



APRIL

Snowpack

SNOTEL Station	Collection Date	Snow Depth (in)	SWE (in)	SWE % Avg	Avg. SWE (in)
Sacajawea	Apr 3, 2017	23	9.2	61	15
	Apr 3, 2016	34	13.8	92	
Lone Mountain	Apr 3, 2017	47	16.7	99	16.9
	Apr 3, 2016	54	18.1	107	

- As of April 3rd, **Sacajawea snowpack** is below average . This time last year, **Sacajawea snowpack** was near average.
- **Lone Mountain snowpack** is average.

Carrot Basin	Apr 3, 2017	94	29.6	117	25.4
	Apr 3, 2016	82	24.8	98	
Black Bear	Apr 3, 2017	114	44.7	121	36.8
	Apr 3, 2016	94	31.9	87	

- As of April 3rd, **Carrot Basin snowpack** is above average. This time last year, **Carrot Basin snowpack** was near average.
- **Black Bear snowpack** is also above average.

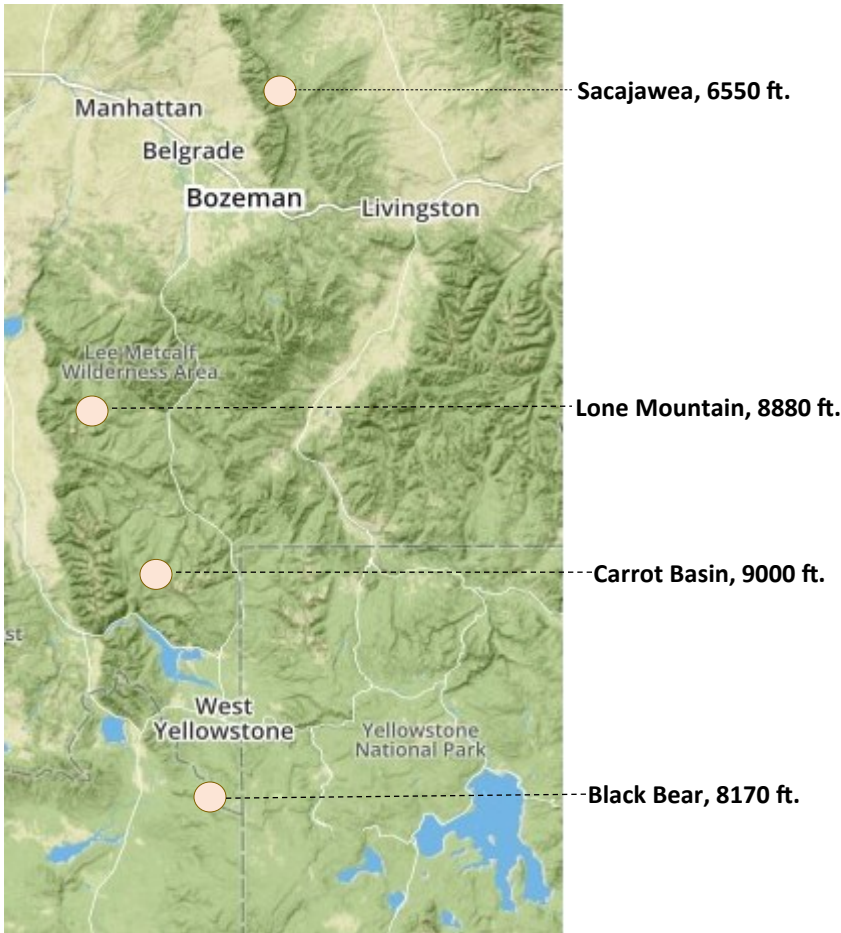
Understanding the Data

Snow Depth — The amount of snow, typically reported in inches, received in a location

Snow Water Equivalent (SWE) — The amount of water contained within the snowpack. SWE is a product of snow depth and snow density. It can be thought of as the theoretical depth of water that would result if all of the snowpack at a given site melted instantly (Source: [NASA](#))

SWE Percent of Average — The current SWE value compared to the average, or normal, SWE value for that site (Source: [NRCS](#))

Average SWE — The average SWE value, calculated from the period of 1981 to 2010



What is SNOTEL?

SNOTEL (SNOWpack TElemetry) is a method of collecting snowpack data, including snow depth, snow density, and snow water equivalent values. SNOTEL data is hosted and collected by the Natural Resource Conservation Service (NRCS) to develop products like water supply forecasts and support agencies in other resource management activities. SNOTEL sites are typically located in mountainous areas and are made up of various sensors that measure snow and weather conditions. The NRCS also hosts an interactive map that allows users to select specific SNOTEL sites and view that site's data. For more information about SNOTEL, visit the [NRCS Snow Survey and Water Supply webpage](#).

Map illustrating SNOTEL sites for Gallatin and surrounding counties

(Source: [NRCS SNOTEL Interactive Map](#))

Streamflow

USGS Stream Gage Site Number	Site Name	Collection Date	Discharge (ft ³ /s)	Gage Height (ft)	Temperature (°F)
06052500	Gallatin River at Logan, MT	Apr 3, 2017	1060	5.14	42.44
		Apr 3, 2016	685	---	51.62
06048650	E Gallatin R ab Water Reclamation Fa nr Bozeman, MT	Apr 3, 2017	249	4.58	---
		Apr 3, 2016	130	---	---

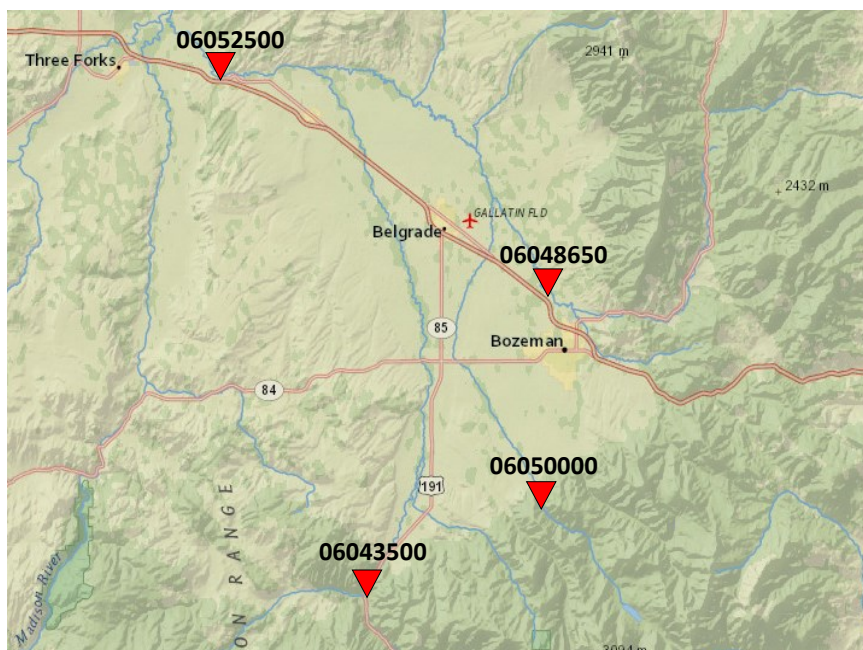
USGS Stream Gage Site Number	Site Name	Collection Date	Discharge (ft ³ /s)	Gage Height (ft)	Temperature (°F)
06043500	Gallatin River near Gallatin Gateway, MT	Apr 3, 2017	538	1.67	---
		Apr 3, 2016	346	---	---
06050000	Hyalite C at Hyalite R S nr Bozeman, MT	Apr 3, 2017	28.3	2.29	---
		Apr 3, 2016	23	---	---

Understanding the Data

Discharge — the volume of water flowing past a given point in a stream in a given period of time (Source: [USGS](#))

Gage Height — the height of the water in the stream above a reference point (Source: [USGS](#))

Temperature — the temperature of a stream, in degrees Fahrenheit, recorded at a reference point

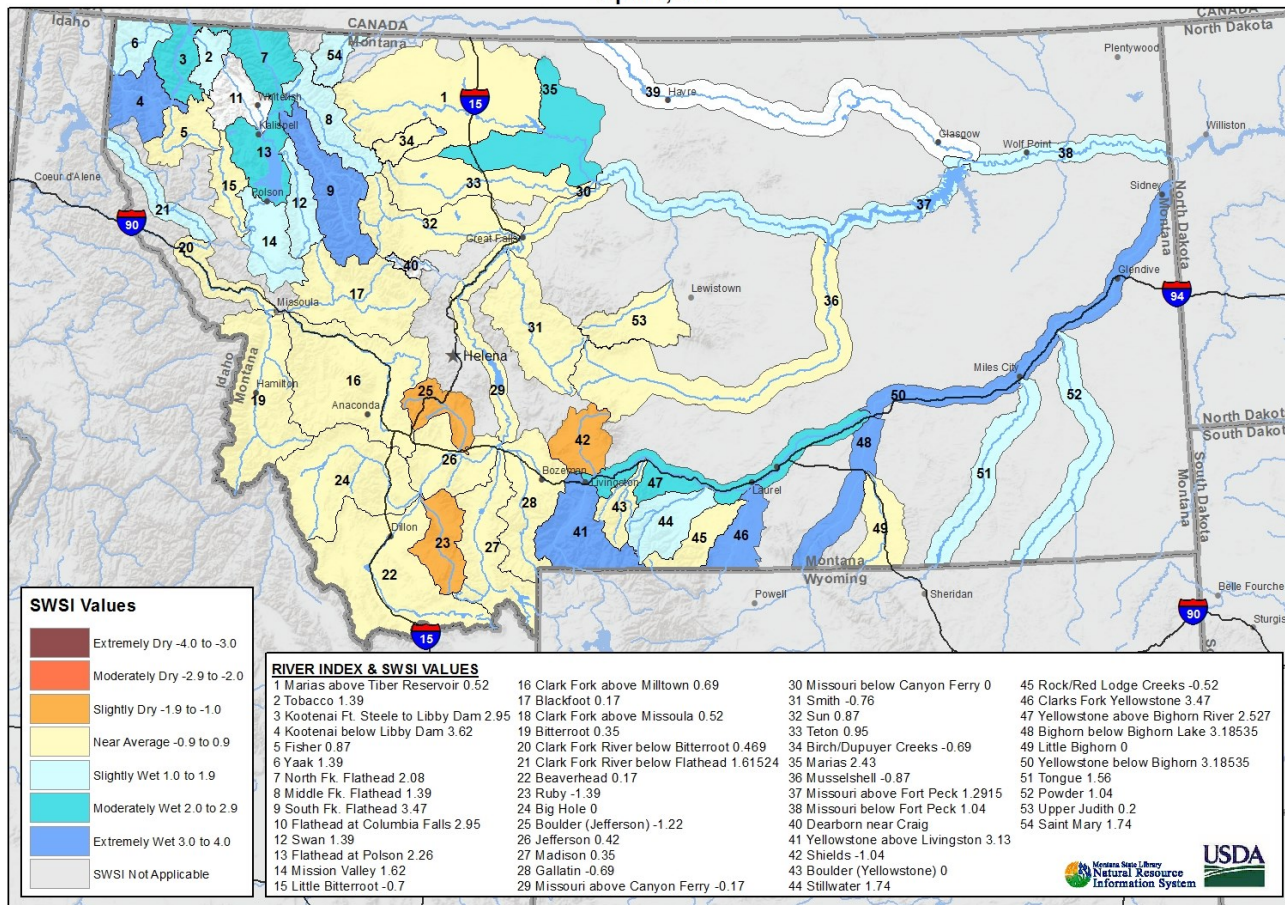


Map illustrating select USGS streamgage sites for Gallatin County (Source: [USGS](#))

What is a streamgage?

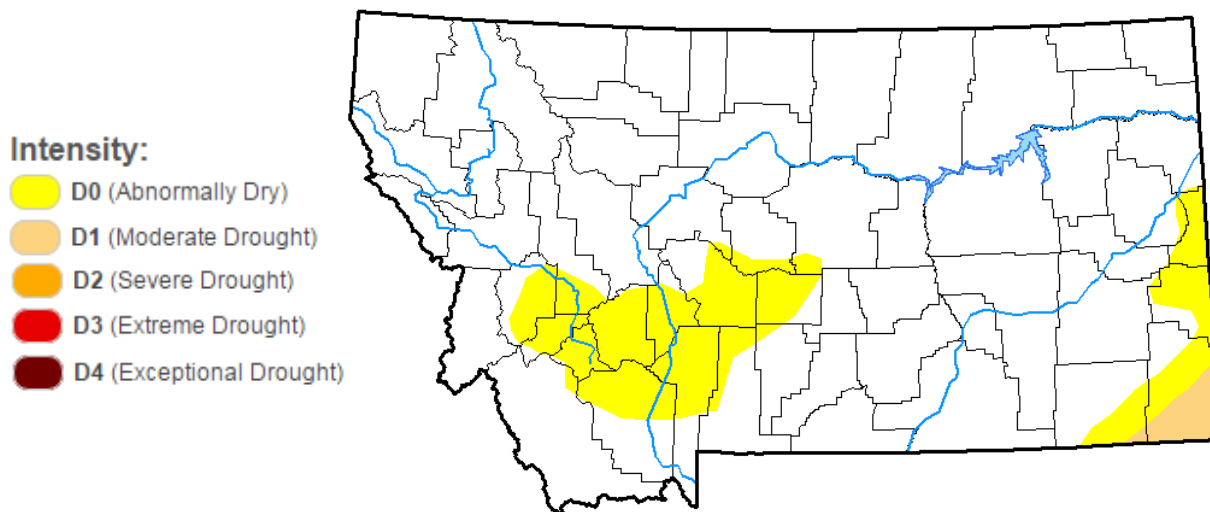
A **USGS streamgage** is an active, continuously functioning measuring device located in the field that computes or estimates a mean daily streamflow or other set of unit values. USGS streamgages measure the elevation of water in a river or stream (the stage) which is then converted to a streamflow (discharge) using a curve that relates the elevation to a set of actual discharge measurements. The stage is typically measured every 15 minutes and data is transmitted to the USGS every 1 to 4 hours, after which stage and streamflow data is calculated and put on to the USGS website. For more information, [visit the USGS webpage on streamgages.](#)

**Montana Data Collection Office
Surface Water Supply Index (SWSI)
April 1, 2017**



Note: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE

Surface Water Supply Index (SWSI) - factors in snowpack, precipitation, streamflow, reservoir storage, and soil moisture conditions to help evaluate current and seasonal surface water supplies. **Source:** [NRCS](#)



U.S. Drought Monitor—Montana - displays areas experiencing drought conditions (current as of Apr 4). The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying [text summary](#) for forecast statements. **Author(s):** Anthony Artusa, NOAA/NWS/NCEP/CPC. **Source:** [U.S. Drought Monitor](#)

If you are interested in receiving any more information on snowpack, stream flow, and drought resiliency contact Madison Boone, *Big Sky Watershed Corps Member*, at MSU Extension in Gallatin County. madison.boone@montana.edu OR (406) 582-3287
The Gallatin County Drought Resiliency Index can be found online at <http://www.msuextension.org/gallatin/NaturalResourcesDroughtIndex.html>.
All map and graph data can also be accessed by clicking on the image.

