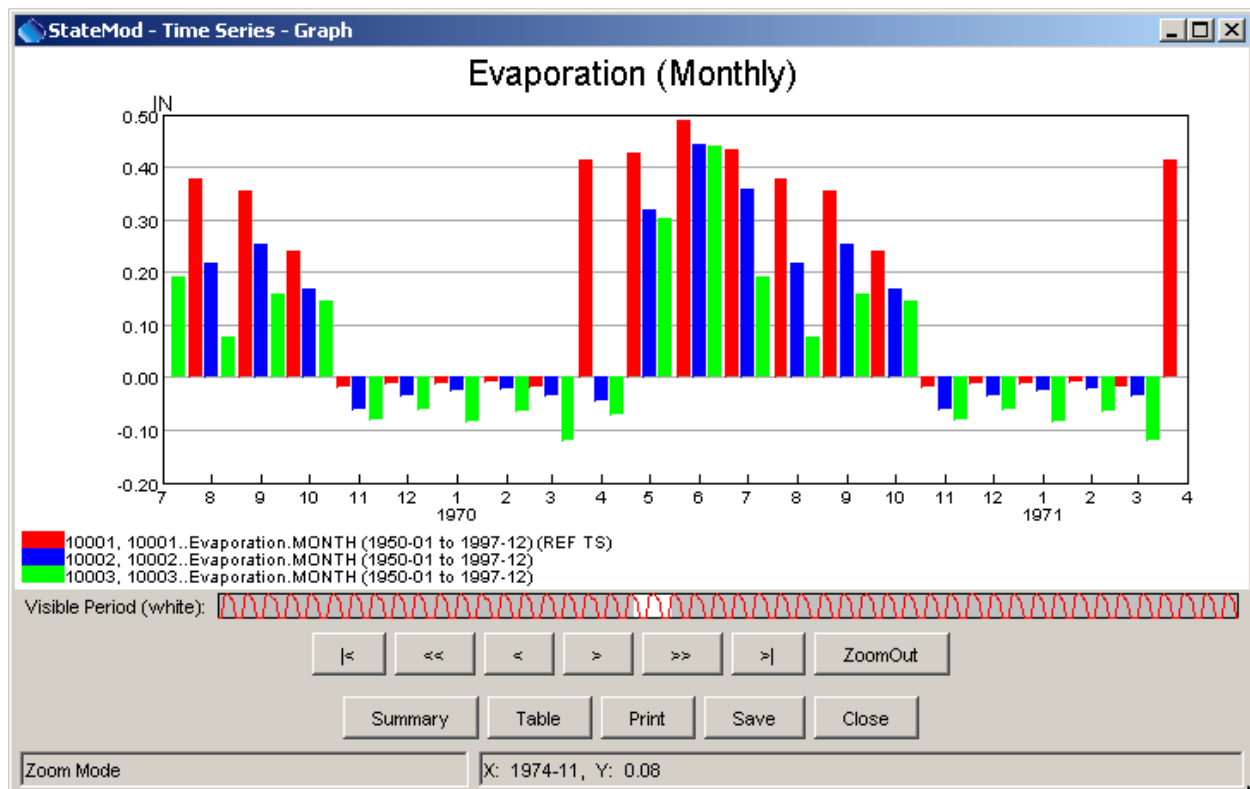
StateMod - Time Series - Table			
DATE	10001, Evaporation, IN	10002, Evaporation, IN	10003, Evaporation, IN
1950-01	-0.01	-0.03	-0.08
1950-02	-0.01	-0.02	-0.07
1950-03	-0.02	-0.03	-0.12
1950-04	0.41	-0.04	-0.07
1950-05	0.43	0.32	0.30
1950-06	0.49	0.44	0.44
1950-07	0.43	0.36	0.19
1950-08	0.38	0.22	0.08
1950-09	0.36	0.25	0.16
1950-10	0.24	0.17	0.14
1950-11	-0.02	-0.06	-0.08

Graph Summary Save Close

Currently-selected worksheet interval: Month

Data\_Evaporation\_Graph

Evaporation Time Series Table



Data\_Evaporation\_Graph

Monthly Evaporation Time Series Graph



## 5.8 Reservoir Data

The **Data...Reservoirs** menu displays information for reservoirs. The primary data component is reservoir stations, and secondary components are water rights, historical time series and target time series.

**StateMod - rgtwd - Reservoirs**

ID	NAME
203536	CONTINENTAL
203554	RIO_GRANDE_RES
203558	SANTA_MARIA_RES
213582	LA_JARA_RES
213583	TERRACE_RES
223574	PLATORO_RES
243576	SANCHEZ_RES
353529	MOUNTAIN_HOME_RES
353530	SMITH_RES
353531	SAN_LUIS_LAKE
20ARW01	20ARW01
20ARW02	20ARW02
21ARW01	21ARW01
22ARW01	22ARW01
22ARW02	22ARW02
24ARW01	24ARW01
25ARW01	25ARW01
26ARW01	26ARW01
27ARW01	27ARW01
35ARW01	35ARW01
CostRes	COSTILLA_RES
EastRes	EASTDALE_RES

Search above list for:

☒ ID

☐ Name

Reservoir Station ID: 203536

Name: CONTINENTAL

River Node ID: 203536

Daily Data ID: connecting end-points of monthly TS

Storage Switch: 1 - Store below targets

Minimum Content (AF): 0.0

Maximum Content (AF): 26716.0

Maximum Release (CFS): 999999.0

Dead Storage (AF): 0.0

One Fill Rule Admin: 1 - January

**Time Series**

☐ Precipitation (Monthly)

☐ Evaporation (Monthly)

☐ Content, End of Month (Monthly)

☐ Content, End of Day (Daily)

☐ Content, End of Day (Estimated Daily)

☐ Target Maximum (Monthly)

☐ Target Minimum (Monthly)

☐ Target Maximum (Daily)

☐ Target Maximum (Estimated Daily)

☐ Target Minimum (Daily)

☐ Target Minimum (Estimated Daily)

**Related Data**

Data\_Reservoirs

### Reservoir Data

All reservoir stations in the data set are listed on the left side of the window. Selecting a reservoir from the list displays that reservoir station's information in the window. Secondary data are displayed in additional windows accessed via buttons. Access to other data is disabled if the data were not read or are not a part of the data set. All data are editable except for the identifier, which is referenced in the network and other data. Press the **Apply** button after making changes. Changes are also applied if the **Close** button is pressed. Use the main **Edit** menu to add or delete reservoir stations and optionally the secondary data.

To search for a particular station, enter the identifier or name in the appropriate search boxes located below the list. Any number of characters can be entered in the search box. Press **Enter** to perform the

case-insensitive search, starting at the top of the list. The **Find Next** button, when pressed, will find the next station that matches the information.

### 5.8.1 Reservoir Content/Area/Seepage

Selecting the **Content/Area/Seepage** button in the main reservoirs window displays the reservoir's content/area/seepage curve information, as shown below:

StateMod - rgtwd - CONTINENTAL - Reservoir Content/Area/Seepage

Reservoir: 203536

Reservoir name: CONTINENTAL

CONTENT (ACFT)	AREA (ACRE)	SEEPAGE (AF/M)
0.0	0.0	0.0
3.0	2.0	0.0
7.0	5.0	0.0
14.0	7.0	0.0
23.0	9.0	0.0
34.0	11.0	0.0
47.0	13.0	0.0
63.0	16.0	0.0
81.0	18.0	0.0
102.0	21.0	0.0
125.0	23.0	0.0
150.0	26.0	0.0
178.0	28.0	0.0

Graph Area Graph Seepage

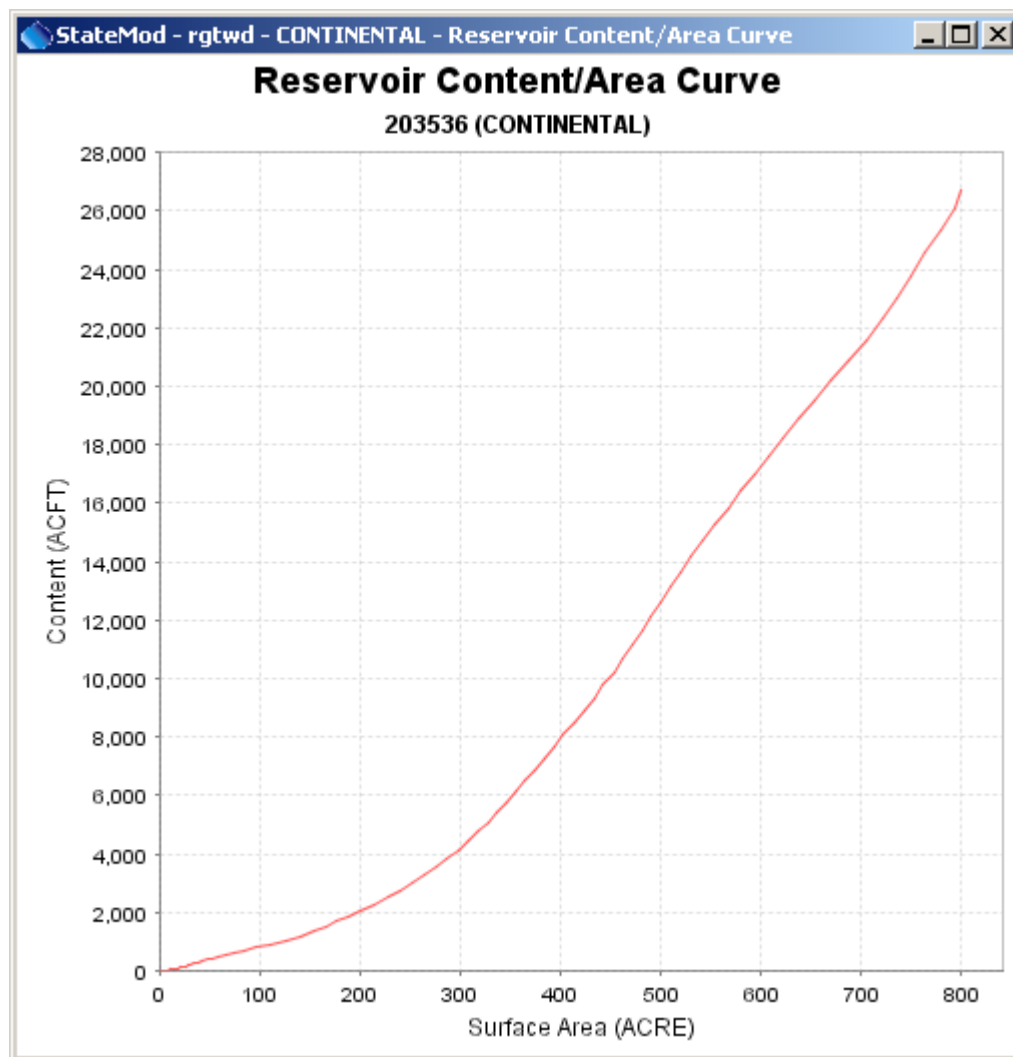
Add line Delete line Apply Cancel Close

Data\_ReservoirsArea\_Content

**Reservoir Area Capacity Content Table**

The **Add line** button adds a row at the bottom of the table. The **Delete line** button will delete the selected row. Information should be added to the table in ascending order. Zero and high point values should be included to bound interpolations. For example, include a very large content value with an area and seepage value that are only slightly larger than the next to last row. Select **Apply** to apply the changes to the reservoir data. The **Close** button will apply the changes and close the window.

If a range of data values is available, the data can be graphed. Seepage values are often not supplied and therefore the graph button is disabled. The following figure illustrates a reservoir content versus area graph displayed with the **Graph Area** button:



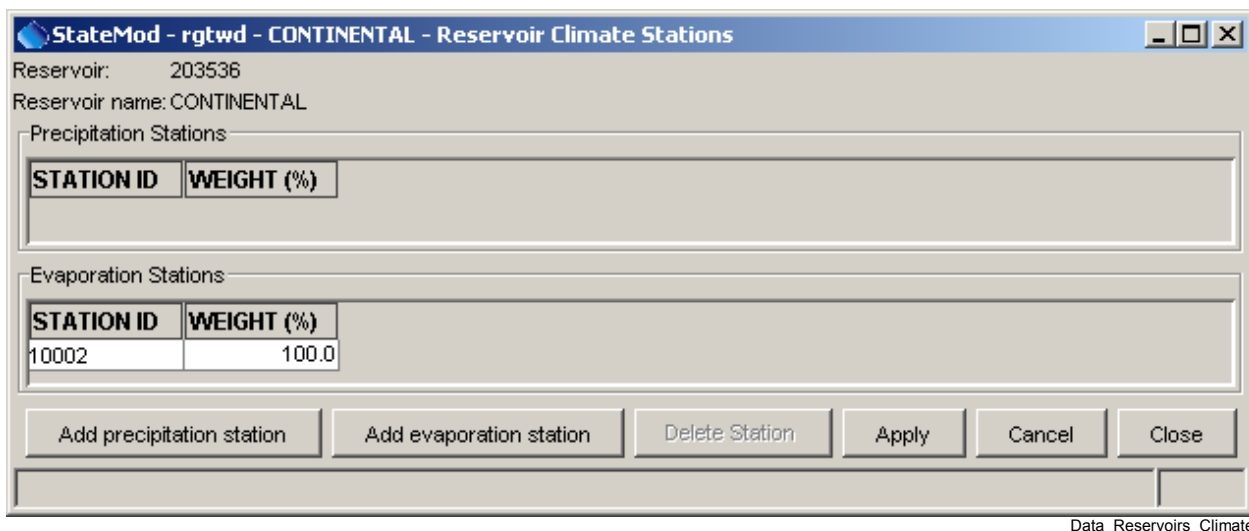
Data\_Reservoirs\_Content\_Graph

**Reservoir Content/Area Graph**

In the above graph, the very large bounding content value is omitted. Right click to print or save the graph to an image. When printing, select the page layout in the first dialog and the printer in the second dialog. Drawing a box on the window will also zoom the graph. Drag the mouse vertically to zoom out.

### 5.8.2 Reservoir Climate Station Assignment

Selecting the **Climate Stations** button in the main reservoirs window displays the climate stations that supply precipitation and evaporation time series for the reservoir, as shown below:



StateMod - rgtwd - CONTINENTAL - Reservoir Climate Stations

Reservoir: 203536  
Reservoir name: CONTINENTAL

Precipitation Stations

STATION ID	WEIGHT (%)
------------	------------

Evaporation Stations

STATION ID	WEIGHT (%)
10002	100.0

Add precipitation station   Add evaporation station   Delete Station   Apply   Cancel   Close

Data\_Reservoirs\_Climate

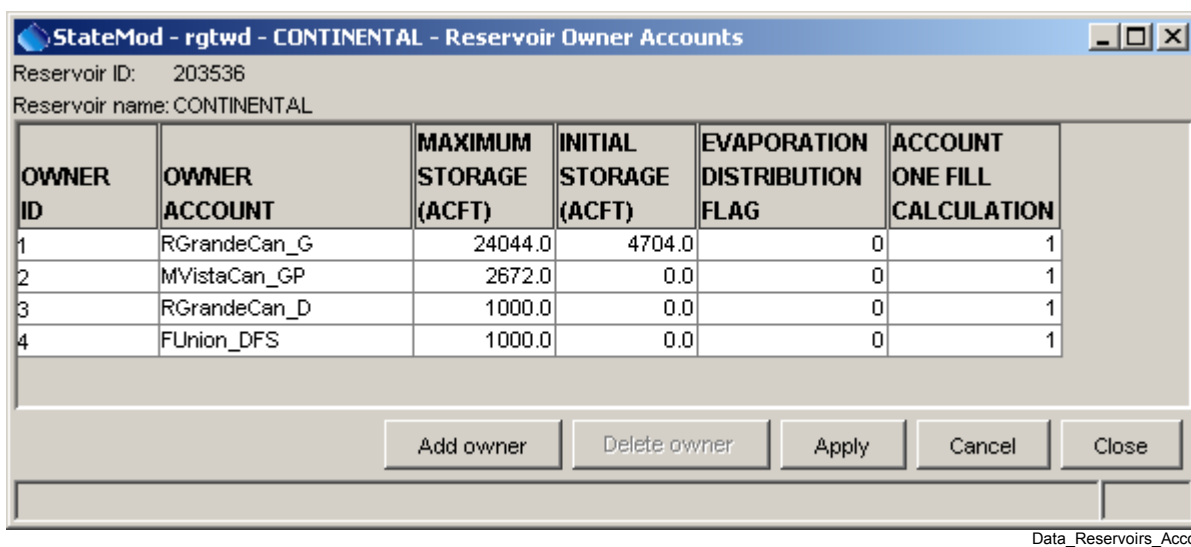
### Reservoir Climate Station Assignments

The climate station identifiers correspond to the identifiers in the precipitation and evaporation time series. The above example illustrates that no precipitation time series are used and therefore the evaporation time series contain net evaporation data.

The **Add precipitation station** and **Add evaporation station** buttons will add a row at the bottom of the appropriate table. The **Delete Station** button will delete the selected row. Select **Apply** to apply the changes to the reservoir data. The **Close** button will apply the changes and close the window.

### 5.8.3 Reservoir Accounts

Selecting the **Owner Accounts** button in the main reservoirs window displays the accounts associated with the reservoir, as shown in the following figure.



StateMod - rgtwd - CONTINENTAL - Reservoir Owner Accounts

Reservoir ID: 203536  
Reservoir name: CONTINENTAL

OWNER ID	OWNER ACCOUNT	MAXIMUM STORAGE (ACFT)	INITIAL STORAGE (ACFT)	EVAPORATION DISTRIBUTION FLAG	ACCOUNT ONE FILL CALCULATION
1	RGrandeCan_G	24044.0	4704.0	0	1
2	MVistaCan_GP	2672.0	0.0	0	1
3	RGrandeCan_D	1000.0	0.0	0	1
4	FUnion_DFS	1000.0	0.0	0	1

Add owner   Delete owner   Apply   Cancel   Close

Data\_Reservoirs\_Accounts

### Reservoir Owner Accounts Data Window

The **Add owner** button will add a row at the bottom of the table. The **Delete owner** button will delete the selected row. Select **Apply** to apply the changes to the reservoir data. The **Close** button will apply the changes and close the window.

#### 5.8.4 Reservoir Water Rights

Selecting the **Water Rights** button in the main reservoirs window displays the water rights associated with the reservoir, as shown in the following figure:

RIGHT NAME	RESERVOIR STATION ID ASSOC. W/ RIGHT	ADMINISTRATION NUMBER	DECREE AMOUNT (ACFT)	ON/OFF SWITCH	ACCOUNT DISTRIBUTION	RIGHT TYPE	FILL TYPE	OUT OF PRIORITY RIGHT
CONTINENTAL RES	203536	24362.18779	8832.0	1	-2	1	1	
CONTINENTAL RES	203536	24362.20942	17884.0	1	-2	1	1	

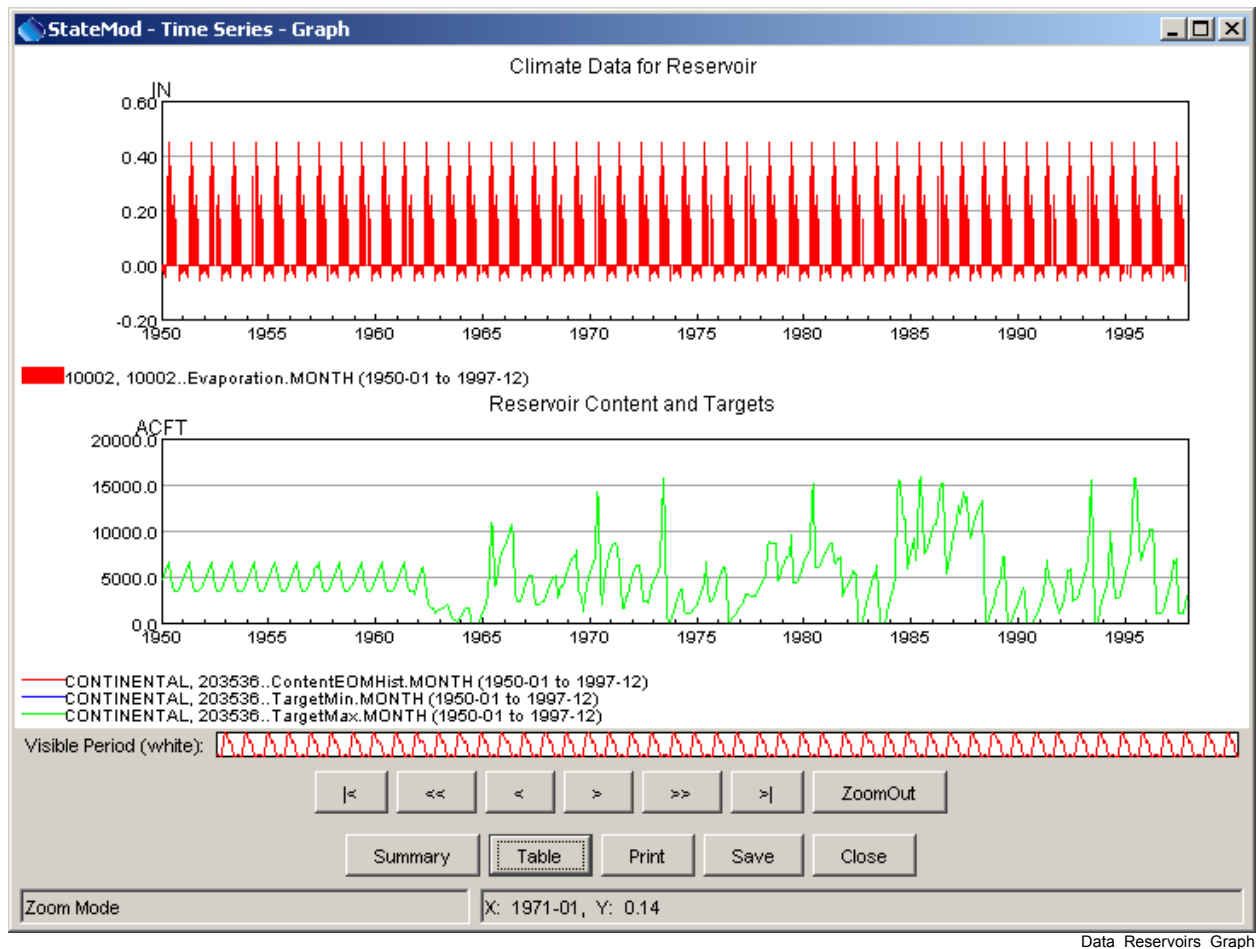
Data\_Reservoirs\_Rights

#### Reservoir Water Rights

The **Add right** button will add a row at the bottom of the table, using default values that should be changed to appropriate values. The **Delete right** button will delete the selected row. Select **Apply** to apply the changes to the reservoir data. The **Close** button will apply the changes and close the window.

#### 5.8.5 Reservoir Time Series

The bottom of the main reservoirs window lists all time series associated with reservoir stations. The checkboxes next to time series are enabled according to the data that are available for the currently selected reservoir station. To view time series, select one or more time series and press the **Graph**, **Table**, or **Summary** buttons. The following figure illustrates a graph of monthly data:



Reservoir Time Series Graph (Monthly)

The data types for the time series are consistent with the nomenclature used in the **Results...Graphing Tool** menu, where possible. The **Summary** button can be used to display a text summary of the time series. The **Table** button can be used to view the time series in tabular form. Refer to the **TSView Time Series Viewing Tools Appendix** for more information about the graphing tools.

## 5.9 Instream Flow Data

The **Data...Instream Flows** menu displays information for instream flow reaches. The primary data component is instream flow stations, and secondary components are water rights and demand time series.

**StateMod - rgtwd - Instream Flows**

ID	NAME
201611	RIO GRANDE NO 1 MSF
201612	RIO GRANDE NO 2 MSF
201613	RIO GRANDE NO 3 MSF
201614	RIO GRANDE NO 4 MSF
201617	GOOSE CREEK MSF
201619	NORTH CLEAR CREEK MSF
201620	CLEAR CREEK MSF
201623	MIDDLE CREEK MSF
201828	SOUTH FK RIO GRANDE MSF4
201852	WEST WILLOW CREEK MSF
201860	TROUT CK AT SO FORK MSF
201873	SAN FRANCISCO CREEK MSF
210639	LA JARA CREEK MSF

Search above list for:

☐ ID

☐ Name

Find Next

Station ID: 201611

Name: RIO GRANDE NO 1 MSF

Daily Data ID: 0 - Use average daily value from monthly time series

Upstream river node: 201611

Downstream river node: 201611\_Dwn

On/Off Switch: 1 - On

Data Type: 2 - Average Monthly

Time Series:

☐ Demands (Monthly)

☐ Demands (Average Monthly)

☐ Demands (Daily)

☐ Demands (Estimated Daily)

Graph Table Summary

Related Data

Water Rights...

Apply Cancel Close

Data\_Instream\_Flows

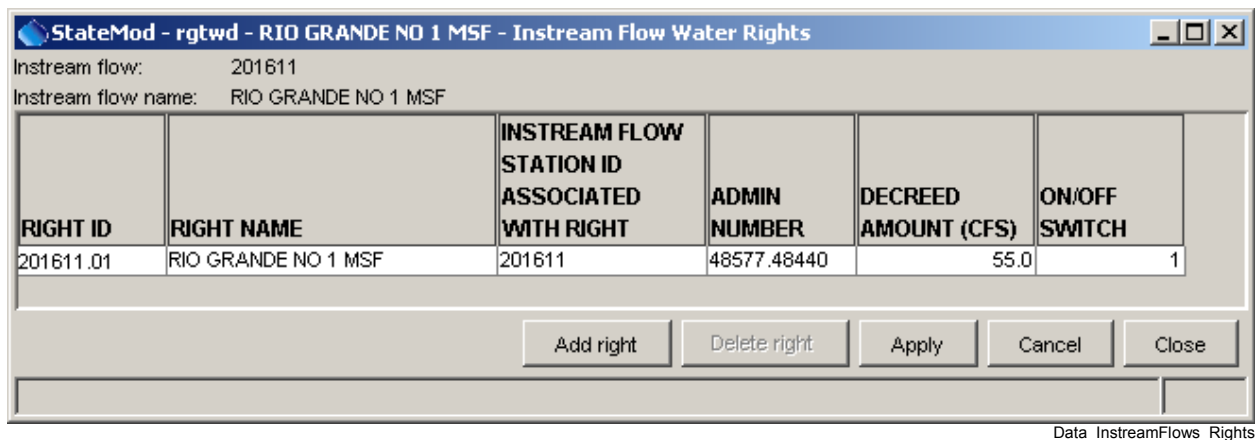
**Instream Flows Data**

All instream flow stations in the data set are listed on the left side of the window. Selecting an instream flow from the list displays that instream flow's information in the window. The instream flow station information is displayed in the main instream flows window and the remaining data are displayed in secondary windows accessed via buttons. Access to other data is disabled if the data were not read or are not a part of the data set. All data are editable except for the identifier, which are referenced in the network and other data. Press the **Apply** button after making changes. Changes are also applied if the **Close** button is pressed. Use the main **Edit** menu to add or delete instream flow stations and optionally the secondary data.

To search for a particular station, enter the identifier or name in the appropriate search boxes located below the list. Any number of characters can be entered in the search box. Press **Enter** to perform the case-insensitive search, starting at the top of the list. The **Find Next** button, when pressed, will find the next station that matches the information.

### 5.9.1 Instream Flow Rights

Selecting the **Water Rights** button in the main instream flows window displays the water rights associated with the instream flow station, as shown in the following figure:



StateMod - rgtwd - RIO GRANDE NO 1 MSF - Instream Flow Water Rights

Instream flow: 201611  
Instream flow name: RIO GRANDE NO 1 MSF

RIGHT ID	RIGHT NAME	INSTREAM FLOW STATION ID ASSOCIATED WITH RIGHT	ADMIN NUMBER	DECREED AMOUNT (CFS)	ON/OFF SWITCH
201611.01	RIO GRANDE NO 1 MSF	201611	48577.48440	55.0	1

Add right Delete right Apply Cancel Close

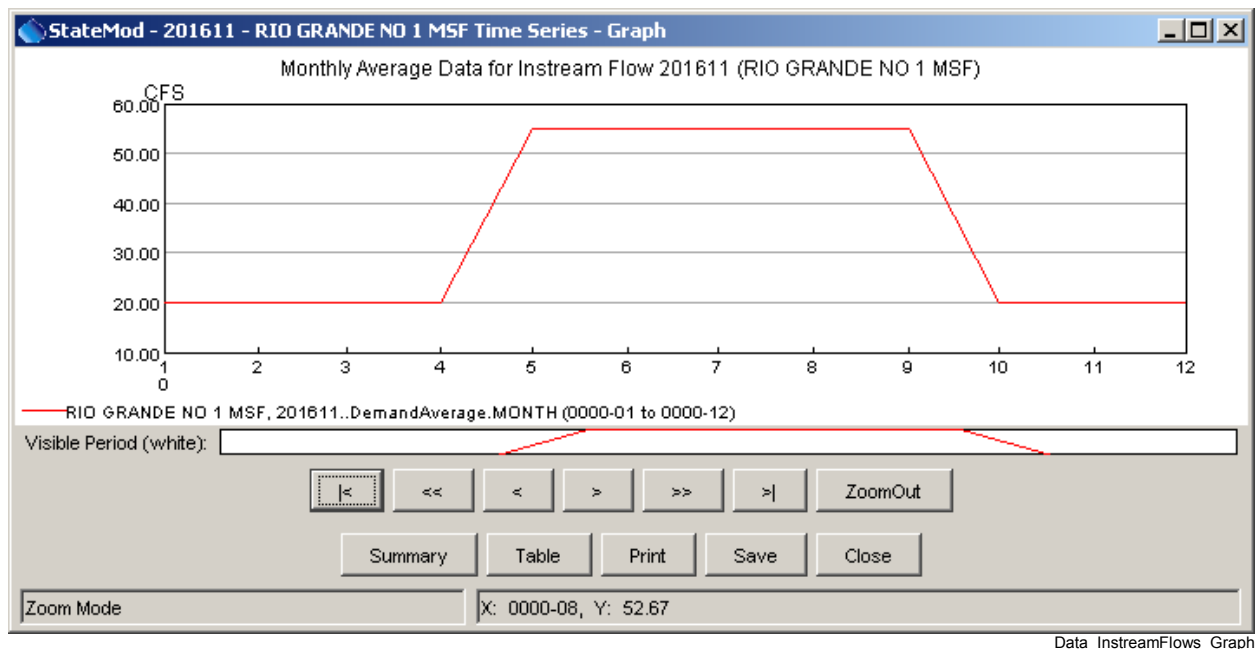
Data\_InstreamFlows\_Rights

**Instream Flow Water Rights**

The **Add right** button will add a row at the bottom of the table, using default values that should be changed to appropriate values. The **Delete right** button will delete the selected row. Select **Apply** to apply the changes to the reservoir data. The **Close** button will apply the changes and close the window.

### 5.9.2 Instream Flow Time Series

The bottom of the main instream flows window lists all time series associated with instream flow stations. The checkboxes next to time series are enabled according to the data that are available for the currently selected instream flow station. To view time series, select one or more time series and press the **Graph**, **Table**, or **Summary** buttons. The following figure illustrates a graph of average monthly demand data:



**Instream Flow Average Monthly Demand Graph**



The data types for the time series are consistent with the nomenclature used in the **Results...Graphing Tool** menu, where possible. The **Summary** button can be used to display a text summary of the time series. The **Table** button can be used to view the time series in tabular form. Refer to the **TSView Time Series Viewing Tools Appendix** for more information about the graphing tools.

## 5.10 Well Data

The **Data...Wells** menu displays information for wells. The primary data component is well stations, and secondary components are water rights, historical time series, demand time series, depletions, and return flows (delay table assignments). A well station can be a single physical well, or a group of wells treated as a single well for modeling purposes. Additionally, wells can be associated with a diversion station, in which case the identifier for the well typically matches the diversion station and the **Associated Diversion** is specified.

The screenshot shows the 'StateMod - rgtwd - Wells' window. On the left is a list of well stations with columns 'ID' and 'NAME'. The station '200812 RIO GRANDE CNL' is selected. On the right, the configuration for this station is displayed. Below the configuration is a 'System Efficiency' table, and at the bottom are 'Time Series' and 'Related Data' sections with buttons for 'Graph', 'Table', 'Summary', 'Depletion...', 'Return Flow...', and 'Water Rights...'. At the very bottom are 'Apply', 'Cancel', and 'Close' buttons.

ID	NAME
210612	REED D 2
260653	RESERVOIR ENRL D
210584	REYNOLDS D
210583	REYNOLDS REED D
220616	RICHFIELD CANAL
220618	RINCONES D
200812	RIO GRANDE CNL
200810	RIO GRANDE D 1
20MS04	RIO GRANDE D 2
200816	RIO GRANDE LARIAT D
200811	RIO GRANDE PIEDRA VLY D
200817	RIO GRANDE SAN LUIS D
260654	ROBERTS COMPANY D
200818	ROBRAN D
270543	ROCKY HILL SEPG OVFL D
220619	ROMERO D
260655	RUSSELL CO D
26MS02	RUSSELL D 4
22MS08	SALAZAR D
240581	SAN ACACIO D
200826	SAN JOSE OR LUCERO D
220624	SAN JUAN SAN RAFAEL D
200829	SAN LUIS VALLEY CNL
220625	SAN RAFAEL CONEJOS D
220627	SANFORD D
35MS03	SANGRE DE CRISTO DIT
220629	SANTIAGO D
210593	SCANDINAVIAN CNL
200833	SCHUCH SCHMIDT D
250647	SCHULTZ DITTRICH D
260667	SEITZ MCCLURE ASHLEY D
22MS09	SPI FONIA VAL DF7 IRR

Station ID: 200812  
 Name: RIO GRANDE CNL  
 River Node ID: 200812  
 Daily Data ID: 4 - Daily time series interpolated from midpoints of monthly data  
 Capacity (CFS): 4394.17  
 On/Off Switch: 1 - On  
 Senior Supply: 0 - Water right priorities determine diversion (SW primary)  
 Associated Diversion: 200812 - RIO GRANDE CNL  
 Use Type: 1 - In Basin  
 Demand Source: 1 - Irr. acr. from GIS DB  
 Data type switch: 1 - Monthly  
 Irrigated acreage: 79508.0

System Efficiency

	Oct	Nov	Dec	Jan	Feb	Mar
Constant efficiency	70.0	70.0	70.0	70.0	70.0	70.0
Monthly efficiency	Apr	May	Jun	Jul	Aug	Sep
	70.0	70.0	70.0	70.0	70.0	70.0

Time Series

☒ Well Pumping (Historical Monthly)  
☐ Well Pumping (Historical Daily)  
☐ Well Pumping (Estimated Historical Daily)  
☒ Demands (Monthly)  
☐ Demands (Daily)  
☐ Demands (Estimated Daily)

Related Data

Depletion ...  
 Return Flow ...  
 Water Rights...

Graph Table Summary

Apply Cancel Close

Diversion Data Window

Data\_Diversions

All well stations in the data set are listed on the left side of the window. Selecting a well from the list displays that well's information in the window. The well station information is displayed in the main wells window and the remaining data are displayed in secondary windows accessed via buttons. Access to other data is disabled if the data were not read or are not a part of the data set. All data are editable except for the identifier, which is referenced in the network and other data. Press the **Apply** button after making changes. Changes are also applied if the **Close** button is pressed.

Use the main **Edit** menu to add or delete well stations and optionally the secondary data.

To search for a particular station, enter the identifier or name in the appropriate search boxes located directly below the list. Any number of characters can be entered in the search box. Press **Enter** to perform the case-insensitive search, starting at the top of the list. The **Find Next** button, when pressed, will find the next station that matches the information.

The well efficiency is displayed for each month in the year. If the well has a constant efficiency, the same value is displayed in each of the twelve monthly fields. If variable efficiencies are used in modeling they are not reflected in this display (only the average efficiencies shown in the well station file are shown).

The **Daily Data ID** is used to associate a daily time series with this well. Changes to this value take effect when either a different well in the list is chosen or when **Enter** is pressed in the **Daily Data ID** text field. The following options are available:

- If the **Daily Data ID** exactly matches the well **Station ID**, the pattern and values are the same.
- If the **Daily Data ID** is "0", the pattern and values are again the same but are the average daily values, calculated using the monthly time series.
- If the **Daily Data ID** does not match the well **Station ID** and is not "0", the pattern time series corresponding to the **Daily Data ID** is displayed as-is. However, the values time series is calculated using the pattern and known monthly totals. The daily time series monthly total should agree with the monthly time series, but the distribution should correspond with the pattern. More than one well may reference the same pattern. For that reason, care should be taken when changing the pattern itself.
- Additional options may be available from StateMod. Refer to the StateMod software documentation.

### 5.10.1 Well Station Depletions

Well station depletions are displayed by pressing the **Depletion** button in the main wells window:

StateMod - rgtwd - RIO GRANDE CNL - Well Depletion Information

Well: 200812  
Well name: RIO GRANDE CNL

RIVER NODE BEING DEPLETED	% OF DEPLETION	DAILY DELAY TABLE ID
200833 - SHULTZ SCHMIDT D _D&W	0.000000	1
200846 - SILVA D _D&W	3.000000	22101
200671 - HORNER YDREN D _D&W	3.000000	22101
200677 - HUBBARD D _D&W	3.090000	22101
20MS05 - NICHOL DITCH _D&W	4.540000	22102
20MS02 - EMPIRE CANAL _D&W	4.540000	22102
260584 - LAWRENCE D 3 _D&W	2.270000	22116
260655 - RUSSELL CO D _D&W	2.270000	22116

Buttons: Add depletion, Delete depletion, Apply, Cancel, Close

Data\_Wells\_Depletions

#### Well Depletion Data

Press the **Add depletion** button to add a row to the display. Fill in the information as appropriate, using the choices that are provided. To delete a return flow, select a row and press the **Delete depletion** button. Select **Apply** to apply the changes to the well data. The **Close** button will apply the changes and close the window.

### 5.10.2 Well Station Return Flows

Well station return flows (delay table assignments) are displayed by pressing the **Return Flow** button in the main wells window:

StateMod - rgtwd - RIO GRANDE CNL - Well Return Flow

Well: 200812  
Well name: RIO GRANDE CNL

RIVER NODE RECEIVING RETURN FLOW	% OF RETURN	DAILY DELAY TABLE ID
200833 - SHULTZ SCHMIDT D _D&W	1.000000	1
200846 - SILVA D _D&W	0.240000	12401
200671 - HORNER YDREN D _D&W	0.240000	12401
200677 - HUBBARD D _D&W	0.240000	12401
200846 - SILVA D _D&W	8.610000	12801
200671 - HORNER YDREN D _D&W	8.610000	12801
200677 - HUBBARD D _D&W	8.870000	12801
20MS05 - NICHOL DITCH _D&W	13.040000	12802

Buttons: Add return flow, Delete return flow, Apply, Cancel, Close

Data\_Wells&gt;Returns

#### Well Return Flow Data

Press the **Add return flow** button to add a row to the display. Fill in the information as appropriate, using the choices that are provided. To delete a return flow, select a row and press the **Delete return flow** button. Select **Apply** to apply the changes to the well data. The **Close** button will apply the changes and close the window.

### 5.10.3 Well Water Rights

The water rights that apply to the well can be viewed by pressing the **Water Rights** button in the wells data window, resulting in a display as shown in the following figure:

StateMod - rgtwd - RIO GRANDE CNL - Well Water Rights

Well: 200812  
Well name: RIO GRANDE CNL

RIGHT ID	WELL RIGHT NAME	WELL ID ASSOCIATED W/ RIGHT	ADMIN NUMBER	DECREEED AMOUNT (CFS)	ON/OFF SWITCH
200812W.02	RIO GRANDE CNL	200812	18981.00000	1.34	1
200812W.03	RIO GRANDE CNL	200812	22519.00000	6.69	1
200812W.04	RIO GRANDE CNL	200812	29505.00000	40.50	1
200812W.05	RIO GRANDE CNL	200812	32570.00000	934.45	1
200812W.06	RIO GRANDE CNL	200812	37812.00000	1828.57	1
200812W.07	RIO GRANDE CNL	200812	41945.00000	911.48	1
200812W.08	RIO GRANDE CNL	200812	53942.00000	671.14	1

Add right Delete right Apply Cancel Close

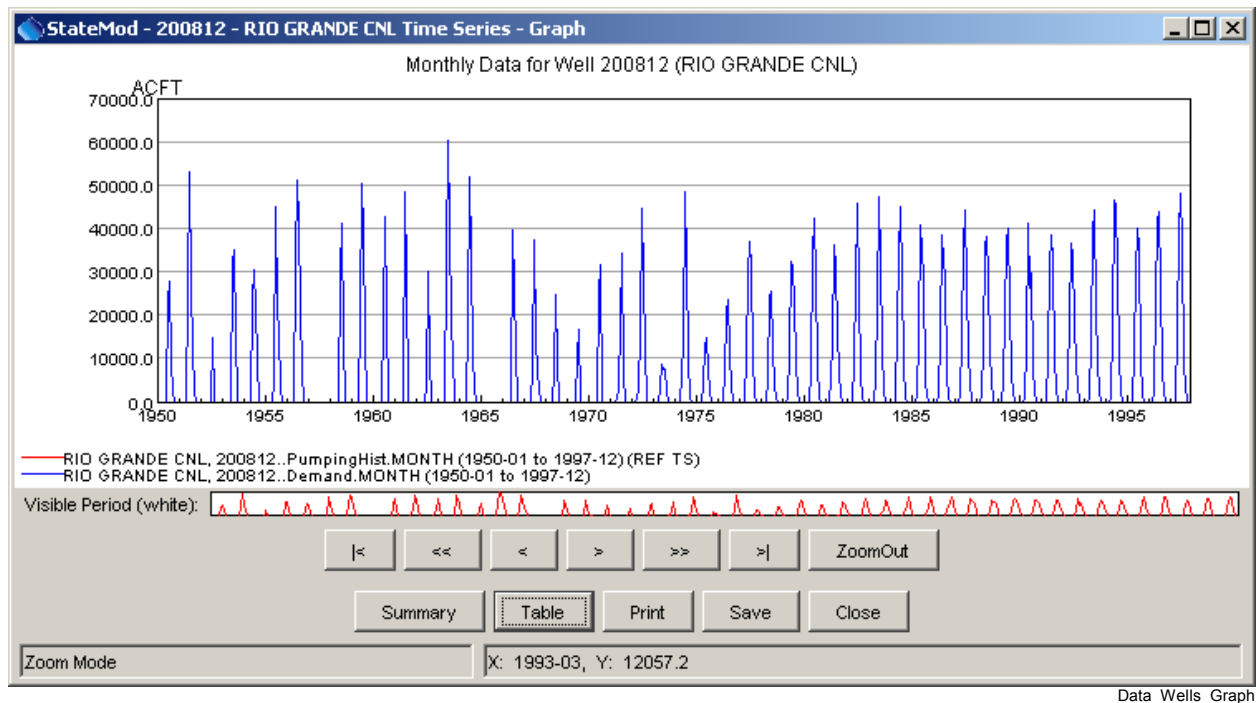
Data\_Wells\_WaterRights

**Well Water Rights Data Window**

To add a water right, press **Add right**. This will add a row with default information, which should be updated as appropriate. To delete a water right, select the row and press **Delete right**. Select **Apply** to apply the changes to the well data. The **Close** button will apply the changes and close the window.

### 5.10.4 Well Time Series

The bottom of the main wells window lists all time series associated with well stations. The checkboxes next to time series are enabled according to the data that are available for the currently selected well station. To view time series, select one or more time series and press the **Graph**, **Table**, or **Summary** buttons. The following figure illustrates a graph of monthly data:



Well Time Series (Monthly)

Data\_Wells\_Graph

The data types for the time series are consistent with the nomenclature used in the **Results...Graphing Tool** menu, where possible. The **Summary** button can be used to display a text summary of the time series. The **Table** button can be used to view the time series in tabular form. Refer to the **TSView Time Series Viewing Tools Appendix** for more information about the graphing tools.

## 5.11 Plan Station Data

The **Data...Plans** menu displays a data window for plan stations. Plan stations are representations of system operational features that do not fall into other model node types. For example, an augmentation plan involving recharge can be represented as a plan. See the StateMod documentation for details about plans.

The screenshot shows the 'StateMod - cm2009 - Plans' window. On the left is a list of plans with columns 'NAME' and 'ID'. The selected plan is 'Con-Hoosier\_OOP\_Plan' with ID '954683OOPPLN'. The right side of the window displays the details for this plan, including fields for Plan ID, Plan name, River node ID, On/off switch, Plan type, Return flow table, Failure switch, Initial storage (AF), and Source ID. Below these are sections for 'Efficiency Data' and 'Related Data'. The 'Efficiency Data' section includes an 'Efficiency Flag' dropdown and a row of 12 empty boxes for months from Oct to Sep. The 'Related Data' section has a 'Return Flow...' button. At the bottom are buttons for 'Show on Map', 'Show on Network', 'Apply', 'Cancel', and 'Close'. A search section at the bottom left allows searching by ID or Name with a 'Find Next' button.

NAME	ID
Con-Hoosier_OOP_Plan	954683OOPPLN
Upper_Blue_OOP_Plan	000PPLN
Roberts_Tun_OOP_Plan	400PPLN
Dillon_OOP_Plan	200PPLN
Replacement_Limit_Pln	nitPLN
Replacement_Limit_Pln	nitPLN

Plan ID: 954683OOPPLN  
 Plan name: Con-Hoosier\_OOP\_Plan  
 River node ID: 954683OOPPLN  
 On/off switch: 1 - On  
 Plan type: 9 - Out-of-Priority Diversion or Storage  
 Return flow table: 999  
 Failure switch: 0 - Do not turn plan off if it fails  
 Initial storage (AF): 0.0  
 Source ID: GM\_Reservoir

Efficiency Data  
 Efficiency Flag: 999 - Use source structure's efficiency values  
 Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep

Related Data  
 Return Flow...

Show on Map Show on Network Apply Cancel Close

Search above list for:  
☐ ID   
☐ Name   
 Find Next

Data\_Plans

### Plan Station Data

The available plan station nodes are shown in the list on the left side of the window. When a node is selected, data associated with the plan are shown on the right side of the window.

## 5.12 Stream Estimate Data

The **Data...Stream Estimate** menu displays a data window for stream estimate stations. Stream estimate stations are locations where historical streamflow time series are not available (as opposed to stream gage stations discussed in **Section 5.2**). Such points are often needed in headwater basins in order to insert streamflow into the model.

StateMod - rgtwd - Stream Estimate Stations

ID	NAME
220601	MC CARROLL D NO 2 _DIV
220607	MOUNTAIN D _DIV
220895	Conejos River MSF - _JSF
240512	ANTONIO VALDEZ D _DIV
240522	CERRO D _D&W
240544	FRANCISCO SANCHEZ D _D&W
240583	SAN FRANCISCO D _DIV
240592	TORCIDO D _DIV
240594	VALLEJOS D _D&W
250509	BACA GRANT 4 IRR D 5 _D&W
250535	CLARK D A _D&W
250590	HICE D 1 _D&W
250595	HICE D 6 _D&W
250606	HOT SPRINGS CREEK DI _DIV
250628	PETERSON D 1 _DIV
250672	WALES D 2 _DIV

Search above list for:

☒ ID

☐ Name

Find Next

ID: 220607  
Name: MOUNTAIN D \_DIV  
Proration Factor: 0.033

Stream Estimate Coefficients

STREAM TERM	UPSTREAM TERM GAGE	GAIN TERM WEIGHT	GAIN TERM GAGE ID
		1.0	08245000

Time Series

☒ Streamflow (Baseflow Monthly)

☐ Streamflow (Baseflow Daily)

Graph Table Summary

Apply Cancel Close

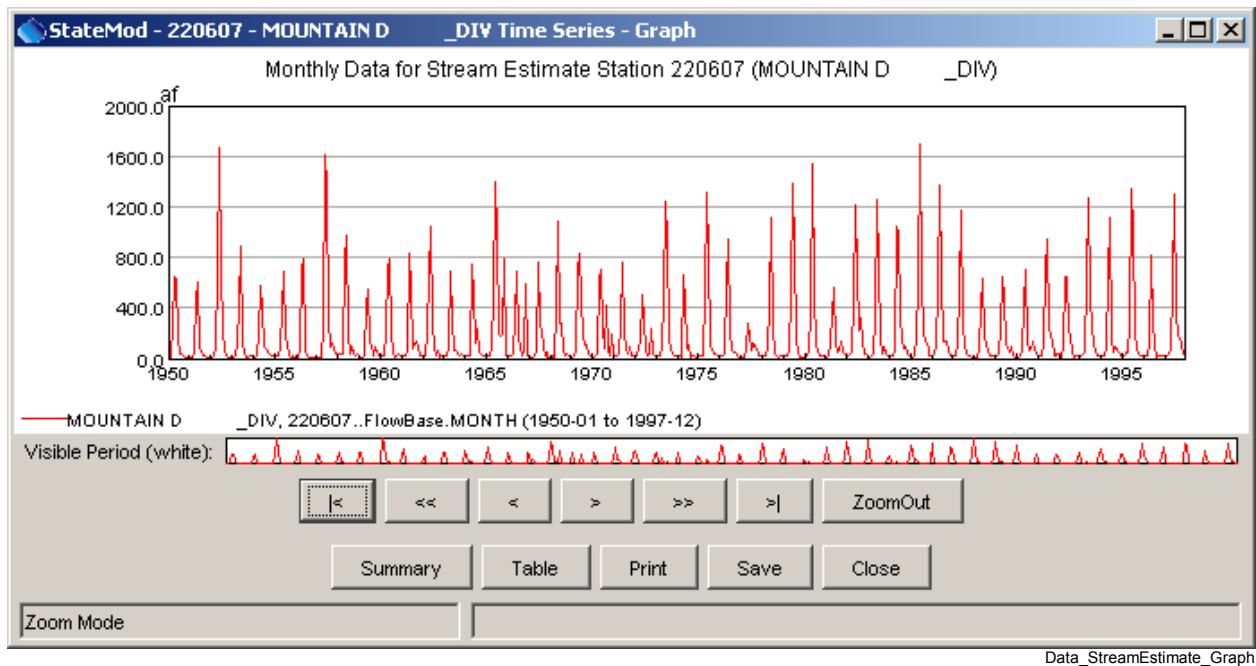
Data\_StreamEstimate

### Stream Estimate Data

The available baseflow nodes are shown in the list on the left side of the window. When a node is selected, the coefficients used to estimate data are shown on the right side of the window. Baseflow coefficient information is not trivial to specify and should be done carefully. See the StateMod software documentation and the StateDMI software documentation for more information.

#### 5.12.1 Stream Estimate Time Series

The bottom of the main stream estimate stations window lists all time series associated with stream estimate stations. The checkboxes next to time series are enabled according to the data that are available for the currently selected stream estimate station. To view time series, select one or more time series and press the **Graph**, **Table**, or **Summary** buttons. The following figure illustrates a graph of monthly data:

**Stream Estimate Time Series (Monthly)**

The data types for the time series are consistent with the nomenclature used in the **Results...Graphing Tool** menu, where possible. The **Summary** button can be used to display a text summary of the time series. The **Table** button can be used to view the time series in tabular form. Refer to the **TSView Time Series Viewing Tools Appendix** for more information about the graphing tools.



### 5.13 River Network Data

The **Data...River Network** menu displays the river network data:

RIVER NODE ID	STATION NAME
200919TM	PINE RIVER WEMINUCHE_FLO
200919	PINE RIVER WEMINUCHE_DIV
200922TM	WEMINUCHE PASS D _FLO
200922	WEMINUCHE PASS D _DIV
203554	RIO GRANDE RESERVOIR_RES
08213500	RG: THIRTYMILEBRG _FLO
200923TM	WILLIAMS SQUAW PASS _FLO
200923	WILLIAMS SQUAW PASS _DIV
201611	Rio Grande River MSF_ISF
201611_Dwn	Rio Grande River MSF_OTH
203536	CONTINENTAL RESERVOIR_RES
08214500	NCLEAR: BLWCONTRES FLO

Search list for:

☒ ID

☐ Name

Find Next

ID: 200919TM

Name: PINE RIVER WEMINUCHE\_FLO

Downstream Node: 200919

Comment:

Apply Cancel Close

Data\_RiverNetwork

#### River Network Data

The river network data describes the connectivity of the river network, in particular by indicating the downstream station for each station in the network. In general, it should not be edited because doing so may break data links in memory (e.g., changing a river node identifier in the river network requires that the node be changed in any other data that uses the old identifier; the StateMod GUI will not do this automatically). Instead, nodes should be added and deleted using the main **Edit** menu. StateMod reports results at river nodes and it may be appropriate to add a river node that is not in any other station list. It is reasonable to edit the description in the river network window.

To search for a particular station, enter the identifier or name in the appropriate search boxes located directly below the list. Any number of characters can be entered in the search box. Press **Enter** to perform the case-insensitive search, starting at the top of the list. The **Find Next** button, when pressed, will find the next station that matches the information.

If modeling in Colorado's Decision Support Systems (CDSS), the StateMod network file is typically created using the StateDMI software. Other files are created by determining station lists from the network.

## 5.14 Operational Rights Data

The **Data...Operational Rights** menu displays operational rights data.

**StateMod - cm2009 - Operational Rights**

**ID** **NAME**

HUPLimit.01 Annual\_HUP\_Pool\_Release\_

CSULimit.01 Annual\_HUP\_Pool\_Release\_

5146200.01 Opr Granby to AdamsTun

5146200.02 Opr Granby Res bypass

5146200.03 Opr Granby to ShadMtnRes

5146200.04 Opr Granby to target

5136950.01 Opr Shadow Mtn to target

5109580.01 Opr WCrkFeeder to Granby

5137100.01 Opr WillowCrk to Granby

5137100.02 Opr Willow Cr Res target

5147000.01 Opr Windy Gap to Granby

5147000.02 Opr Windy Gap to Granby

5147000.03 Opr Windy Gap to Granby

3606060.01 Opr Elliot to Green Mtn

3606060.02 Opr Elliot to GM Power

3635430.01 Opr GreenMtn - Granby Ex

3635430.02 Opr GreenMtn-WillowCr Ex

3635430.03 Opr GreenMtn-ShadowMtnEx

3635430.04 Opr GM-WillowCr Feeder

3635430.05 Opr GMT-Silt Project

3635430.06 Opr GreenMtn to Shoshone

3635430.07 Opr GM Replacement(hist)

3635430.08 Opr GM=>Govt High(hist)

3635430.09 Opr GM=>OMD Irr (hist)

3635430.10 Opr GM=>OMD Pump (hist)

3635430.11 Opr GM Replacement(futr)

3635430.12 Opr GM=>Govt High(futr)

3635430.13 Opr GM=>OMD Irr (futr)

3635430.14 Opr GM=>OMD Pump (futr)

3635430.15 Opr GM-Vail(mun)-nonirr

3635430.16 Opr GMCont - ATKINSON

3635430.17 Opr GMContract - NEEDHAM

3635430.18 Opr GMContract - DERBY

3635430.19 Opr GMCont - COON PIPE

3635430.20 Opr GM-Agg Cont Users

3635430.21 Opr GreenMtn target

3635430.22 Opr GreenMtn target

3635430.23 Opr GreenMtn target

3635430.24 Opr GreenMtn target

3635430.28 Opr HUP to Fish Flow

3635430.29 Opr\_1955\_B\_R\_Decree\_Exch

9546830.01 Opr 1929 to Hoosier Tunn

**Primary attributes**

Operational right ID: HUPLimit.01 Operational right name: Annual\_HUP\_Pool\_Release\_

Operational right type: 47 - Administration Plan Limits

Administration number: 1.00000 On/off switch: 0 - Off

Associated plan data: NA - Not used

Diversion type: Diversion

Conveyance loss (%): 0.0

Limits: 1.0

First year of operation: 0 Last year of operation: 9999

**Source(s) - note that Source 2 is used for special options for some right types**

Source 1: HUPLimitPLN - (Plan (Release Limit)) Replacement\_Limit\_Pln Account: 0 - Not used

Source 2: 0 - Not used Account: 0 - Not used

**Monthly on/off switch (leave all blank for default of all on; otherwise, specify every value)**

Oct Nov Dec Jan Feb Mar

Apr May Jun Jul Aug Sep

**Monthly and annual operating limits (ACFT)**

Oct	Nov	Dec	Jan	Feb	Mar	Annual
66000.0	66000.0	66000.0	66000.0	66000.0	66000.0	66000.0
Apr	May	Jun	Jul	Aug	Sep	Annual
66000.0	66000.0	66000.0	66000.0	66000.0	66000.0	66000.0

**Comments (will be output above operational right data, with # at start of line)**

Card 2: Carrier-Dispatch data (include only if item > 0)

format: (Free)

Inter item(I,J) intervening direct diversion structure id's

Enter # Str values

ID	Name	NA	Admin#	# Str	On/Off	Dest Id	Dest Ac	Soul Id	Soul Ac	Sou2 Id	Sou2 Id
eb	eb	eb	eb	eb	eb	eb	eb	eb	eb	eb	eb

Limit HUP and CSU Substitution operations using Accounting Plans which do not hold or release water

Search above list for:

☐ ID ☐ Name

Find Next

Show on Map Show on Network Apply Cancel Close Help

Data\_OperationalRights

### Operational Rights Data

Operational rights data control operating policies for reservoirs and other structures. This file often is edited by hand during initial data set development. The StateMod GUI attempts to display all operational right types; however, there are a number of limitations that will require additional resources to resolve and using the GUI to edit rights is discouraged at this time:

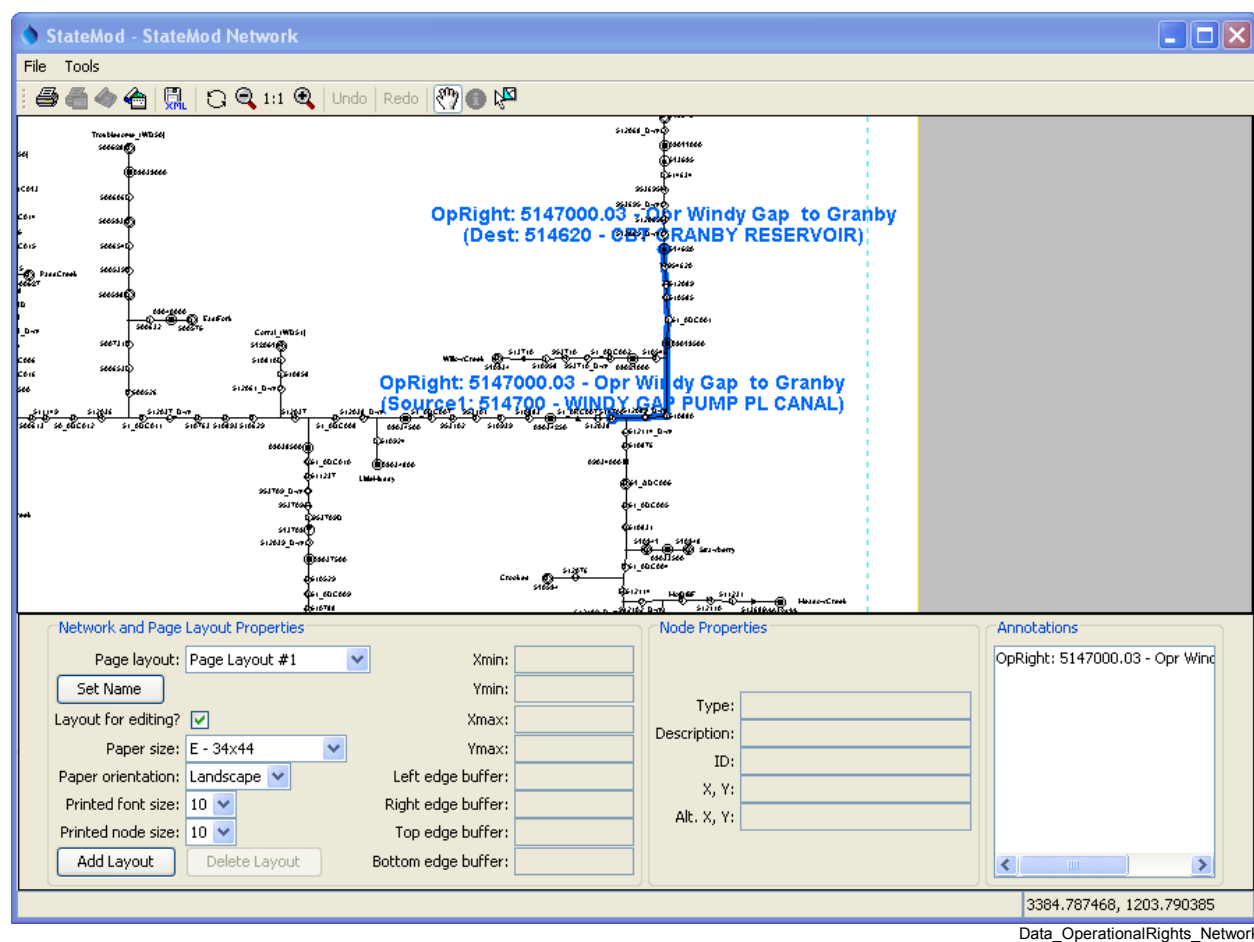
1. The StateMod model software has features that have not been considered by the GUI.
2. The operational rights are complex and difficult to treat generically. The GUI window has been segmented for major operational right data; however, the documentation for operational rights and use in practice needs to be verified against GUI features.
3. Handling of comments in the operational rights file is problematic. Additional standardization on the file format and modeling practices is needed.
4. Right types that are not understood are displayed as text.

Different areas of the window will be enabled, depending on the right type. See the StateMod software documentation for more information about operational rights.

All data are editable except for the identifier and name, which are referenced in other data. Press the **Apply** button after making changes. Changes are also applied if the **Close** button is pressed. Use the main **Edit** menu to add or delete operational rights.

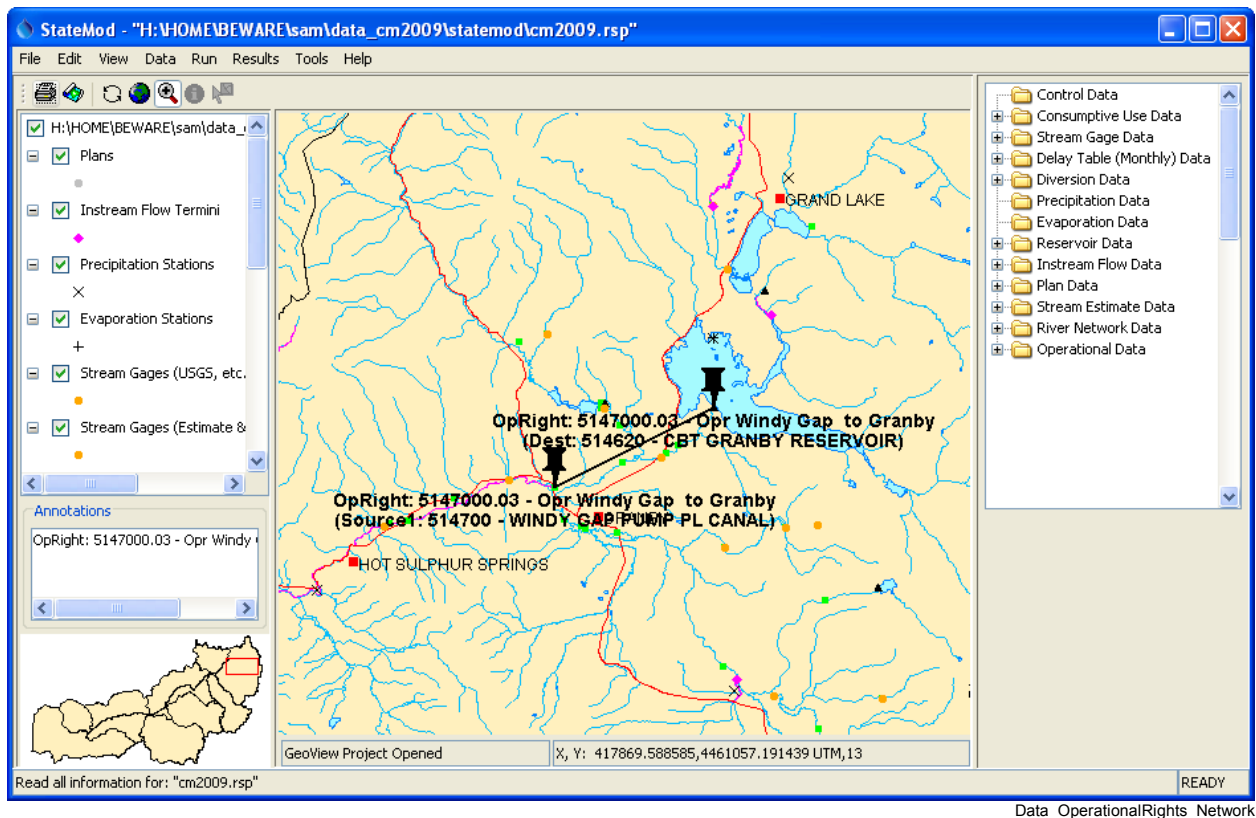
To search for a particular right, enter the identifier or name in the appropriate search boxes located directly below the list. Any number of characters can be entered in the search box. Press **Enter** to perform the case-insensitive search, starting at the top of the list. The **Find Next** button, when pressed, will find the next station that matches the information.

The **Show on Network** button is enabled if the operational right source and destination identifiers can be determined. Pressing the button annotates the network with information about the operational right, as shown in the following figure. The intervening flow path is highlighted, although in some cases wet water will not actually flow along the path for the operational right. Right click on the **Annotations** area in the lower right to clear the annotations. The annotations will not be saved in the (\*.net) file if the network is saved.



Operational Right Annotated on the Network

The **Show on Map** button is enabled if the operational right source and destination location information can be determined. Pressing the button annotates the map with information about the operational right, using push pin symbols. The locations are connected with a straight line for visualization purposes. Right click on the **Annotations** area in the lower left to clear the annotations.



Operational Right Annotated on the Map