

Tutorial

Retrieving National Park Service Water Quality Data from the STORET Data Warehouse

Start your Internet Browser and go to http://www.epa.gov/storet/dw_home.html. This will take you to the STORET Data Warehouse Query Options page shown in Figure I.

Figure I. STORET Data Warehouse (http://www.epa.gov/storet/dw_home.html)

The screenshot shows the STORET Data Warehouse interface. At the top, there is a navigation bar with the U.S. Environmental Protection Agency logo and the STORET logo. Below this, there is a search bar with a 'GO' button. The main content area is titled 'STORET Data Warehouse' and includes a 'Query Options' section. The 'Query Options' section is divided into four main categories: STORET Station Descriptions (1), STORET Regular Results (2), STORET Biological Results (3), and STORET Habitat Results (4). Each category has sub-links for retrieval by geographic location, organization/station ID, or project. On the right side, there are additional links for 'Tell Us What You Think!', 'Make a Map', 'Data Logger Results (5)', 'Data Quality Documentation (6)', and 'Training Exercise'. A 'Help' link is located at the bottom right of the page.

There are four basic retrievals: (1) **Station Descriptions**; (2) **Regular** (non-biological physical and chemical) **Results**; (3) **Biological Results**; and (4) **Habitat Results**. Station Descriptions can be retrieved by geographic location (state and/or county, bounding latitude and longitude rectangle, or drainage basin/HUC) or by Organization and Station ID. Results can be retrieved by geographic location; Organization and Station ID; or Project.

Due to their voluminous nature, automatic data logger results for all organizations are kept in one self-extracting compressed text file which users must download separately (#5 above) and search with their own text editor. Metadata documenting different aspects of the sampling and analytical process are also combined for all organizations in one large Adobe Acrobat PDF file that must be downloaded separately (#6 above) and searched with Adobe Acrobat Reader.

Note: Because the STORET National Data Warehouse stores a different set of attributes for biological and habitat results than for regular results, if you want to retrieve all result data for an area, station, or project, you'll need to run three different queries (#2, 3, and 4 above) and download and manually search the Data Logger Results file (#5 above) with a text editor.

This tutorial is divided into 3 sections: (1) Retrieving STORET Station Descriptions; (2) Retrieving STORET Regular Results; and (3) Retrieving STORET Metadata. Once you have retrieved STORET Regular Results, a similar procedure is followed to retrieve biological and habitat results. Since, at the time of this writing, no biological or habitat results were stored by the National Park Service for Cuyahoga Valley National Park (the subject of this tutorial), those retrievals are not necessary.

Retrieving STORET Station Descriptions

Click: *'Stations by Geographic Location'*

The top part of the form that appears (Figure II) allows you to select stations by (1) State/County, (2) Latitude/Longitude, or (3) Drainage Basin/HUC. You must pick one of those options. When you pick a State Name, you'll be able to select one or more counties in that state. The Latitude/Longitude search is a decimal degrees bounding rectangle delimiting the furthest north and south (latitude range) and east and west (longitude range) for the query. The Drainage Basin/HUC query provides a list of all the U.S. Geological Survey catalog unit/subbasins from which you can select one subbasin (<http://www.ncgc.nrcs.usda.gov/products/datasets/watershed/history.html>).

Figure II. Selecting STORET Station Descriptions by Geographic Location

Stations by Geographic Location (stormoda)													
Geographic Location													
Select a single type of location search that you wish to perform (state/county, latitude/longitude, or HUC). Then enter the corresponding search criteria.													
<input checked="" type="radio"/> State/County	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">State Name ALL</td> <td style="width: 50%;">County Name ALL</td> </tr> <tr> <td colspan="2" style="text-align: right;"><input type="button" value="Look Up"/></td> </tr> </table>	State Name ALL	County Name ALL	<input type="button" value="Look Up"/>									
State Name ALL	County Name ALL												
<input type="button" value="Look Up"/>													
<input type="radio"/> Latitude/Longitude (in decimal degrees)	<table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">West Limit 180</td> <td style="width: 33%;">North Limit 90</td> <td style="width: 33%;">East Limit 0</td> </tr> <tr> <td style="text-align: right;">W</td> <td style="text-align: right;">N</td> <td style="text-align: right;">W</td> </tr> <tr> <td colspan="3" style="text-align: center;">South Limit 0</td> </tr> <tr> <td colspan="3" style="text-align: center;">N</td> </tr> </table>	West Limit 180	North Limit 90	East Limit 0	W	N	W	South Limit 0			N		
West Limit 180	North Limit 90	East Limit 0											
W	N	W											
South Limit 0													
N													
<input type="radio"/> Drainage Basin/HUC	<table border="1" style="width: 100%;"> <tr> <td>Cataloging Unit ALL</td> </tr> <tr> <td style="text-align: right;"><input type="button" value="Look Up"/></td> </tr> </table>	Cataloging Unit ALL	<input type="button" value="Look Up"/>										
Cataloging Unit ALL													
<input type="button" value="Look Up"/>													

For the purposes of this tutorial, we'll do a Latitude/Longitude search. Click the Latitude/Longitude circle and enter the bounding rectangle coordinates for Cuyahoga Valley National Park as they appear in Figure III.

Figure III. Bounding Latitude/Longitude Coordinate Retrieval for Cuyahoga Valley N.P.

Stations by Geographic Location (stormoda)

Geographic Location

Select a single type of location search that you wish to perform (state/county, latitude/longitude, or HUC). Then enter the corresponding search criteria.

<input type="radio"/> State/County	State Name ALL	County Name ALL	Look Up
<input checked="" type="radio"/> Latitude/Longitude (in decimal degrees)	<p>Enter these bounding rectangle coordinates</p> <p>North Limit: 41.42 N</p> <p>West Limit: 81.66 W</p> <p>East Limit: 81.48 W</p> <p>South Limit: 41.08 N</p>		
<input type="radio"/> Drainage Basin/HUC	Cataloging Unit ALL	Look Up	

The query specifications in Figure III will return all the water quality stations within the specified bounding latitude/longitude rectangle. You can further limit the retrieval of Station Descriptions by Station Type (Figure IV), the presence of a particular Characteristic (e.g. only those stations where mercury was measured) (Figure V), or by Organization (Figure VI).

Figure IV. Limit the Station Retrieval to One or More Station Type(s)

Station Type

Select one or more Station Type(s)

PRIMARY TYPE	SECONDARY TYPE
Select All	
River/Stream	None
Lake	None
Great Lake	None
Well	None
Facility	Industrial
Facility	Municipal Sewage (POTW)
Facility	Municipal Water Supply (PWS)
Facility	Other/combined
Facility	Privately Owned non-industrial

Figure V. Limit the Station Retrieval to those with Results for Particular Characteristics

Characteristic

Find Stations with at least one reported value of the selected Characteristics
Use the Characteristic Search to create a list of up to 50 Characteristics

Characteristic Search:

Search By: CHARACTERISTIC NAME

Search Hide Taxonomic Names

Characteristic Name

Clear Selected Clear All

Figure VI. Limit the Station Retrieval to One or More Organizations

Organization

Select one or more Organization(s)

ORG ID	ORGANIZATION NAME
Select All	
0800257	Clear Creek Superfund
0800597	Ogden Railyard (US EPA Region 8)
0800650	International Smelter (US EPA Region 8)
0800852	Mystery Bridge Road - US Highway 20
0801194	Summitville Superfund site (US EPA Region 8)
0801417	Red Mountain Pass Zinc (US EPA Region 8)
0801478	California Gulch (US EPA Region 8)
0801505	French Gulch Superfund site (US EPA Region 8)
0801600	Captain Jack Mine (Colorado)

For the purposes of this tutorial we'll just accept the defaults (to retrieve all the stations ignoring Station Type, Characteristic, and Organization) and just *click* the button at the bottom of the form. STORET will initially process the retrieval and report back the number of stations that met your search criteria. As seen in Figure VII, there are 193 stations whose latitude and longitude coordinates fall within the specified bounding rectangle.

Figure VII. 193 Stations Fall within the Specified Bounding Rectangle

Station Search Summary (stormoda)

Number of Stations Returned: 193

Search Parameter Values

North Limit: 41.42 NORTH

South Limit: 41.08 NORTH

East Limit: 81.48 WEST

West Limit: 81.66 WEST

Station Type(s): ALL

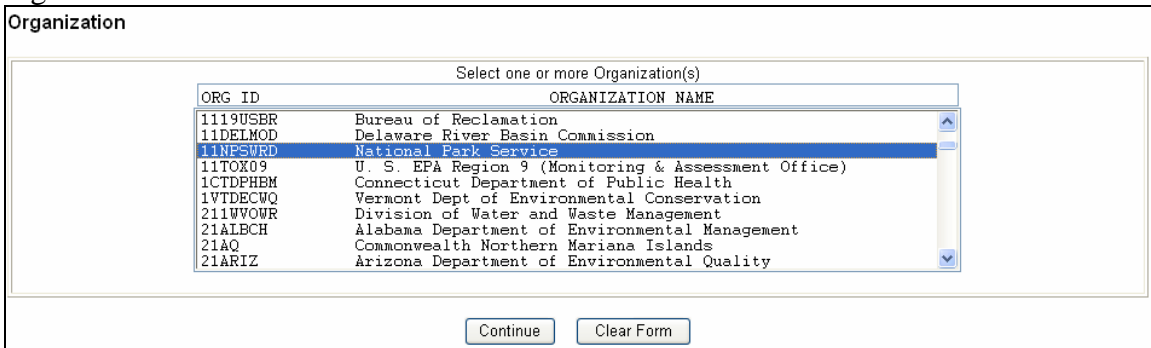
Characteristic(s): ALL

Organization(s): ALL

Select 'Back' to modify search parameters and refine your query.
Select 'Continue' to generate a report based on your current selections.
You may customize the content of your report by selecting Data Elements below.

Since for this tutorial we are only looking for the 28 stations belonging to the National Park Service, *click* the button to return to the previous screen where you entered the bounding rectangle coordinates. Use the Organization text box to scroll down and *select* '11NPSWRD National Park Service' as the Organization (Figure VIII). This query will return only the National Park Service entered stations in the specified bounding rectangle. After selecting the National Park Service as the Organization, *click* the button.

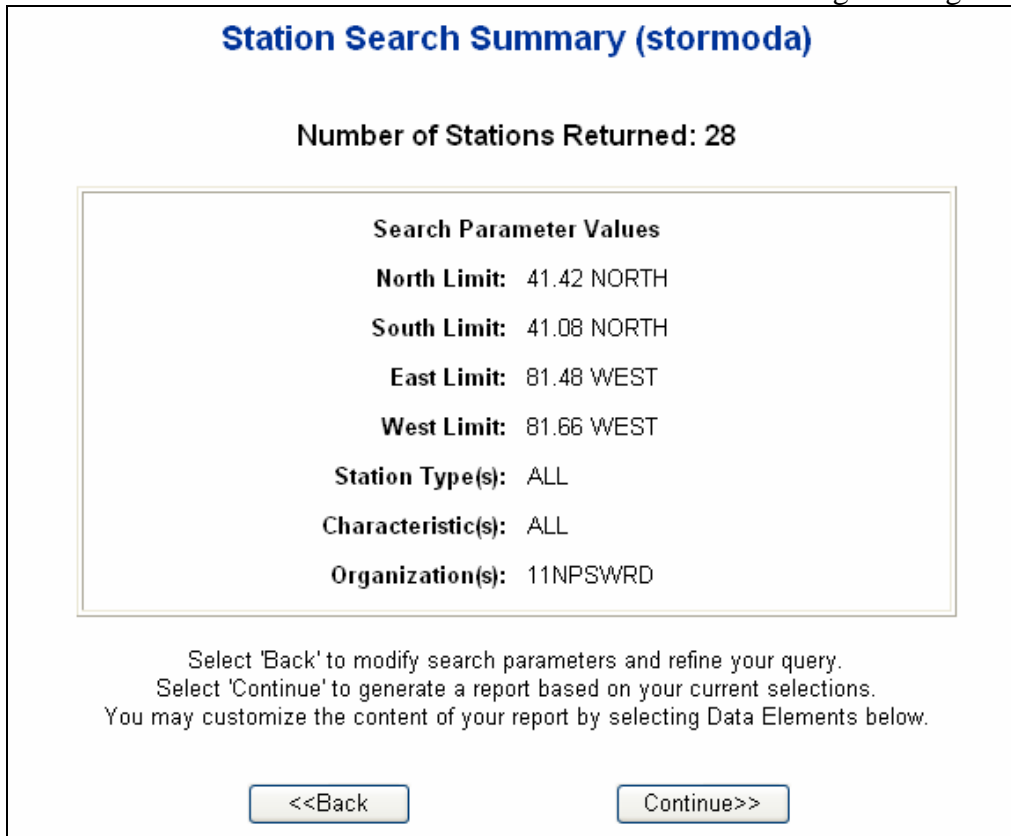
Figure VIII. Scroll Down to Select '11NPSWRD National Park Service'



ORG ID	ORGANIZATION NAME
1119USBR	Bureau of Reclamation
11DELMOD	Delaware River Basin Commission
11NPSWRD	National Park Service
11TOR09	U. S. EPA Region 9 (Monitoring & Assessment Office)
1CTDPHEM	Connecticut Department of Public Health
1VTDECWQ	Vermont Dept of Environmental Conservation
211WVOWR	Division of Water and Waste Management
21ALECH	Alabama Department of Environmental Management
21AQ	Commonwealth Northern Mariana Islands
21ARIZ	Arizona Department of Environmental Quality

STORET initially processes the retrieval and this time (Figure IX) reports back that there are 28 National Park Service stations within the bounding rectangle.

Figure IX. 28 National Park Service Stations Fall within the Bounding Rectangle



Station Search Summary (stormoda)

Number of Stations Returned: 28

Search Parameter Values

North Limit: 41.42 NORTH

South Limit: 41.08 NORTH

East Limit: 81.48 WEST

West Limit: 81.66 WEST

Station Type(s): ALL

Characteristic(s): ALL

Organization(s): 11NPSWRD

Select 'Back' to modify search parameters and refine your query.
 Select 'Continue' to generate a report based on your current selections.
 You may customize the content of your report by selecting Data Elements below.

Below the Station Search Summary, the STORET Data Warehouse will show you all the Data Elements (Figure IX) that can be retrieved for each station but only a default subset of them will be checked for inclusion in the report/retrieval. You can go with the default subset, make your own selections, or click to include all Data Elements. Data Elements in [blue](#) actually comprise multiple Data Elements. Click on the STORET [blue](#) hyperlink to see what Data Elements are included in the listed Data Element. The same link also provides definitions for all Station Data Elements or you can go directly to http://www.epa.gov/storpubl/modern/doc/DW_storet_help.html#Station%20Data%20Elements for the Station Data Element definitions.

For the purposes of this exercise, **click** and then **click** to select all station Data Elements and continue processing (Figure X).

Figure X. All Station Description Data Elements Selected for Report/Retrieval

Select Data Elements for Report

<input checked="" type="checkbox"/> Org ID	<input checked="" type="checkbox"/> Additional Elevation Info
<input checked="" type="checkbox"/> Station ID	<input checked="" type="checkbox"/> Country Name
<input checked="" type="checkbox"/> Station Name	<input checked="" type="checkbox"/> State
<input checked="" type="checkbox"/> Org Name	<input checked="" type="checkbox"/> County
<input checked="" type="checkbox"/> Primary Type	<input checked="" type="checkbox"/> Hydrologic Unit Code
<input checked="" type="checkbox"/> Secondary Type	<input checked="" type="checkbox"/> Hydrologic Unit Name
<input checked="" type="checkbox"/> S/G/O Indicator	<input checked="" type="checkbox"/> Generated Hydrologic Unit Code
<input checked="" type="checkbox"/> Well Number	<input checked="" type="checkbox"/> Generated Hydrologic Unit Name
<input checked="" type="checkbox"/> Well Name	<input checked="" type="checkbox"/> RF1 Info
<input checked="" type="checkbox"/> Pipe Number	<input checked="" type="checkbox"/> NRCS Watershed ID
<input checked="" type="checkbox"/> NAICS Code	<input checked="" type="checkbox"/> Estuary Info
<input checked="" type="checkbox"/> Spring Info	<input checked="" type="checkbox"/> Great Lake Name
<input checked="" type="checkbox"/> Location Point Type	<input checked="" type="checkbox"/> Ocean Name
<input checked="" type="checkbox"/> Point Sequence Number	<input checked="" type="checkbox"/> Natv American Land Name
<input checked="" type="checkbox"/> Point Name	<input checked="" type="checkbox"/> FRS Key Identifier
<input checked="" type="checkbox"/> Latitude/Longitude	<input checked="" type="checkbox"/> Description Text
<input checked="" type="checkbox"/> Conv Latitude/Longitude	<input checked="" type="checkbox"/> Station Document/Graphic Name
<input checked="" type="checkbox"/> Lat/Long Info	<input checked="" type="checkbox"/> Station Document/Graphic URL
<input checked="" type="checkbox"/> Elevation (w/ Units)	

The STORET Data Warehouse will process your request and report back the size of your download (Figure XI). If the file size is very large or your bandwidth is small, you might want to click 'Compress data file now...' to download a compressed file. For this

exercise, *click* 'Download your file now ...' to actually move the information from STORET to your local computer.

Figure XI. STORET Reports the Size of Your Report/Retrieval

Download Site Descriptions (stormoda)

You have requested to download a custom site description

The size of your report download is **14.8KB**

[Download your file now...](#)

or, for large files, you may click below to compress before download

[Compress data file now...](#)


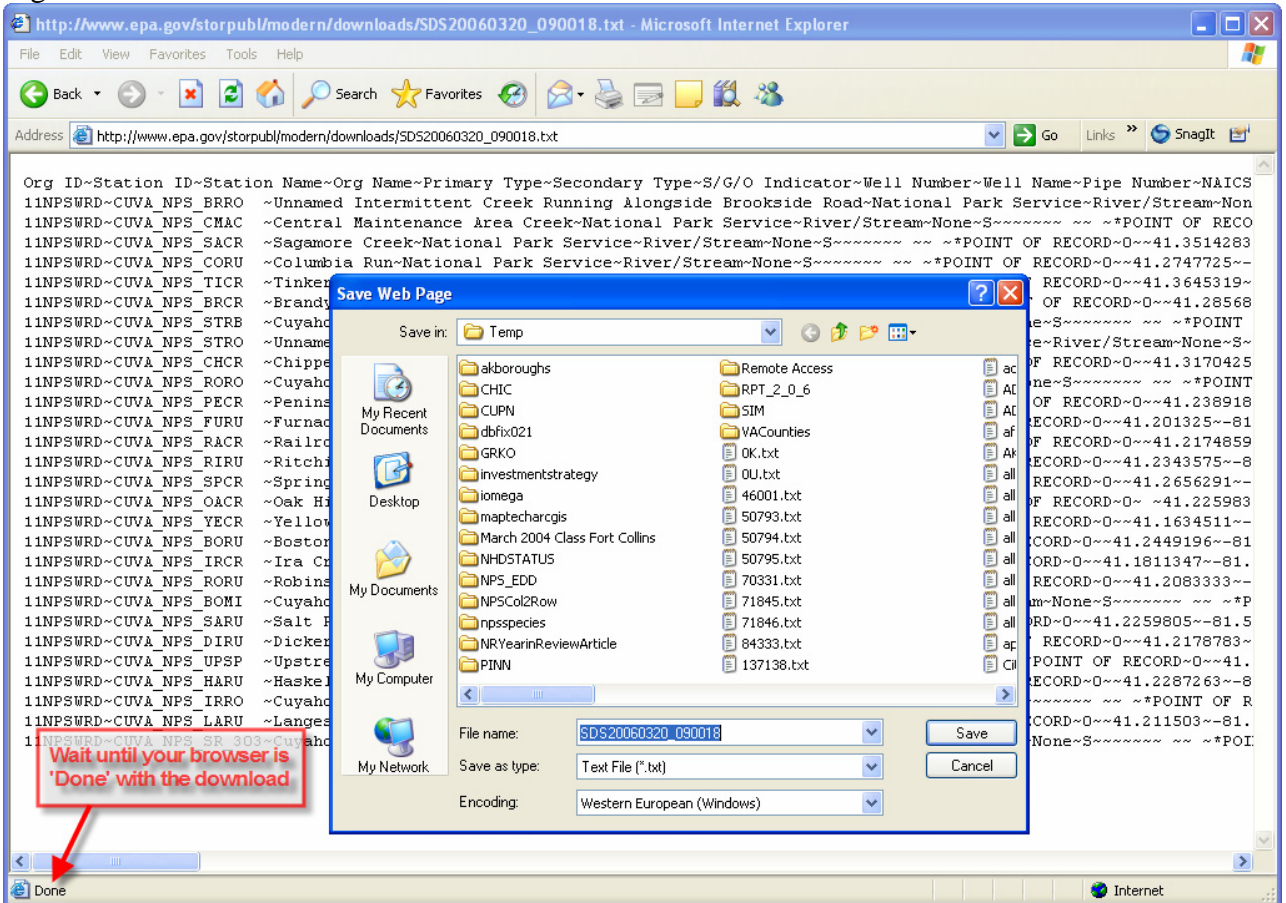

You will see a tilde (~) delimited file appear in your browser (Figure XII). *Wait* until the progress bar at the bottom of the screen completes and you see  in the lower left corner to indicate that the entire file has been downloaded.

Figure XII. Download is Done. Save the Download as a Text File



The screenshot shows a Microsoft Internet Explorer browser window. The address bar displays the URL: `http://www.epa.gov/storpubl/modern/downloads/SDS20060320_090018.txt`. The main content area shows a table with columns: Org ID, Station ID, Station Name, Org Name, Primary Type, Secondary Type, S/G/O Indicator, Well Number, Well Name, Pipe Number, and NAICS. The table contains multiple rows of data, including entries for 'Unnamed Intermittent Creek Running Alongside Brookside Road' and 'Central Maintenance Area Creek'. A 'Save Web Page' dialog box is open in the foreground, showing the file name 'SDS20060320_090018' and the save type 'Text File (*.txt)'. A red box with a red arrow points to the 'Done' icon in the browser's status bar at the bottom left, with the text 'Wait until your browser is 'Done' with the download'.

From your browser's menu, **choose** 'File-Save As' and **set** the 'Save as Type' to Text File (*.txt). Either **accept** the default file name (in this case 'SDS' followed by the date and time: SDR20060320_090018) or **enter** your own file name.

Now that this text file exists on your computer, if desired, you can close the browser file download window by clicking  or choosing 'File-Close' from the browser's menu.

To import the data into Microsoft Excel, follow these steps:

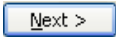
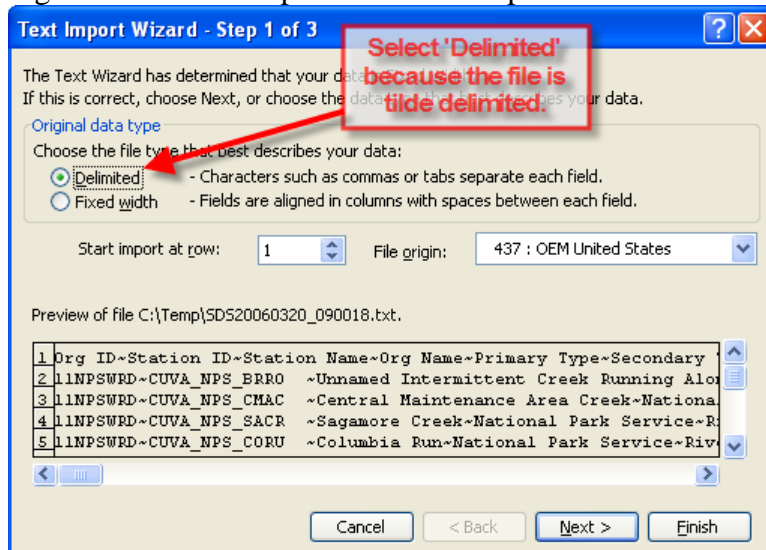
- (1) Start Excel
- (2) **Choose** 'File-Open' and **browse** to where you saved the file. Be sure the 'Files of type:' is **set** to 'Text Files (*.prn; *.txt; *.csv). **Select** and **open** the desired file.
- (3) This will start the Text Import Wizard.
- (4) On Text Import Wizard - Step 1 of 3, **click** 'Delimited' because the Data Elements are delimited (separated) by tildes (~) (Figure XIII). **Click** .

Figure XIII. Text Import Wizard – Step 1 of 3



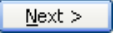
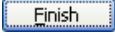
- (5) On Text Import Wizard - Step 2 of 3, **enter** a tilde in the Other Delimiter box, **click** on the check mark next to Tab to remove the check from the Tab box, and **set** the Text qualifier to be "" (Figure XIV). **Click** .
- (6) On Text Import Wizard - Step 3 of 3, you can optionally set the data format for each column/field or you can accept the default (General) and click 'Finish'. For this tutorial, just **click**  (Figure XV).

Figure XIV. Text Import Wizard – Step 2 of 3

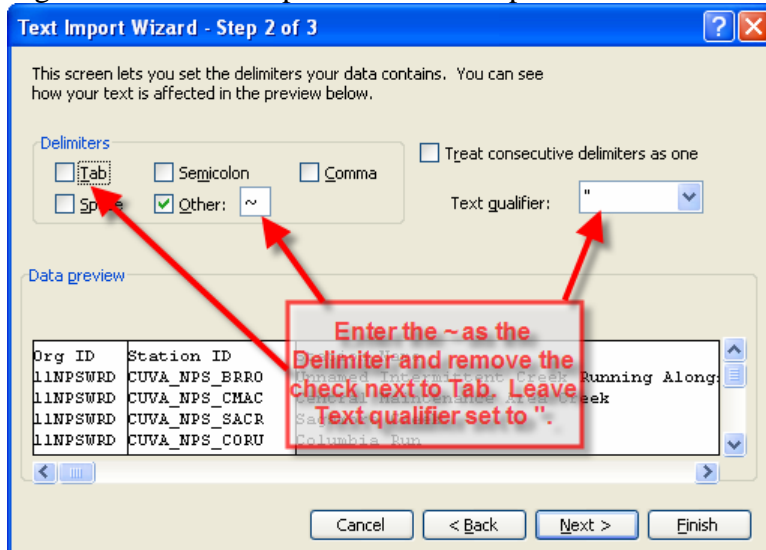
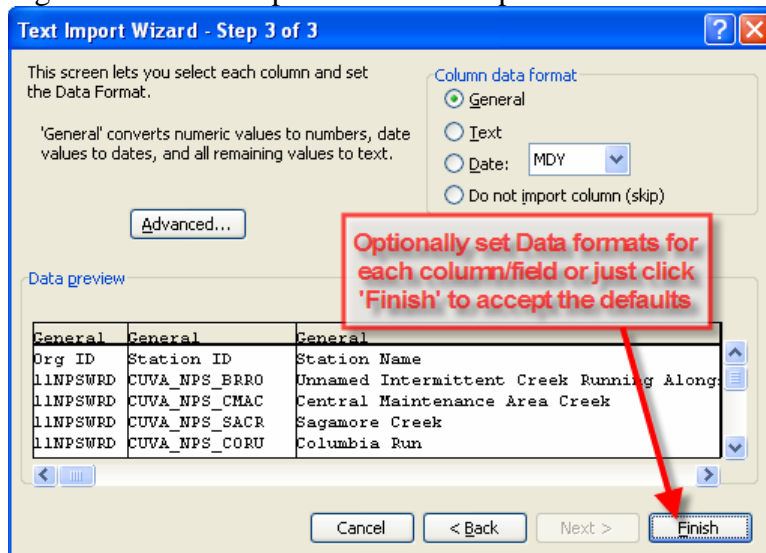


Figure XV. Text Import Wizard – Step 3 of 3



- (7) You should now see the Station Description file in Excel as shown in Figure XVI. To quickly make Excel increase the column widths so the information is more legible, **click** the empty space/cell to the left of column 'A' and above row '1'. This will select every cell in the spreadsheet. Then **double click** the line separating column 'A' from column 'B' (or any other two adjacent columns). This will automatically set the column width for each column to the maximum need to display the longest entry. The result of these operations is shown in Figure XVII.

Figure XVI. The Station Descriptions as Imported into Microsoft Excel

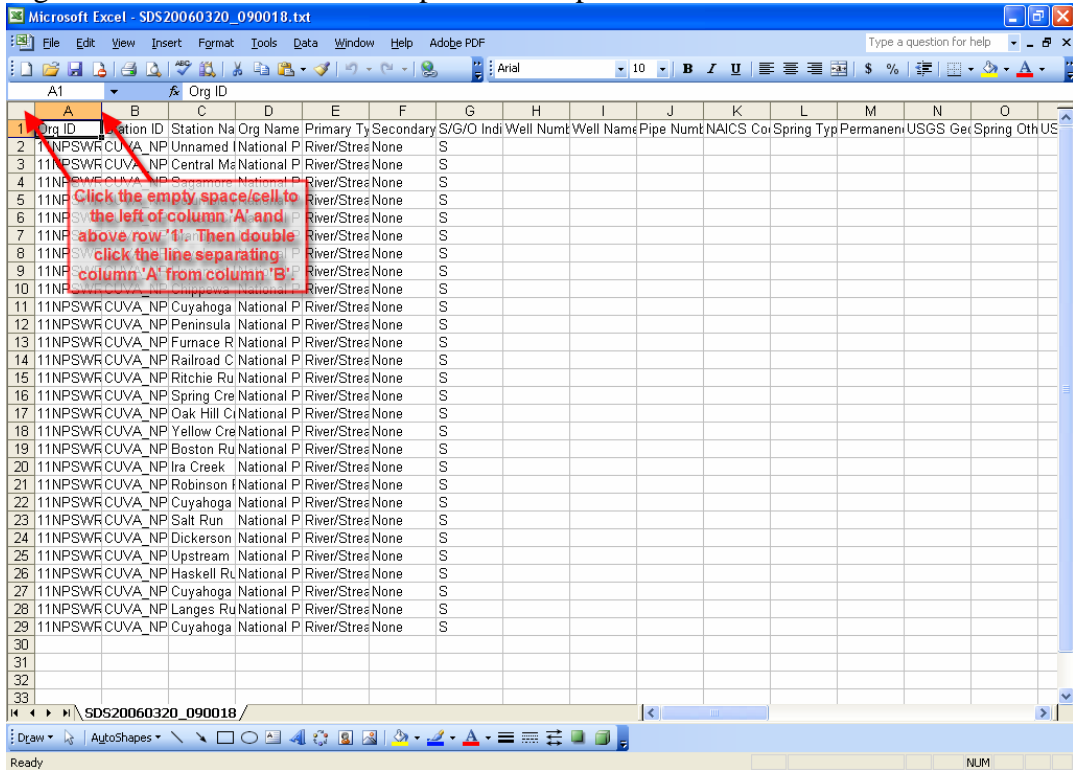
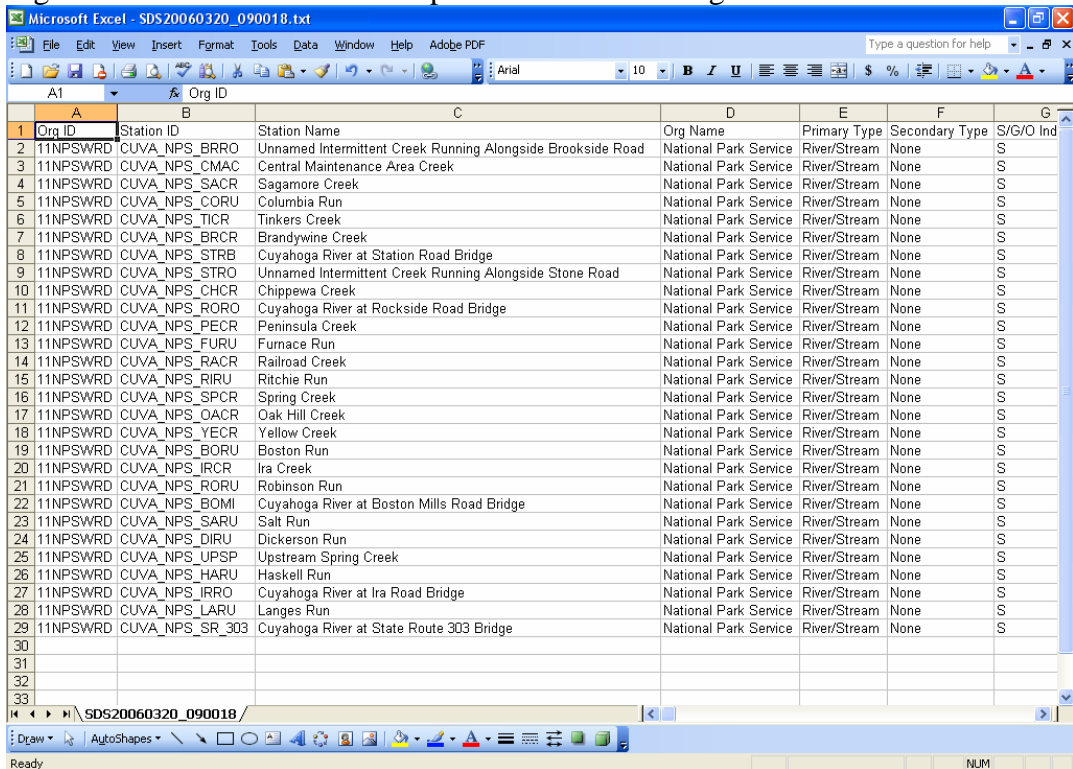


Figure XVII. The Station Descriptions after Formatting the Column Widths



Retrieving STORET Regular Results

In this exercise, we'll retrieve Regular Results (non-biological physical and chemical data) from the STORET Data Warehouse for a Project. Use your Internet Browser to go to http://www.epa.gov/storet/dw_home.html (the STORET Data Warehouse homepage shown in Figure I).

Click: 'Regular Results by Project'

Click the drop down arrow (▼) and then **scroll** down to **select** the National Park Service's STORET Organization ID: '11NPSWRD National Park Service'.

Click the button and then **scroll** down to **select** the project entitled 'CUVA0001 Water Quality Monitoring Program at Cuyahoga Valley NP' (Figure XVIII).

Figure XVIII. Select the Organization and Project

Regular Results by Project (stormoda)

Project

Step 1: Select a Single Organization from the List

ORG ID	ORGANIZATION NAME
11NPSWRD	National Park Service

Step 2: Select a Single Project by Clicking "Look Up"

CUVA0001	Water Quality Monitoring Program at Cuyahoga Valley	<input type="button" value="Look Up"/>
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Once you have selected the desired Project, you can elect to include only the data for a Project collected during user-specified Date ranges (Figure XIX), from a particular Activity Medium (Figure XX), and/or only certain Characteristics (Figure XXI).

Figure XIX. Include Only Data from the Specified Date Ranges

Date

Specify Activity Start Date range(s)

Date Range 1: JAN 1 1900 To MAR 7 2006

Date Range 2: --- -- ---- To --- -- ----

Date Range 3: --- -- ---- To --- -- ----

Date Range 4: --- -- ---- To --- -- ----

Figure XX. Include Only Data from the Specified Media

Activity Medium

Select one or more Activity Medium

ACTIVITY MEDIUM

- Select All
- Water
- Sediment
- Soil
- Air
- Other

Figure XXI. Include Only Data for the Specified Characteristics

Characteristic

Use the Characteristic Search to create a list of up to 50 Characteristics

Characteristic Search

Search By CHARACTERISTIC NAME

Hide Taxonomic Names

Characteristic Name

For the purposes of this tutorial we'll just **accept** the defaults (to retrieve all the Regular Results irrespective of Date, Activity Medium, or Characteristic) and just **click** the button at the bottom of the form.

STORET will query the Data Warehouse with your search criteria and report back the number of results it found (Figure XXII). For the CUVA0001 – Water Quality Monitoring Program at Cuyahoga Valley NP (at the time of this writing) there are 25,121 Regular Results. The next step is to **scroll** down and select the Data Elements you want included in the report (retrieval).

Figure XXII. Result Search Summary for Specified Criteria

Result Search Summary (stormoda)

Number of Results Returned: 25,121

Search Criteria

Organization: 11NPSWRD

Project: CUVA0001 - Water Quality Monitoring Program at Cuyahoga Valley NP

Activity Start Dates: ALL

Medium: ALL

Characteristic(s): ALL

Select 'Back' to modify search criteria and refine your query.
Select 'Continue' to generate a report based on your current selections.
You may customize the content of your report by selecting Data Elements below.

The STORET Data Warehouse will show you all the Data Elements that can be retrieved for each Regular Result but only a default subset of them will be checked for inclusion in the report/retrieval. You can go with the default subset, make your own selections, or click to include all Data Elements (Figure XXIII). Data Elements in [blue](#) actually comprise multiple Data Elements. Click on the STORET [blue](#) hyperlink to see what Data Elements are included in the listed Data Element. The same link also provides definitions for all Result Data Elements or you can go directly to http://www.epa.gov/storpubl/modern/doc/DW_storet_help.html#Regular%20Result%20Data%20Elements for the Result Data Element definitions.

Figure XXIII. All Regular Result Data Elements Selected for Report/Retrieval

Select Data Elements for Report

<input checked="" type="checkbox"/> Org ID	<input checked="" type="checkbox"/> Actual Activity Lat/Long	<input checked="" type="checkbox"/> Converted Result Value
<input checked="" type="checkbox"/> Org Name	<input checked="" type="checkbox"/> Conv Actual Activity Lat/Long	<input checked="" type="checkbox"/> Converted Result Unit
<input checked="" type="checkbox"/> Station ID	<input checked="" type="checkbox"/> Well Number	<input checked="" type="checkbox"/> Result Comment
<input checked="" type="checkbox"/> Station Name	<input checked="" type="checkbox"/> Pipe Number	<input checked="" type="checkbox"/> Result Free Text
<input checked="" type="checkbox"/> Station Location Info	<input checked="" type="checkbox"/> Additional Act Location Info	<input checked="" type="checkbox"/> Weight Basis
<input checked="" type="checkbox"/> Station Lat/Long	<input checked="" type="checkbox"/> Activity Depth	<input checked="" type="checkbox"/> Temperature Basis
<input checked="" type="checkbox"/> Conv Station Lat/Long	<input checked="" type="checkbox"/> Activity Depth Unit	<input checked="" type="checkbox"/> Duration Basis
<input checked="" type="checkbox"/> Station Types	<input checked="" type="checkbox"/> Activity Upper Depth	<input checked="" type="checkbox"/> Particle Size Basis
<input checked="" type="checkbox"/> S/G/O Indicator	<input checked="" type="checkbox"/> Activity Rel Depth	<input checked="" type="checkbox"/> Distance Measured From
<input checked="" type="checkbox"/> Visit Num	<input checked="" type="checkbox"/> Activity Lower Depth	<input checked="" type="checkbox"/> Distance Measured To
<input checked="" type="checkbox"/> Visit Start	<input checked="" type="checkbox"/> Upr Lwr Depth Unit	<input checked="" type="checkbox"/> Analytical Proc ID
<input checked="" type="checkbox"/> Visit Stop	<input checked="" type="checkbox"/> Sample Collection ID	<input checked="" type="checkbox"/> Additional Anal Proc Info
<input checked="" type="checkbox"/> Trip ID	<input checked="" type="checkbox"/> Field Gear ID	<input checked="" type="checkbox"/> Lab Remark
<input checked="" type="checkbox"/> Trip Name	<input checked="" type="checkbox"/> Field Gear Config ID	<input checked="" type="checkbox"/> Dilution Ind
<input checked="" type="checkbox"/> Activity ID	<input checked="" type="checkbox"/> Sample Preservation	<input checked="" type="checkbox"/> Recovery Ind
<input checked="" type="checkbox"/> Activity Start	<input checked="" type="checkbox"/> Portable Data Logger	<input checked="" type="checkbox"/> Correction Ind
<input checked="" type="checkbox"/> Activity Stop	<input checked="" type="checkbox"/> Characteristic Name	<input checked="" type="checkbox"/> Other Lab Info
<input checked="" type="checkbox"/> Activity Medium	<input checked="" type="checkbox"/> CAS Num	<input checked="" type="checkbox"/> Num of Reps
<input checked="" type="checkbox"/> Activity Matrix	<input checked="" type="checkbox"/> EPA Registry Num	<input checked="" type="checkbox"/> Precision
<input checked="" type="checkbox"/> Activity Type	<input checked="" type="checkbox"/> ITIS Num	<input checked="" type="checkbox"/> Bias
<input checked="" type="checkbox"/> Activity Category-Rep Num	<input checked="" type="checkbox"/> Sample Fraction	<input checked="" type="checkbox"/> Conf Level
<input checked="" type="checkbox"/> Activity Intent	<input checked="" type="checkbox"/> Value Type	<input checked="" type="checkbox"/> Correction for Bias Ind
<input checked="" type="checkbox"/> Field Set	<input checked="" type="checkbox"/> Statistic Type	<input checked="" type="checkbox"/> Result Document/Graphic Name
<input checked="" type="checkbox"/> Actual Point Type	<input checked="" type="checkbox"/> Result Value as Text	<input checked="" type="checkbox"/> Result Document/Graphic URL
<input checked="" type="checkbox"/> Actual Point Sequence	<input checked="" type="checkbox"/> Result Value as Number	<input checked="" type="checkbox"/> Activity Document/Graphic Name
<input checked="" type="checkbox"/> Actual Point Name	<input checked="" type="checkbox"/> Units	<input checked="" type="checkbox"/> Activity Document/Graphic URL

For the purposes of this exercise, click to select all the Data Elements and then click . The STORET Data Warehouse will process your request and report back the size of your download (Figure XXIV). If the file size is very large or you bandwidth is small, you might want to click ‘Compress data file now...’ to download a

compressed file. For this exercise, **click** 'Download your file now ...' to actually move the information from STORET to your local computer.

Figure XXIV. STORET Reports the Size of Your Results Report/Retrieval

Download Results (stormoda)

You have requested to download monitoring Results

The size of your report download is **18168KB**

[Download your file now...](#)

or, for large files, you may click below to compress before download

[Compress data file now...](#)


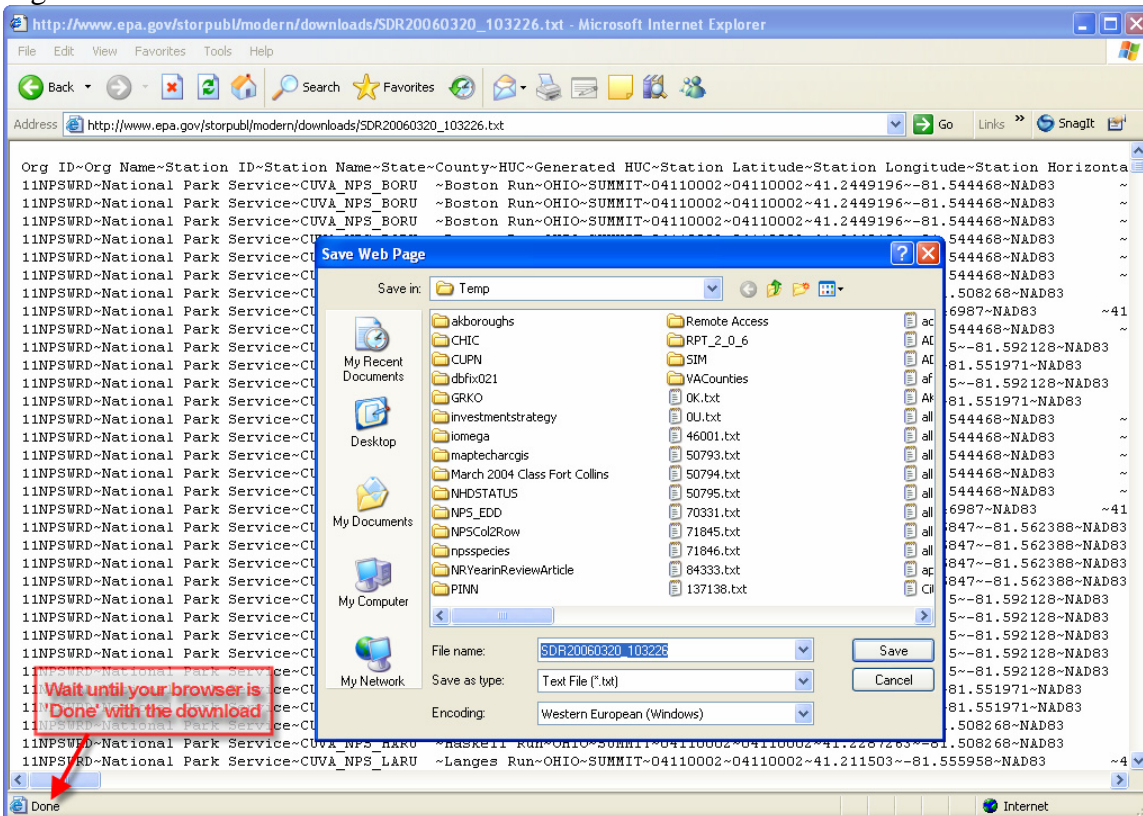

You will see a tilde (~) delimited file appear in your browser (Figure XXV). **Wait** until the progress bar at the bottom of the screen completes and you see  Done in the lower left corner to indicate that the entire file has been downloaded.

Figure XXV. Download is Done. Save the Download as a Text File



The screenshot shows a Microsoft Internet Explorer browser window displaying a data table from the EPA STORET website. The table has columns for Org ID, Org Name, Station ID, Station Name, State, County, HUC, Generated, HUC, Station Latitude, Station Longitude, and Station Horizontal. The data rows are delimited by tildes (~). A 'Save Web Page' dialog box is open over the table, with the file name 'SDR20060320_103226' and 'Save as type' set to 'Text File (*.txt)'. A red box highlights the 'Done' icon in the bottom left corner of the browser window, with a red arrow pointing to it. A red text box with a white background is overlaid on the dialog box, containing the text: 'Wait until your browser is Done with the download'.

From your browser's menu, choose 'File-Save As' and set the 'Save as Type' to Text File (*.txt). Either accept the default file name (in this case 'SDR' followed by the date and time: SDR20060320_103226) or enter your own file name.

Now that this text file exists on your computer, if desired, you can close the browser file download window by clicking  or choosing 'File-Close' from the browser's menu.

To import the data into Microsoft Excel, follow these steps:

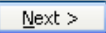
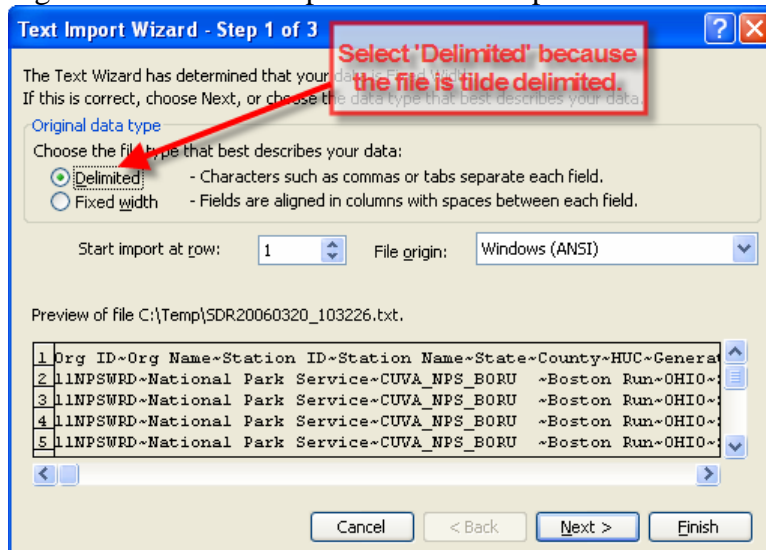
- (1) Start Excel
- (2) Choose 'File-Open' and browse to where you saved the file. Be sure the 'Files of type:' is set to 'Text Files (*.prn; *.txt; *.csv). Select and open the desired file.
- (3) This will start the Text Import Wizard.
- (4) On Text Import Wizard - Step 1 of 3, click 'Delimited' because the Data Elements are delimited (separated) by tildes (~) (Figure XXVI). Click .

Figure XXVI. Text Import Wizard – Step 1 of 3





- (5) On Text Import Wizard - Step 2 of 3, enter a tilde in the Other Delimiter box, click on the check mark next to Tab to remove the check from the Tab box, and set the Text qualifier to be "" (Figure XIV). Click .
- (6) On Text Import Wizard - Step 3 of 3, you can optionally set the data format for each column/field or you can accept the default (General) and click 'Finish'. For this tutorial, just click .

Figure XXVII. Text Import Wizard – Step 2 of 3

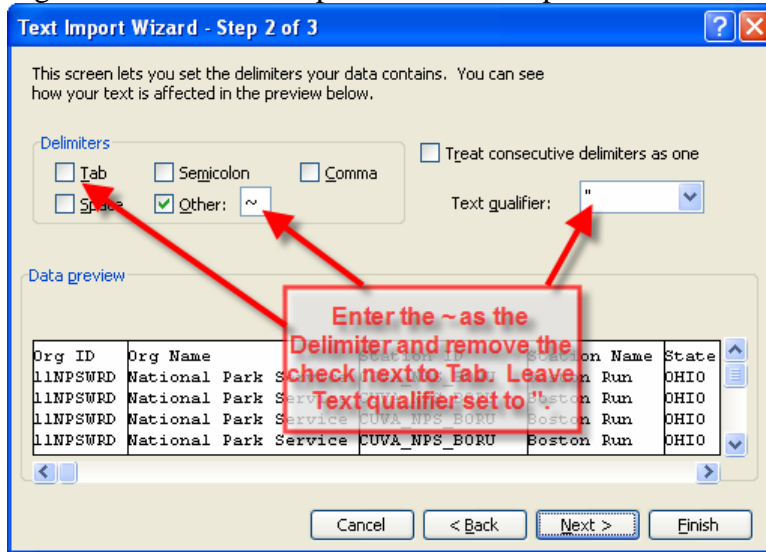
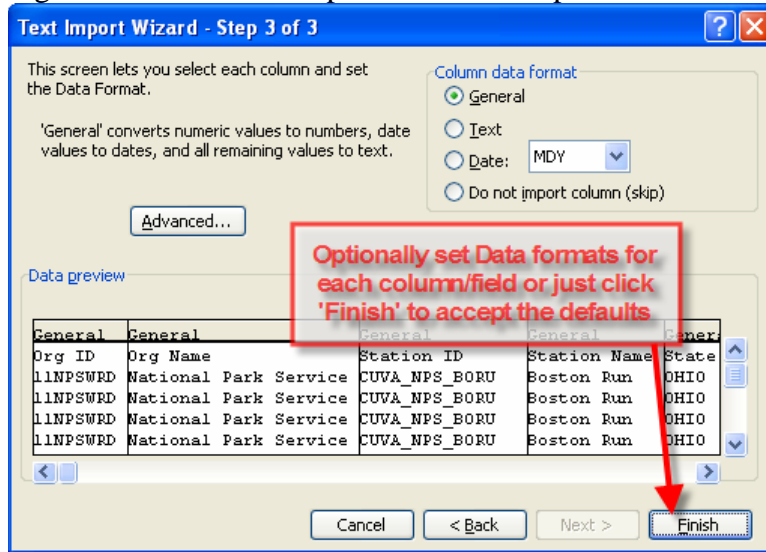


Figure XXVIII. Text Import Wizard – Step 3 of 3



- (7) You should now see the Regular Results file in Excel as shown in Figure XXIX. To quickly make Excel increase the column widths so the information is more legible, **click** the empty space/cell to the left of column 'A' and above row '1'. This will select every cell in the spreadsheet. Then **double click** the line separating column 'A' from column 'B' (or any other two adjacent columns). This will automatically set the column width for each column to the maximum need to display the longest entry. The result of these operations is shown in Figure XXX.

Figure XXIX. The Regular Results as Imported into Microsoft Excel

Microsoft Excel - SDR20060320_103226.txt

File Edit View Insert Format Tools Data Window Help Adobe PDF Type a question for help

A1 Org ID

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
1	Org ID	Org Name	Station ID	Station Na	State	County	HUC	Generated	Station Lat	Station Loi	Station Ho	Converted	Converted	Converted	Primary Ty	Se
2	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
3	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
4	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
5	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
6	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
7	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
8	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.22873	-81.5083	NAD83	41.22873	-81.5083	NAD83	River/Stree	No
9	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.22598	-81.547	NAD83	41.22598	-81.547	NAD83	River/Stree	No
10	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
11	11NPSWR	National P	CUVA_NP	Chippewa	OHIO	CUYAHOG	4110002	4110002	41.31704	-81.5921	NAD83	41.31704	-81.5921	NAD83	River/Stree	No
12	11NPSWR	National P	CUVA_NP	Dickerson	OHIO	SUMMIT	4110002	4110002	41.21788	-81.552	NAD83	41.21788	-81.552	NAD83	River/Stree	No
13	11NPSWR	National P	CUVA_NP	Chippewa	OHIO	CUYAHOG	4110002	4110002	41.31704	-81.5921	NAD83	41.31704	-81.5921	NAD83	River/Stree	No
14	11NPSWR	National P	CUVA_NP	Dickerson	OHIO	SUMMIT	4110002	4110002	41.21788	-81.552	NAD83	41.21788	-81.552	NAD83	River/Stree	No
15	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
16	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
17	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
18	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
19	11NPSWR	National P	CUVA_NP	Boston Ru	OHIO	SUMMIT	4110002	4110002	41.24492	-81.5445	NAD83	41.24492	-81.5445	NAD83	River/Stree	No
20	11NPSWR	National P	CUVA_NP	Salt Run	OHIO	SUMMIT	4110002	4110002	41.22598	-81.547	NAD83	41.22598	-81.547	NAD83	River/Stree	No
21	11NPSWR	National P	CUVA_NP	Brandywin	OHIO	CUYAHOG	4110002	4110002	41.28568	-81.5624	NAD83	41.28568	-81.5624	NAD83	River/Stree	No
22	11NPSWR	National P	CUVA_NP	Brandywin	OHIO	CUYAHOG	4110002	4110002	41.28568	-81.5624	NAD83	41.28568	-81.5624	NAD83	River/Stree	No
23	11NPSWR	National P	CUVA_NP	Brandywin	OHIO	CUYAHOG	4110002	4110002	41.28568	-81.5624	NAD83	41.28568	-81.5624	NAD83	River/Stree	No
24	11NPSWR	National P	CUVA_NP	Brandywin	OHIO	CUYAHOG	4110002	4110002	41.28568	-81.5624	NAD83	41.28568	-81.5624	NAD83	River/Stree	No
25	11NPSWR	National P	CUVA_NP	Chippewa	OHIO	CUYAHOG	4110002	4110002	41.31704	-81.5921	NAD83	41.31704	-81.5921	NAD83	River/Stree	No
26	11NPSWR	National P	CUVA_NP	Chippewa	OHIO	CUYAHOG	4110002	4110002	41.31704	-81.5921	NAD83	41.31704	-81.5921	NAD83	River/Stree	No
27	11NPSWR	National P	CUVA_NP	Chippewa	OHIO	CUYAHOG	4110002	4110002	41.31704	-81.5921	NAD83	41.31704	-81.5921	NAD83	River/Stree	No
28	11NPSWR	National P	CUVA_NP	Chippewa	OHIO	CUYAHOG	4110002	4110002	41.31704	-81.5921	NAD83	41.31704	-81.5921	NAD83	River/Stree	No
29	11NPSWR	National P	CUVA_NP	Chippewa	OHIO	CUYAHOG	4110002	4110002	41.31704	-81.5921	NAD83	41.31704	-81.5921	NAD83	River/Stree	No
30	11NPSWR	National P	CUVA_NP	Dickerson	OHIO	SUMMIT	4110002	4110002	41.21788	-81.552	NAD83	41.21788	-81.552	NAD83	River/Stree	No
31	11NPSWR	National P	CUVA_NP	Dickerson	OHIO	SUMMIT	4110002	4110002	41.21788	-81.552	NAD83	41.21788	-81.552	NAD83	River/Stree	No
32	11NPSWR	National P	CUVA_NP	Haskell Ru	OHIO	SUMMIT	4110002	4110002	41.22873	-81.5083	NAD83	41.22873	-81.5083	NAD83	River/Stree	No
33	11NPSWR	National P	CUVA_NP	Haskell Ru	OHIO	SUMMIT	4110002	4110002	41.22873	-81.5083	NAD83	41.22873	-81.5083	NAD83	River/Stree	No

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Ready NUM

Figure XXX. The Regular Results after Formatting the Column Widths

Microsoft Excel - SDR20060320_103226.txt

File Edit View Insert Format Tools Data Window Help Adobe PDF Type a question for help

A1 Org ID

A	B	C	D	E	F	G	H	
1	Org ID	Org Name	Station ID	Station Name	State	County	HUC	Generated
2	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
3	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
4	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
5	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
6	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
7	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
8	11NPSWRD	National Park Service	CUVA_NPS_HARU	Haskell Run	OHIO	SUMMIT	4110002	4111
9	11NPSWRD	National Park Service	CUVA_NPS_SARU	Salt Run	OHIO	SUMMIT	4110002	4111
10	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
11	11NPSWRD	National Park Service	CUVA_NPS_CHCR	Chippewa Creek	OHIO	CUYAHOGA	4110002	4111
12	11NPSWRD	National Park Service	CUVA_NPS_DIRU	Dickerson Run	OHIO	SUMMIT	4110002	4111
13	11NPSWRD	National Park Service	CUVA_NPS_CHCR	Chippewa Creek	OHIO	CUYAHOGA	4110002	4111
14	11NPSWRD	National Park Service	CUVA_NPS_DIRU	Dickerson Run	OHIO	SUMMIT	4110002	4111
15	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
16	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
17	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
18	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
19	11NPSWRD	National Park Service	CUVA_NPS_BORU	Boston Run	OHIO	SUMMIT	4110002	4111
20	11NPSWRD	National Park Service	CUVA_NPS_SARU	Salt Run	OHIO	SUMMIT	4110002	4111
21	11NPSWRD	National Park Service	CUVA_NPS_BRCR	Brandywine Creek	OHIO	CUYAHOGA	4110002	4111
22	11NPSWRD	National Park Service	CUVA_NPS_BRCR	Brandywine Creek	OHIO	CUYAHOGA	4110002	4111
23	11NPSWRD	National Park Service	CUVA_NPS_BRCR	Brandywine Creek	OHIO	CUYAHOGA	4110002	4111
24	11NPSWRD	National Park Service	CUVA_NPS_BRCR	Brandywine Creek	OHIO	CUYAHOGA	4110002	4111
25	11NPSWRD	National Park Service	CUVA_NPS_CHCR	Chippewa Creek	OHIO	CUYAHOGA	4110002	4111
26	11NPSWRD	National Park Service	CUVA_NPS_CHCR	Chippewa Creek	OHIO	CUYAHOGA	4110002	4111
27	11NPSWRD	National Park Service	CUVA_NPS_CHCR	Chippewa Creek	OHIO	CUYAHOGA	4110002	4111
28	11NPSWRD	National Park Service	CUVA_NPS_CHCR	Chippewa Creek	OHIO	CUYAHOGA	4110002	4111
29	11NPSWRD	National Park Service	CUVA_NPS_CHCR	Chippewa Creek	OHIO	CUYAHOGA	4110002	4111
30	11NPSWRD	National Park Service	CUVA_NPS_DIRU	Dickerson Run	OHIO	SUMMIT	4110002	4111
31	11NPSWRD	National Park Service	CUVA_NPS_DIRU	Dickerson Run	OHIO	SUMMIT	4110002	4111
32	11NPSWRD	National Park Service	CUVA_NPS_HARU	Haskell Run	OHIO	SUMMIT	4110002	4111
33	11NPSWRD	National Park Service	CUVA_NPS_HARU	Haskell Run	OHIO	SUMMIT	4110002	4111

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Retrieving STORET Metadata

Most of the metadata documenting the results of physical, chemical, biological, and habitat-related water quality monitoring in STORET is contained in the retrievals along with the results. The exception to this is the more verbose text/memo fields that describe the details of particular sample collection, handling, lab, and analytical procedures. In the STORET Data Warehouse, this metadata is provided in Adobe PDF formatted files (Adobe Acrobat® Reader required). The STORET Data Warehouse also provides other verbose textual information in Adobe PDF formatted files. In this exercise, we'll retrieve the metadata that goes along with the Regular Result retrieval above.

Use your Internet Browser to go to http://www.epa.gov/storet/dw_home.html (the STORET Data Warehouse homepage shown in Figure I).

Click: 'Data Quality Documentation' (#6 in Figure I)

On the STORET Data Warehouse Metadata web page (Figure XXXI), metadata are grouped by the following categories: (1) Organizations; (2) Projects; (3) Stations; (4) Sampling Protocols; (5) Laboratories and Methods; and (6) General.

Figure XXXI. STORET Data Warehouse Metadata Reports by Category







Organizations		
Click Here  To Download	Organization Summaries This report lists Organization IDs, and for each Organization, those Organizations with which it operates cooperatively, and for each such cooperating organization, its name, the name of its primary contact, and any known physical address(es) and electronic addresses (i.e. telephone numbers, web sites, etc.)	270 KB 342 Pages
Click Here  To Download	Personnel Summary This report lists Organization IDs, and for each Organization, those people who are responsible for its monitoring activities. For each staff member, the report lists name, status, affiliation, title, and electronic addresses (if supplied, i.e. telephone numbers, email addresses, etc.)	349 KB 270 Pages
Click Here  To Download	Cooperating Organizations This report lists Organization IDs, and for each Organization, those Organizations with which it operates cooperatively, and for each such cooperating organization, its name, the name of its primary contact, and any known physical address(es) and electronic addresses (i.e. telephone numbers, web sites, etc.)	50 KB 53 Pages
Projects		
Click Here  To Download	Project Summary This report lists Organization IDs, and for each Organization, those Projects within which it conducts its business. For each such project, the report lists its assigned ID, its name, start date, planned duration, a brief text description, and the ID and name of any stations which are assigned to it.	3.7 MB 2,309 Pages
Click Here  To Download	Program Summary This report lists Organization IDs, and for each Organization, those Programs within which it groups its projects. For each such program, the report lists its name, a brief text description, and the ID and name of any projects which are assigned to it.	93 KB 75 Pages
Stations		
Click Here  To Download	Station Alias Schemes This report lists Organization IDs, and for each Organization, those alias schemes within which it assigns aliases to stations. For each such alias scheme, the report lists its assigned ID, its name, and a brief text description.	41 KB 37 Pages

Figure XXXI. STORET Data Warehouse Metadata Reports by Category (continued)

Sampling Protocols		
Click Here  To Download	Sample Collection or Creation Procedures This report lists Organization IDs, and for each Organization, those procedures and protocols that it uses to collect or create environmental samples. For each such procedure, the report lists its assigned ID, its name, any category of gear or equipment used, a brief text description, and any relevant literature citation.	124 KB 104 Pages
Click Here  To Download	Sampling Gear and Equipment Configurations This report lists Organization IDs, and for each Organization, the various configurations of sampling gear or equipment that it uses to collect environmental samples. For each such configuration, the report lists the category and kind of equipment used, the configuration ID, its name, and its detailed specifications.	77 KB 61 Pages
Click Here  To Download	Sample Preservation and Handling Profiles This report lists Organization IDs, and for each Organization, those standard approaches that it uses to handle and preserve environmental samples. For each such profile, the report lists its assigned ID, its name, the size, color, and material of any container used, and any refrigeration or chemical preservation techniques used.	105 KB 70 Pages
Laboratories and Methods		
Click Here  To Download	Laboratories This report lists Organization IDs, and for each Organization, the Laboratories it uses. For each Laboratory, its assigned code, its name, and any known physical address(es) and electronic addresses (i.e. telephone numbers, web sites, etc.)	72 KB 78 Pages
Click Here  To Download	Analytical Methods and Equipment used in the Lab or in the Field (summary) This report lists Organization IDs, and for each Organization, the codes and titles of the analytical methods each organization uses in the determination of monitoring results.	250 KB 144 Pages
Click Here  To Download	Analytical Methods and Equipment used in the Lab or in the Field (details) This report lists Organization IDs, and for each Organization, the codes, titles, description, bibliographic citations and equipment used in the analytical methods each organization uses in the determination of monitoring results.	720 KB 437 Pages
Click Here  To Download	Procedures Applied in the Laboratory to Prepare Samples for Evaluation This document lists Organization IDs, and for each Organization, the codes, titles, and bibliographic citations documenting the sample preparation procedures methods each organization uses in its labs.	46 KB 36 Pages
General		
Click Here  To Download	Characteristic Group Summary This report lists Organization IDs, and for each Organization, all characteristic groups it maintains for use during data entry. For each Characteristic Group, it lists its assigned ID Code, its name, and details describing the kind of sampling, measurement, or observation activities with which it is associated.	166 KB 132 Pages
Click Here  To Download	Characteristic Group Details This report lists Organization IDs, and for each Organization, the rows in each characteristic group it maintains for use during data entry. For each Characteristic Group, it lists its assigned ID Code, its name, a brief text description, any literature citation, and details describing the kind of sampling, measurement, or observation activities with which it is associated. Within each group, the report identifies individual characteristics it contains, with a unique Row ID for each, and a set of defaults for such things as units, sample fraction, value type, statistic type, any applicable weight basis, temperature basis, or time basis, as well as default sample preparation techniques applied in the lab, and default analytical methods used in its determination.	2.5 MB 1,416 Pages
Click Here  To Download	Bibliographic Citations This report lists Organization IDs, and for each Organization, all bibliographic citations it has referenced in its STORET data. For each citation, it lists any assigned code, and its title, author, publishing organization, year of publication, volume and page reference(s), and any supplied comments.	178 KB 123 Pages

For this exercise, **click** the Download Button in the category Laboratories and Methods for ‘Analytical Methods and Equipment used in the Lab or in the Field (details)’.

Provided you have Adobe Acrobat Reader installed, the file will download and you will see the first page (Figure XXXII). Note: Your first page may vary depending on the date of your retrieval.

Figure XXXII. First Page of ‘Analytical Methods and Equipment used in the Lab or in the Field (details)’ Metadata Document

Field/Lab Analytical Procedures and Equipment Detail						March 20, 2006 13:58:01
Procedure Source	Procedure ID	Status	Procedure Name	Citation	Equipment	Comparable National Procedure ID
0800257	Clear Creek Superfund					
0800257	UNKNOWN	Active	Unknown	Unknown, 19--, No Cite - Method Not Cited, Unknown, VGI --		
APHA	2340	Active	Hardness in Water by EDTA Titration	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition	Titration Apparatus	
USEPA	200.7(S)	Active	Metals In Soil by ICP-AES	USEPA, 1994, Methods for the Determination of Metals in Environmental Samples, Supplement I, USEPA, EPA 600/R-94-111	Inductively Coupled Plasma Combined with Mass Spectrophotome	
USEPA	200.7(W)	Active	Metals In Water by ICP-AES	USEPA, 1994, Methods for the Determination of Metals in Environmental Samples, Supplement I, USEPA, EPA 600/R-94-111	Inductively Coupled Plasma Combined with Mass Spectrophotome	
USEPA	200.8(W)	Active	Metals In Waters by ICPMS	USEPA, 1994, Methods for the Determination of Metals in Environmental Samples, Supplement I, USEPA, EPA 600/R-94-111	Inductively Coupled Plasma Spectrophotomet er	
USEPA	200.9	Active	Metals by Temperature Stabilized GFAA	USEPA, 1994, Methods for the Determination of Metals in Environmental Samples, Supplement I, USEPA, EPA 600/R-94-111	Temperature Stabilized Graphite Furnace AA Spectrophotomet er	
USEPA	245.1	Active	Mercury In Water by CVAA	USEPA, 1994, Methods for the Determination of Metals in Environmental Samples, Supplement I, USEPA, EPA 600/R-94-111	Cold Vapor Atomic Absorption Spectrophotomet er	
USEPA	300(A)	Active	Inorganic Anions by Ion Chromatography	USEPA, 1993, Methods for the Determination of Inorganic Substances In Environmental Samples, USEPA, EPA 600/R-93-100	Ion Chromatograph	

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Press ‘Ctrl F’ and enter: 11NPSWRD. Adobe Acrobat Reader will search for the first occurrence of this string and show you that page (Figure XXXIII).

Figure XXXIII. Field/Lab Analytical Procedures and Equipment Detail for 11NPSWRD

Find

Previous
Next

Field/Lab Analytical Procedures and Equipment Detail March 20, 2006 13:58:01

11NPSWRD	National Park Service					
Procedure Source	Procedure ID	Status	Procedure Name	Citation	Equipment	Comparable National Procedure ID
11NPSWRD	CUVA_AKR ON_UNK	Active	Unspecified Procedures for Historical Data	Unknown, 19-- No Cite - Method Not Cited, Unknown, Vol --		
	Description: Contracted work to the Alton Water Pollution Control Station. Procedures unknown. Only reference is USEPA Methods for Chemical Analysis of Water and Wastes, Section 205 - 1979.					
11NPSWRD	CUVA_ALK ALINITY	Active	Alkalinity Analytical Procedure	Unknown, 19-- No Cite - Method Not Cited, Unknown, Vol --	Titration Apparatus	
	Description: 100ml sample, titrated with 1.6N of H2SO4 using a calibrated titrator and cartridge containing H2SO4. Titrate to a value of 4.5 pH. Value expressed as mg/l as CaCO3.					
11NPSWRD	CUVA_CHL ORIDE	Active	Chloride Procedure	Unknown, 19-- No Cite - Method Not Cited, Unknown, Vol --	Titration Apparatus	APHA/4500-CL-(C)
	Description: 100ml sample titrated with 2.256N mercuric nitrate. Acid contents of diphenylcarbazone reagent powder. Titrate to color change. Value expressed as concentration of chloride in mg/L.					
11NPSWRD	CUVA_ECO LI	Active	E. Coli In Water by Membrane Filtration	USEPA, 2002, Method 1103.1: Escherichia coli (E. coli) in Water by Membrane Filtration Using membrane-Thermotolerant Escherichia coli Agar (mTEC) (September 2002), USEPA, EPA 821-R-02-020		
11NPSWRD	CUVA_FEC AL_ODOH	Active	Fecal Coliform by Membrane Filtration	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 19th Edition, American Public Health Association, 19th Edition	Optical Microscope	APHA/9222-D
11NPSWRD	CUVA_FEC AL_PARK	Active	Fecal Coliform by Membrane Filtration	USDOI, USGS, 1987, Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples, Book 5, Chapter A4., USDOI, USGS, Book 5, Chapter A4	Optical Microscope	
11NPSWRD	CUVA_HAC HHARD	Active	Hardness by Hach Digital Titration Cartridge	Hach Chemical Company, 1992, Hach Water Analysis Handbook., HACH Chemical Company, 2nd Edition	Digital Buret	
	Description: Using 0.800M EDTA; measured in mg/L CaCO3.					
11NPSWRD	GRBA_KES TREL	Active	Air Temperature Measured with Kestrel	GRBA_000001 - Gretchen Schenk Baker, 2004, Aquatic Inventory Field Manual, Great Basin National Park, 45 pp	Thermometer	

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Scroll down through the ‘Field/Lab Analytical Procedures and Equipment Detail’ information for 11NPSWRD until you find the ‘Procedure ID’ that matches the ‘Analytical Proc ID’ in the STORET retrieval. Procedures are alphabetical order by Procedure ID. For example, you can also **press** ‘Ctrl F’ and **enter:** NPS_YSI33 to search for information about that analytical procedure with an ID of NPS_YSI33S-C-T.

Note: Because the Adobe PDF file wraps long entries in each column based on the column width, a search for NPS_YSI33S-C-T will not be successful because the wrapping pushes it on to two logically disconnected lines (like CUVA_CHLORIDE above). To get around this, just search for the first 6 or 9 characters of the string (i.e. NPS_YSI33).

The key thing to remember about working with the Metadata PDF files is that you are actually downloading the entire file for that metadata construct for all organizations in STORET and then using Adobe Acrobat Reader to search for a particular organization or procedure ID in the downloaded file.

For additional help on retrieving data from the STORET Data Warehouse, consult the on-line help at: http://www.epa.gov/storpubl/modern/doc/DW_storet_help.html, call STORET Technical Support at 1-800-424-9067, or email <mailto:STORET@epa.gov>.