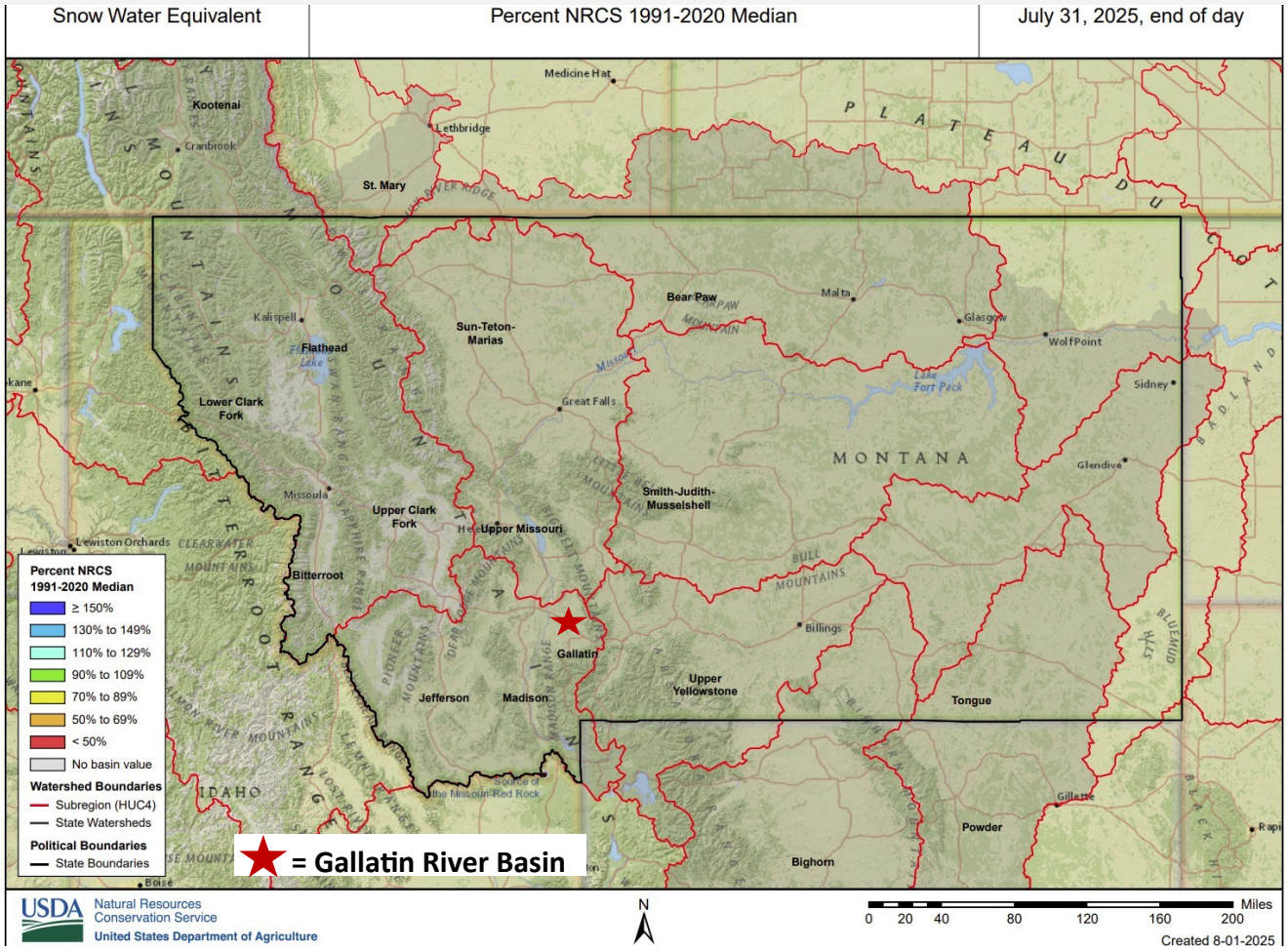
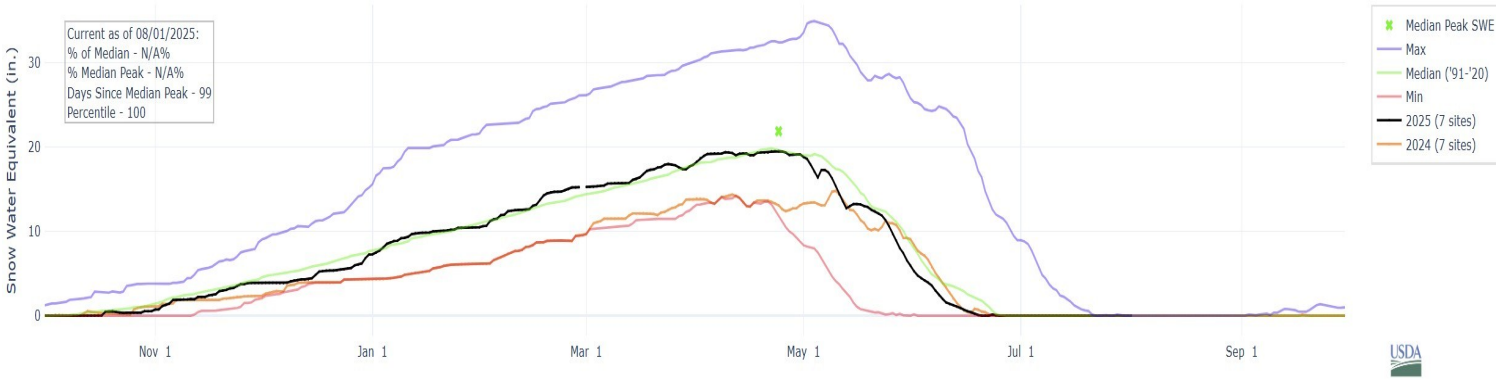
# Gallatin Water Supply Outlook
## July 2025




SNOW WATER EQUIVALENT IN GALLATIN




## SNOWPACK SUMMARY (Water Year (WY) = October 1st—September 30)

*Data current as of August 1st

We are currently in Water Year 2025 (black line). The Snow Water Equivalent (SWE) was at normal (median) within the Gallatin River Basin on July 31st, 2025 at 0.0 inches (no change since last month). Last year on July 31st, 2024, the SWE was at 0.0 inches (orange line). Detailed end-of-month SNOTEL site information follows.

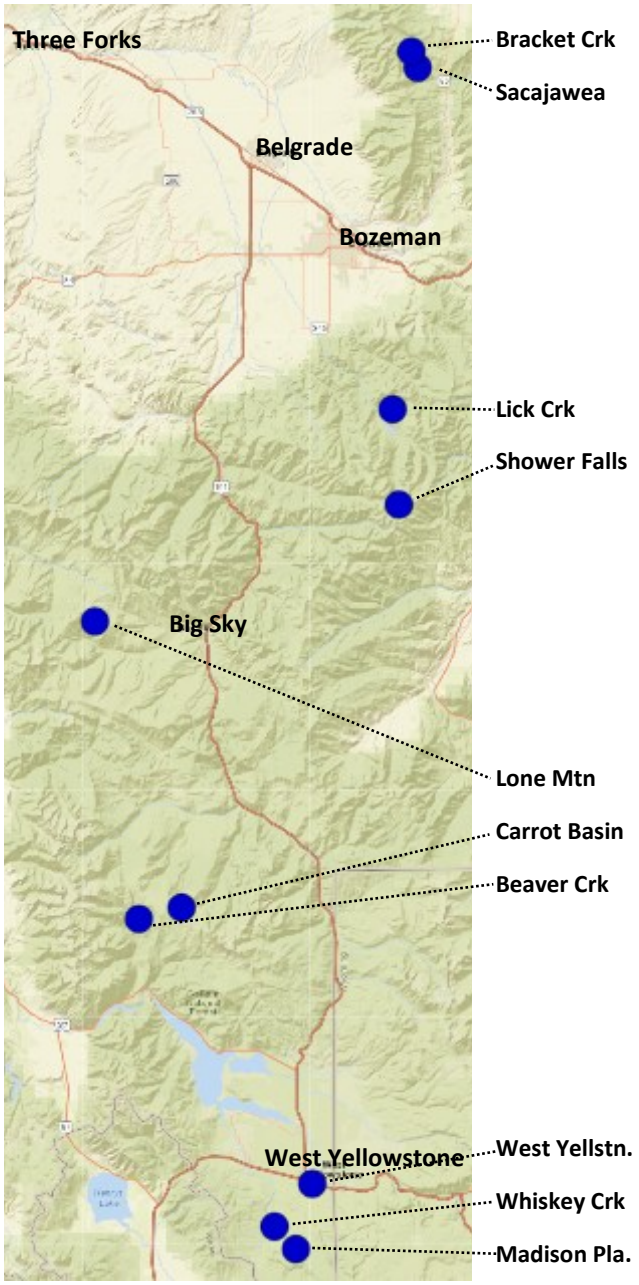
# Snowpack Data
## Gallatin River Basin—July 2025

| Gallatin Valley Region (Bozeman-Belgrade-Four Corners) | | | | | |
|---|---|---|---|---|---|
| *Station Name* | *Date* | *Snow Depth (in)* | *SWE (in)* | *SWE % Normal* | *Normal SWE 1971-2000 (in)* |
| Brackett Creek | July 2024 | - | 0.0 | - | 0.0 |
| | July 2025 | 0 | 0.0 | - | |
| Sacajawea | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | - | 0.0 | - | |

| Hyalite Region (Gallatin Gateway) | | | | | |
|---|---|---|---|---|---|
| *Station Name* | *Date* | *Snow Depth (in)* | *SWE (in)* | *SWE % Normal* | *Normal SWE 1971-2000 (in)* |
| Lick Creek | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | 0 | 0.0 | - | |
| Shower Falls | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | 0 | 0.0 | - | |

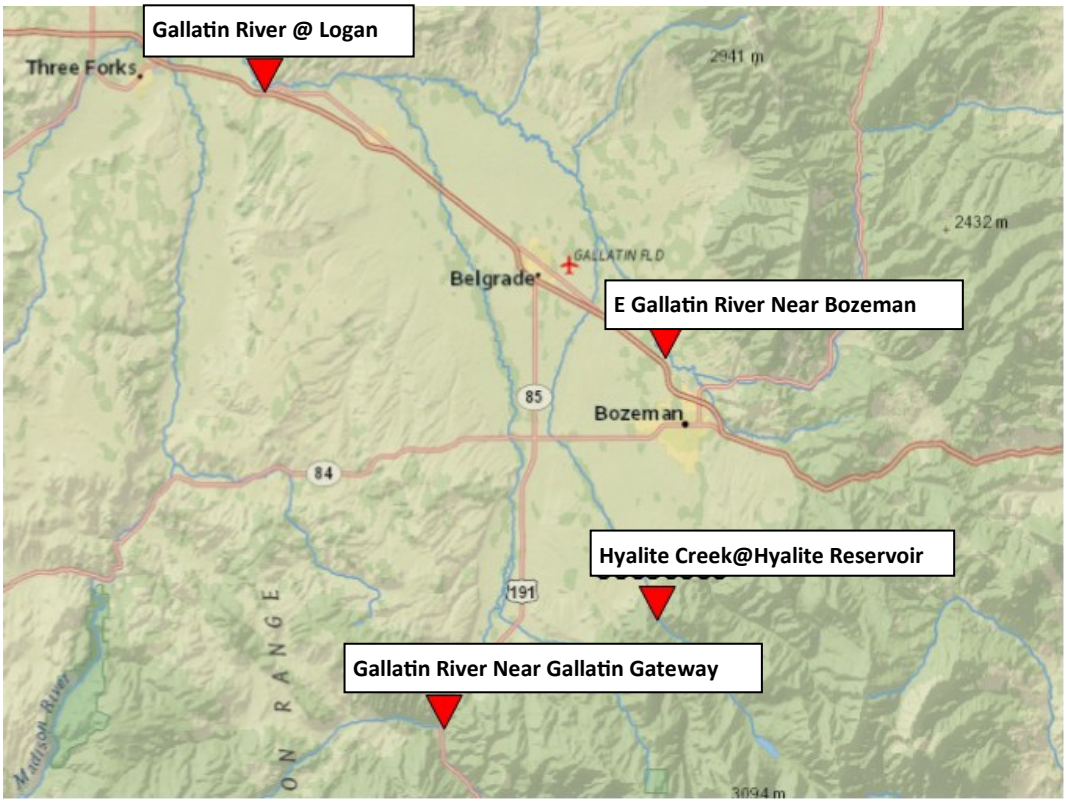
| Lee Metcalf Wilderness Region (Big Sky) | | | | | |
|---|---|---|---|---|---|
| *Station Name* | *Date* | *Snow Depth (in)* | *SWE (in)* | *SWE % Normal* | *Normal SWE 1971-2000 (in)* |
| Beaver Creek | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | 1 | 0.0 | - | |
| Carrot Basin | July 2024 | 0 | - | - | 0.0 |
| | July 2025 | 1 | 0.0 | - | |
| Lone Mountain | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | 0 | 0.0 | - | |

| West Yellowstone Region | | | | | |
|---|---|---|---|---|---|
| *Station Name* | *Date* | *Snow Depth (in)* | *SWE (in)* | *SWE % Normal* | *Normal SWE 1971-2000 (in)* |
| Madison Plateau | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | 1 | 0.0 | - | |
| West Yellowstone | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | 0 | 0.0 | - | |
| Whiskey Creek | July 2024 | 0 | 0.0 | - | 0.0 |
| | July 2025 | 0 | 0.1 | - | |



# Streamflow Data

## Gallatin River Basin—July 2025




| August 1st Gallatin Watershed Streamflow | | | | | |
|---|---|---|---|---|---|
| Station Name | 2025 Discharge (cfs) | % Normal | Normal Dis-charge (cfs) | 2024 Discharge (cfs) | Period Of Record (Yrs) |
| Gallatin at Logan | 350.0 | 85% | 412 | 358 | 109 |
| E Gallatin near Bozeman | 49.8 | 119% | 42 | 40 | 10 |
| Hyalite Creek at Hyalite Reservoir | 83.5 | 116% | 72 | 78.2 | 77 |
| Gallatin near Gallatin Gateway | 532.0 | 94% | 565 | 631 | 96 |

## STREAMFLOW SUMMARY *Data current as of August 1st

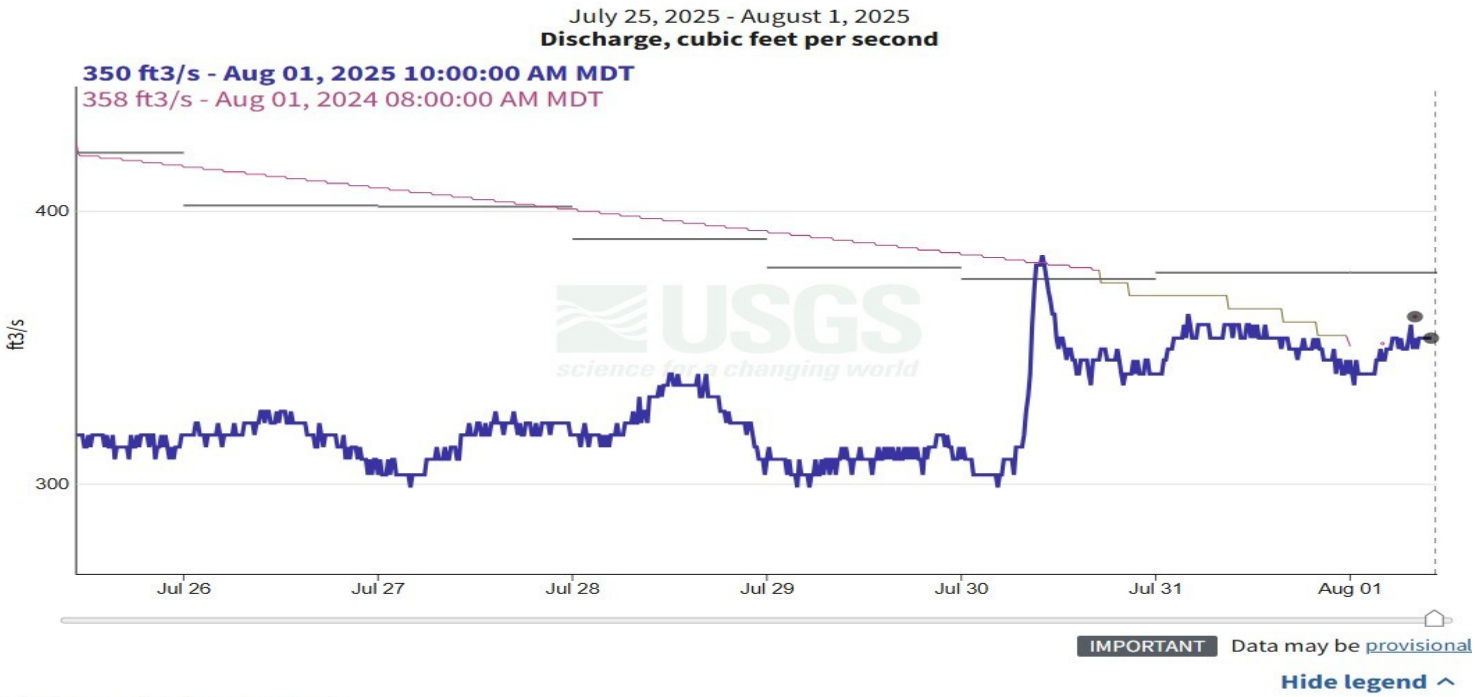
The Gallatin at Logan and Gallatin near Gallatin Gateway sites have below normal discharge values for this time of year, while the Gallatin near Bozeman and Hyalite Creek have above normal discharge.

The Gallatin at Logan and Gallatin near Gallatin Gateway sites have discharge values below what they were this time last year, while values are above what they were last year at the Gallatin near Bozeman and Hyalite Creek sites.

# Streamflow Data

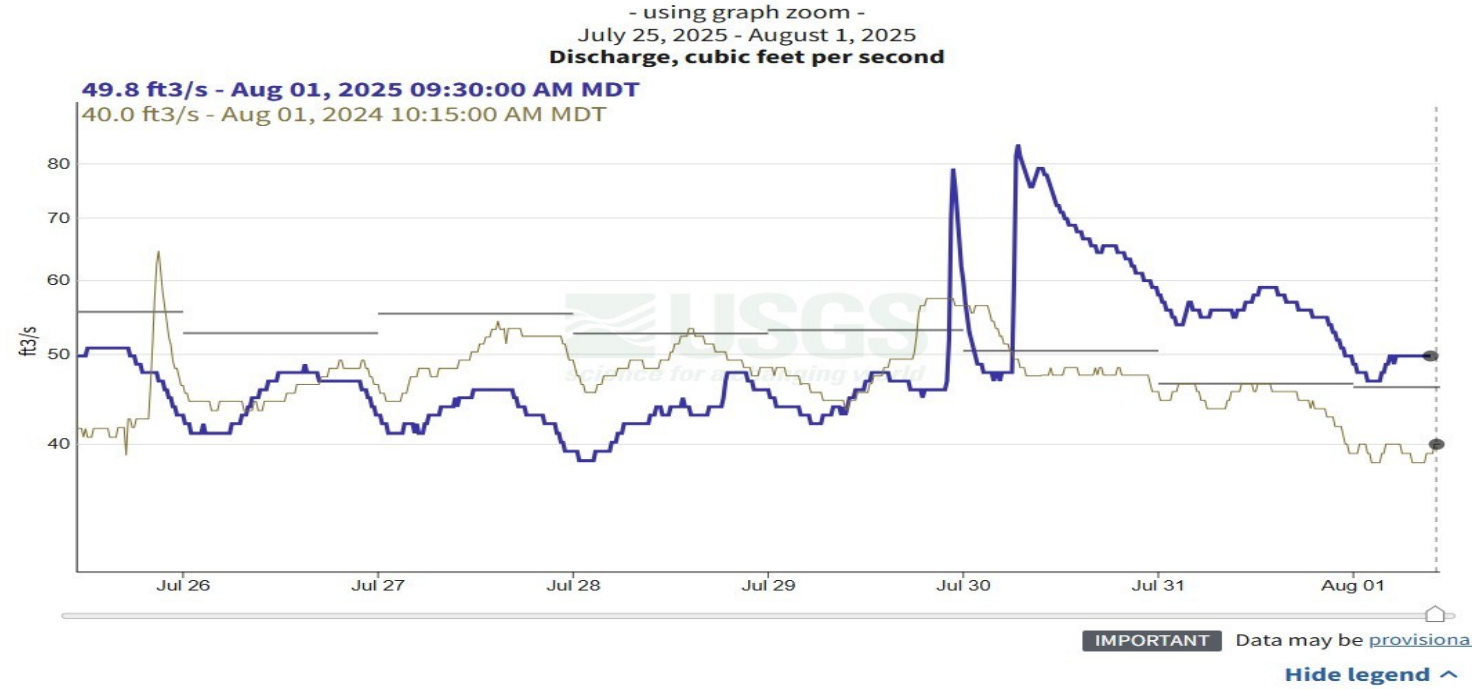
## Gallatin River Basin—July 2025

**Gallatin River at Logan MT - USGS-06052500** Subscribe to WaterAlert




**Discharge data is below normal.**

**E Gallatin R ab Water Reclamation Fa nr Bozeman MT - USGS-06048650** Subscribe to WaterAlert

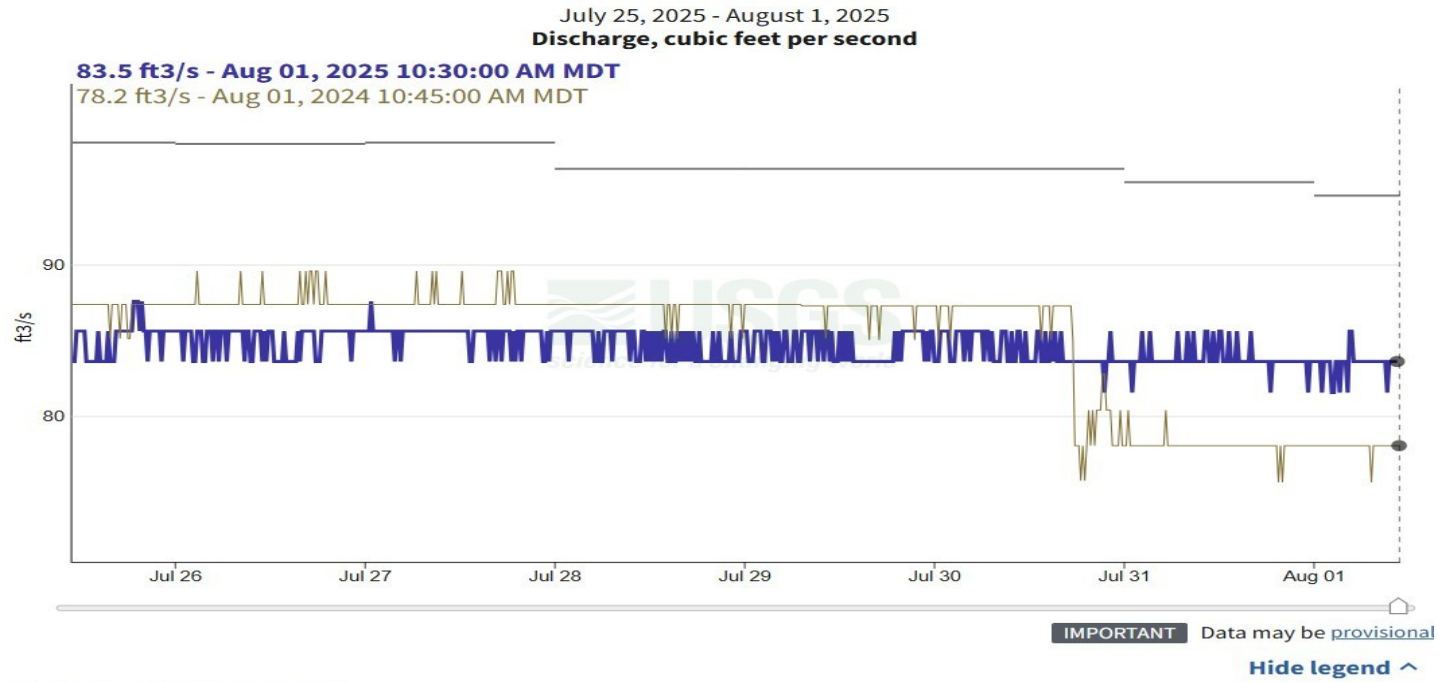



**Discharge data is above normal.**

# Streamflow Data

## Gallatin River Basin—July 2025

**Hyalite C at Hyalite R S nr Bozeman MT - USGS-06050000** Subscribe to WaterAlert




IMPORTANT Data may be provisional

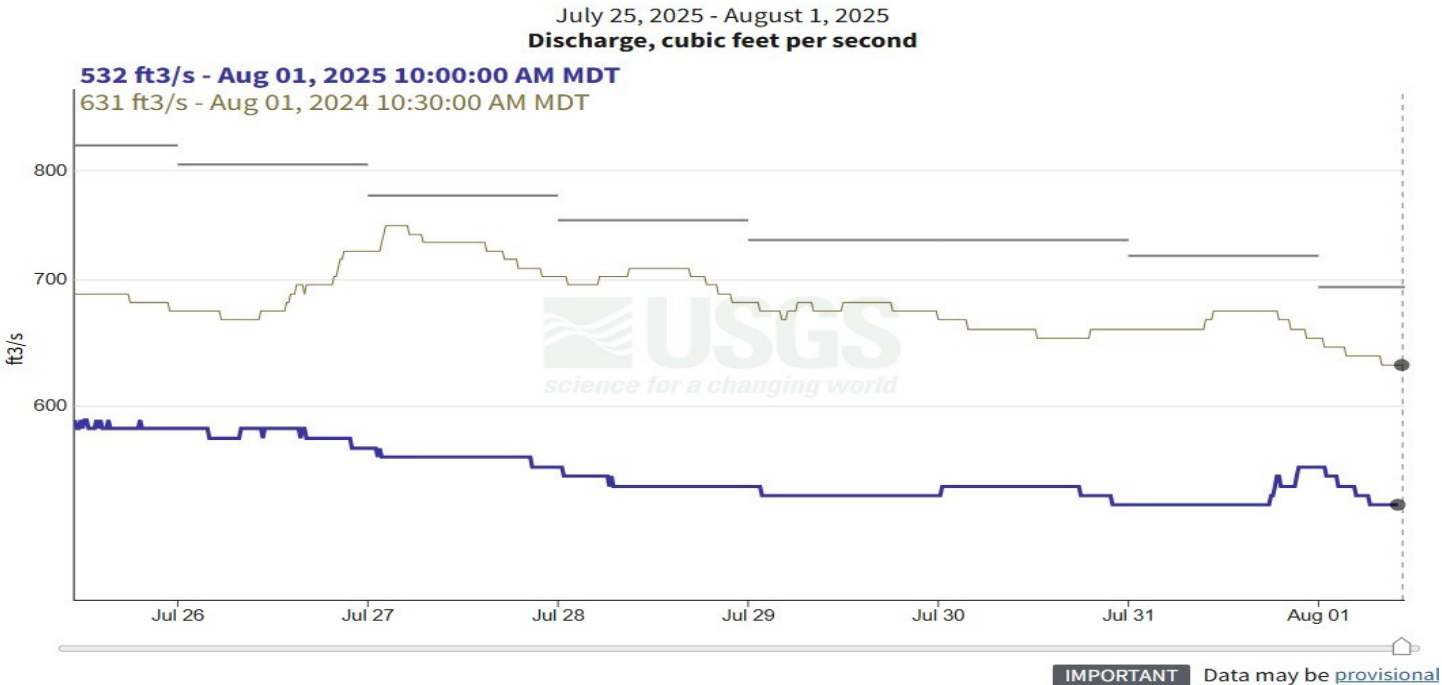
Hide legend

Discharge, cubic feet per second
This year
Recorded
prior year
Recorded
Median 1895 - 2025

**Discharge data is above normal.**

**Graphed data does not match statistical data.**

**Gallatin River near Gallatin Gateway, MT - USGS-06043500** Subscribe to WaterAlert




IMPORTANT Data may be provisional

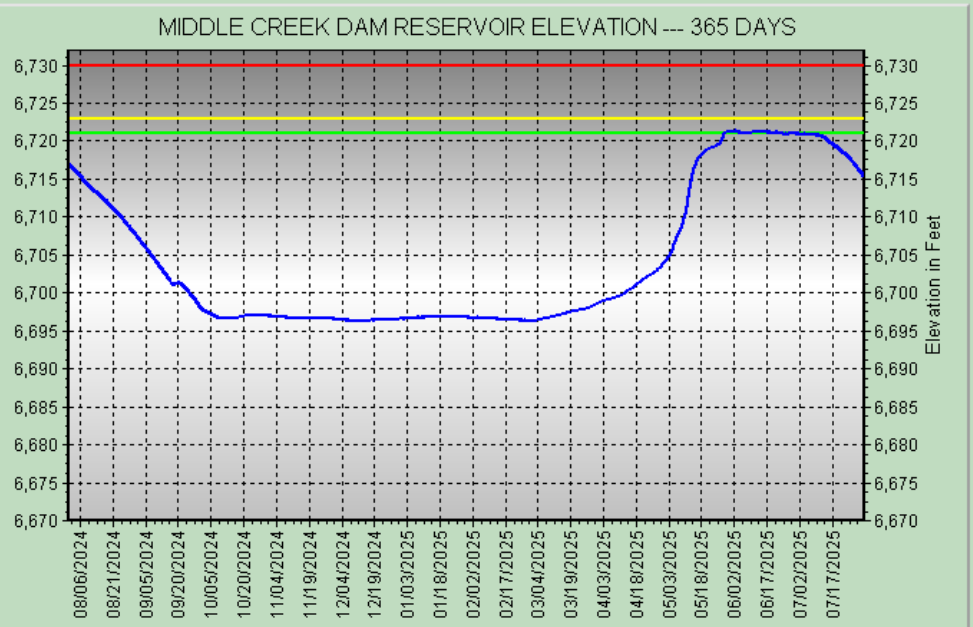
Hide legend

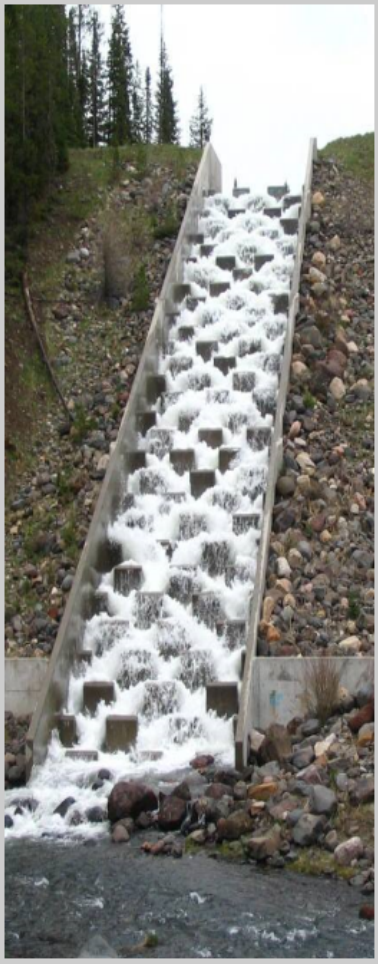
Discharge, cubic feet per second
This year
Recorded
prior year
Recorded
Median 1889 - 2025

**Discharge data is below normal.**

# Water Storage Data

## Middle Creek Dam, Hyalite Reservoir—July 2025



| | |
|---|---|
| TIME OF LAST READING | 7/31/2025 5:00 PM |
| RESERVOIR ELEVATION | 6,715.3 FT |
| RESERVOIR VOLUME | 8,816 AF |

| REFERENCE INFORMATION | FT (MSL) | AC-FT |
|---|---|---|
| DAM CREST | 6730 | 12,790 |
| EMERGENCY SPILLWAY CREST | 6723 | 10,707 |
| PRINCIPAL SPILLWAY CREST | 6721 | 10,184 |
| LOWEST USEABLE ELEVATION | 6637 | 0 |

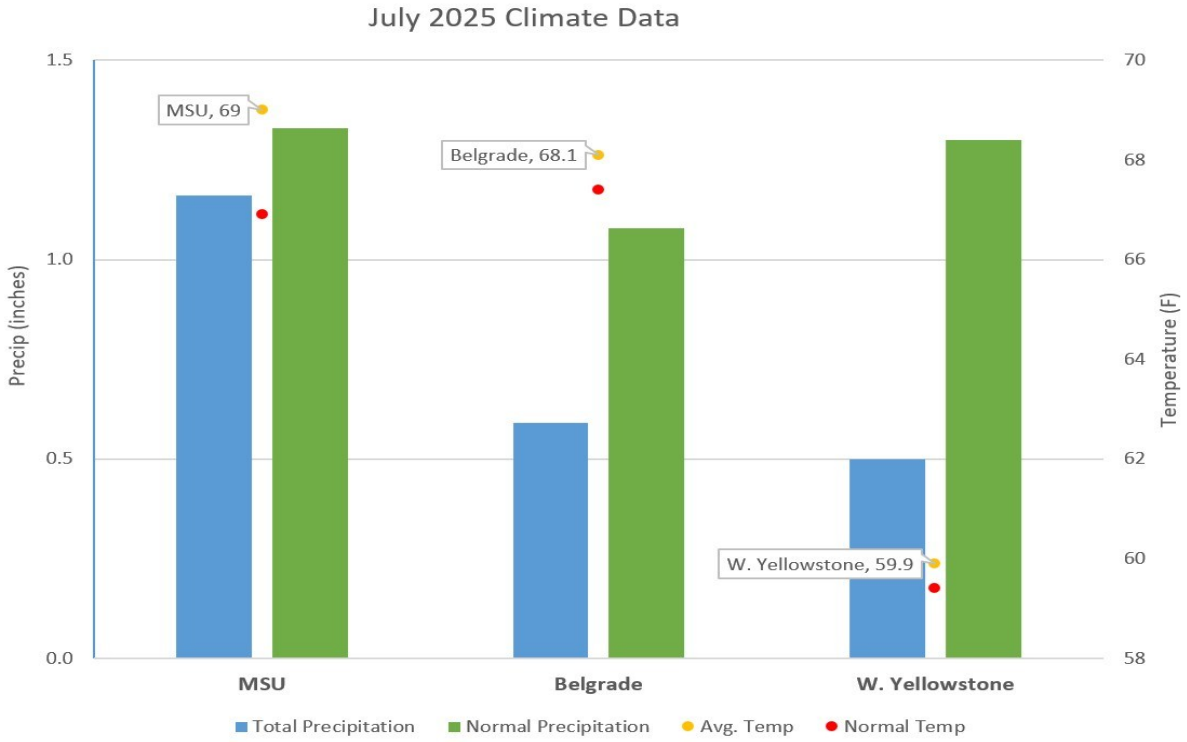
*** PROVISIONAL DATA SUBJECT TO REVISION ***

## RESERVOIR SUMMARY *Data current as of August 1st

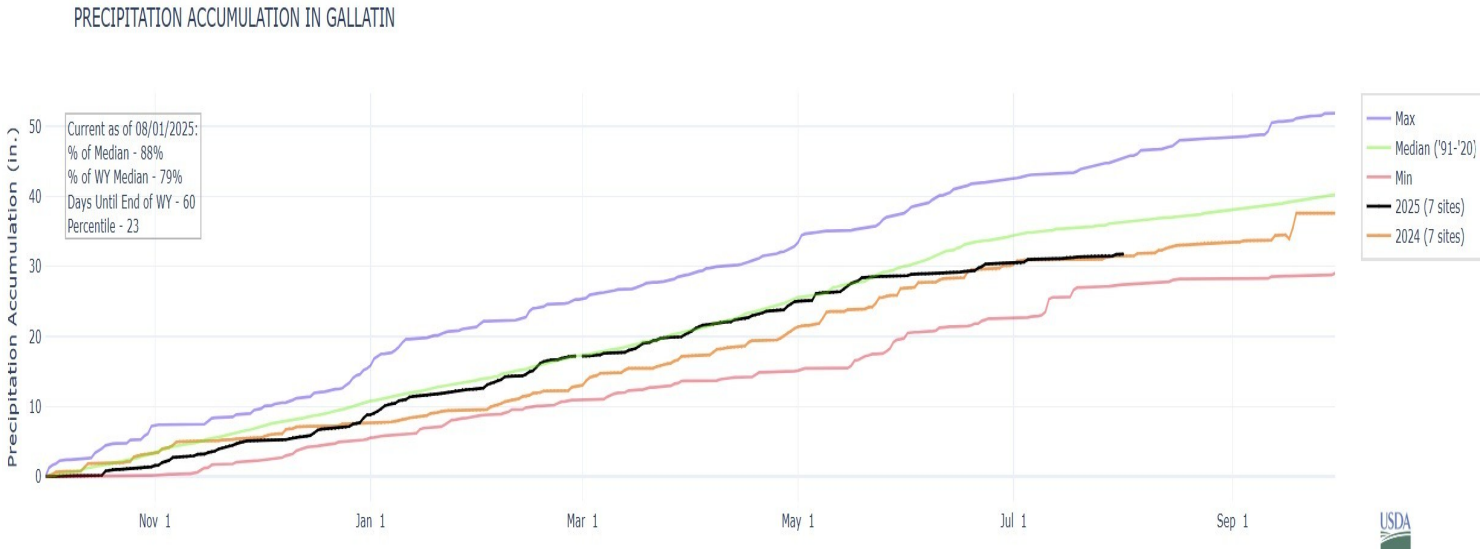
Middle Creek Dam Reservoir elevation is 6,715.3 ft, which is 5.7 ft below the principal spillway crest (6,721 ft). The reservoir elevation has decreased by 5.6 ft since July 1st, 2025 (date of last relevant WSO report). Reservoir volume is 8,816 acre-ft; which is 1,350 acre-ft less than July 1st, 2025.

# Climate Data

## Gallatin County—July 2025




**Above graph depicting ACIS climate data representing the entire month of July 2025.**




## TEMP & PRECIP SUMMARY (Water Year (WY) = October 1st—September 30)

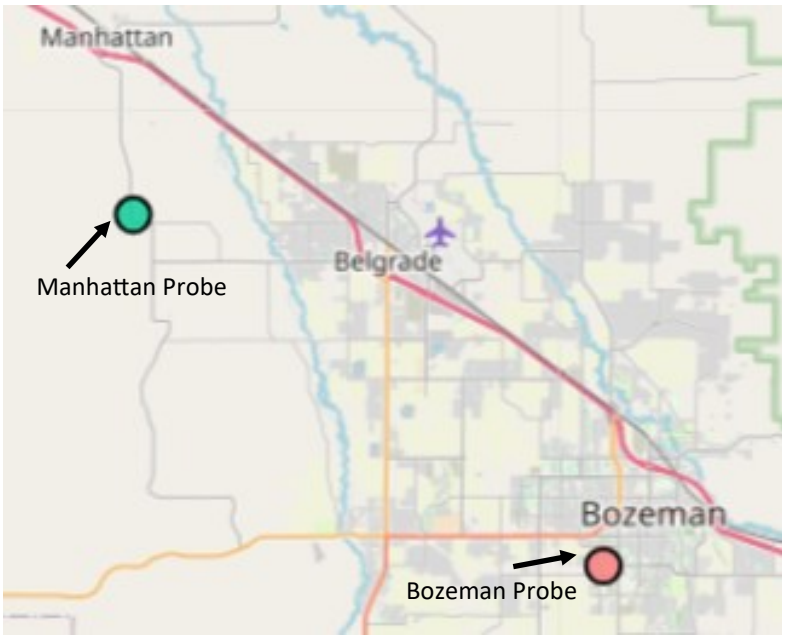
*Data is current as of August 1st

Average temperatures have increased at the MSU, Belgrade, and West Yellowstone sites since June 2025. All sites also had an average that was above the normal temperature for this time of year (ACIS graph). The MSU, Belgrade, and West Yellowstone sites also experienced below normal precipitation in July 2025.

We are currently in Water Year 2025 (black line). The total accrued precipitation for the Gallatin River Basin as of July 31st, 2025 is below average (median) at 31.7 inches (USDA graph).
The total accrued precipitation for WY 2024 on July 31st, 2024 was 31.5 inches (orange line).

# Soil Moisture Data

## Mesonet Stations—July 2025




| Manhattan Soil Probe Depth (in) | Soil Temp (°F) | Soil Water Content (%) |
|---|---|---|
| 8" - Surface | 66.02 | 19.30% |
| 20" - Shallow rooting | 62.24 | 9.00% |
| 36" - Deep Rooting | 57.73 | 26.10% |

| Bozeman Soil Probe Depth (in) | Soil Temp (°F) | Soil Water Content (%) |
|---|---|---|
| 4" - Surface | 74.75 | 14.45% |
| 8" - Shallow rooting | 68.63 | 14.85% |
| 20" - Deep Rooting | 64.67 | 19.55% |

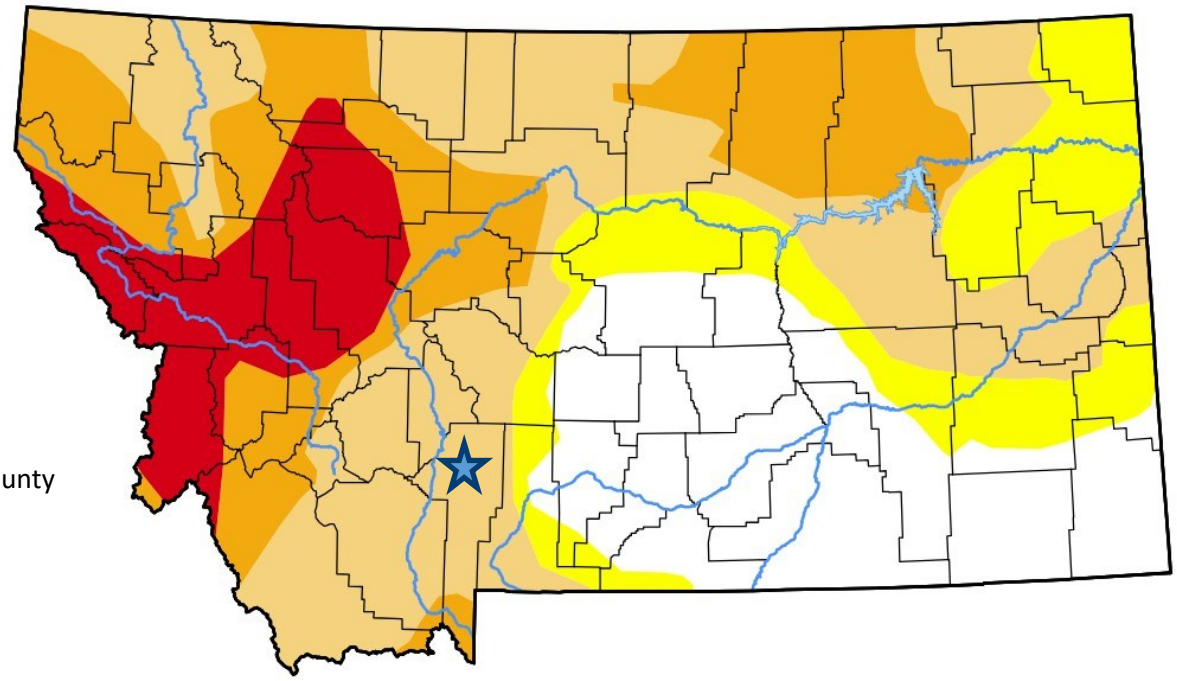
## SOIL MOISTURE SUMMARY *Data current as of July 31st

At the Manhattan and Bozeman stations, the soil temperature has increased at all depths since June 2025.

Since June 2025, the soil water content has decreased at both stations at all depths.

# Drought Index Data

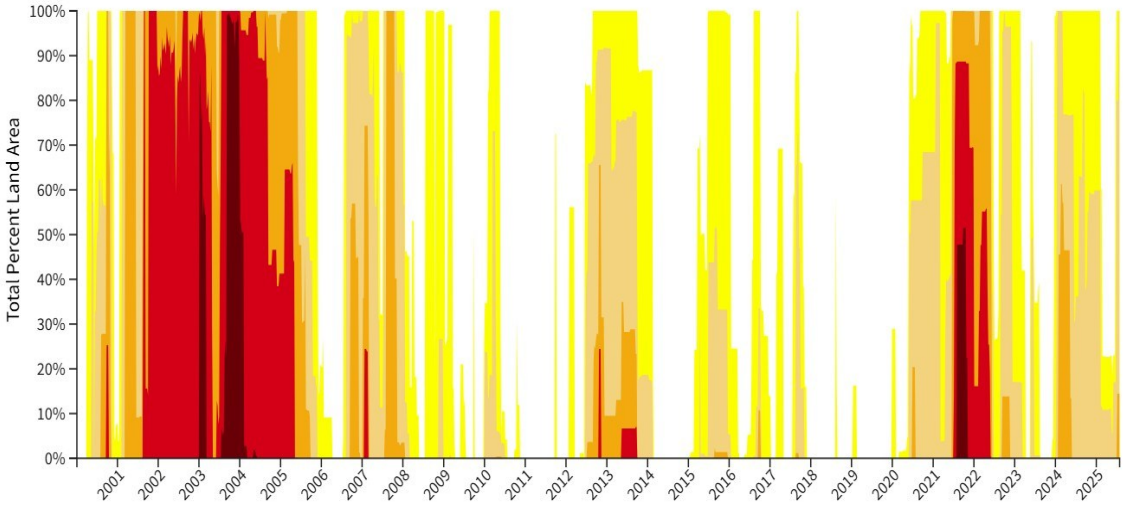
## Gallatin County— July 2025



= Gallatin County

**Intensity:**

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data



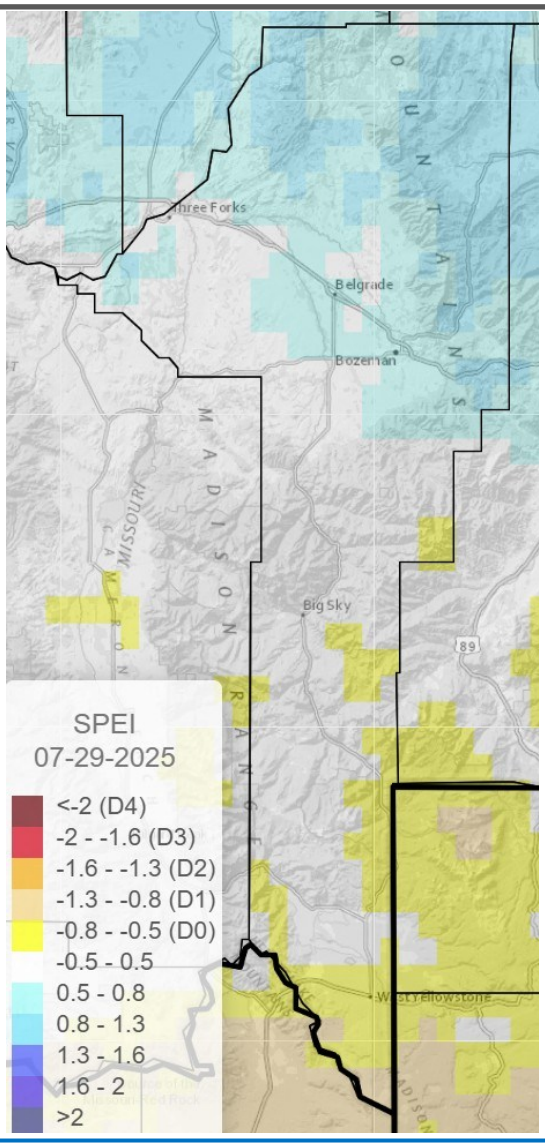

**Historical Conditions for Gallatin County, 2000-Present**

## DROUGHT INDEX SUMMARY *Data is current as of July 31st

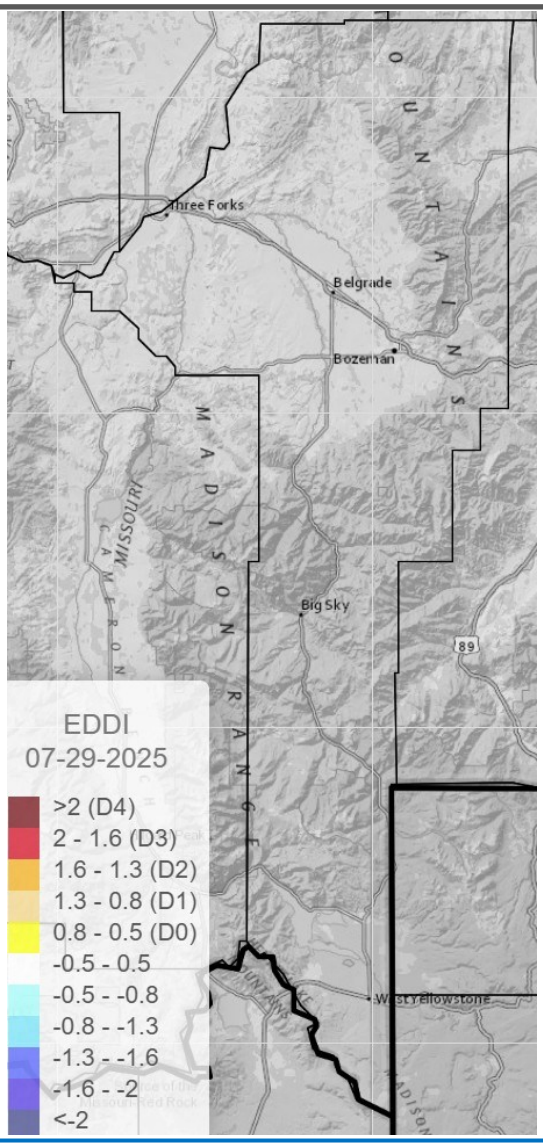
**85.53%** of Gallatin County is experiencing moderate drought conditions. Impacts include feeding livestock supplemental hay, crops are stressed and growth is poor. Fire restrictions may be implemented.

**14.47%** of Gallatin County is experiencing Severe Drought conditions at this time. Impacts include lower hay and crop yields, lower hay quality, non-existent subsoil moisture, high danger and fire count, poor air quality, low to dry livestock ponds and stressed water wells.

## Standardized Precipitation Evapotranspiration Index




## Evaporative Demand Drought Index




## SPEI & EDDI Overview *Data is current as of July 29th

The maps above show the current Standardized Precipitation Evapotranspiration Index (SPEI, Left) and Evaporative Demand Drought Index (EDDI, Right) for July 2025.

**SPEI** takes into account both precipitation and potential evapotranspiration to describe the wetness (positive blue values) or dryness (negative red values) of a time period. SPEI has been calculated for July 2025 to represent drought impacts on hydrological conditions for the past 30 days. SPEI incorporates the important effect of atmospheric demand on drought.

**EDDI** has examined how deviated from normal the atmospheric evaporative demand is for Gallatin County for July 2025. EDDI is an experimental drought monitoring and early warning guidance tool. EDDI can offer early warning of agricultural drought, hydrologic drought, and fire-weather risk. Positive (red) values represent dryness categories while negative (blue) values represent wetness categories.

# Gallatin County Water Supply Outlook

## Source Information & Helpful Links

**Gallatin Conservation District:**

- Archive of Water Supply Outlook Reports
- Living by the Water
- 310 Permit Forms & Info

**Snowpack:**

- USDA / NRCS Interactive Map
- Montana Snow Survey Homepage
- NRCS / NWCC National Water & Climate Center
- Standardized Snow Water Equivalent (SWE from SNODAS & Hypsome –SWE

**Streamflow:**

- USGS Real Time Streamflow
- State of Montana Gaging Stations
- DNRC Water Right Query System

**Water Storage:**

- DNRC Water Projects—Middle Creek Real Time Data
- Middle Creek Early Warning System
- BOR—Montana Lakes and Reservoirs

**Climate:**

- ACIS Database
- NRCS Montana Current Conditions
- Montana Snow Survey Homepage
- US Climate Data

**Soil Moisture:**

- Montana Mesonet
- DNRC Drought Status by County

**Drought:**

- US Drought Portal
- US Drought Monitor

**SPEI & EDDI:**

Standardized Precipitation Evapotranspiration Index

Evaporative Demand Drought Index

**Helpful Partner Websites:**

- Department of Natural Resources & Conservation
- Gallatin County MSU Extension Office
- Gallatin Local Water Quality District
- Gallatin River Task Force
- Gallatin Watershed Council
- Montana Fish, Wildlife, & Parks
- Montana Natural Resource Conservation Services
- Association of Gallatin Agricultural Irrigators