
3 Getting Started

Version 4.02.00, 2011-07-15

This chapter provides an overview of the StateView/CWRAT graphical user interface (GUI). The main interface components are described below, with specific chapters devoted to the main features.

3.1 Starting StateView/CWRAT

StateView/CWRAT can be started using the **Start...Programs...CDSS...StateView-Version** and **Start...Programs...CDSS...CWRAT-Version** menus. Newer systems may use the **Start...All Programs...CDSS...** menus. Software updates install in a separate versioned location so that old and new versions can be run independently.

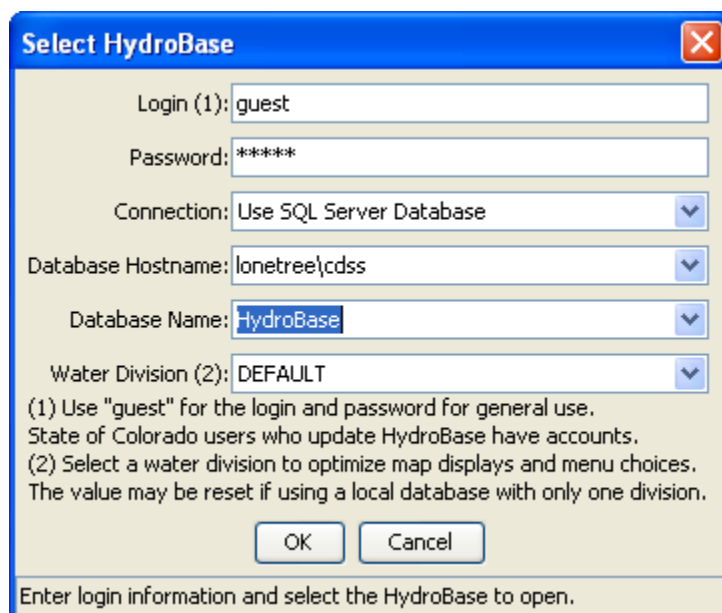
3.2 Select HydroBase Dialog

At startup you are requested to select a HydroBase database. A HydroBase database can also be selected from the **File...Open...** menu. The dialog shown in the following figure will be displayed (in this case illustrating the use of HydroBase running on a local desktop computer):

Select HydroBase Database Dialog for Local Computer

HydroBaseLogin_Local

The following figure illustrates the HydroBase login when a shared (remote) database server is used:



HydroBaseLogin

Select HydroBase Database Dialog for Shared Database Server

You can also cancel the login, in which case HydroBase features will be disabled. If a previous HydroBase connection has been made, then **Cancel** reverts to the previous connection.

The main items displayed in the login dialog are described below. Footnotes in the login dialog provide information about some of the data fields.

- | | |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Login | The login identifies the user to the system. Many users can use the default guest login for viewing data. CWRAT Administration features require a valid login and password in order to edit data. |
| Password | The password is associated with the login and is required to edit data. The default guest login and password are suitable for most users. |
| Connection | The connection indicates the database that will be used for data viewing and editing. If Use SQL Server Database is selected, then the main Denver SQL Server database or a SQL Server Express server will be used. If Use Access Database is selected, then a Microsoft Access version of HydroBase will be used (Access is being phased out and is not discussed further below). |
| Database Hostname | The database host name choices are defaulted to available servers. If necessary, enter an alternate name or Internet address. |
| Database Names | A list of databases is listed for the selected Database Hostname (any databases that include HydroBase in the name). |

Water Division

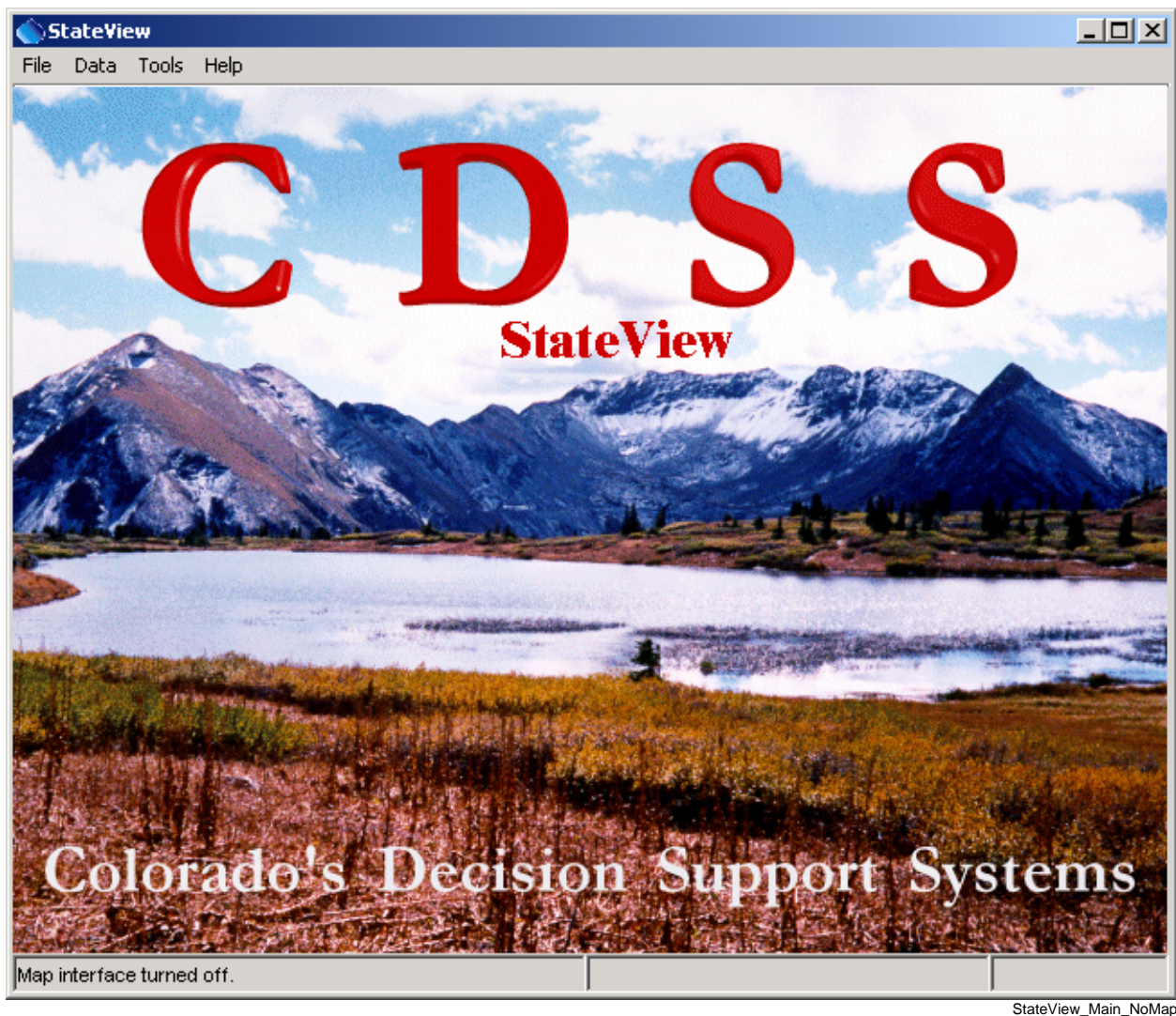
The **Water Division** choice is used to determine user preferences for the session. For example, a user who always works with Division 3 data can select DIV3. The **Tools...Options...Water District Filter** and **Tools...Options...Map** settings, when changed, will then be applied to a Division 3 login session. The settings in the SQL Server databases for State of Colorado staff may be pre-configured to typical settings. Using the DEFAULT Water Division setting will typically result in no map display and Water Division/District lists that include all divisions and districts.

3.3 Main Interface

The StateView/CWRAT application provides two main interface options:

1. **No map interface.** In this configuration, all interface features are accessed using the main menus.
2. **With map interface.** In this configuration, an interactive map is displayed that shows background layers (e.g., rivers and water districts) and data associated with other display windows (e.g., diversion locations), allowing some queries to be performed from the map interface. Spatial data to support the map interface are available from the State of Colorado and generally are installed in the C:\CDSS\GIS folder (this is the default location when installed from the HydroBase DVD).

The following figure illustrates the StateView interface after startup, with no map. The interface will appear as follows until you have completed the login procedure. (Note that the CWRAT interface is the same except that it includes an **Administration** menu.)

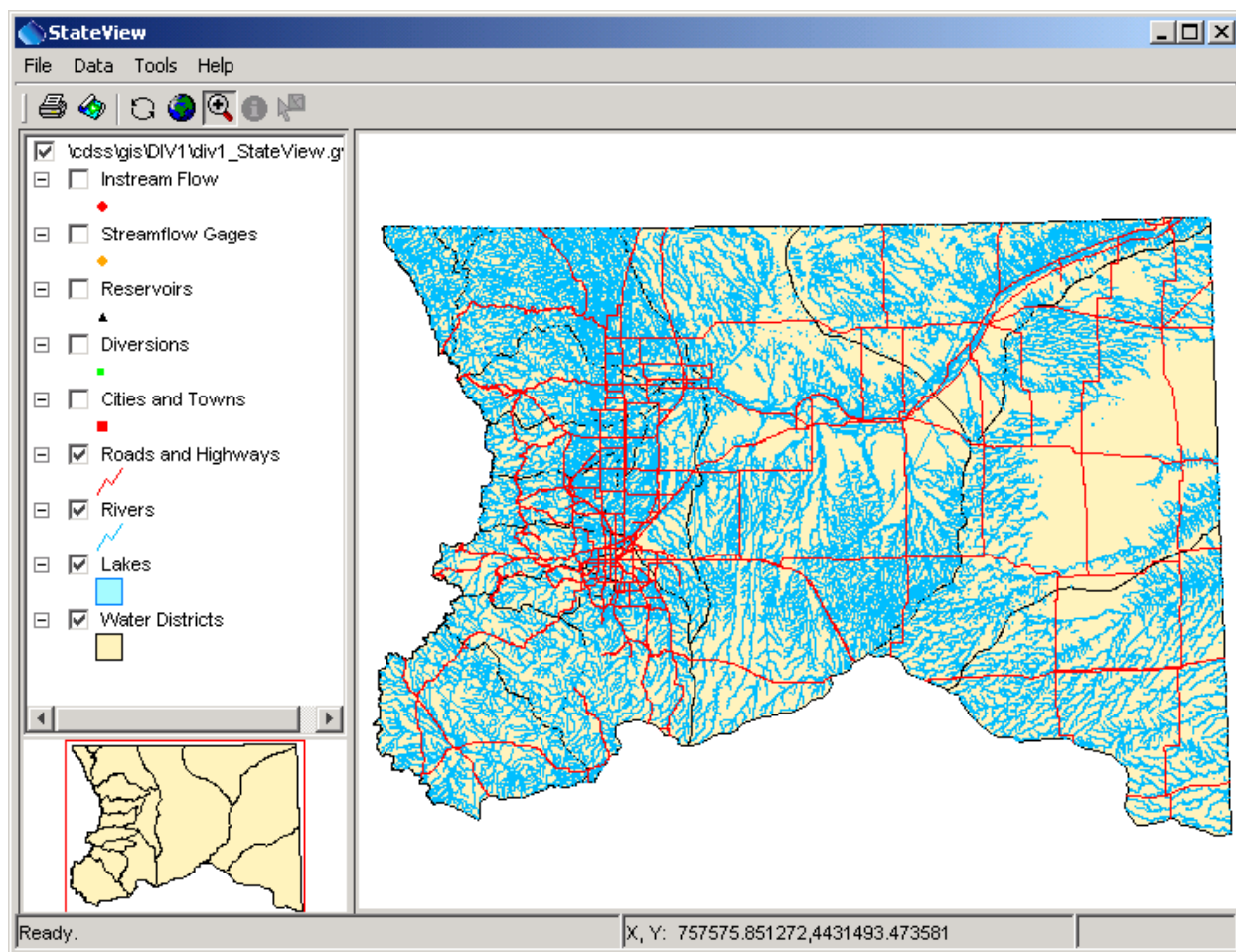


StateView_Main_NoMap

StateView Main Interface - No Map

3.3.1 Map Interface

StateView/CWRAT will display a map interface if, for your login, the **Tools...Options...Map** settings indicate a valid GeoView project file. Supporting GIS (Geographic Information Systems) files are typically distributed with the HydroBase DVD and are made available to State of Colorado staff on a file server. The following figure illustrates the main StateView interface when a map is displayed.



StateView_Main_WithMap

StateView Main Interface - With Map

The mapping tool used by StateView/CWRAT is a general tool and is described in the **GeoView Mapping Tools Appendix**. The map interface is similar to other common map interfaces; however, it has been implemented to specifically provide features to view HydroBase data and related spatial data. The mapping tools can be used interactively (e.g., you can zoom in to an area or turn layers on and off). To streamline the specific StateView/CWRAT functionality, the following actions are taken by StateView/CWRAT:

1. The GeoView project file, which describes the layers that are initially shown in the map, identifies layers as Baselayer or specific data types (e.g., *Diversions*). StateView/CWRAT is then able to automatically turn layers on and off during operation. For example, if the **Data...Structures** menu item is selected, only the structure layer types (*Diversions*, *Reservoir*, *Well*) will be enabled on the map (indicated by the check-box in the map table of contents). This automatic enabling/disabling of layers is meant to streamline data viewing. You can turn on other layers if

necessary by enabling them in the table of contents. Automatically displaying some map layers will cause StateView/CWRAT to pause temporarily if spatial data layers are large. Loading the spatial data at startup will also temporarily slow down the software.

2. Several **Data** menu displays include **Select on Map** buttons that allow data from those displays to be selected on the map (e.g., station or diversion locations). The default behavior in this case is to zoom in to the selected structures. Again, this behavior has been implemented to help streamline data viewing.

Chapter 7 - Examples of Use provides step-by-step examples of how to use the map interface to simplify spatial queries of the database (e.g., finding diversions in an area). Additional information is discussed for each **Data** display that supports map interaction (see **Chapter 4 – Viewing Data**).

3.3.2 Time Series Viewing Tools

Many StateView/CWRAT data views allow time series data to be displayed. In most cases, regardless of how time series data are initially displayed, time series can be displayed in the following ways:

1. Graph
2. Table
3. Summary (i.e., text report)

The **TSView Time Series Viewing Tools Appendix** describes the features of the time series viewing package, which is used by several CDSS programs.

3.3.3 Tabular Lists (Worksheets)

Tabular lists are used for record-based output, such as lists of structures or water rights. Because the size of such output may be large, both vertical and horizontal scrollbars may be used. The following figure illustrates a tabular list.

Structure Records: 6247 records returned in 59.155 seconds

	WD	ID	STRUCTURE NAME	LOCATION	WATER SOURCE	STREAM MILE	OWNER
1	1	500	HOOVER DITCH	S 5N 64W 15 NE NW	SOUTH PLATTE RIVER	147.00	HOOVER DITCH
2	1	501	EMPIRE DITCH	S 5N 63W 19 SW SW SE	SOUTH PLATTE RIVER	0.00	BIJOU DITCH CO
3	1	502	HARDIN DITCH	S 5N 63W 25 NE NW SE	SOUTH PLATTE RIVER	0.00	ABANDON
4	1	503	RIVERSIDE CANAL	S 5N 63W 20 SW	SOUTH PLATTE RIVER	144.00	RIVERSIDE IRRIG
5	1	504	ILLINOIS DITCH	S 5N 63W 34 NE SW NW	SOUTH PLATTE RIVER	0.00	FARR, W. D.
6	1	505	BIJOU & PUTNAM D	S	SOUTH PLATTE RIVER	0.00	NO INFORMATI
7	1	506	PUTNAM DITCH	S 4N 62W 13 NE	SOUTH PLATTE RIVER	0.00	PUTNAM DITCH
8	1	507	BIJOU CANAL	S 4N 63W 13 NE	SOUTH PLATTE RIVER	139.00	BIJOU IRRIGATI
9	1	508	RIVERSIDE RES OUT D	S 5N 63W 20 SW	SOUTH PLATTE RIVER	133.00	WOODWARD, I
10	1	509	CORONA RANCH DITCH	S 4N 62W 17 SE NW NW	SOUTH PLATTE RIVER	136.00	CORONA RAN
11	1	510	SCHULTZ DITCH	S 4N 62W 15 SE SE NW	SOUTH PLATTE RIVER	133.00	.
12	1	511	WELDON VALLEY DITCH	S 4N 61W 13 SW	SOUTH PLATTE RIVER	126.00	WELDON VALL
13	1	512	JACKSON LAKE OUT	S	SOUTH PLATTE RIVER	121.00	FT MORGAN RE

TabularList

Example Tabular List

Features of tabular lists are summarized below:

- Default widths for columns are set based on the contents of the column; however, the column widths can be changed by dragging the boundary between two columns.

- The contents of a column can be sorted by right clicking on the column header and selecting **Sort Ascending**, **Sort Descending**, or **Original Order**. The sorts are performed alphabetically and numeric sorts are also performed based on alphabetic ordering of the number's digits. This limitation at times causes some columns to not sort properly because of the output format (e.g., blanks occurring at the beginning of a line).
- Long tabular lists typically are shown with a label indicating the total number of records. Most tabular lists include a column with the record number, to facilitate scrolling.
- To facilitate interaction with other software, most tabular lists allow copy and paste. To select all cells, press **Ctrl-A**. To select a single cell, use **Ctrl-left-click**. To select groups of cells, select one cell and then use **Shift-left-click**, or drag over several cells. To copy selected cells, use **Ctrl-C** or right-click on the worksheet and select **Copy** from the popup menu. The selected cells' contents can then be pasted into other applications like Microsoft Excel. Currently, copy and paste is performed using text only and the resulting copy may need to be formatted in the receiving application.

3.3.4 Filters for Queries

Many queries provide choice-based input filters, as shown in the following figure:

InputFilter

Filter Used to Limit Query

By default, all data will be returned. However, the filters can be used to restrict the query. Depending on the data being evaluated, a choice may be provided, or a value may need to be typed. If more than one filter is used, the query will be further restricted.

3.3.5 Tool Tips

In many cases, holding the mouse stationary over a graphical interface component for a few seconds will display useful information, as shown in the following example:

OWNER	STRUCTURE TYPE	CURRENTLY IN USE	TRANS-BASIN	DECREED RATE ABS (CFS)
COMCD	Reservoir	U		0.001

Indicates if the structure is currently in use (CIU):

A = Active structure with contemporary diversion records.

B = Structure abandoned by the court.

EC = Conditional structure.

ED = Duplicate, ID is no longer used.

FF = Structure used as FROM number - located in another district.

HH = Historical structure only - no longer exists or has records, but has historical data.

II = Inactive structures which physically exist but no diversion records are kept.

NN = Non-existent structure with no contemporary or historical records.

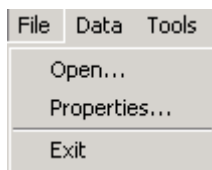
UU = Active structures but diversion records are not maintained.

ToolTip

Example Tool Tip

3.4 File Menu – Open HydroBase, Display HydroBase Properties, Exit

The **File** menu provides standard input and output features as described below.



Menu_File

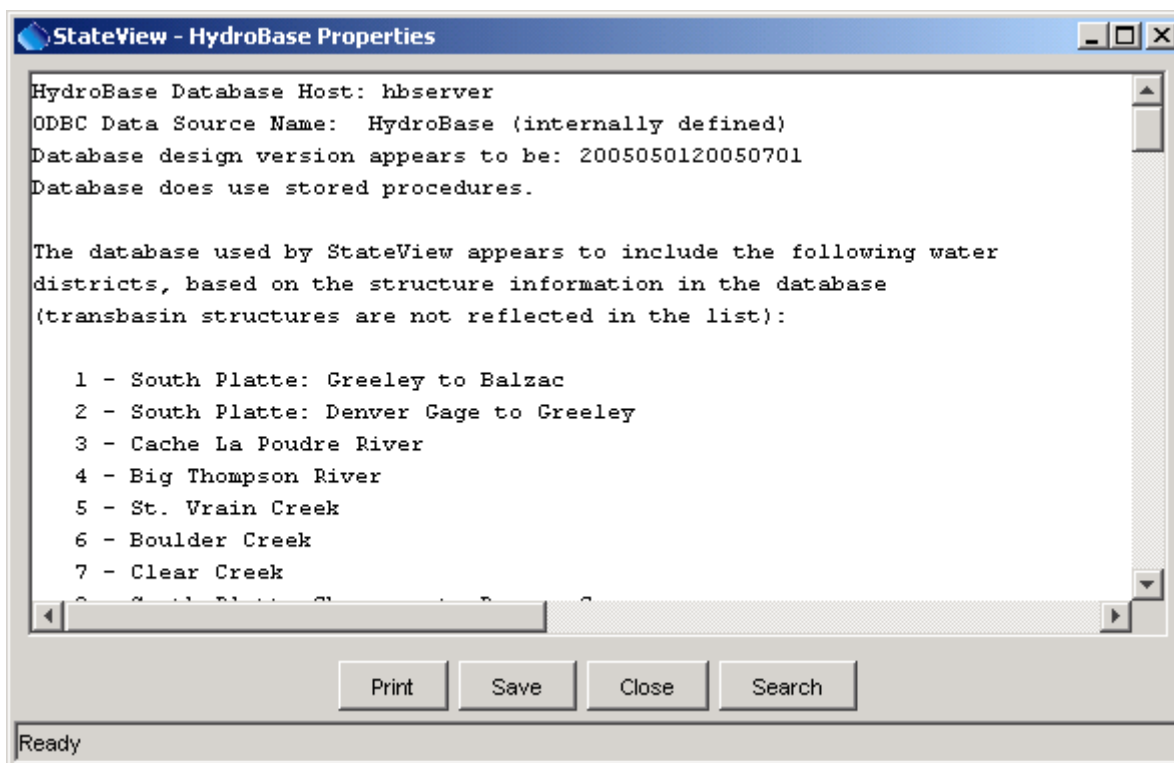
File Menu

3.4.1 Open HydroBase

The **File...Open** menu displays the **Select HydroBase** dialog, as previously discussed in **Section 3.2 – Select HydroBase Dialog**.

3.4.2 HydroBase Properties

The **File...Properties** menu displays properties for the HydroBase database, as shown in the following figure. The properties indicate the database server that is being used and the version of the database. This information is useful when diagnosing database problems or comparing differences between database contents.



HydroBase_Properties

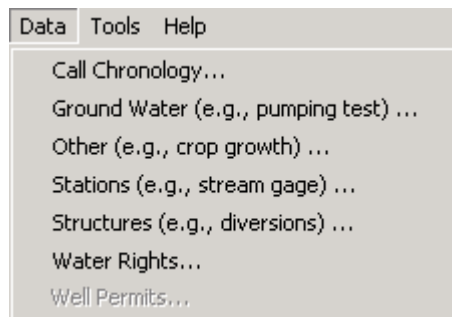
HydroBase Properties Dialog

3.4.3 Exit

The **File...Exit** menu exits StateView/CWRAT. You are given the option to cancel the exit. If you have changed display options and are logged in as someone other than guest, the settings will be saved in HydroBase for use in the next session.

3.5 Data Menu

The **Data** menu provides displays for most of the data in HydroBase, and is summarized below. See **Chapter 4 – Viewing Data** for more information.



Menu_Data

Data Menu

3.5.1 Call Chronology

The **Data...Call Chronology** menu item displays river call data for active and previously set/released calls. The interface is similar to that available from the **Administration...Edit Calls** interface except that calls cannot be modified. Call data may only be available in the central databases (not on HydroBase DVD).

3.5.2 Ground Water

The **Data...Ground Water** menu item displays data related to ground water, including well levels and pumping tests. Ground water data are only available for basins where a CDSS ground water modeling effort has occurred.

3.5.3 Other

The **Data...Other** menu item displays data that do not fit into the other menus, primarily crop statistics and consumptive use information.

3.5.4 Stations

The **Data...Stations** menu item displays data for climate and streamflow stations, including time series data.

3.5.5 Structures

The **Data...Structures** menu item displays data for administered structures (diversions, reservoirs, instream flow locations, dams, and wells). All structures except dams have water rights. Multiple data

views are available for structures, reflecting the variety of data available in HydroBase for structures. The water rights view can be accessed from structure displays.

3.5.6 Water Rights

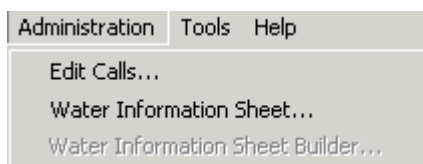
The **Data...Water Rights** menu item displays water right transactions and net amounts. Water rights data can be viewed in raw form or can be formatted in standard reports.

3.5.7 Well Permits

The **Data...Well Permits** menu item displays well permit data. Because well permit data have traditionally only been available for a fee, the menu is only enabled when using a SQL Server database with a non-guest login.

3.6 Administration Menu

The **Administration** menu is available only in CWRAT, and provides water administration tools, as summarized below. The data editing features of administration tools allow saving data to HydroBase only when logged in as someone that has permission in a water district, as configured by the HydroBase database administrator. See **Chapter 5 – Administration Tools** for more information.



Menu_Administration

Administration Menu

3.6.1 Edit Calls Menu

The **Administration...Edit Calls** menu item displays the interface for setting and releasing river call information. After call information is saved to HydroBase, it can be viewed by other system users, including web site users.

3.6.2 Water Information Sheet Menu

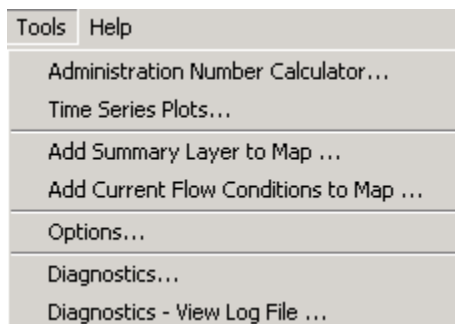
The **Administration...Water Information Sheet** menu item displays the Water Information Sheet (WIS) interface, which provides a daily water administration worksheet. Water commissioners and others who administer data use WIS.

3.6.3 Water Information Sheet Builder

The **Administration...Water Information Sheet Builder** menu item displays the WIS builder tool, which allows WIS formats to be adjusted. This tool is used infrequently to adjust a WIS. It can also be used to edit the WIS diagram.

3.7 Tools Menu

The **Tools** menu provides useful tools, as summarized below. See **Chapter 6 – Tools** for more information



Menu_Tools

Tools Menu

3.7.1 Administration Number Calculator

The **Tools...Administration Number Calculator** menu item displays a dialog that converts between administration number and appropriation date.

3.7.2 Time Series Plots

The **Tools...Time Series Plots** menu item provides a general time series plotting tool that allows time series from other displays (e.g., stations and structures) to be dragged onto a configuration window to produce complex plots. Time series products can be saved in HydroBase for reuse at a later time. The TSTool software is also useful for displaying time series of different type and interval.

3.7.3 Add Summary Layer to Map

The **Tools...Add Summary Layer to Map** menu item provides a general tool that allows a delimited file to be used to create a summary map layer. For example, average historical flow conditions at stream gages can be displayed as bars on the map.

3.7.4 Add Current Flow Conditions to Map

The **Tools...Add Current Flow Conditions to Map** menu item displays current flow conditions on the map, using the streamflow gage layer for locations. This feature requires that HydroBase include real-time streamflow data.

3.7.5 Options

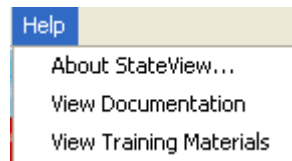
The **Tools...Options** menu item displays options for configuring StateView/CWRAT.

3.7.6 Diagnostics

The **Tools...Diagnostics** menu item displays a dialog that controls diagnostics settings, which are used in troubleshooting. The **Tools...Diagnostics – View Log File** menu item displays the log file, allowing scrolling and searches.

3.8 Help Menu

The help menu displays the software version and support information.



Menu_Help

Help Menu

The **Help...About StateView** menu (and **Help...About CWRAT** menu for CWRAT) displays the program version number, as shown in the following figure. Indicate the version number when reporting problems or suggestions. StateView and CWRAT share most features and the software versions will be consistent. The **Show Software/System Details** button displays technical information that is useful in troubleshooting.



Help_AboutStateView

Help...About StateView Dialog

The **Help** menu also provides access to the this documentation and to training materials.