



How to Access Public Stream Data

The two primary sites to access stream data for the state of Montana include the Montana State University Extension Water Quality Program (MSUEWQ) website:

https://waterquality.montana.edu/datahub_about/index.html and the Water Quality Portal: <https://www.waterqualitydata.us/>. The MSUEWQ site contains data from volunteer data collection efforts in Montana and the Water Quality Portal contains water quality data collected by volunteers and agencies in Montana and across the United States.

Montana State University Extension Water Quality Data

https://waterquality.montana.edu/datahub_about/index.html

The MSUEWQ Data Hub has surface water data from a limited number of watersheds and streams across the state. The site encompasses data from Central to Southeastern Montana. The “Map of Sites” button will show you the sites where data is collected from.

Steps to Access Data:

1. Click on the “Data Viewer” button.
2. Scroll towards the bottom of the page and select your desired watershed from “Choose Sites.”
3. Once selected, fill in the date range you are looking for data from. The data will automatically appear on the graph above.
 - a. You can also click on the buttons above the date range to see “Past Year,” “Latest Data,” or “Entire Range.”
4. Under “Display” select if you want to view the data as lines, points, or lines and points.
 - a. Data will automatically appear as a timeseries. If you’d like to view the data in a different format, scroll to the top of the graph and you have the option to change to “Double Timeseries,” “Boxplot,” “Elevation Profile,” or “Regression.”
5. On the y-axis of the graph you can select the parameter that you’d like to see on the graph.
6. Click on “Database Stats and Download” button to download these data points.
7. Select the watershed and dates you would like the data from and then click “Download Data.”
 - a. The data will be downloaded in .csv format.

If you have any further questions while accessing the MSUEWQ site, scroll towards the bottom of the landing page and click on “*New User Guidance and Resources*.” From this page you can access the “*New User Guidance Page*” that will give you an overview and instructions on the features of the website.





Figure 1. Overview of the Montana State University Extension Water Quality Data page

Water Quality Portal

<https://www.waterqualitydata.us/>

The Water Quality Portal incorporates water quality data from the USGS National Water Information System, the EPA Water Quality Exchange, and USDA ARS Sustaining the Earth's Watersheds – Agricultural Research Database System. This portal contains publicly available data for all 50 states and various other US territories.

Steps to Access Data:

1. On the homepage, enter the state and county that you are looking for. You can select multiple counties at one time.
 - a. If you only enter the state and not the county you will receive data from the entire state, which could be tens of thousands of data records.
2. For "Point Location" leave this section blank, unless you know the exact location of the stream.
3. In "Site Type" enter "Stream".

4. Select “Next” and enter your desired date range.
 - a. If you do not select a date range you will receive all years of data from that selection.
5. Under “Sample Media” select “Water (NWIS, STEWARDS, STORET)”.
6. Select the water quality parameter you are interested in under “Characteristic Group.”
 - a. Common parameters to look at include “Physical” (which includes water temperature, dissolved oxygen, pH, etc...), “Nutrients” (which includes phosphorus and nitrogen), and “Inorganic, minor, metals” (which includes metals such as cadmium, lead, copper, etc...).
7. Click “Next” to head to the third page.
8. Under “Data Profiles” select “Sample Results (physical, chemical metadata)” if you selected any of the above-mentioned characteristic groups.
 - a. Other potential data profiles to select include “Sample Results (biological metadata)” if you selected the characteristic group of “Biological.”
9. Next select the file format you would like the data to be downloaded in and then select “Download.”
10. Your data will be downloaded into an Excel document and will need to be sorted from there.

Be sure to note the units that the measurements are taken in. Many sites changed their units over the years.

Page 1	Page 2	Page 3
<div style="border: 1px solid #ccc; padding: 5px;"> <p>Country ⓘ</p> <p>All Countries ▼</p> <hr/> <p>State ⓘ</p> <p>Montana (NWIS, STORET) ▼</p> <hr/> <p>County ⓘ</p> <p>US, Montana, Flathead County (NWIS, STORET) ▼</p> <hr/> <p>Point Location ⓘ</p> <p>Within Miles of <input style="width: 30px;" type="text"/> Lat <input style="width: 30px;" type="text"/> Long <input style="width: 30px;" type="text"/> Use my location</p> <hr/> <p>Site Type ⓘ</p> <p>Stream (NWIS, STEWARDS, STORET) ▼</p> <hr/> <p style="text-align: center;"> Clear search Next </p> </div>	<div style="border: 1px solid #ccc; padding: 5px;"> <p>Date Range ⓘ</p> <p style="font-size: x-small;">Dates should be entered as mm-dd-yyyy, mm-yyyy, or yyyy from:</p> <p>01-01-2015 []</p> <p>to:</p> <p>01-01-2022 []</p> <hr/> <p>Sample Media ⓘ</p> <p>Water (NWIS, STEWARDS, STORET) ▼</p> <hr/> <p>Characteristic Group ⓘ</p> <p>Nutrient (NWIS, STEWARDS, STORET) ▼</p> <hr/> <p style="text-align: center;"> Clear search Previous Next </p> </div>	<div style="border: 1px solid #ccc; padding: 5px;"> <p>Data Profiles ⓘ</p> <p><input type="radio"/> Organization Data</p> <p><input type="radio"/> Site Data Only</p> <p><input type="radio"/> Project Data</p> <p><input checked="" type="radio"/> Sample Results (physical/chemical metadata)</p> <p><input type="radio"/> Sample Results (biological metadata)</p> <p><input type="radio"/> Sample Results (narrow)</p> <p><input type="radio"/> Sampling Activity</p> <hr/> <p>File Format ⓘ</p> <p><input checked="" type="radio"/> Comma-Separated</p> <p><input type="radio"/> Tab-Separated</p> <p><input type="radio"/> MS Excel 2007+</p> <hr/> <p style="text-align: center;"> Start over Previous Download </p> </div>

Figure 2 Water Quality Pages