

# StateView Training

## Using the Map

Version: 4.02.00, 2011-07-15

Duration: Approximately 45 minutes

Level: Introduction

Colorado's Decision Support Systems

Developed by DWR and CWCB



# This Presentation

- Provides an introduction to StateView map features and functionality for new users
- Is designed for self-paced training
- Includes examples
- StateView requires that the HydroBase database is accessible

# CDSS GIS Data

- Available for download from CDSS website (<http://cdss.state.co.us>) under Products...GIS.
- Available on HydroBase DVD
- NOT distributed with StateView software due to size of files – the availability of GIS data increases the usefulness of StateView

# CDSS GIS Data Files

div1

File Edit View Favorites Tools Help

Back Forward Up Search Folders

Address C:\CDSS\GIS\div1

Folders

CDSS

- CWRAT-04.02.00
- data
- data\_backups
- data\_downloads
- GIS
  - div1
  - div2
  - div3
  - div4
  - div5
  - div5\_old
  - div6
  - div7
- Installs
- logs
- snotel
- StateCU
  - statecu10
  - statecu-old
- StateDMI-02.16.00
- StateDMI-02.18.00
- StateDMI-02.18.00save
- StateDMI-03.00.00beta
- StateDMI-03.02.00beta
- StateDMI-03.03.00
- StateDMI-03.04.00
- StateDMI-03.06.00

div1\_reservoirs.shx 25 KB SHX File 8/4/2006

div1\_solarradiation.dbf 9 KB DBF File 6/23/200

div1\_solarradiation.htm 8 KB Firefox Document 6/24/200

div1\_solarradiation.prj 1 KB PRJ File 6/23/200

div1\_solarradiation.shp 4 KB SHP File 6/23/200

div1\_solarradiation.shx 8 KB SHX File 6/23/200

div1\_StateView.gvp 8 KB DBF File 6/23/200

div1\_StateView\_WithWells.gvp 6 KB Firefox Document 6/24/200

div1\_tempstations.dbf 1 KB PRJ File 6/23/200

div1\_tempstations.htm 1 KB SHP File 6/23/200

div1\_tempstations.prj 5 KB SHX File 6/23/200

div1\_tempstations.shp 1 KB DBF File 6/23/200

div1\_tempstations.shx 16 KB Firefox Document 6/24/200

div1\_townships.dbf 1 KB PRJ File 6/23/200

div1\_townships.htm 1 KB SHP File 6/23/200

div1\_townships.prj 1 KB SHX File 6/23/200

div1\_townships.shp 4 KB SHX File 6/23/200

div1\_townships.shx 1 KB DBF File 6/23/200

div1\_wells\_decree.dbf 7 KB SHX File 6/23/200

div1\_StateView.gvp

div1\_StateView\_WithWells.gvp

div1\_tempstations.dbf

div1\_tempstations.htm

div1\_tempstations.prj

div1\_tempstations.shp

div1\_tempstations.shx

div1\_townships.dbf

div1\_townships.htm

div1\_townships.prj

div1\_townships.shp

div1\_townships.shx

div1\_wells\_decree.dbf

GIS files are distributed on the HydroBase DVD. If downloaded from the CDSS website, follow this file organization to be compatible with software default configuration.

StateView does not read ESRI map configuration files and instead a simple text "GeoView Project" (gvp) file defines the map configuration.

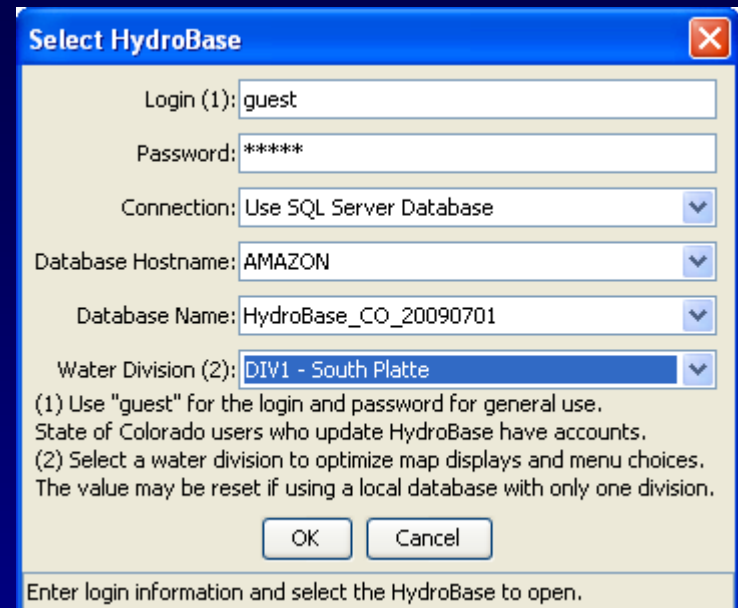


# StateView with Map Disabled



# Selecting a Map at Startup

- Guest login is OK
- Select HydroBase version to use
- Select water division of interest
- HydroBase distributed on DVD is configured to look for GIS data in C:\CDSS



The screenshot shows a Windows-style dialog box titled "Select HydroBase". It contains several input fields and dropdown menus. The "Login (1)" field is set to "guest", the "Password" field is masked with "\*\*\*\*\*", the "Connection" dropdown is set to "Use SQL Server Database", the "Database Hostname" dropdown is set to "AMAZON", the "Database Name" dropdown is set to "HydroBase\_CO\_20090701", and the "Water Division (2)" dropdown is set to "DIV1 - South Platte". Below these fields, there is explanatory text: "(1) Use 'guest' for the login and password for general use. State of Colorado users who update HydroBase have accounts. (2) Select a water division to optimize map displays and menu choices. The value may be reset if using a local database with only one division." At the bottom of the dialog are "OK" and "Cancel" buttons. A status bar at the very bottom of the dialog reads "Enter login information and select the HydroBase to open."

Select HydroBase

Login (1): guest

Password: \*\*\*\*\*

Connection: Use SQL Server Database

Database Hostname: AMAZON

Database Name: HydroBase\_CO\_20090701

Water Division (2): DIV1 - South Platte

(1) Use "guest" for the login and password for general use.  
State of Colorado users who update HydroBase have accounts.  
(2) Select a water division to optimize map displays and menu choices.  
The value may be reset if using a local database with only one division.

OK Cancel

Enter login information and select the HydroBase to open.



# Main Window (Map Enabled)

The screenshot displays the StateView application window. The title bar reads "StateView". The menu bar includes "File", "Data", "Tools", and "Help". The toolbar contains icons for file operations, map navigation, and data management. The left sidebar shows a list of map layers with checkboxes and symbols:

- ☒ \cdss\gis\DIV1\div1\_StateView.gv
- ☐ Streamflow Gages
- ☐ Reservoirs
- ☐ Diversions
- ☒ Cities and Towns
- ☒ Roads and Highways
- ☒ Rivers
- ☒ Lakes
- ☒ Water Districts

The main map area shows a detailed map of Colorado with numerous cities and towns labeled, including Denver, Boulder, Fort Collins, and others. The map is overlaid with a network of roads and rivers. A small overview map is visible in the bottom-left corner.

Annotations with arrows point to specific features:

- An arrow points to the file path `\cdss\gis\DIV1\div1_StateView.gv` in the layer list, with the text: "Location of map configuration file".
- An arrow points to the "Reservoirs" layer, with the text: "Map layers can be enabled/disabled – select and right-click to view attribute table and properties".
- An arrow points to the zoom controls (a box with left and right arrows) at the bottom of the map, with the text: "Draw box on main map or overview map to zoom in".

The status bar at the bottom shows "Ready." and coordinates: "X, Y: 398955.165163, 4576198.181577".

# StateView Map

- Provides basic spatial data viewing, but is not intended for full-featured GIS analysis
- Maps are configured for general use and therefore defaults may not be suitable for all purposes
- Data viewing may be limited because not all HydroBase data have coordinates, and coordinates may be inaccurate



# Map Tools

The screenshot displays the StateView GIS application window. The title bar reads "StateView". The menu bar includes "File", "Data", "Tools", and "Help". The toolbar contains icons for file operations, navigation, and analysis. The left sidebar shows a project tree with the following items:

- ☒ \cdss\gis\DIV1\StateView.gv
- ☐ Streamflow Gages
- ☐ Reservoirs
- ☐ Divergions
- ☒ Roads and Highways
- ☒ Rivers
- ☒ Lakes
- ☒ Water District

The main map area shows a detailed map of Colorado with numerous place names and geographical features. A red rectangular box is drawn on the map, indicating a selection area. A black callout box with white text points to the toolbar and the map, stating: "Tools to enter information mode and select mode for features on the map". Another black callout box with white text points to the toolbar, stating: "Zoom to full extent". A third black callout box with white text points to the map, stating: "Turn on zoom mode – use the mouse to draw a box on the map". The status bar at the bottom left shows "Ready." and the bottom right shows the coordinates "X, Y: 398955.165163, 4576198.181577".

Tools to enter information mode and select mode for features on the map

Zoom to full extent

Turn on zoom mode – use the mouse to draw a box on the map

Ready.

X, Y: 398955.165163, 4576198.181577

# Mapping Diversion Structures

- You want to see where one or more diversion structures are on the map
- The diversion structures of interest **MUST** have coordinates – otherwise they will not be displayed on the map

# Mapping Diversion Structures (1)

StateView - Structure Data - Query

Query Options:

Div/Dist: Division 1: South Platte

Where: Structure Name Contains north poudre

Where: Structure Type Matches Headgate

Where: Matches

Get Data

Structure Records: 11 records returned in 0.359 seconds

	DIV	WD	ID	STRUCTURE NAME	LOCATION	WATER SOURCE	STREAM MILE	OWNER	STRUCTURE TYPE	CURRENT IN USE
1	1	3	1077	DUPE NORTH POUDRE CANAL		DRY CREEK	0.00	NORTH POUDRE IRR...	Headgate	D
2	1	3	994	NORTH POUDRE CANAL	S 10N 71W 12 SE SE SW	N FK CAC LA POUDRE R	0.00	NORTH POUDRE IRR...	Headgate	A
3	1	3	1246	NORTH POUDRE SEEP 2	S 9N 69W 10 SE NE NW	SEEPAGE	0.00		Headgate	U
4	1	3	1245	NORTH POUDRE SEEP 3	S 9N 69W 11 SW SE NE	SEEPAGE	0.00		Headgate	U
5	1	3	1244	NORTH POUDRE SEEP 4	S 9N 69W 11 SE SW SE	SEEPAGE	0.00		Headgate	U
6	1	3	1241	NORTH POUDRE SEEP 5	S 9N 69W 12 SW NE SW	SEEPAGE	0.00		Headgate	U
7	1	3	1243	NORTH POUDRE SEEP 6	S 9N 69W 12 SW SW SW	SEEPAGE	0.00		Headgate	U
8	1	3	1247	NORTH POUDRE SEEP NO 1	S 9N 69W		00		Headgate	U
9	1	3	905	NORTH POUDRE SUPPLY CNL	S 8N 70W		00	NORTH POUDRE IRR...	Headgate	A
10	1	3	992	WOODS NORTH POUDRE D 1	S 11N 72W		00	BRACKENBURY, D	Headgate	U
11	1	3	993	WOODS NORTH POUDRE D 2	S 11N 72W		00	BRACKENBURY, D	Headgate	U

Display View: Structure Summary

Select On Map Print Export Close

Cannot generate view list; more than one structure selected

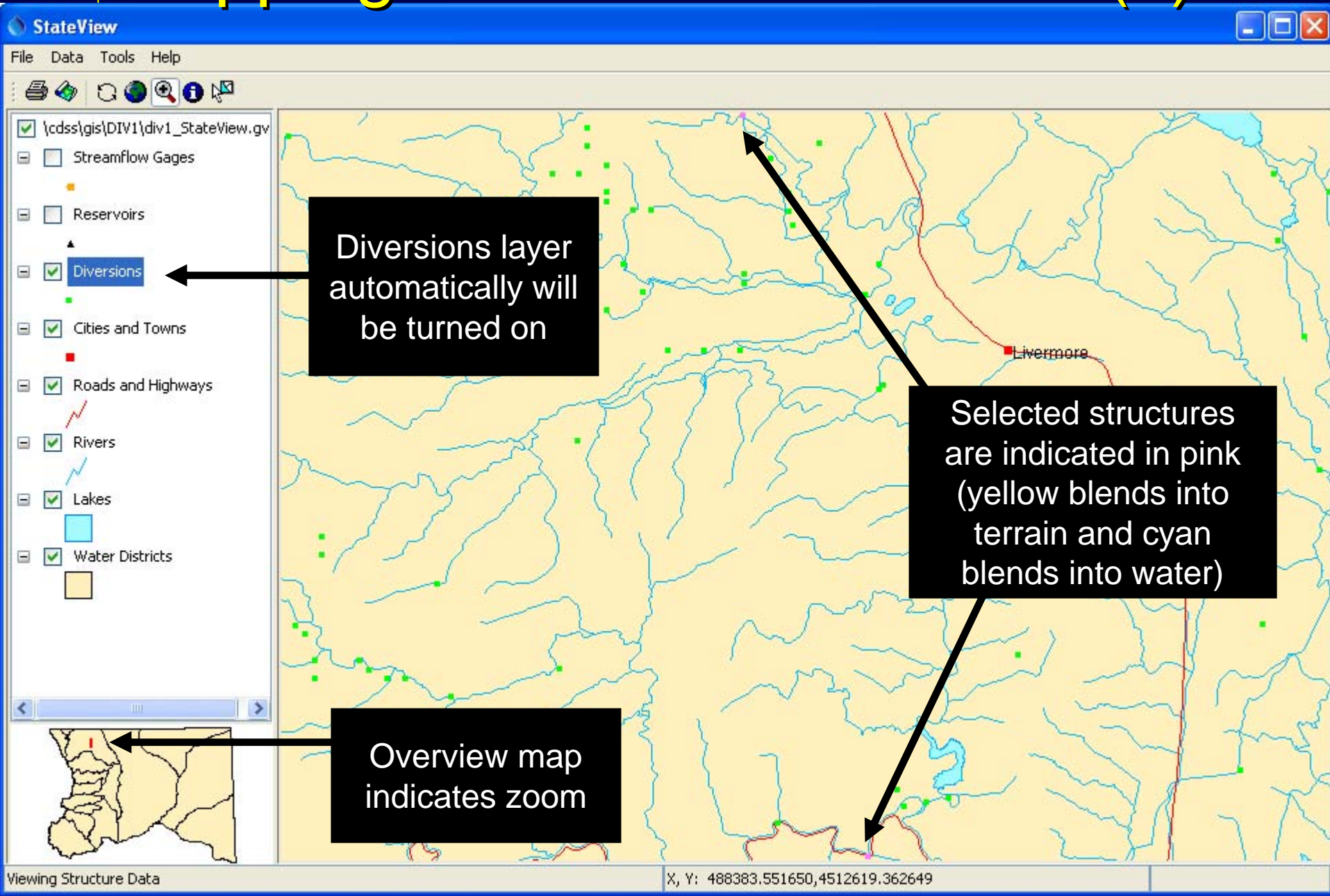
Select structures of interest

Further select structures and press "Select on Map"

Scroll to see coordinates on far right – missing coordinates will result in no location on the map



# Mapping Diversion Structures (2)





# Labeling Diversion Structures (1)

The screenshot shows the StateView software interface. On the left is a layer list with the following items: ☒ \cdss\gis\DIV1\div1\_1, ☐ Streamflow Gages, ☐ Reservoirs, ☒ Diversions, ☒ Cities and Towns, ☒ Roads and Highways, ☒ Rivers, ☒ Lakes, and ☒ Water Districts. The main map area displays a yellow background with blue lines representing water features and green dots representing diversion structures. Each dot is labeled with a number and a name, such as "0301462, LOWER CHEROKEE SPRING 2" and "0301474, EMOND LUNDBERG". A black callout box with the text "Right click to view layer properties" has an arrow pointing to the "Diversions" layer in the list. Another black callout box with the text "Labels help to identify structures, but also clutter up the map (scale-dependent labeling is not a feature)" has an arrow pointing to the labels on the map. A third black callout box with the text "Right click to view layer properties" has an arrow pointing to the "Diversions - Properties" dialog box. The dialog box has tabs for "Layer", "Symbol", "Label", "Application", and "Animation". The "Label" tab is selected, showing options for text labels, floating point values, integer values, and string values. The "Label field(s)" dropdown is set to "NAME", and the "Label format" is set to "%s,%s". The "Label font" is set to "Helvetica" and the "Font size (points)" is set to "10.0". The "Position" is set to "Right". There is a checkbox for "Label Selected Features Only" which is unchecked. At the bottom of the dialog are "Apply", "OK", and "Cancel" buttons. The status bar at the bottom of the window displays "X, Y: 473951.196733, 4509034.856199".

StateView

File Data Tools Help

Right click to view layer properties

StateView - Diversions - Properties

Layer Symbol Label Application Animation

Text labels can be formatted from data fields. Select one or more fields.  
Optionally, also use the label format to specify how label fields should be formatted.  
Floating point values: Use %NN.NF (e.g., %f, %.2f, %10.2f).  
Integer values: Treat as 0-precision float (e.g., %.0f, %f, %10.0f).  
String values: Use %s (e.g., %s, %20s, %20.20s).

Label field(s): NAME

id\_label7,NAME

Label format: %s,%s

Label font: Helvetica

Font size (points): 10.0

Position: Right

☐ Label Selected Features Only

Apply OK Cancel

Labels help to identify structures, but also clutter up the map (scale-dependent labeling is not a feature)

Viewing Structure Data

X, Y: 473951.196733, 4509034.856199

# Labeling Selected Diversion Structures

StateView

File Data Tools Help

\cdss\gis\DIV1\div1\_StateView.gv

☐ Streamflow Gages

☐ Reservoirs

☒ Diversions

☒ Cities and Towns

☒ Roads and Highways

☒ Rivers

☒ Lakes

☒ Water Districts

StateView - Diversions - Properties

Layer Symbol Label Application Animation

Text labels can be formatted from data fields. Select one or more fields.  
Optionally, also use the label format to specify how label fields should be formatted.  
Floating point values: Use %NN.NF (e.g., %f, %.2f, %10.2f).  
Integer values: Treat as 0-precision float (e.g., %.0f, %f, %10.0f).  
String values: Use %s (e.g., %s, %20s, %20.20s).

Label field(s): NAME  
id\_label7,NAME

Label format: %s,%s

Label font: Helvetica

Font size (points): 10.0

Position: Right

☒ Label Selected Features Only

Apply OK Cancel

Select "Label Selected Features Only" and press "Apply" to filter the labels

Viewing Structure Data

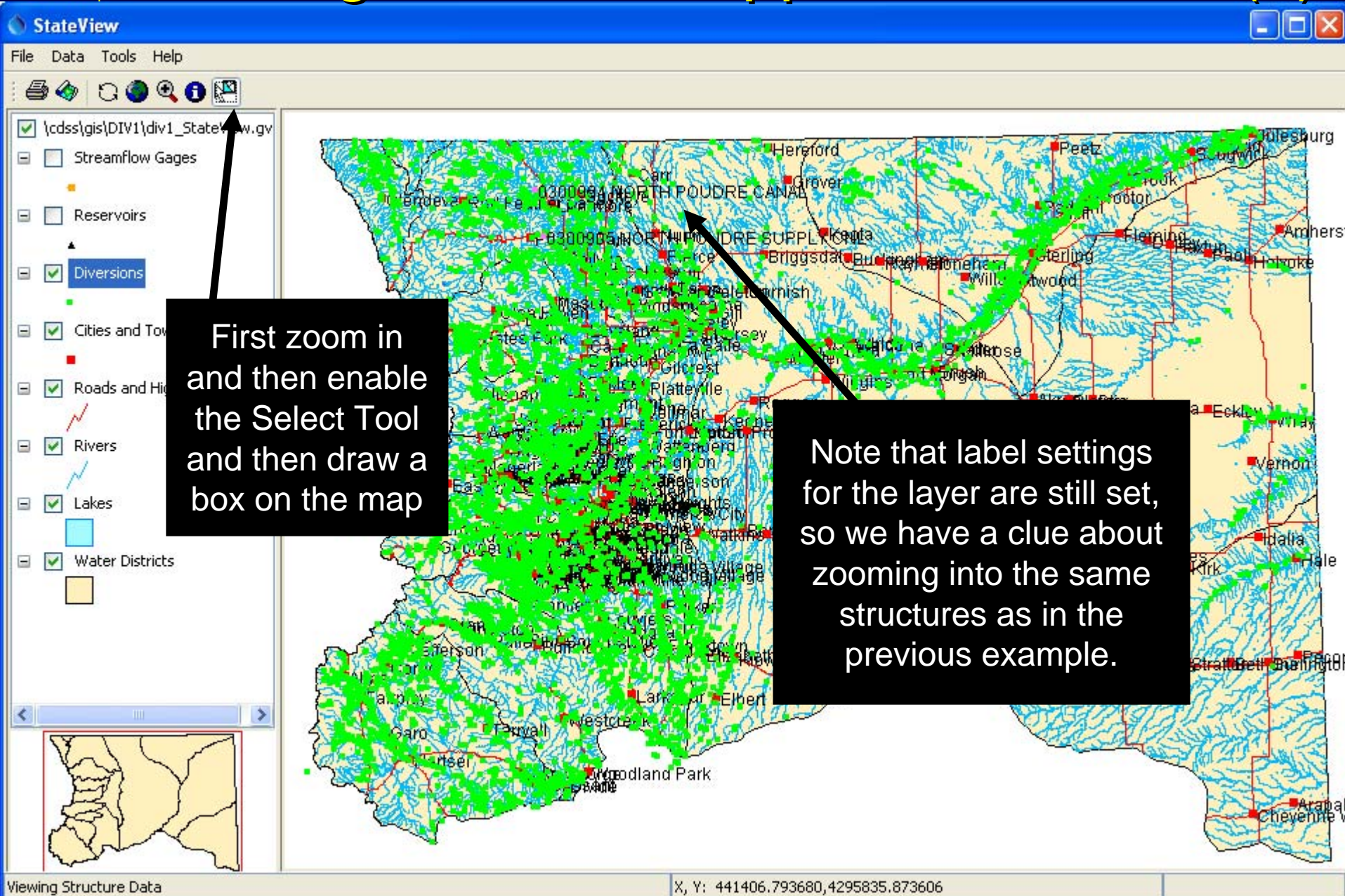
X, Y: 470492.462440,4521329.084461

# Lookup up Diversion Structures from the Map

- You have selected diversion structures on the map and want to see the corresponding HydroBase data
- First, zoom out the map by pressing the globe tool above the map
- Then, zoom into an area of interest on the map by drawing a box on the map
- Make sure the Diversions layer is enabled (the map will show many symbols)

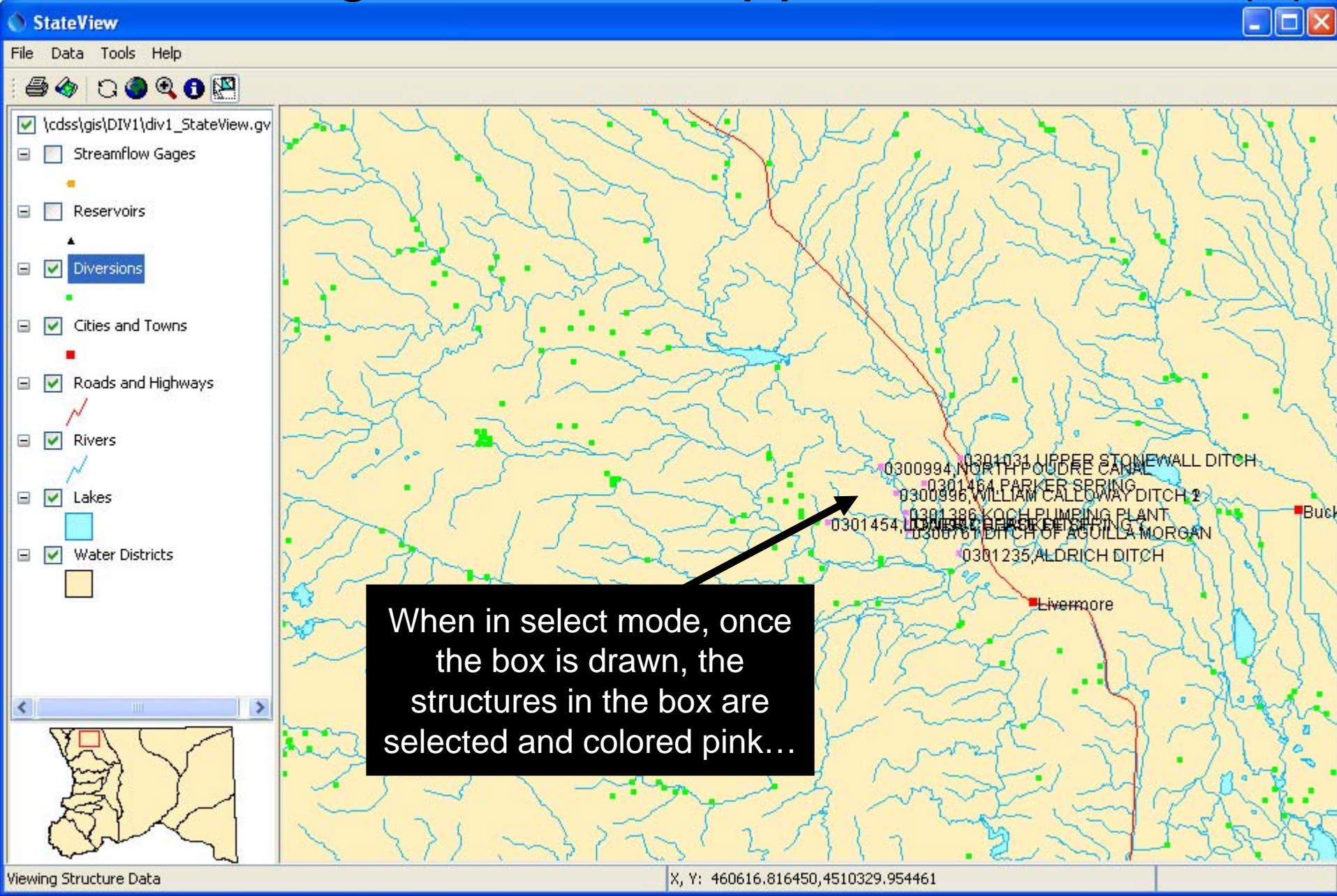


# Showing Data for Mapped Structures (1)





# Showing Data for Mapped Structures (2)



# Showing Data for Mapped Structures (3)

StateView - Structure Data - Query

Query Options:

Div/Dist:

Where: Structure Name

Where: Structure Type

Where:

Structure Records: 3 records returned in 0.313 seconds

	DIV	WD	ID	STRUCTURE NAME	LOCATION	WATER SOURCE	STREAM MILE	OWNER	STRUCTURE TYPE	CURRENT IN USE
1	1	3	994	NORTH POUDRE CANAL	S 10N 71W 12 SE SE SW	N FK CAC LA POUDRE R	0.00	NORTH POUDRE IRR...	Headgate	A
2	1	3	992	WOODS NORTH POUDRE D 1	S 11N 72W 28 SW	N FK CAC LA POUDRE R	0.00	BRACKENBURY, D	Headgate	U
3	1	3	993	WOODS NORTH POUDRE D 2	S 11N 72W 27 SE	N FK CAC LA POUDRE R	0.00	BRACKENBURY, D	Headgate	U

Display View:

3 records returned in 0.313 seconds, queried using map coordinates.

Why are only 3 listed? Because the "Where" filters are still in place!

If desired can go back and forth between map and this display to find data.

# Mapping Stations

- The Stations display has similar mapping features
- However, the interaction is complicated because stations correspond to different data types (streamflow, precipitation, etc.) and there are not map layers configured for all the combinations
- Stations mapping can be used to display streamflow gages

# More Information

Help...View Documentation displays the StateView documentation. Help...View Training Materials displays other self-paced presentations.

See the Water Commissioner Manual and HydroBase documentation

Numerous task memoranda, reports, software documentation, and other documents provide technical information and are available on the CDSS web site:

<http://cdss.state.co.us> (see Products links)