COLORADO DATA SHARING NETWORK (CDSN)
A Project of the Colorado Water Quality Monitoring Council
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www.ColoradoWaterData.org

JANUARY 25, 2015

GETTING STARTED WITH THE CDSN MONITORING LOCATION & EXCEEDANCES GOOGLE-MAP UTILITY

The CDSN Google-Mapper allows a user to see monitoring location metadata quickly when the mouse is rolled-over an Ambient Water Quality Monitoring System (AWQMS), USGS National Water Information System (NWIS), or EPA National Data Warehouse monitoring location at an appropriate zoom level. A summary of water quality data results can be viewed or downloaded for AWQMS and EPA monitoring locations from the mapper simply by clicking on the monitoring location, again at the appropriate zoom level. Clicking on a USGS monitoring location will take you to a USGS data download page where you can download the USGS water quality results data.

The user can turn on the Exceedance filter and specify a characteristic and a threshold value to the AWQMS monitoring locations (EPA & USGS monitoring locations will continue to display but do not get filtered by the exceedance function). AWQMS Monitoring locations having "hits" or exceedances will then turn red. With the Exceedance filter active, only data that exceeds the threshold specified for the characteristics specified will be provided for viewing/download upon clicking on a "red" AWQMS monitoring location. Again, the exceedance filter only works on AWQMS monitoring locations and for the specific characteristic.

The CDSN "Google-map" was first deployed in the fall of 2011 and allowed for displaying AWQMS monitoring locations, as well as USGS NWIS/NAWQA monitoring locations and EPA National Data Warehouse monitoring locations. The ability to view monitoring locations that have data in AWQMS which exceeds a user specified value for a user specified characteristic (analyte) was added in January 2013.

Anyone can search for monitoring locations, exceedances, and download data from the CDSN Google-Map by simply registering as a user with their email address, for free at http://www.coloradowaterdata.org/cdsnawqms_cdsn.html. The CDSN Google-map and Exceedance map allow for real-time viewing of monitoring locations and filtering/viewing/downloading data from CDSN AWQMS. However, monitoring locations must have activity/results data stored in AWQMS to be visible on the map. Simply having monitoring location meta-data stored in AWQMS without also having sampling activity/results data stored in AWQMS for the same monitoring location by the same organization, will not make a monitoring location appear on the map.

Monitoring locations from the EPA National Data Warehouse (WQX/STORET) & USGS NWIS database monitoring locations are visible on the CDSN Google-map once they have been linked to the CDSN map. We update the links approximately annually. So if a new EPA National Data Warehouse or USGS NWIS monitoring location comes online in their systems in between our updates, it will not be visible until the next update. Once an EPA National Data Warehouse or USGS NWIS monitoring location is linked to the CDSN Google-map, you will be able to click on a USGS or National Data Warehouse monitoring location to get access via a table or website links to the real-time sampling activity/results data for these monitoring locations.

The Google-map requires a sufficient zoom level so that monitoring locations are displayed as "waterdrop" symbols, with different colors used to symbolize the monitoring locations from the three different databases linked to the map: CDSN AWQMS (blue), USGS NWIS (Yellow), or EPA (Orange).

In June, 2013 we upgraded the exceedance utility of the map, so that you could see both the monitoring locations where there are exceedances at the same time you could see those that don't exceed your thresholds for your analytes. Also, by streamlining the Monitoring Location map and the Exceedance query feature into one legend, the user interface of the map changed a bit. Whether you are a veteran or a new CDSN Google-map user, please take a minute to skim through this updated quick-start guide. The 2015 guide adds more details about generating results tables. **The text in bold red highlights a change with the June 2013-January 2015 version of the map, that veteran users will need to note and get used to.**

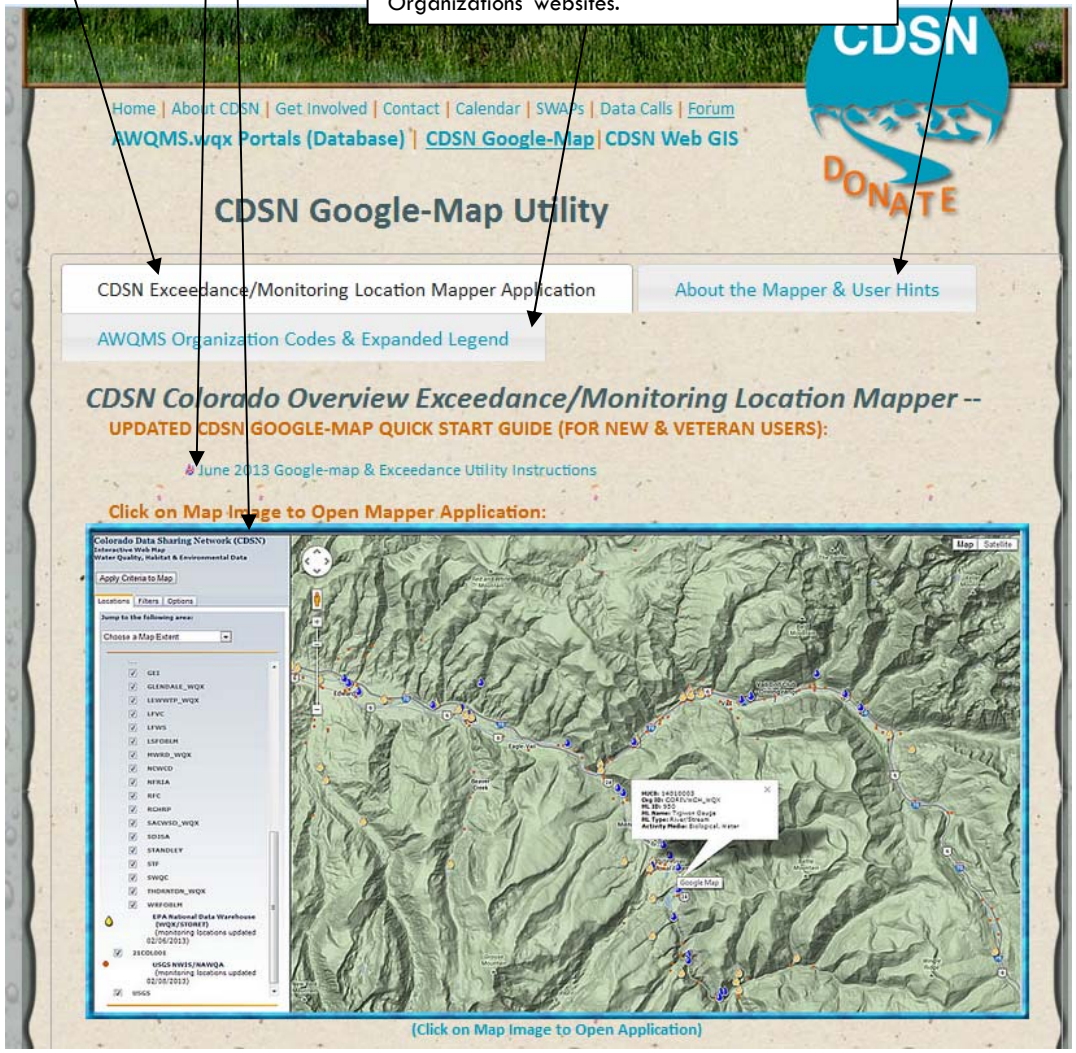
Please help the CDSN Project Coordinators know how the map is working for you and how we can make improvements. Email your comments to cdsn@coloradowaterdata.org. As always, our ability to make improvements and fix bugs will depend on funding we have available to pay our programmers. Please consider a contribution either online or by check to CDSN if you use the Google-Map. You can earmark it for map enhancements if you wish.

1. Find the Google-map and a printable Quick Start Guide, the Expanded Legend, and helpful hints on the CDSN Google-map webpage: **http://www.coloradowaterdata.org/cdsngooglemap_cdsn.html**

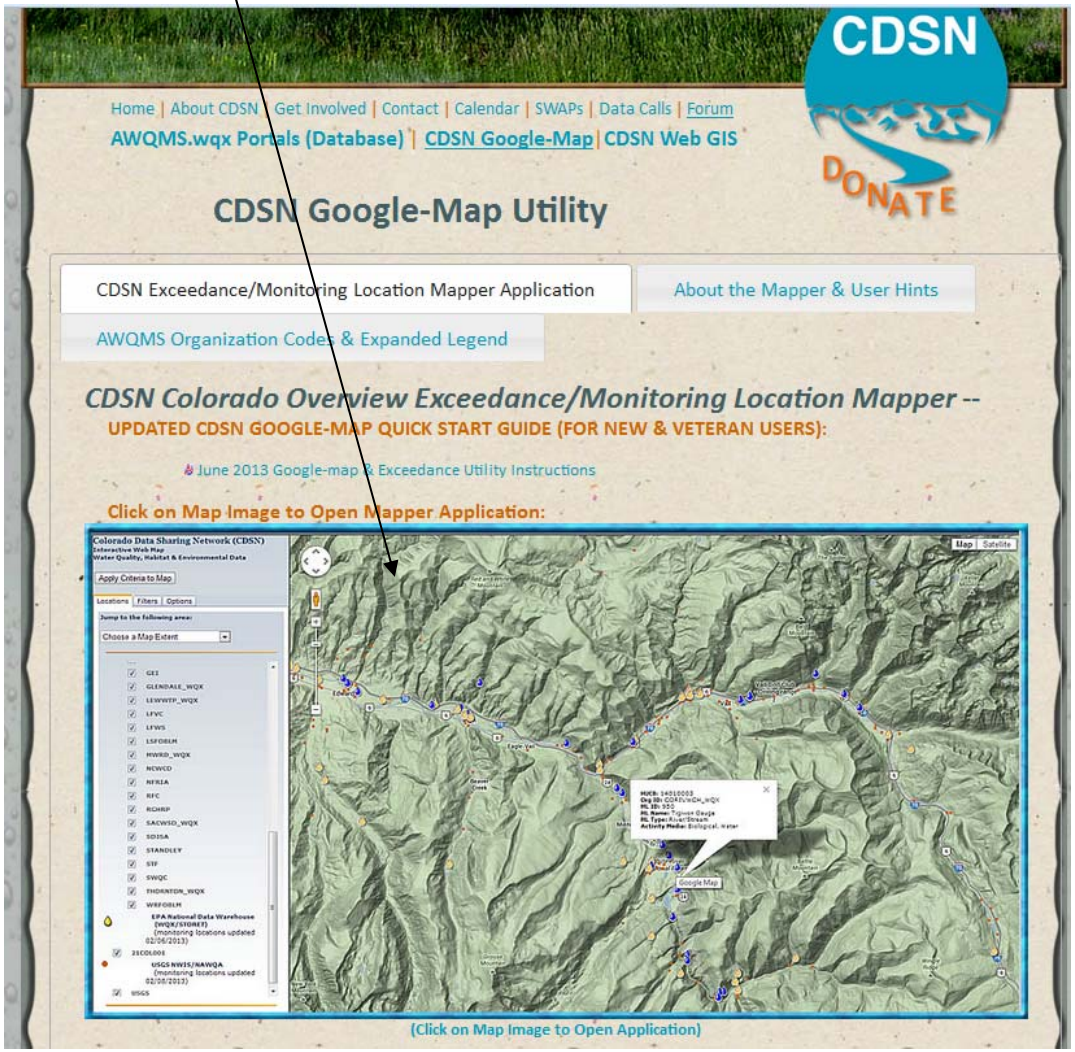
Default Tab, with Quick Start Guide and Map Utility

Expanded Legend Tab, with data summary, Organization Codes and Names, Links to AWQMS Organizations' websites.

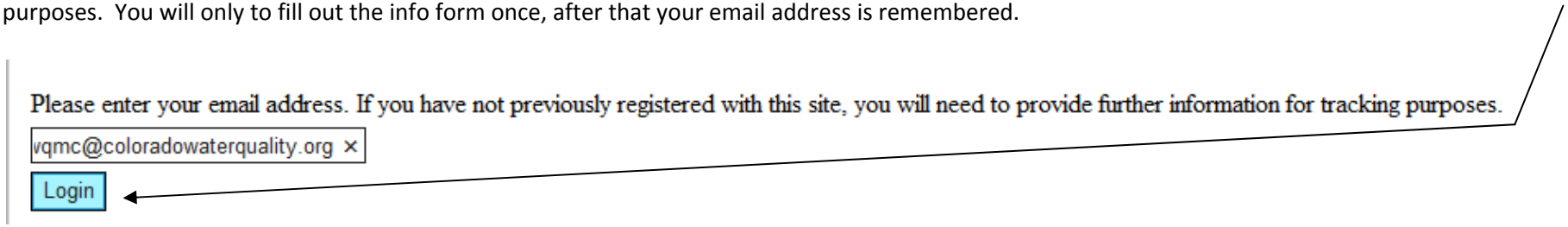
Helpful Hints Tab. More detail and step-by-step tutorial is in the Quick Start Guide.



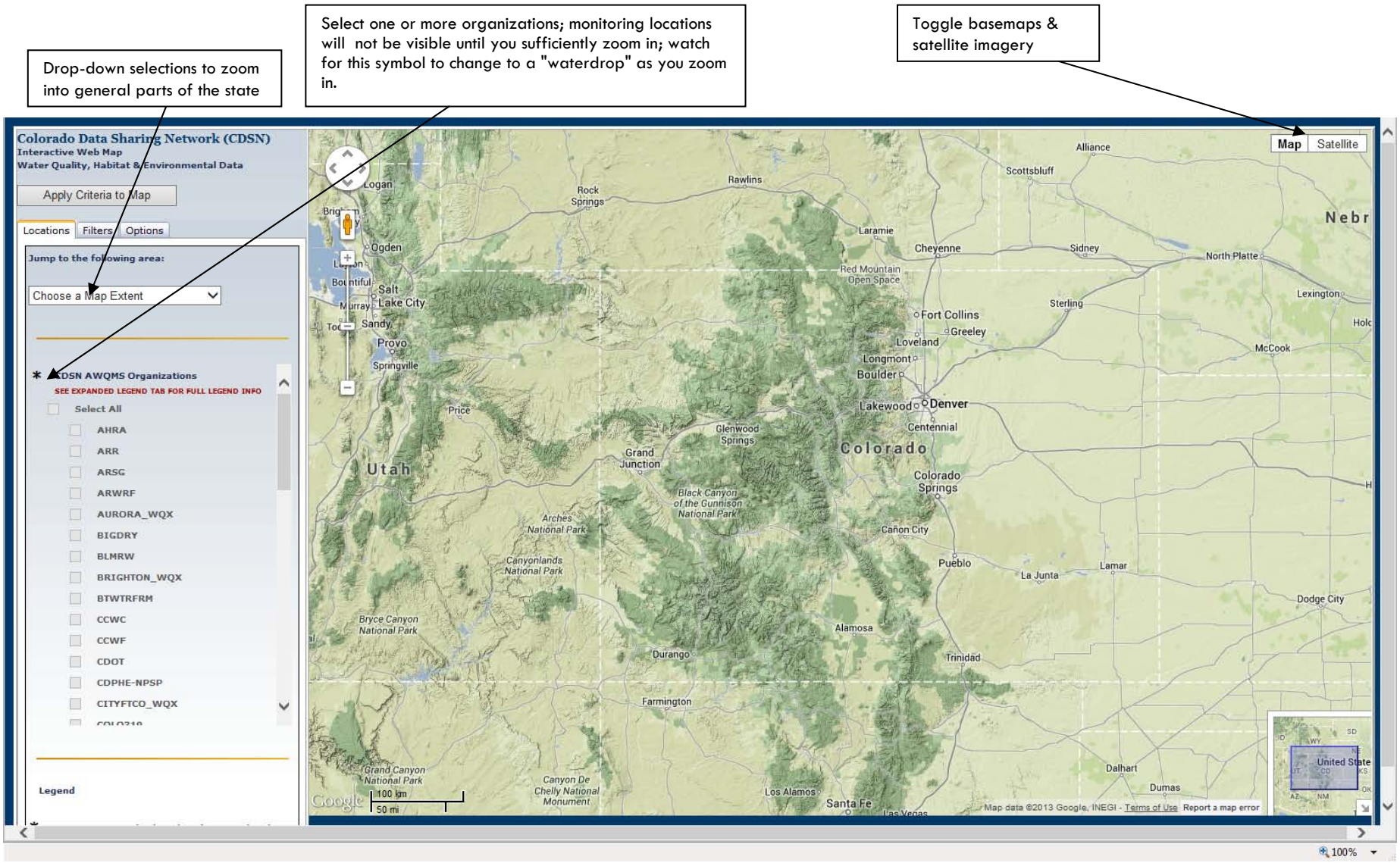
2. Click on the map image at **www.ColoradoWaterData.org/cdsngooglemap_2013.html** to open the Google-map utility. If you are using Internet Explorer 9 or 10 (IE9 or IE10) please consider using Mozilla or Google-Chrome. If you continue with IE9 or IE10, you should refer to the compatibility settings notes here to correct unexpected results or non-performance: **Important Information When Using AWQMS with Internet Explorer versions 9 and 10**.



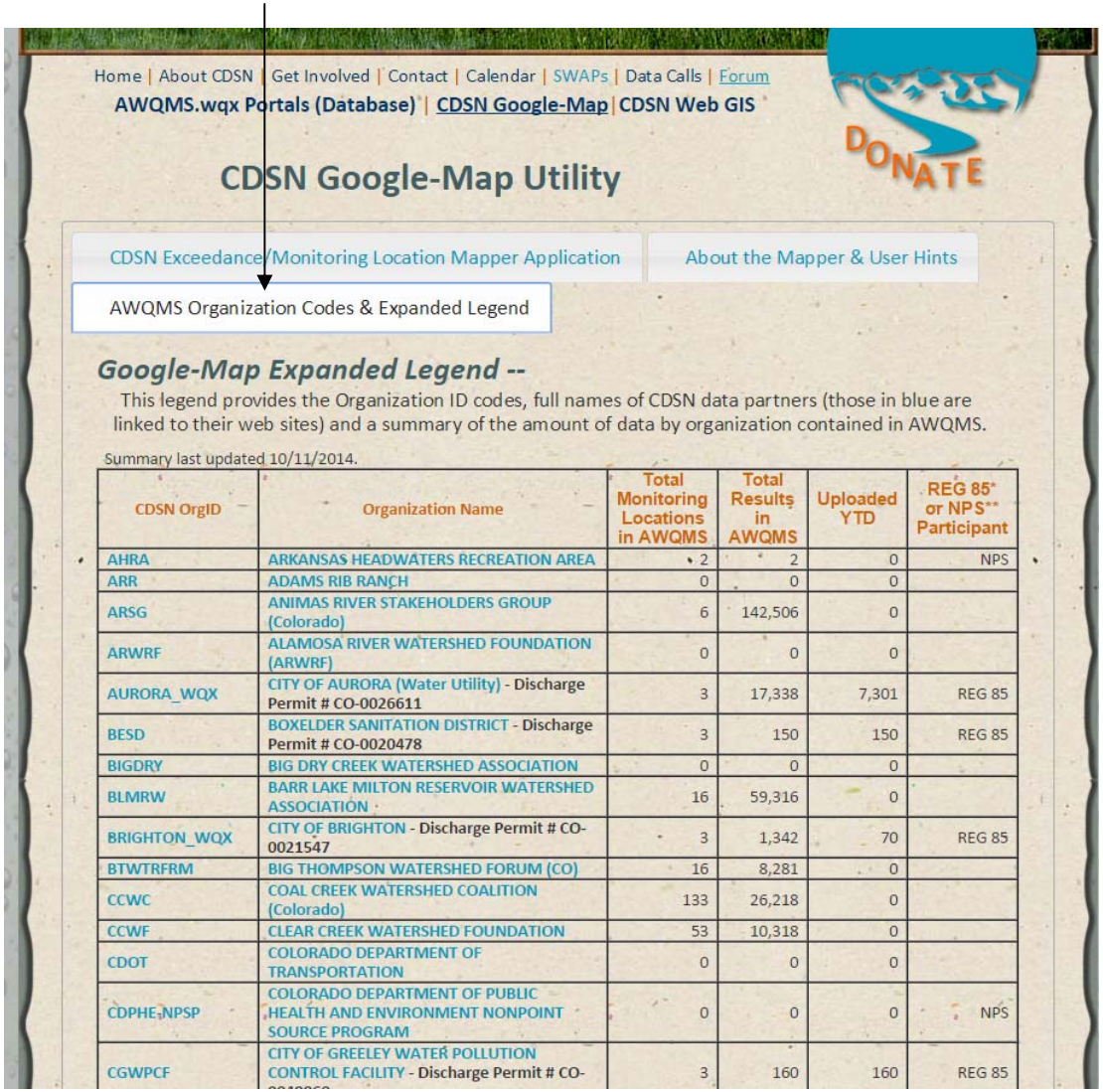
3. If this is your first visit to the CDSN Google-Map and depending on your browser settings, you will need to enter your email address into the login box; after entering your email address remember to press the LOGIN button with your mouse (for some users, hitting the "return" key won't work). If this is your first time using that email address it will ask you for some information about yourself. We do not share the information. It is used for grant-required user-tracking purposes. You will only to fill out the info form once, after that your email address is remembered.



4. You are now at the default view of the Google-Map. This utility works best with a faster internet connection. 3G cellphone modems are typically not fast enough for the Map to be responsive without being frustratingly slow.

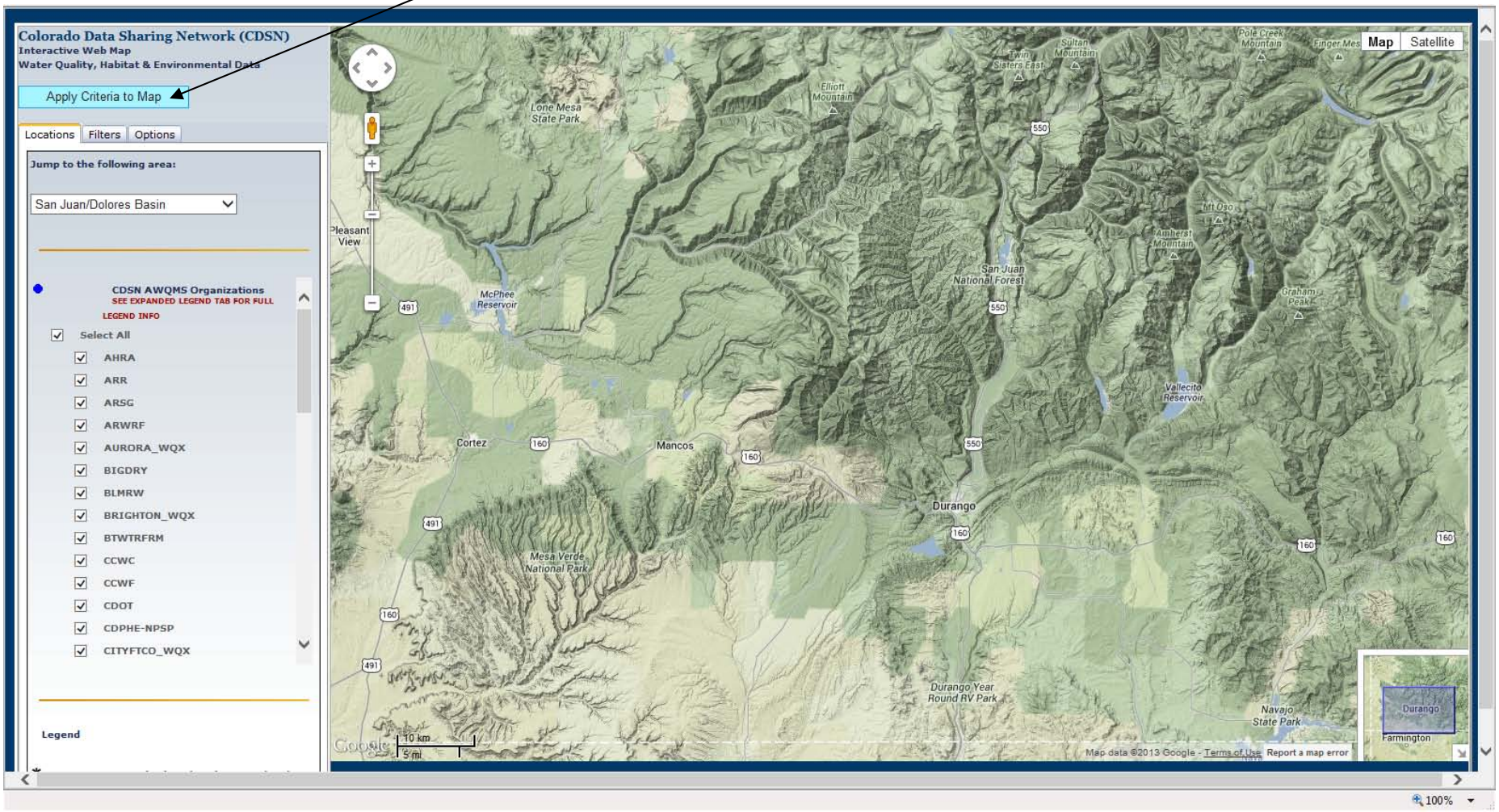


5. There is an expanded legend tab on our Google-Map web page, to help you decipher the Organization IDs, determine how many monitoring locations and water quality data results are in AWQMS for each organization, and also to help you find each data organization's web sites, in case you wish to learn more about them. We manually update the legend periodically as needed. Real-time data can also be accessed by using the public login for the AWQMS database will have the real-time summary tables.

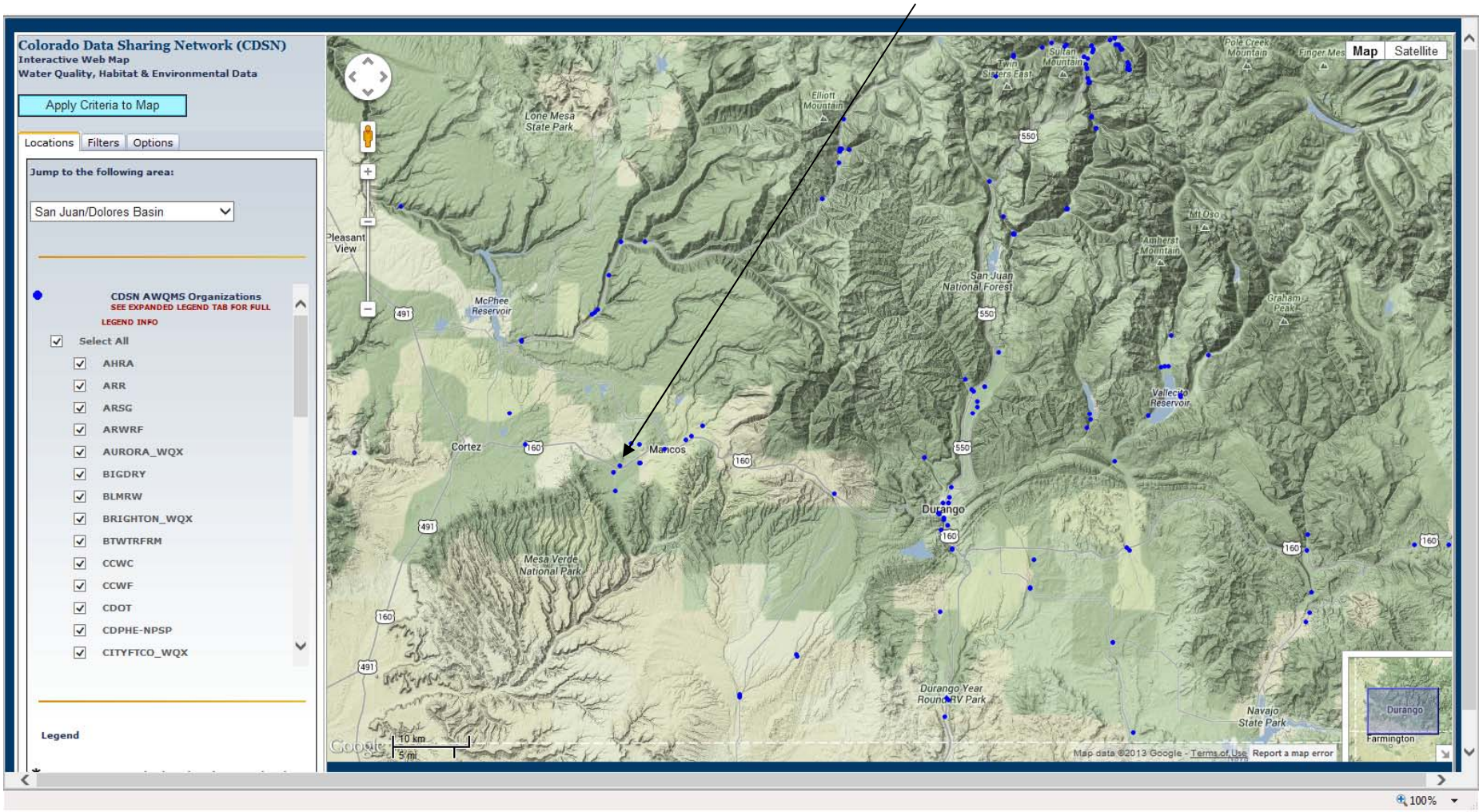


CDSN OrgID	Organization Name	Total Monitoring Locations in AWQMS	Total Results in AWQMS	Uploaded YTD	REG 85* or NPS** Participant
AHRA	ARKANSAS HEADWATERS RECREATION AREA	2	2	0	NPS
ARR	ADAMS RIB RANCH	0	0	0	
ARSG	ANIMAS RIVER STAKEHOLDERS GROUP (Colorado)	6	142,506	0	
ARWRF	ALAMOSA RIVER WATERSHED FOUNDATION (ARWRF)	0	0	0	
AURORA_WQX	CITY OF AURORA (Water Utility) - Discharge Permit # CO-0026611	3	17,338	7,301	REG 85
BESD	BOXELDER SANITATION DISTRICT - Discharge Permit # CO-0020478	3	150	150	REG 85
BIGDRY	BIG DRY CREEK WATERSHED ASSOCIATION	0	0	0	
BLMRW	BARR LAKE MILTON RESERVOIR WATERSHED ASSOCIATION	16	59,316	0	
BRIGHTON_WQX	CITY OF BRIGHTON - Discharge Permit # CO-0021547	3	1,342	70	REG 85
BTWTRFRM	BIG THOMPSON WATERSHED FORUM (CO)	16	8,281	0	
CCWC	COAL CREEK WATERSHED COALITION (Colorado)	133	26,218	0	
CCWF	CLEAR CREEK WATERSHED FOUNDATION	53	10,318	0	
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	0	0	0	
CDPHE_NPSP	COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT NONPOINT SOURCE PROGRAM	0	0	0	NPS
CGWPCF	CITY OF GREELEY WATER POLLUTION CONTROL FACILITY - Discharge Permit # CO-	3	160	160	REG 85

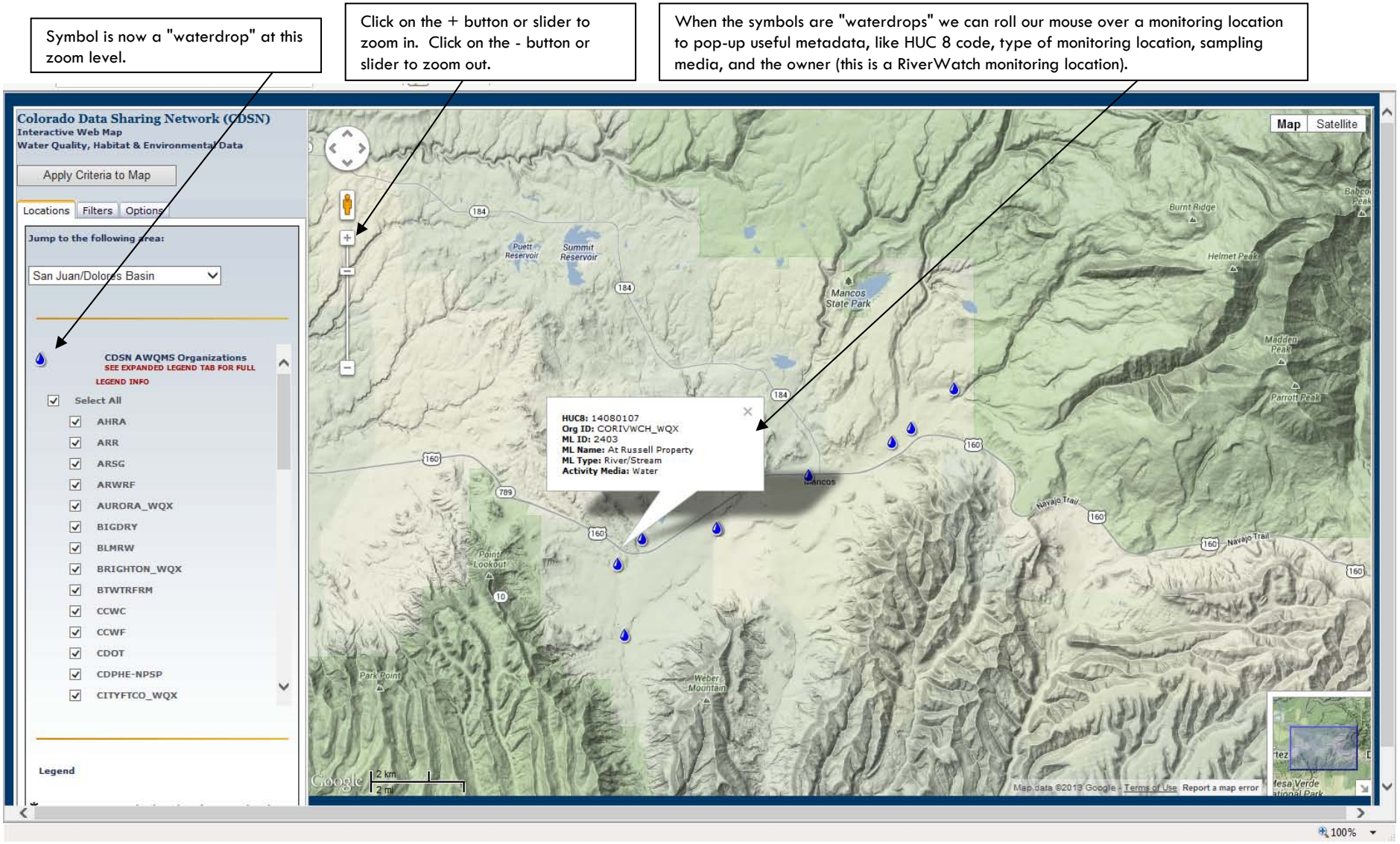
6. Lets zoom in to the San Juan Basin area, and click on "Select All" so that all possible CDSN organizations' monitoring locations are selected to display. Notice that at this zoom level we see that the monitoring locations will be "blue dots" and not "waterdrops". That is ok for now to get more of an overview. **The map will not display the monitoring locations until you press the "Apply Criteria to Map" button with your mouse.** We apologize for this inconvenience, but it was necessary for combining the exceedance utility and the general Google-Map into one map.



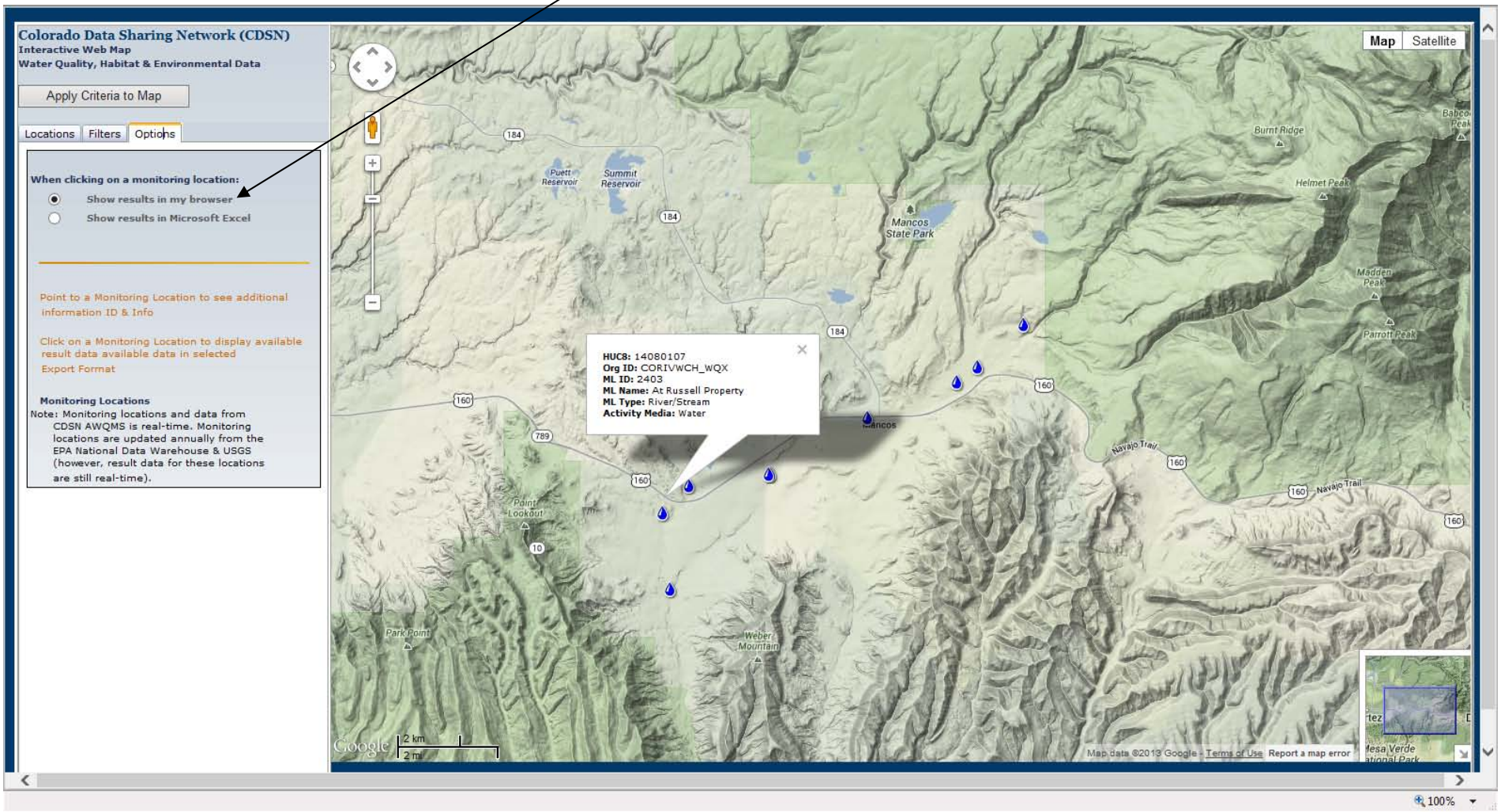
7. Here is the view after pressing "Apply Criteria to Map". Now there are blue dots representing AWQMS monitoring locations visible on the map.



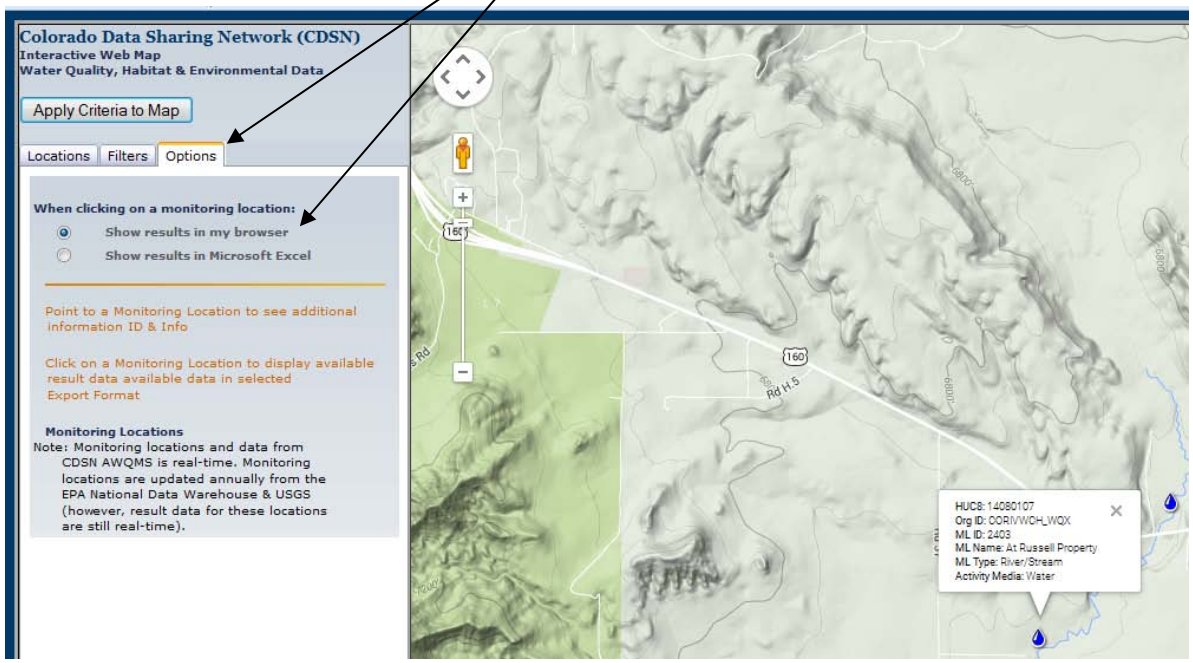
8. Lets zoom in on the Mancos monitoring locations. To zoom in or out we use press the "+" or "-" buttons here:



9. We can download all of the activities/results, with a subset of metadata for this monitoring location by clicking on it. Click on the monitoring location of interest to download all of the activities and results with associated metadata. We can select to view/download activity/results data in a html pop-up table within the web browser, or by downloading/opening file in Excel, by clicking on the options tab. **Note: When toggling between the two different table options, you will need to press the "Apply Criteria to Map" button for the change of table output type to take effect.** Let's just view the data in a browser table for now:



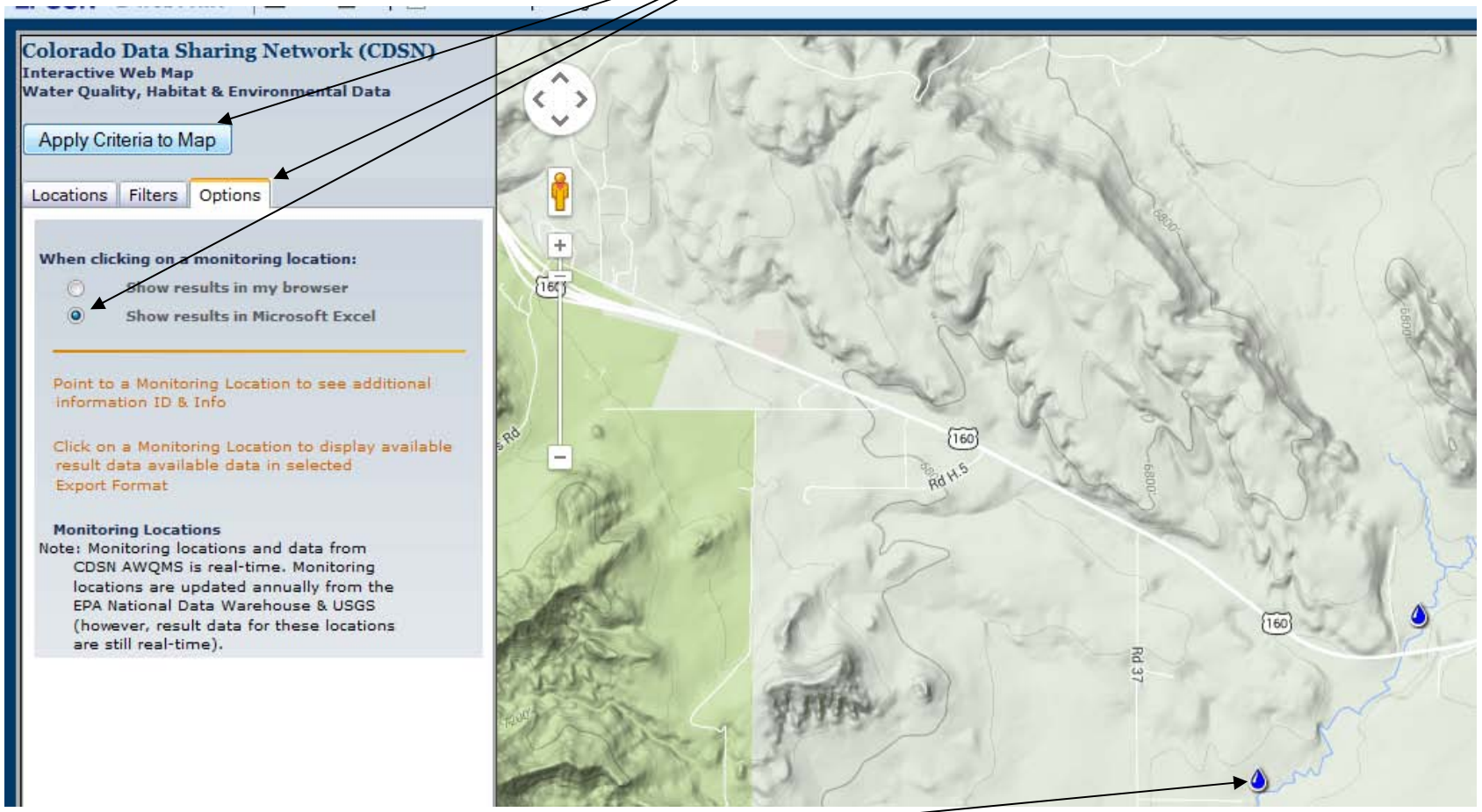
10. The Google-map starts with the default Browser table output option pre-selected. You can view this from the Options tab.



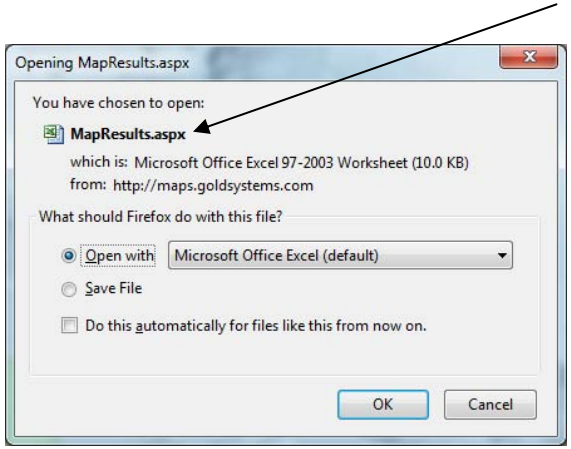
By clicking on a blue AWQMS monitoring location, without having used the Exceedance filter query settings, we will get a table containing ***all*** of the activity/results for this monitoring location currently contained in AWQMS. Note **- on some computers/browsers this table might open behind your active window.**

Monitoring Location ID	Monitoring Location Name	Monitoring Location Latitude	Monitoring Location Longitude	Project ID	Activity ID	Activity Type	Activity Start Date	Activity Start Time	Activity Start Time Zone	Activity Media Name	Characteristic Name	Result Measure Value	Result Measure Unit	Result Value Type	Sample Fraction Name	Result Status	Result Detection/Quantitation Limit Measure	Result Detection/Quantitation Limit Unit	Result Detection/Quantitation Limit Type	Result Detection Condition Name	Biological Intent	Assemblage Name	Taxonomic Name
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001N	Sample-Routine	10-14-2009	06:30:00 PM	MST	Water	Ammonia	0.01	ug/l	Actual	Total	Validated	0.01	mg/l	Method Detection Level				
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001N	Sample-Routine	10-14-2009	06:30:00 PM	MST	Water	Chloride	85.1	mg/l	Actual	Total	Validated	1	mg/l	Method Detection Level				
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001N	Sample-Routine	10-14-2009	06:30:00 PM	MST	Water	Inorganic nitrogen (nitrate and nitrite)	0.218	mg/l	Actual	Total	Validated	0.02	mg/l	Method Detection Level				
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001N	Sample-Routine	10-14-2009	06:30:00 PM	MST	Water	Phosphorus	5.36	mg/l	Actual	Total	Validated	0.005	mg/l	Method Detection Level				
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001N	Sample-Routine	10-14-2009	06:30:00 PM	MST	Water	Sulfate	1290	mg/l	Actual	Total	Validated	0.5	mg/l	Method Detection Level				
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001N	Sample-Routine	10-14-2009	06:30:00 PM	MST	Water	Total suspended solids	259.8	mg/l	Actual	Total	Validated	4	mg/l	Method Detection Level				

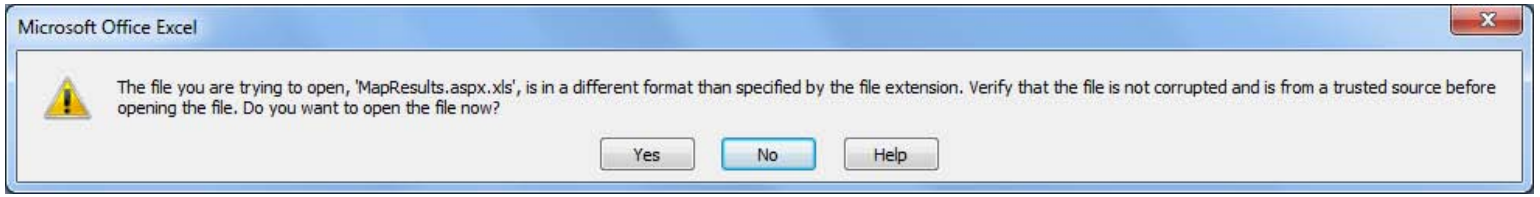
11. Let's switch to the "Excel" output option. We must select the "Excel" option by pressing the radio button next to the option from the Options tab. Then for this toggle to take effect we must next press the "Apply Criteria to Map" button.



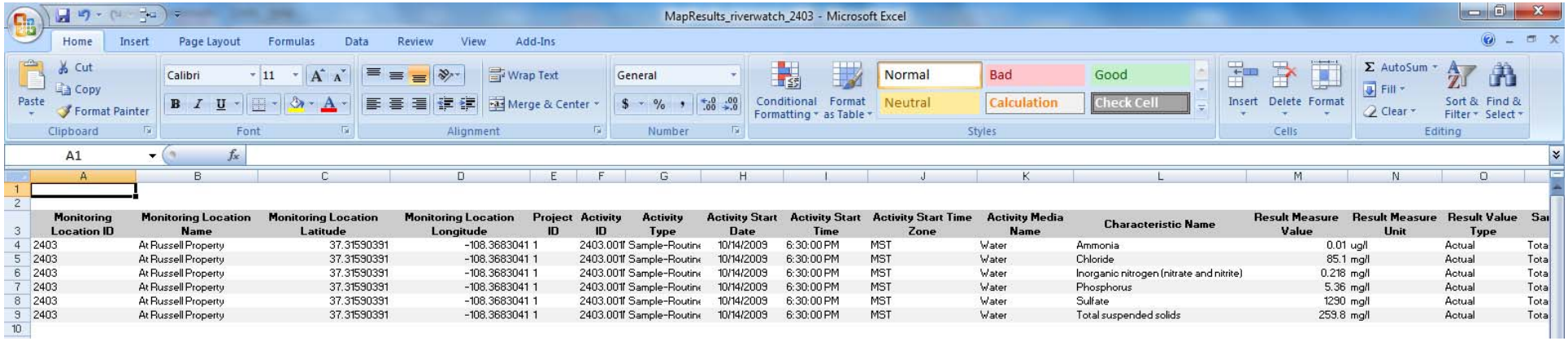
Now when we press on the monitoring location of interest to generate an output table, depending on our individual browser settings we get either a prompt or a download notification such as the open or save message box below (note the file extension is actually ".aspx" not ".xls which is a true Excel file):



If you choose "Open with" you will probably get a message like this from Excel:



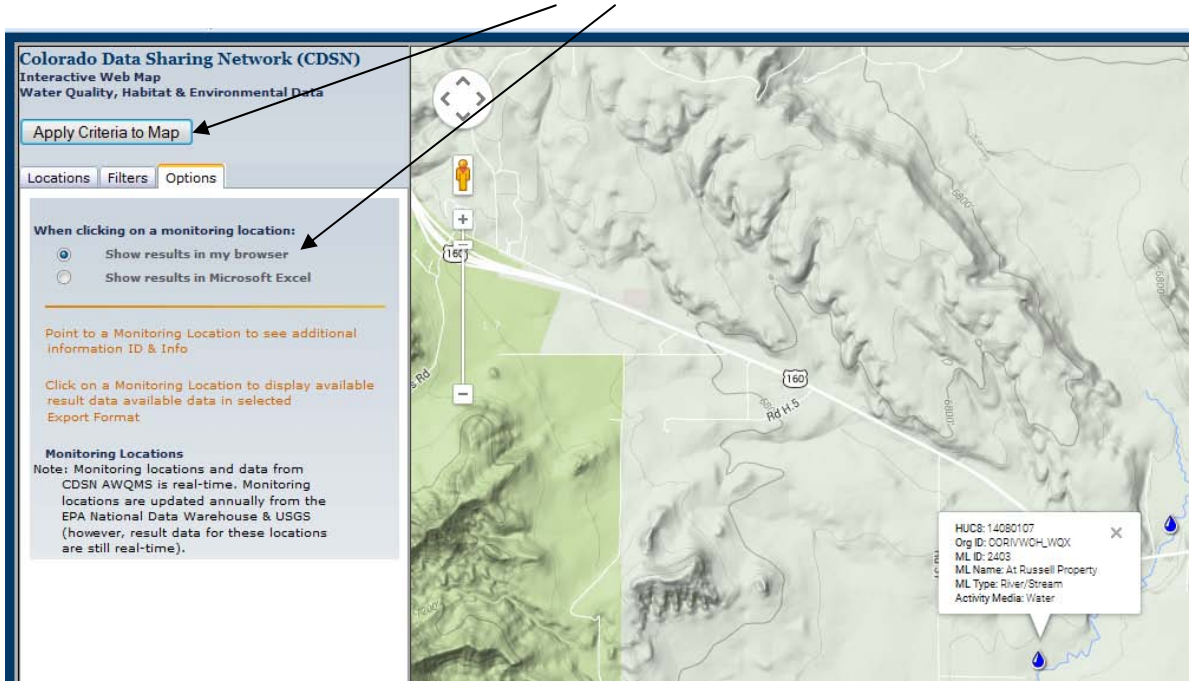
Press "Yes" and the file will open. Now you can save it as a true Excel (.xls) file if desired.



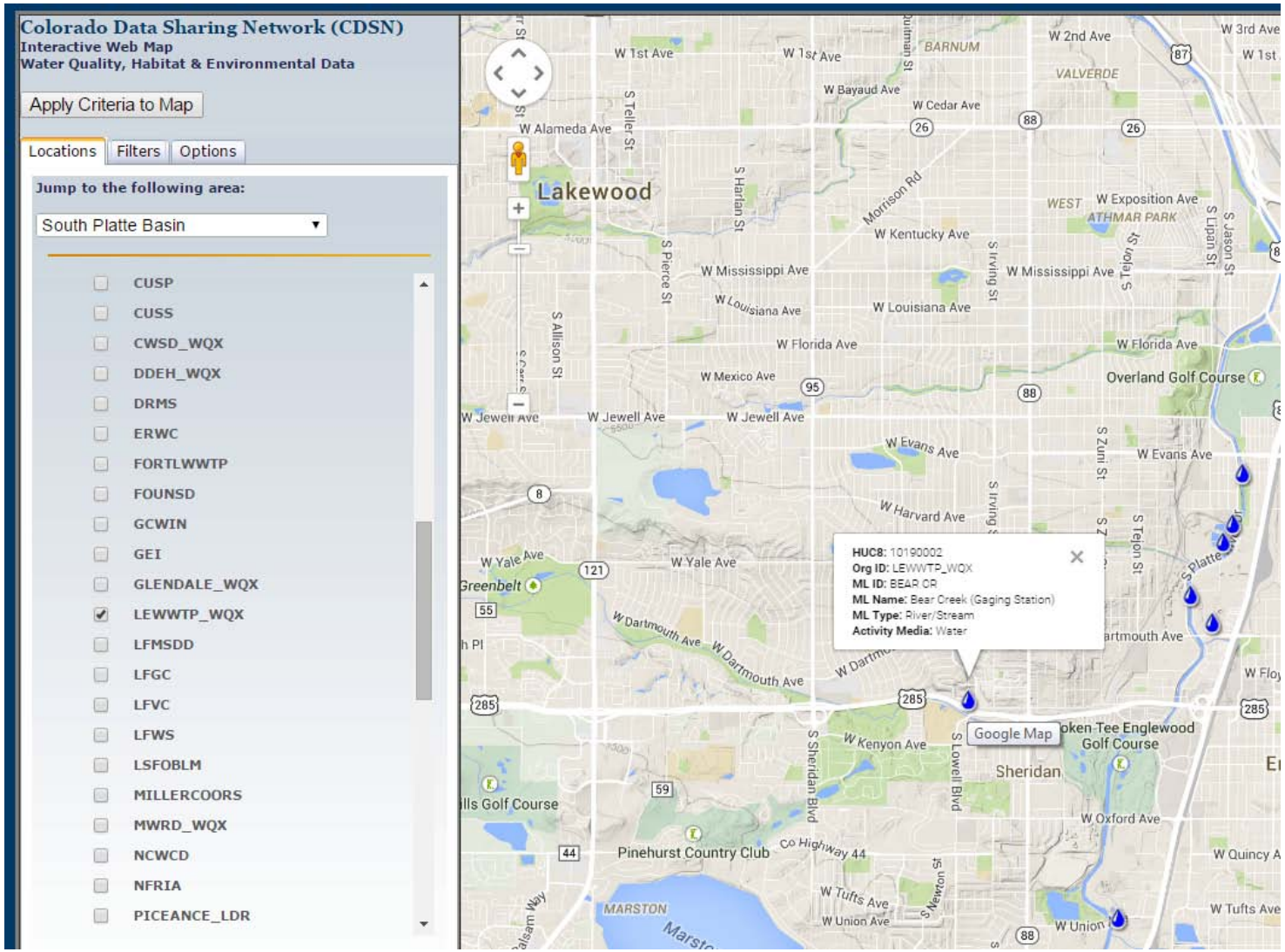
Monitoring Location ID	Monitoring Location Name	Monitoring Location Latitude	Monitoring Location Longitude	Project ID	Activity ID	Activity Type	Activity Start Date	Activity Start Time	Activity Start Time Zone	Activity Media Name	Characteristic Name	Result Measure Value	Result Measure Unit	Result Value Type	Sa
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001	Sample-Routine	10/14/2009	6:30:00 PM	MST	Water	Ammonia	0.01	ug/l	Actual	Tota
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001	Sample-Routine	10/14/2009	6:30:00 PM	MST	Water	Chloride	85.1	mg/l	Actual	Tota
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001	Sample-Routine	10/14/2009	6:30:00 PM	MST	Water	Inorganic nitrogen (nitrate and nitrite)	0.218	mg/l	Actual	Tota
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001	Sample-Routine	10/14/2009	6:30:00 PM	MST	Water	Phosphorus	5.36	mg/l	Actual	Tota
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001	Sample-Routine	10/14/2009	6:30:00 PM	MST	Water	Sulfate	1290	mg/l	Actual	Tota
2403	At Russell Property	37.31590391	-108.3683041	1	2403.001	Sample-Routine	10/14/2009	6:30:00 PM	MST	Water	Total suspended solids	259.8	mg/l	Actual	Tota

Note: In some browsers, a download file may be automatically generated. You can find it on the bottom left of your browser window, or if using Windows, in your Downloads folder on your hard drive. When opening the file from your hard drive, we recommend opening Excel first, then navigating to the file (make sure you are looking for "All Files" instead of just Excel files, since this is an .aspx file) and then opening the file from within the File>Open menu in Excel.

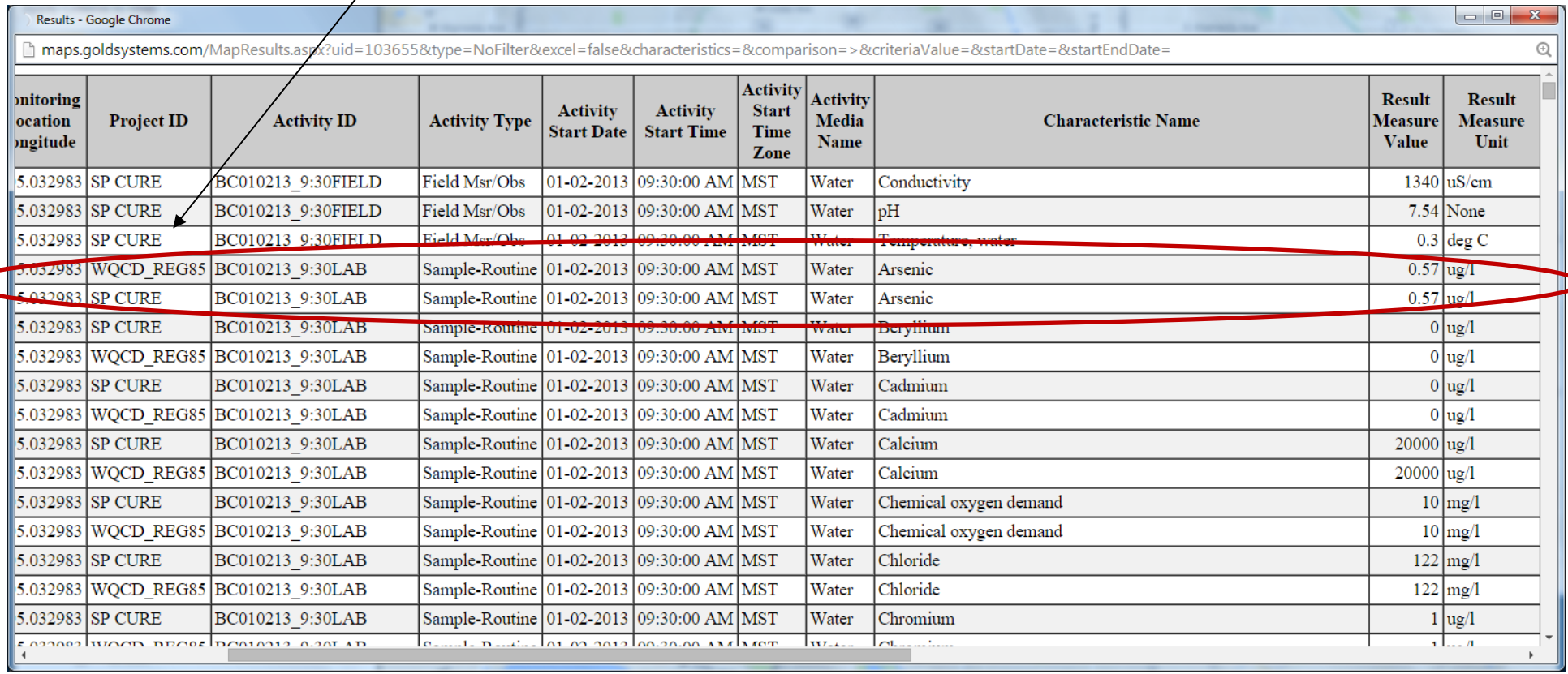
Now, all tables generated in the Google-map will be these quasi-Excel files until you toggle back to the "Show Results in My Browser" button on the Options tab and press "Apply Criteria to Map" again.



12. Some monitoring locations will have results from one or more projects of a particular organization. For example, LEWWTP_WQX's monitoring location has activity/results data from sampling activities at this location associated with LEWWTP's "SP CURE" Project and "WQCD_REG85" Project.



When we click on the BEAR CR Monitoring Location, we get a results table that has one row for each result ***for each project***. So a single result that is associated with both LEWWTP_WQX projects, will appear on two different rows in the Google-map output table (this does not happen when you download data via Standard Export file within AWQMS):

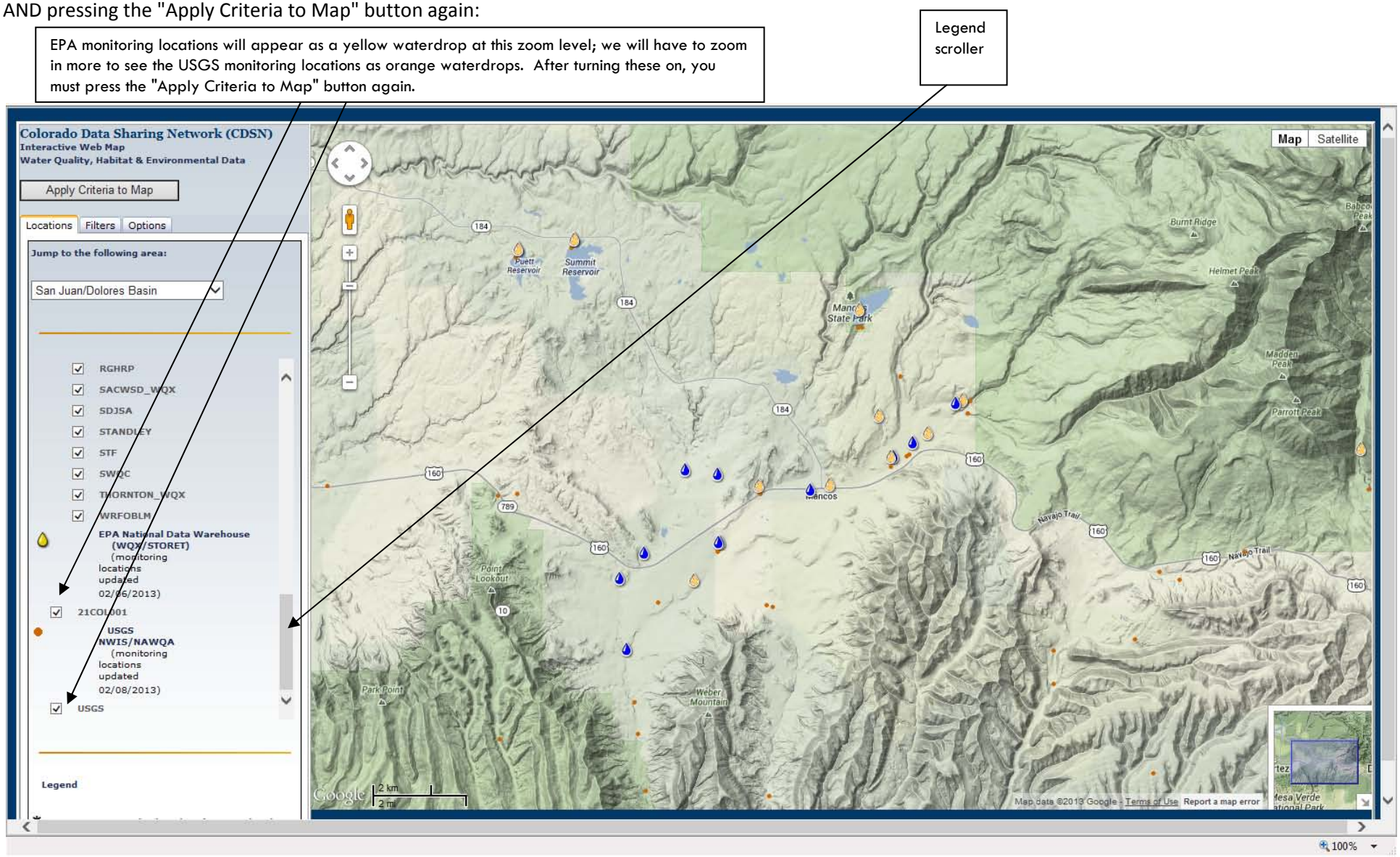


Results - Google Chrome

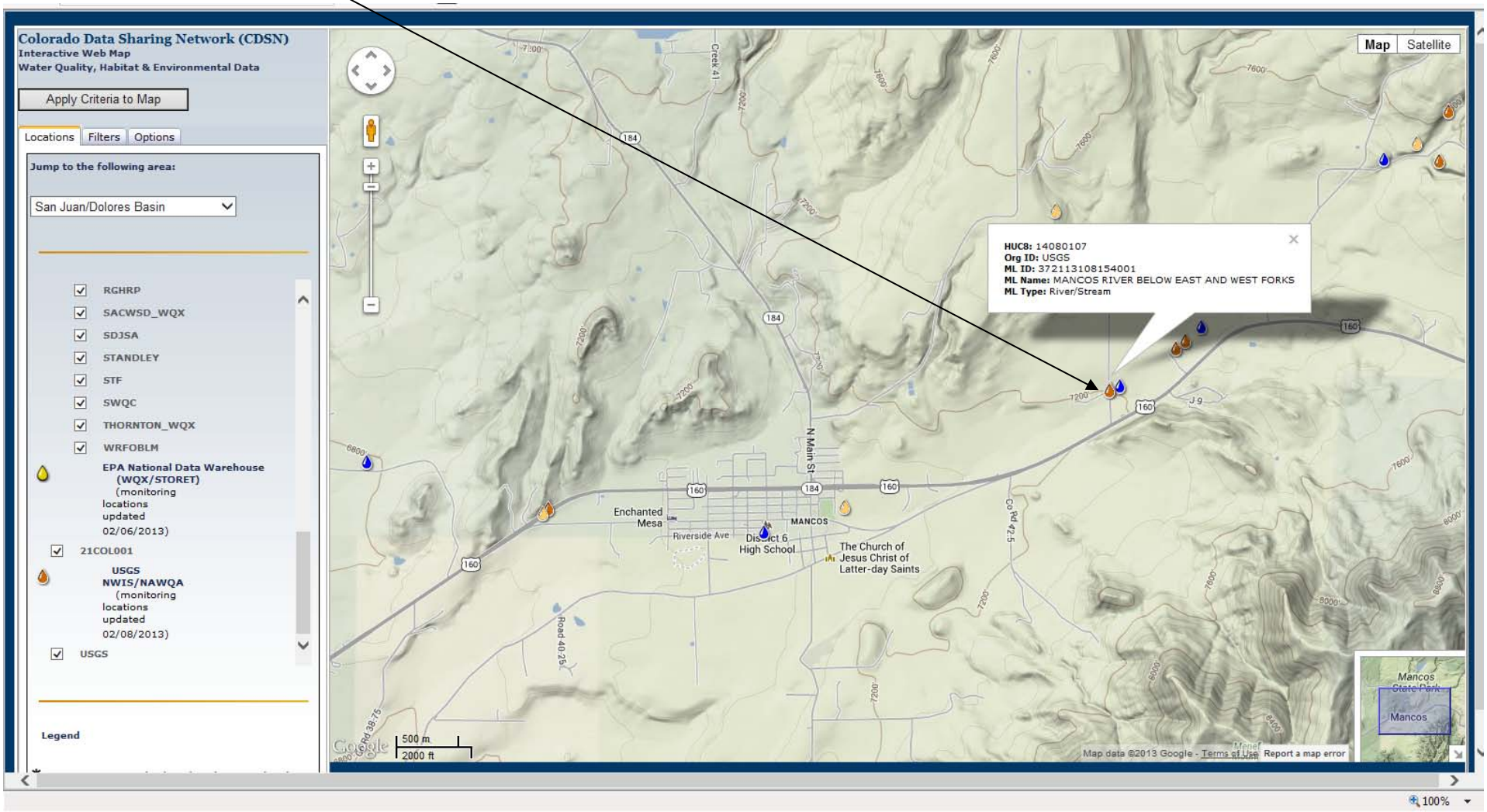
maps.goldsystems.com/MapResults.aspx?uid=103655&type=NoFilter&excel=false&characteristics=&comparison=>&criteriaValue=&startDate=&startEndDate=

ɔnitoring ocation ɔngitude	Project ID	Activity ID	Activity Type	Activity Start Date	Activity Start Time	Activity Start Time Zone	Activity Media Name	Characteristic Name	Result Measure Value	Result Measure Unit
5.032983	SP CURE	BC010213_9:30FIELD	Field Msr/Obs	01-02-2013	09:30:00 AM	MST	Water	Conductivity	1340	uS/cm
5.032983	SP CURE	BC010213_9:30FIELD	Field Msr/Obs	01-02-2013	09:30:00 AM	MST	Water	pH	7.54	None
5.032983	SP CURE	BC010213_9:30FIELD	Field Msr/Obs	01-02-2013	09:30:00 AM	MST	Water	Temperature, water	0.3	deg C
5.032983	WQCD_REG85	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Arsenic	0.57	ug/l
5.032983	SP CURE	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Arsenic	0.57	ug/l
5.032983	SP CURE	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Beryllium	0	ug/l
5.032983	WQCD_REG85	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Beryllium	0	ug/l
5.032983	SP CURE	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Cadmium	0	ug/l
5.032983	WQCD_REG85	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Cadmium	0	ug/l
5.032983	SP CURE	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Calcium	20000	ug/l
5.032983	WQCD_REG85	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Calcium	20000	ug/l
5.032983	SP CURE	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Chemical oxygen demand	10	mg/l
5.032983	WQCD_REG85	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Chemical oxygen demand	10	mg/l
5.032983	SP CURE	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Chloride	122	mg/l
5.032983	WQCD_REG85	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Chloride	122	mg/l
5.032983	SP CURE	BC010213_9:30LAB	Sample-Routine	01-02-2013	09:30:00 AM	MST	Water	Chromium	1	ug/l

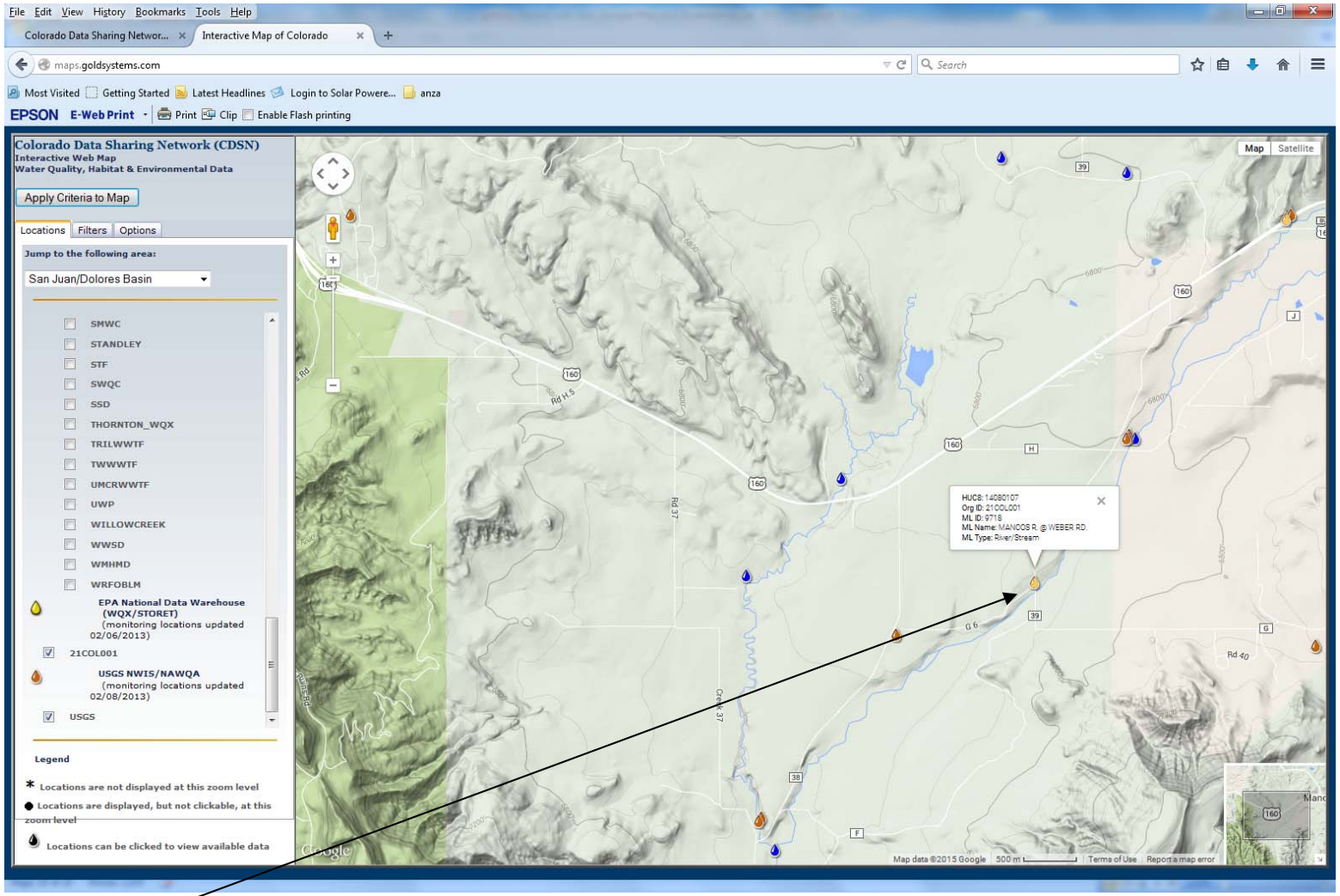
13. We can see what USGS and EPA monitoring locations exist in this area by scrolling down in the legend and turning those monitoring location check boxes on AND pressing the "Apply Criteria to Map" button again:



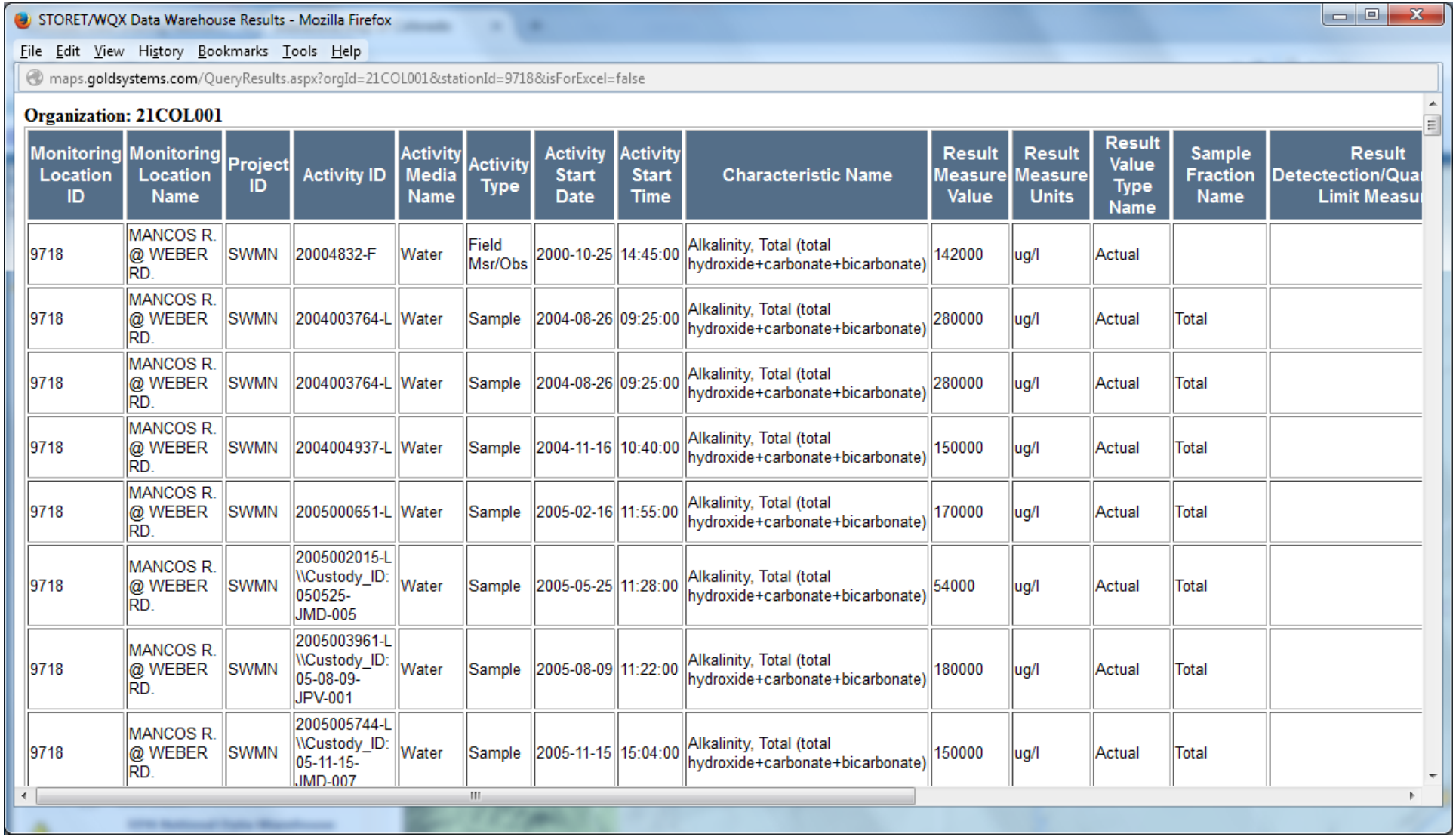
14. We can roll our mouse over the USGS and EPA monitoring locations to get similar metadata pop-up boxes.



15. Generating a results output table for an EPA National Data Warehouse (yellow water drop) monitoring location:



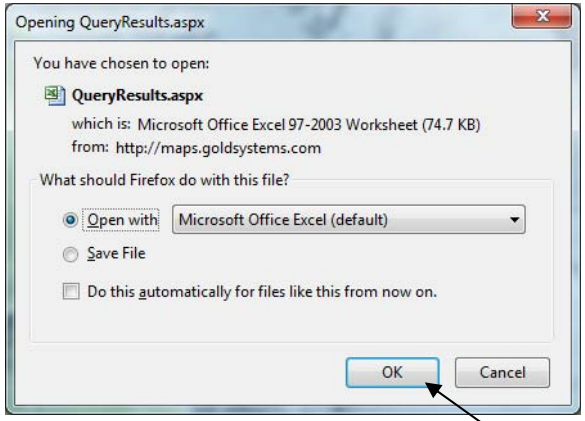
We can click on an EPA National Data Warehouse (WQX/STORET) monitoring location, just like a blue AWQMS monitoring location. If we have the browser table option selected we will get a pop-up table like this:



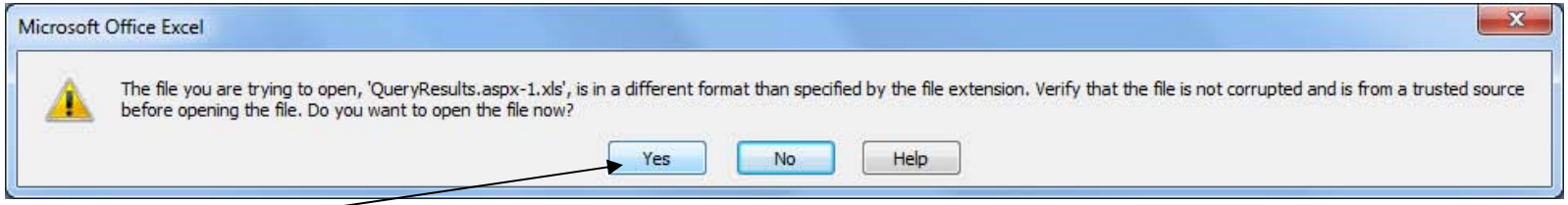
Organization: 21COL001

Monitoring Location ID	Monitoring Location Name	Project ID	Activity ID	Activity Media Name	Activity Type	Activity Start Date	Activity Start Time	Characteristic Name	Result Measure Value	Result Measure Units	Result Value Type Name	Sample Fraction Name	Result Detectection/Quan Limit Measu
9718	MANCOS R. @ WEBER RD.	SWMN	20004832-F	Water	Field Msr/Obs	2000-10-25	14:45:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	142000	ug/l	Actual		
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	2004-08-26	09:25:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	280000	ug/l	Actual	Total	
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	2004-08-26	09:25:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	280000	ug/l	Actual	Total	
9718	MANCOS R. @ WEBER RD.	SWMN	2004004937-L	Water	Sample	2004-11-16	10:40:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	150000	ug/l	Actual	Total	
9718	MANCOS R. @ WEBER RD.	SWMN	2005000651-L	Water	Sample	2005-02-16	11:55:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	170000	ug/l	Actual	Total	
9718	MANCOS R. @ WEBER RD.	SWMN	2005002015-L \\Custody_ID: 050525-JMD-005	Water	Sample	2005-05-25	11:28:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	54000	ug/l	Actual	Total	
9718	MANCOS R. @ WEBER RD.	SWMN	2005003961-L \\Custody_ID: 05-08-09-JPV-001	Water	Sample	2005-08-09	11:22:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	180000	ug/l	Actual	Total	
9718	MANCOS R. @ WEBER RD.	SWMN	2005005744-L \\Custody_ID: 05-11-15-JMD-007	Water	Sample	2005-11-15	15:04:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	150000	ug/l	Actual	Total	

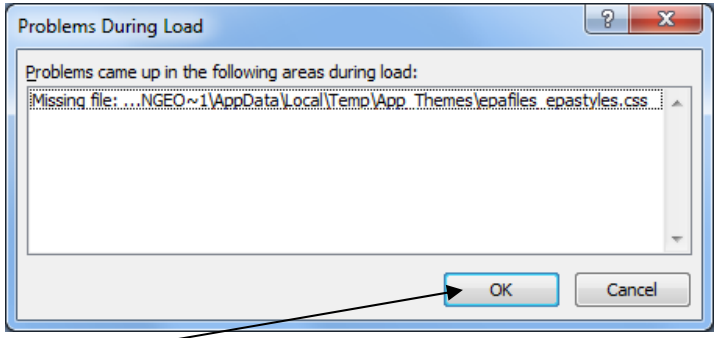
If we have the "Excel" option selected we will get to see many of the same message boxes as if we were clicking on a blue AWQMS monitoring location. First we get the Open/Save box:



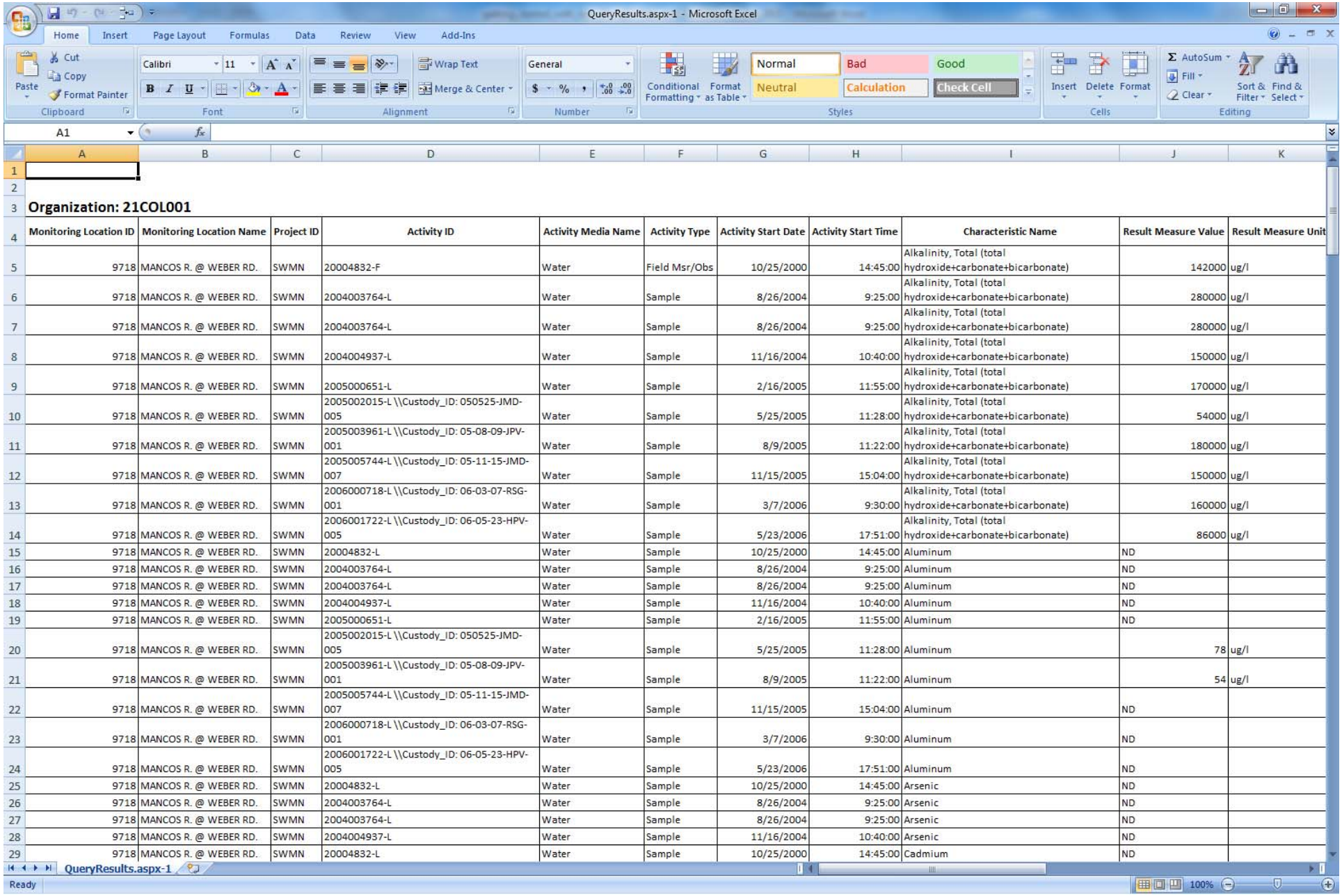
Choosing to open with MS Excel, we next get



(Select "Yes") and after pressing "Yes", in my version of Excel at least, I get one more message box:



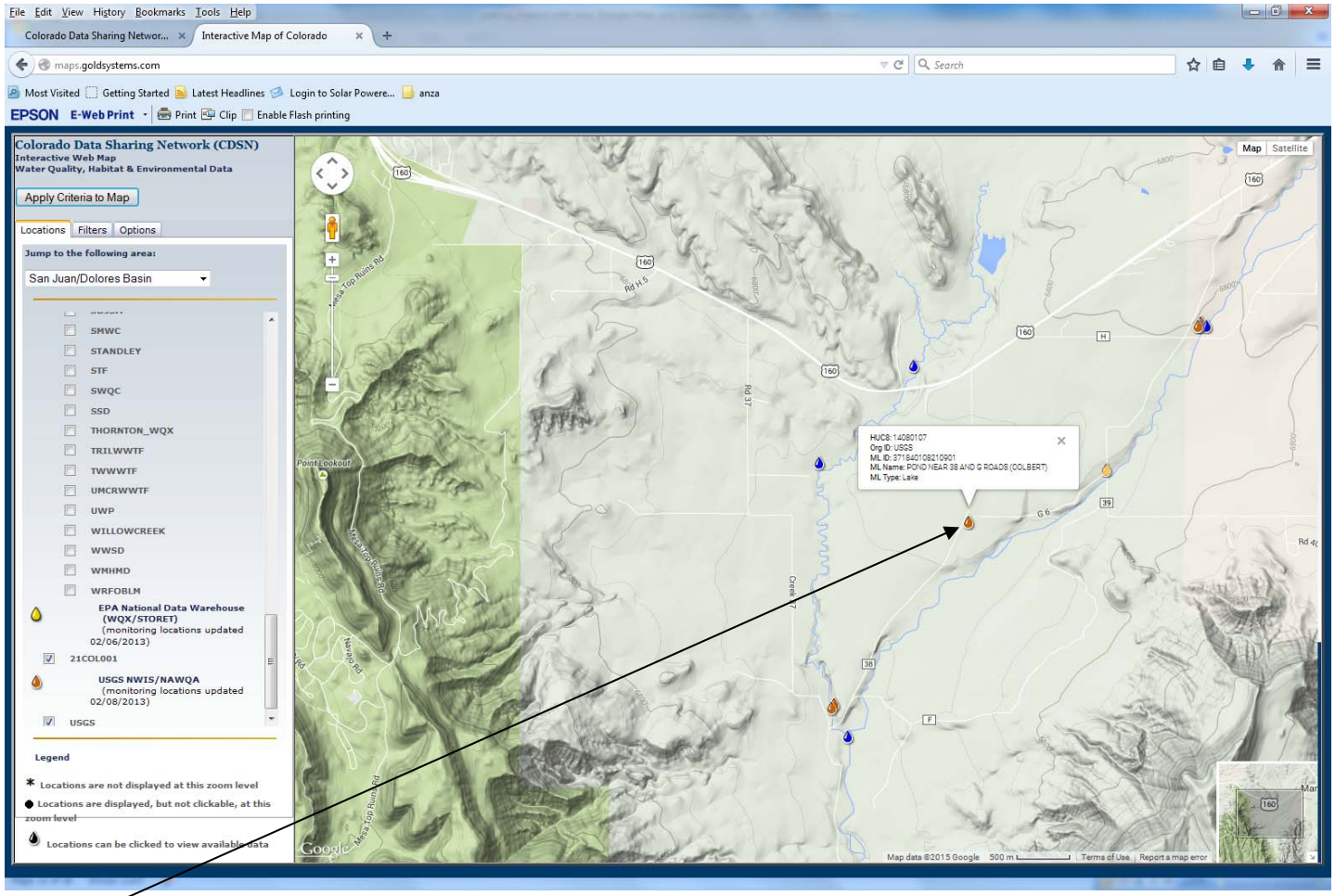
Click OK above and the results file of the data available for this monitoring location stored within the National Data Warehouse will open:



Organization: 21COL001

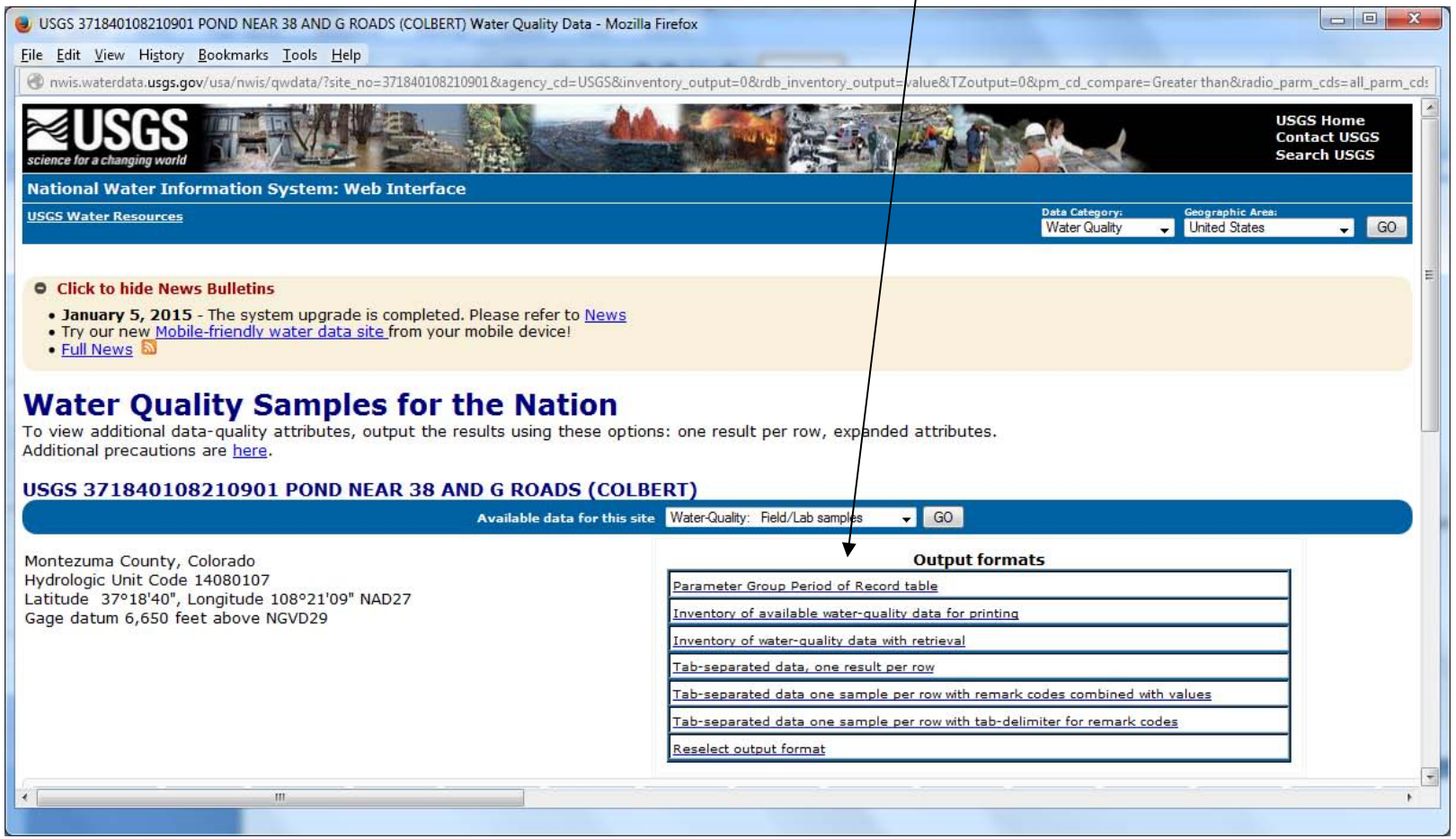
Monitoring Location ID	Monitoring Location Name	Project ID	Activity ID	Activity Media Name	Activity Type	Activity Start Date	Activity Start Time	Characteristic Name	Result Measure Value	Result Measure Unit
9718	MANCOS R. @ WEBER RD.	SWMN	20004832-F	Water	Field Msr/Obs	10/25/2000	14:45:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	142000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	8/26/2004	9:25:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	280000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	8/26/2004	9:25:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	280000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2004004937-L	Water	Sample	11/16/2004	10:40:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	150000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2005000651-L	Water	Sample	2/16/2005	11:55:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	170000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2005002015-L \\Custody_ID: 050525-JMD-005	Water	Sample	5/25/2005	11:28:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	54000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2005003961-L \\Custody_ID: 05-08-09-JPV-001	Water	Sample	8/9/2005	11:22:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	180000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2005005744-L \\Custody_ID: 05-11-15-JMD-007	Water	Sample	11/15/2005	15:04:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	150000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2006000718-L \\Custody_ID: 06-03-07-RSG-001	Water	Sample	3/7/2006	9:30:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	160000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2006001722-L \\Custody_ID: 06-05-23-HPV-005	Water	Sample	5/23/2006	17:51:00	Alkalinity, Total (total hydroxide+carbonate+bicarbonate)	86000	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	20004832-L	Water	Sample	10/25/2000	14:45:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	8/26/2004	9:25:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	8/26/2004	9:25:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2004004937-L	Water	Sample	11/16/2004	10:40:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2005000651-L	Water	Sample	2/16/2005	11:55:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2005002015-L \\Custody_ID: 050525-JMD-005	Water	Sample	5/25/2005	11:28:00	Aluminum	78	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2005003961-L \\Custody_ID: 05-08-09-JPV-001	Water	Sample	8/9/2005	11:22:00	Aluminum	54	ug/l
9718	MANCOS R. @ WEBER RD.	SWMN	2005005744-L \\Custody_ID: 05-11-15-JMD-007	Water	Sample	11/15/2005	15:04:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2006000718-L \\Custody_ID: 06-03-07-RSG-001	Water	Sample	3/7/2006	9:30:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2006001722-L \\Custody_ID: 06-05-23-HPV-005	Water	Sample	5/23/2006	17:51:00	Aluminum	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	20004832-L	Water	Sample	10/25/2000	14:45:00	Arsenic	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	8/26/2004	9:25:00	Arsenic	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2004003764-L	Water	Sample	8/26/2004	9:25:00	Arsenic	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	2004004937-L	Water	Sample	11/16/2004	10:40:00	Arsenic	ND	
9718	MANCOS R. @ WEBER RD.	SWMN	20004832-L	Water	Sample	10/25/2000	14:45:00	Cadmium	ND	

16. Generating a results output table for a USGS NWIS (orange water drop) monitoring location:



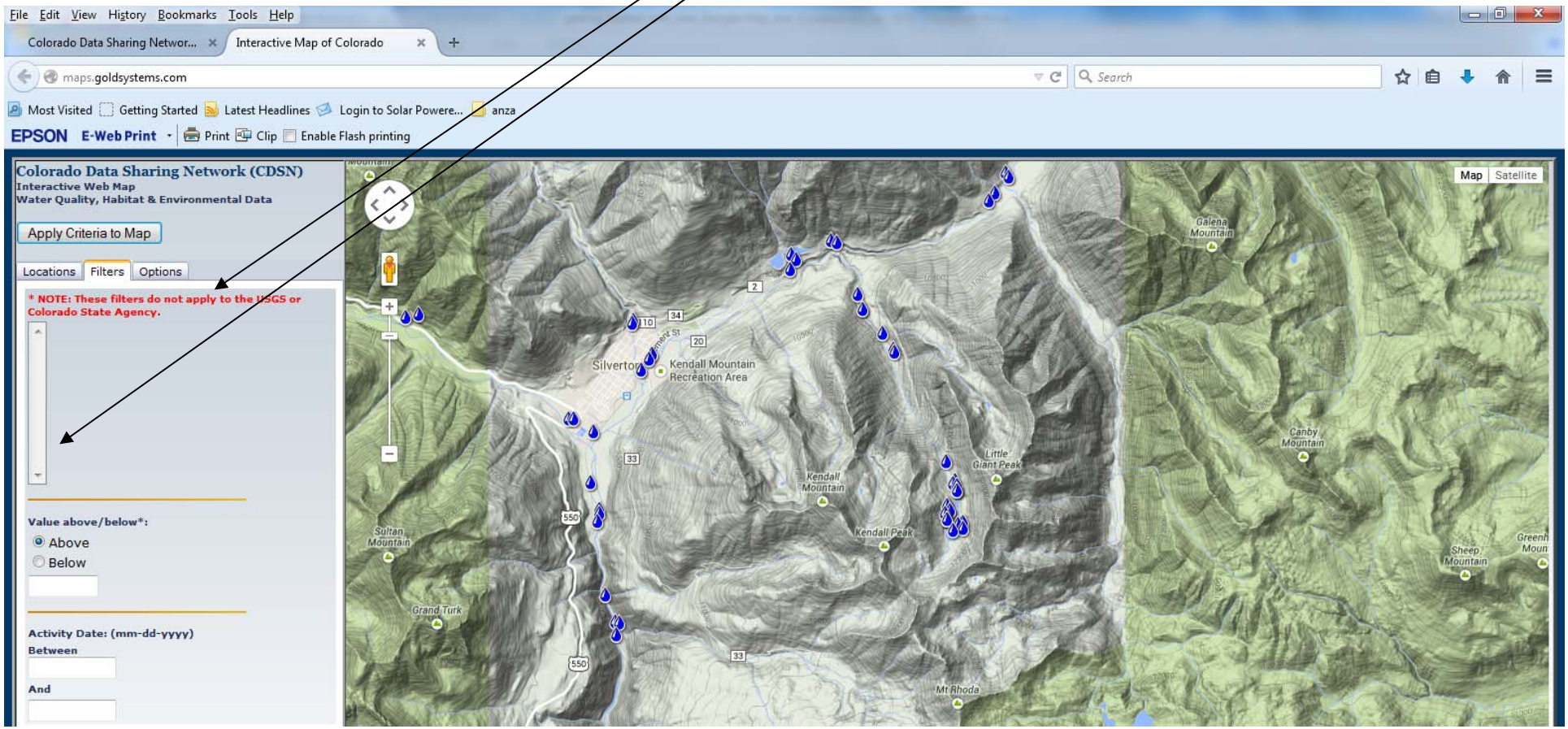
Clicking a USGS monitorning location water drop will not open a results table directly.

Upon clicking this type of monitoring location when sufficiently zoomed in, a new window will open to the url of that monitoring location's USGS web page (below). You can choose from a variety of USGS output options from the USGS page.

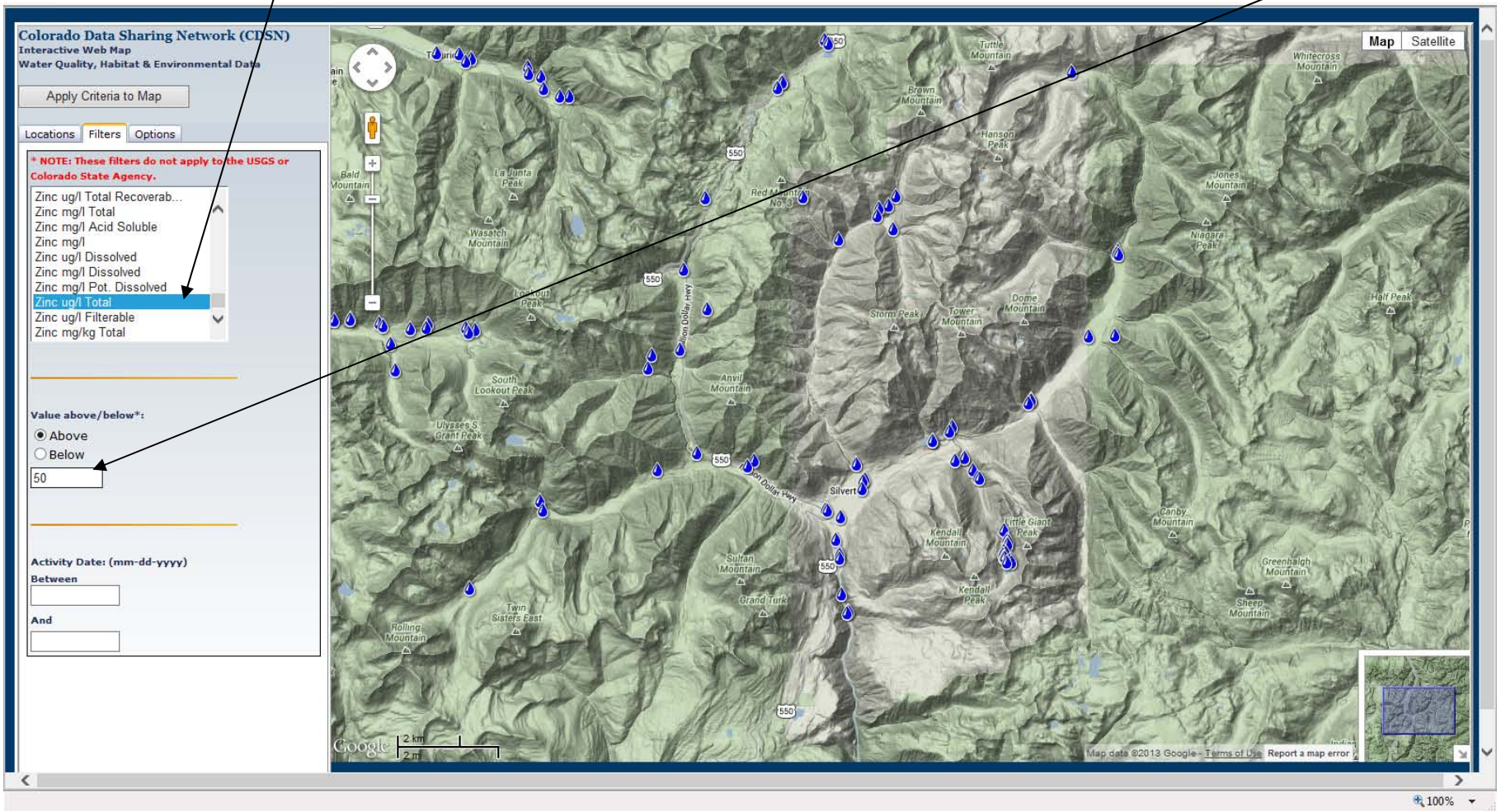


17. Let's use the Exceedance feature. **It will only work for the CDSN AWQMS monitoring locations (see note on screenshot below)**, because it is feeding our exceedance query real-time from the CDSN AWQMS database. First, I have selected organizations ARSG and CORIVWCH_WQX as the displayed monitoring locations (Animas River Stakeholders Group and Colorado RiverWatch). I hit the "Apply Criteria to Map" button again. I zoomed into Silverton by holding my mouse down on the map and dragging it into the centered position I wanted. I also clicked on the Filters tab. **Upon clicking on the Filters tab, you may have to wait several seconds to a couple minutes to let the Exceedance Criteria selection values appear.**

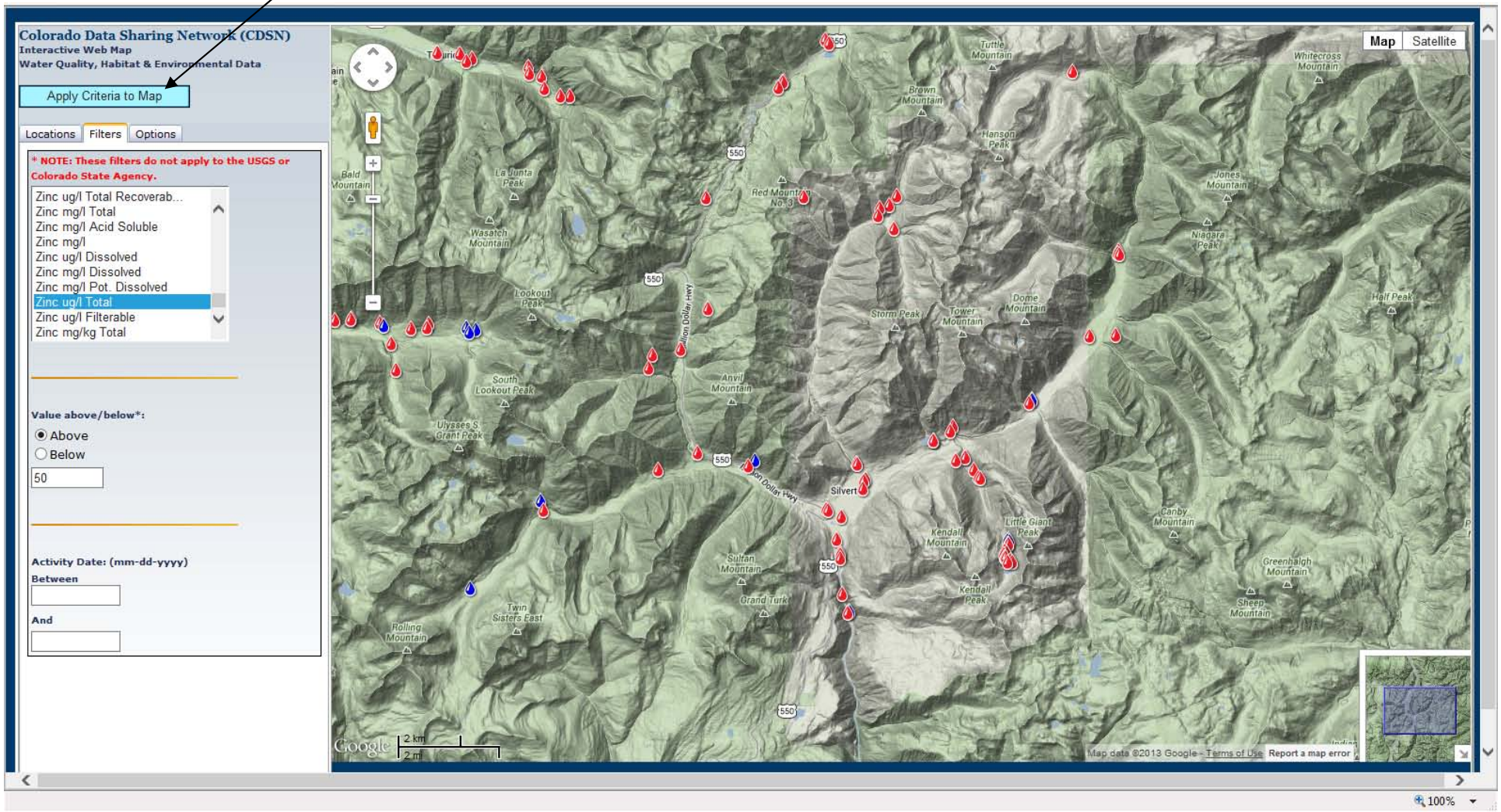
The criteria boxes will look like this while the criteria selectors are fully loading:



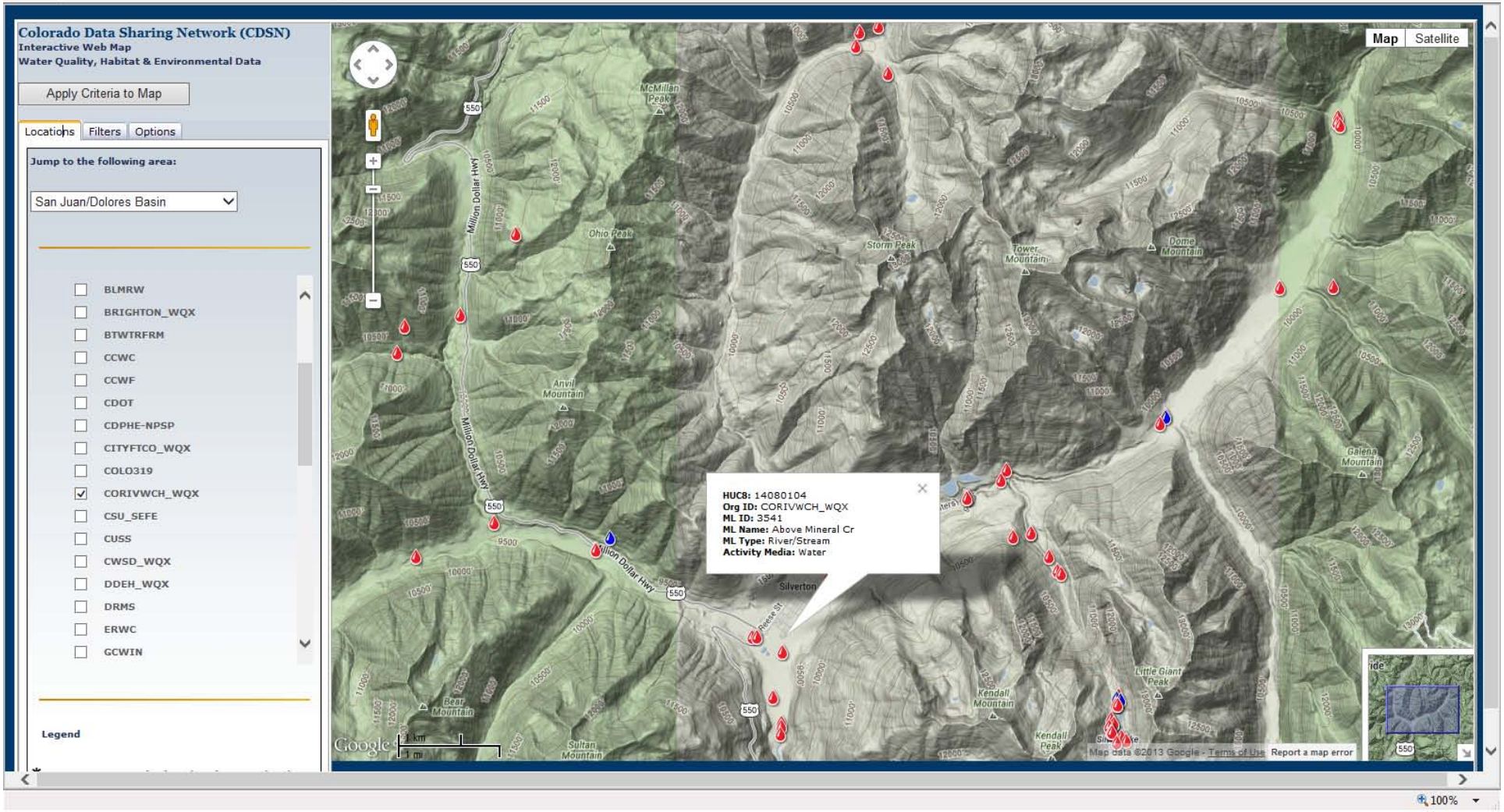
I selected "Zinc ug/l Total" as my characteristic (analyte) of interest, by clicking on it after scrolling down the list with the scroller; and I chose a threshold value of 50 and entered it. This means the map will display the exceedance locations where total zinc has been measured at greater than 50 ug/l. A date range can be specified if desired, but can be left blank if you don't wish to use it or if you don't know the full date range of the monitoring location's data.



18. After pressing "Apply Criteria to Map" I get these results displayed where those monitoring locations in exceedance of the criteria are now in red. Note - Monitoring locations that have results for the characteristic/units/sample fraction specified not exceeding the threshold, will still display as blue waterdrops:



19. Now I can roll my mouse over the monitoring locations to see the pop-up metadata again. I can view/download the data for Zinc ug/l Total for any monitoring location (exceeding the 50 ug/l specified threshold or not) by clicking on the monitoring location. **I will only be able to see or download the Zinc ug/l Total results data since the exceedance filter is on. The map will only let you view/download results data for one monitoring location at a time. If you would like to download a batch of data for multiple monitoring locations at once, we recommend using the public login for our AWQMS database and generating a Standard Export file. (You will find an AWQMS data download guide on our AWQMS page, www.coloradowaterdata.org/cdsnawqms_cdsn.html**



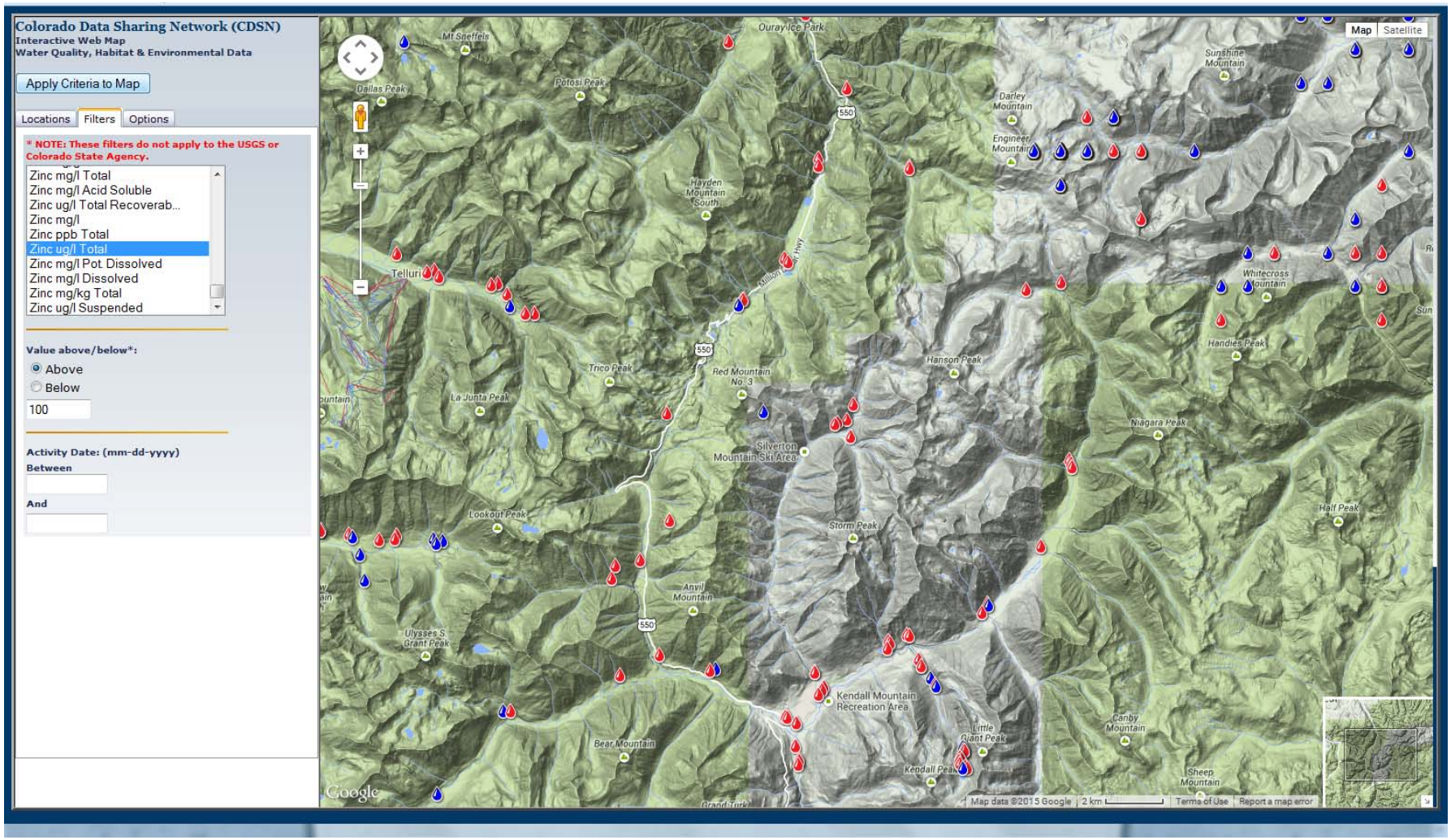
20. **Below, my exceedance table is only showing the total zinc ug/l results EXCEEDING my threshold. There may be other Zinc ug/l Total results for this monitoring location in AWQMS. But if I click on a red monitoring location with the Exceedance filter on, I will only get a table with the results EXCEEDING the value I entered in my query.** Again, if I click on a red monitoring location with an exceedance filter in effect, I will not be downloading all of the activities/results for this monitoring location that exists in AWQMS as we did in steps 9-11 -- just the data for the characteristic, units and sample fraction selected.

Monitoring Location ID	Monitoring Location Name	Monitoring Location Latitude	Monitoring Location Longitude	Project ID	Activity ID	Activity Type	Activity Start Date	Activity Start Time	Activity Start Time Zone	Activity Media Name	Characteristic Name	Result Measure Value	Result Measure Unit
3541	Above Mineral Cr	37.80070441	-107.6673745	1	3541.001M	Sample-Routine	09-09-1997	12:00:00 AM	MST	Water	Zinc	487	ug/l
3541	Above Mineral Cr	37.80070441	-107.6673745	1	3541.001M	Sample-Routine	09-09-1997	12:00:00 AM	MST	Water	Zinc	451	ug/l

Similarly, if I click on a blue monitoring location, I will only get the results for zinc, total, ug/l, and not for the results for other characteristics for that monitoring location.

21. To refresh the map and start fresh from the default view, and to clear the exceedance query filter, I need to press the F5 key on my keyboard (above the number 4 key usually).

22. Selecting multiple characteristics/units/sample fractions in one Exceedance query - we can hold down the CTRL key and select multiple characteristics (in this example, Zinc, ug/l, dissolved and Zinc, ug/l, total) in one query. **[Both of our selections are not visible in the menu in the screen shot below, but we do have BOTH dissolved and total Zinc, ug/l selected].** Note, only those monitoring locations having results for these parameters remain in the view, either as red (exceeding our threshold of 50) or blue. The others for which there are no zinc, [sample fraction], ug/l results disappear.



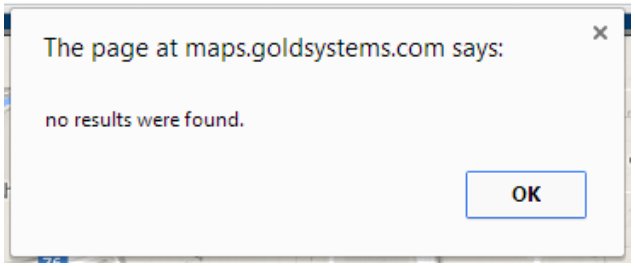
The result table for a "red" monitoring location will contain the results for each of the selected characteristics exceeding the threshold. For example, my query criteria for Zinc, ug/l, dissolved and Zinc, ug/l, total; exceeding a value of 100. Here is a result table for a "red" monitoring location:

oring tion ne	Monitoring Location Latitude	Monitoring Location Longitude	Project ID	Activity ID	Activity Type	Activity Start Date	Activity Start Time	Activity Start Time Zone	Activity Media Name	Characteristic Name	Result Measure Value	Result Measure Unit	Result Value Type	Sample Fraction Name	Result Status	Det
t Cr	37.8159	-107.6618	1	323.001M	Sample-Routine	07-23-1992	03:30:00 PM	MST	Water	Zinc	725	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.001M	Sample-Routine	07-23-1992	03:30:00 PM	MST	Water	Zinc	808	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.002M	Sample-Routine	09-20-1992	11:53:00 AM	MST	Water	Zinc	1070	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.003M	Sample-Routine	10-12-1994	03:50:00 PM	MST	Water	Zinc	1077	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.003M	Sample-Routine	10-12-1994	03:50:00 PM	MST	Water	Zinc	1082	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.004M	Sample-Routine	11-09-1994	03:46:00 PM	MST	Water	Zinc	999	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.004M	Sample-Routine	11-09-1994	03:46:00 PM	MST	Water	Zinc	1160	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.005M	Sample-Routine	12-13-1994	03:00:00 PM	MST	Water	Zinc	892	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.005M	Sample-Routine	12-13-1994	03:00:00 PM	MST	Water	Zinc	935	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.006M	Sample-Routine	01-18-1995	03:41:00 PM	MST	Water	Zinc	910	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.006M	Sample-Routine	01-18-1995	03:41:00 PM	MST	Water	Zinc	840	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.007M	Sample-Routine	02-15-1995	03:50:00 PM	MST	Water	Zinc	116	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.007M	Sample-Routine	02-15-1995	03:50:00 PM	MST	Water	Zinc	1140	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.008M	Sample-Routine	03-01-1995	03:50:00 PM	MST	Water	Zinc	1143	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.008M	Sample-Routine	03-01-1995	03:50:00 PM	MST	Water	Zinc	1241	ug/l	Actual	Total	Validated	
t Cr	37.8159	-107.6618	1	323.009M	Sample-Routine	03-15-1995	03:50:00 PM	MST	Water	Zinc	1407	ug/l	Actual	Dissolved	Validated	
t Cr	37.8159	-107.6618	1	323.009M	Sample-Routine	03-15-1995	03:50:00 PM	MST	Water	Zinc	1418	ug/l	Actual	Total	Validated	

The result for the same query, but for a blue, non-exceeding monitoring location:

itoring cation ame	Monitoring Location Latitude	Monitoring Location Longitude	Project ID	Activity ID	Activity Type	Activity Start Date	Activity Start Time	Activity Start Time Zone	Activity Media Name	Characteristic Name	Result Measure Value	Result Measure Unit	Result Value Type	Sample Fraction Name	Result Status	I
r Exp JJ	37.8931	-107.6809	1	9003.001M	Sample-Routine	03-05-2012	12:00:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.001M	Sample-Routine	03-05-2012	12:00:00 AM	MST	Water	Zinc	32.1	ug/l	Actual	Total	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.002M	Sample-Routine	03-05-2012	12:01:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.002M	Sample-Routine	03-05-2012	12:01:00 AM	MST	Water	Zinc	26.1	ug/l	Actual	Total	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.003M	Sample-Routine	03-05-2012	12:02:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.003M	Sample-Routine	03-05-2012	12:02:00 AM	MST	Water	Zinc	26.1	ug/l	Actual	Total	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.004M	Sample-Routine	03-05-2012	12:03:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.004M	Sample-Routine	03-05-2012	12:03:00 AM	MST	Water	Zinc	58.5	ug/l	Actual	Total	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.005M	Sample-Routine	03-05-2012	12:04:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.005M	Sample-Routine	03-05-2012	12:04:00 AM	MST	Water	Zinc	24.6	ug/l	Actual	Total	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.006M	Sample-Routine	03-05-2012	12:05:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.006M	Sample-Routine	03-05-2012	12:05:00 AM	MST	Water	Zinc	35	ug/l	Actual	Total	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.007M	Sample-Routine	03-05-2012	12:06:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.007M	Sample-Routine	03-05-2012	12:06:00 AM	MST	Water	Zinc	9	ug/l	Actual	Total	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.008M	Sample-Routine	03-05-2012	12:07:00 AM	MST	Water	Zinc	0	ug/l	Actual	Dissolved	Validated	
r Exp JJ	37.8931	-107.6809	1	9003.008M	Sample-Routine	03-05-2012	12:07:00 AM	MST	Water	Zinc	20.8	ug/l	Actual	Total	Validated	

23. Getting the message "no results were found":



This message occurs when there are no monitoring locations within your **zoomed in view that meet your search criteria.** You can zoom out and pan around the map to see if you will get results at a different map view. Don't forget to press the "Apply Criteria to Map" button again from your new view. It is suggested that you refer to the Expanded Legend tab to get an idea of the number of monitoring locations and results different data providers have shared in AWQMS, and their general area of interest.

Last note: The purpose of the Google-map and Exceedance tool is to allow for a quick way to interact with monitoring locations and results geo-spatially. If you need to make sure you are getting all of the results data for a group of monitoring locations or characteristics, exceedances or non-exceedances, we recommend you download data via the Standard Export file option directly from the public login to the CDSN AWQMS database (more information at http://www.coloradowaterdata.org/cdsnawqms_cdsn.html.)

The CDSN Project Coordinators are always interested in your feedback about this and any of our tools. Please email your comments and suggestions to cdsn@ColoradoWaterData.org. As always, our ability to make improvements will depend on funding we have available to pay our programmers. Please consider a contribution either online or by check to CDSN. You can earmark it for map enhancements if you wish. If we can help you in any way please don't hesitate to call us at 970-626-4045 or email us.