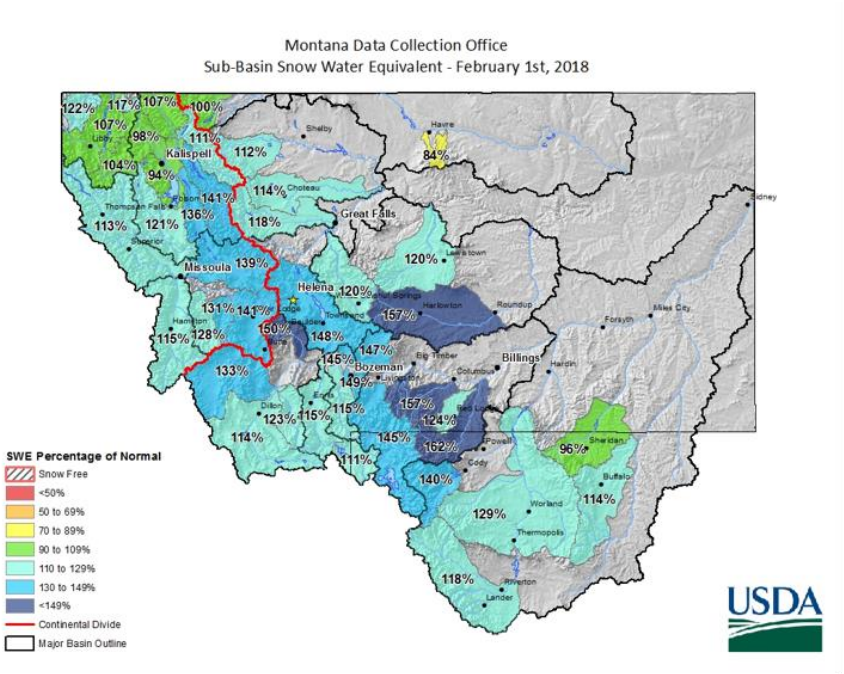
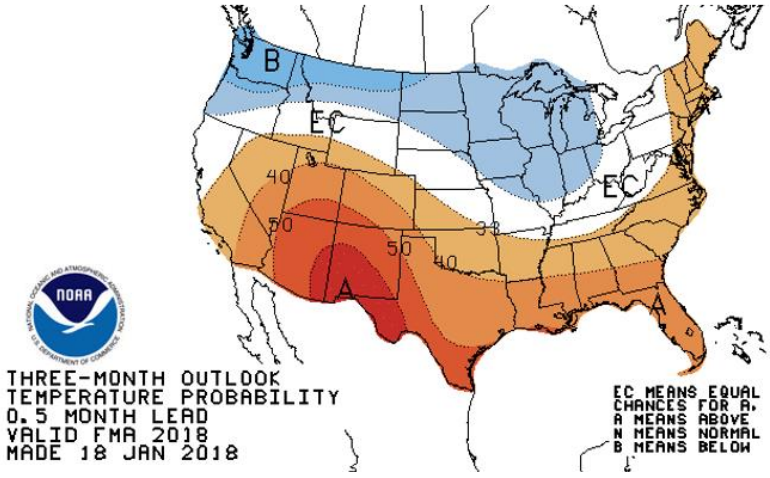
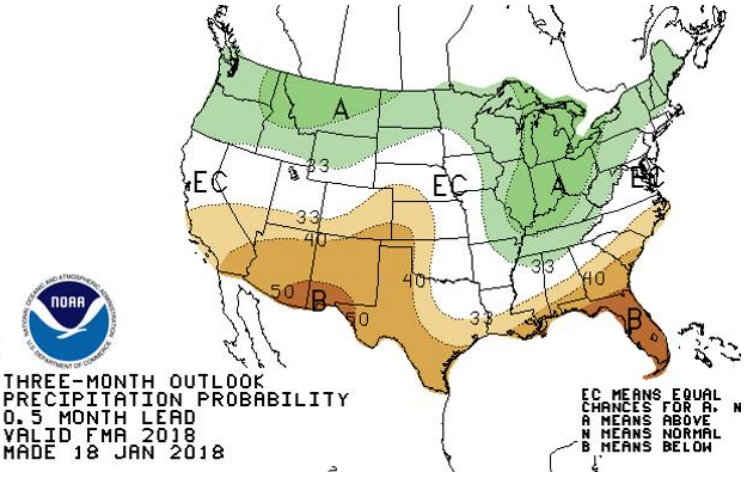
NRCS Natural Resources Conservation Service

USDA

# Montana
# Water Supply Outlook Report
# February 1st, 2018




February 1st, 2018 Snowpack totals across the state of Montana are near to well above normal across all of the state's major river basins. The forecasted La Nina for this winter seems to be holding up and has delivered consistent moisture to mountain and valley locations across the state this water year. Long term forecasts call for a continuation of this pattern into the end of winter, indicating below normal temperatures and above average precipitation for the February – April time period. Hopefully this stands true, it would be great news for water users across the state, and would continue to build on our already above normal snowpack. Spring is critical in Montana and things could change. But, for now, things are looking great in the hills.

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# Montana Water Supply Outlook Report as of February 1st, 2018

## How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

# Snowpack – Overview

During the month of January most northwest basins received consistent moisture through the month. Some of these storms came in a little warmer than most would like this time of the year and dropped rain across most elevations. Until this point the snowpack had remained relatively cold, meaning the warm energy from mid-month rain-on-snow event was not enough to cause melt at the lower elevations, and this water was stored in the snowpack for future runoff.

Basins east of the Divide experienced a range of conditions over the month. Some lower elevation SNOTEL sites in southwest Montana and in the central part of the state received near to slightly below normal snowfall for the month, while sites in south central basins along the Wyoming border received near to well above normal snowfall. While the basins west of the divide had a near constant stream of moisture at all elevations, these storms mostly favored the higher elevation the Gallatin and Upper Yellowstone basins.

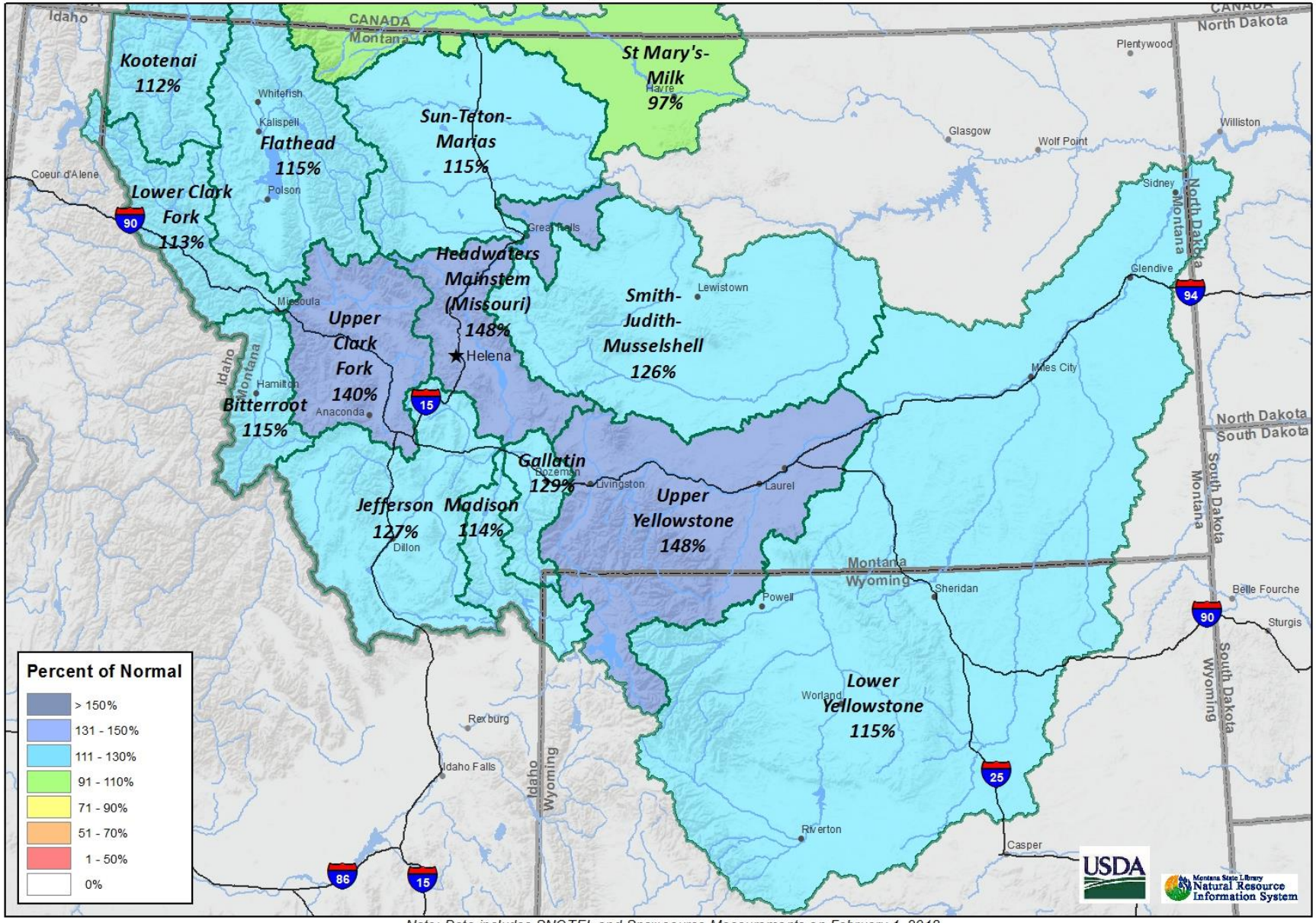
But fret not, early season snowfall this year has left all basins across the state at normal to well above normal for February 1st. In fact, Montana is the only state in the Western U.S where all basins have a snowpack that is at least near normal for this time of year, with 12 of the 13 major river basins well above normal for snowpack. So where does this leave us? At this point of the snow accumulation season typically 60-75% of the seasonal peak snowpack west of the Divide has accumulated, and east of the Divide 50-70% has accumulated. There is a still lot of time before spring runoff begins for conditions to continue to improve or degrade, but if the current weather patterns persists through the spring water supply should be near to above average. Time will tell if the snow faucet turns off for us like it has done in many western states. We like to tell water users to prepare for the worst, but hope for the best. For now things are looking fairly optimistic.

**Snow Water Equivalent**

| ***2/1/2018*** | ***% Normal*** | ***% of Last Year*** |
|---|---|---|
| Columbia River Basin | 121 | 159 |
| Kootnenai in Montana | 112 | 158 |
| Flathead in Montana | 115 | 147 |
| Upper Clark Fork | 140 | 179 |
| Bitterroot | 115 | 147 |
| Lower Clark Fork | 113 | 157 |
| Missouri River Basin | 121 | 151 |
| Jefferson | 127 | 161 |
| Madison | 114 | 133 |
| Gallatin | 129 | 165 |
| Headwaters Mainstem | 148 | 174 |
| Smith-Judith-Musselshell | 126 | 203 |
| Sun-Teton-Marias | 115 | 137 |
| St. Mary-Milk | 97 | 128 |
| Yellowstone River Basin | 130 | 111 |
| Upper Yellowstone | 148 | 142 |
| Lower Yellowstone | 115 | 91 |

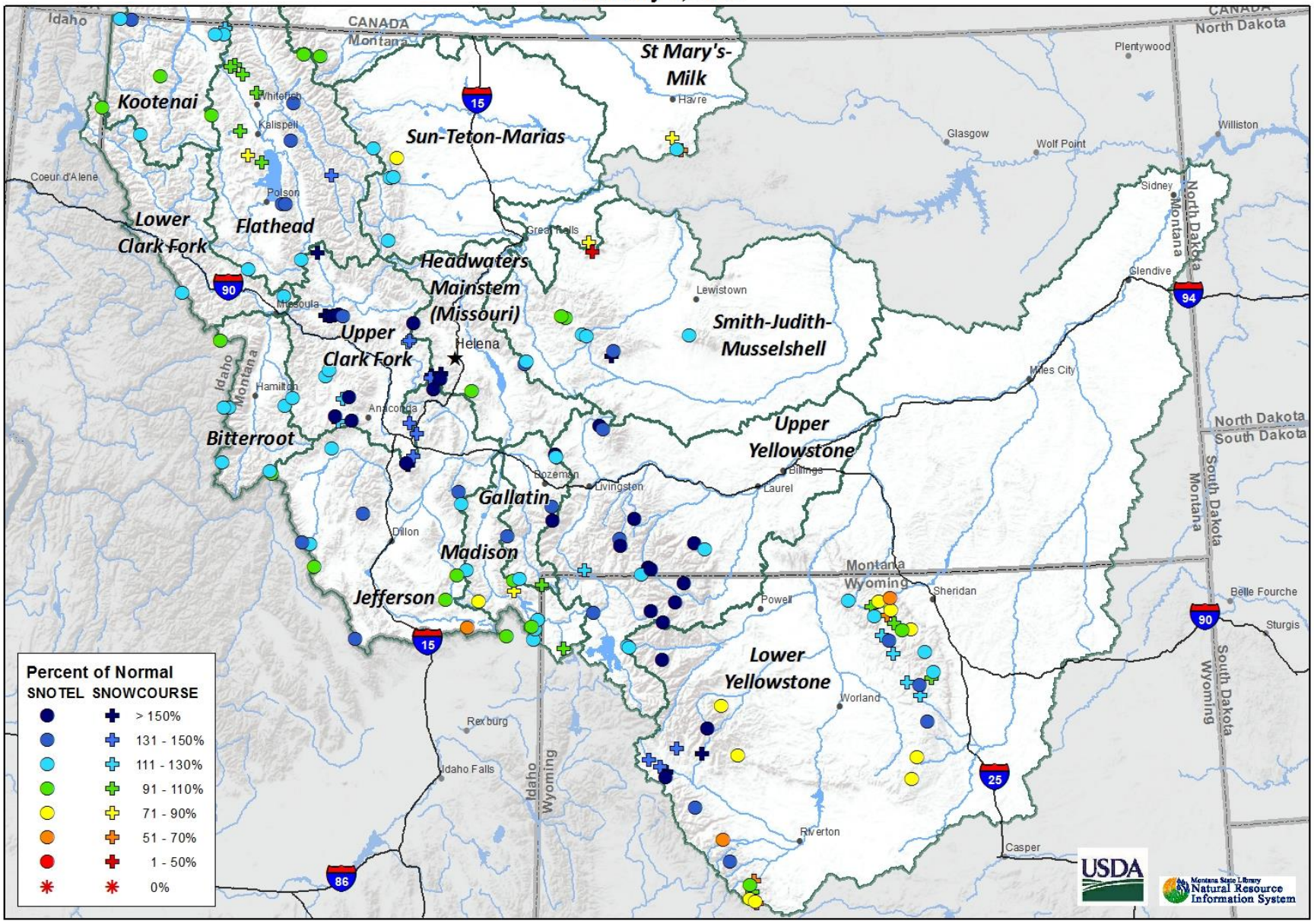
| | | |
|---|---|---|
| West of Divide | 121 | 159 |
| East of Divide | 124 | 127 |
| *Montana State-Wide* | 124 | 155 |

**Montana Data Collection Office**
**Current Snow Water Equivalent**
**Basin Percentage of Normal - February 1, 2018**



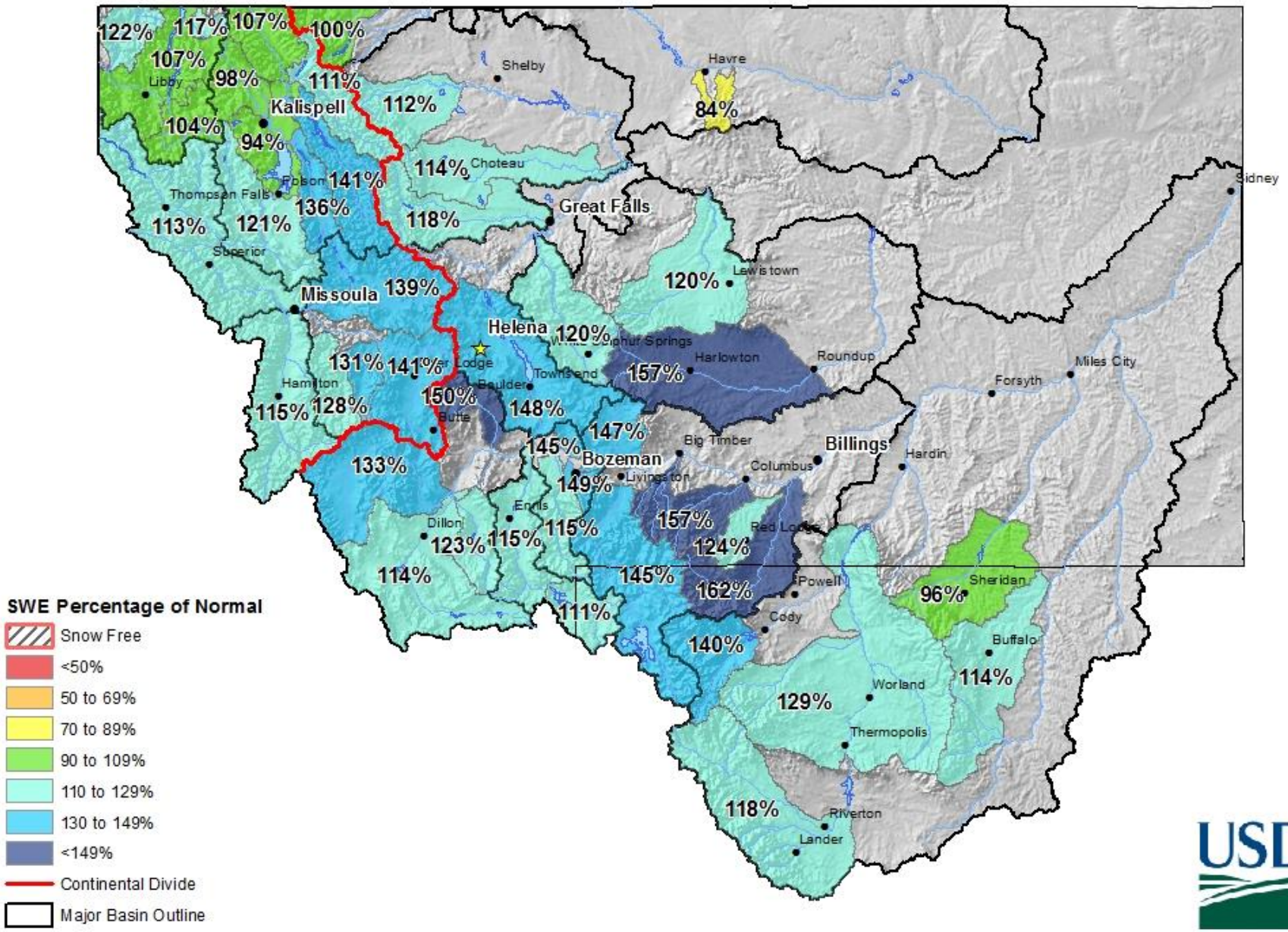

*Note: Data includes SNOTEL and Snowcourse Measurements on February 1, 2018*

**Montana Data Collection Office**
**Current Snow Water Equivalent**
**February 1, 2018**



Montana Data Collection Office

Sub-Basin Snow Water Equivalent - February 1st, 2018



# Precipitation - Overview

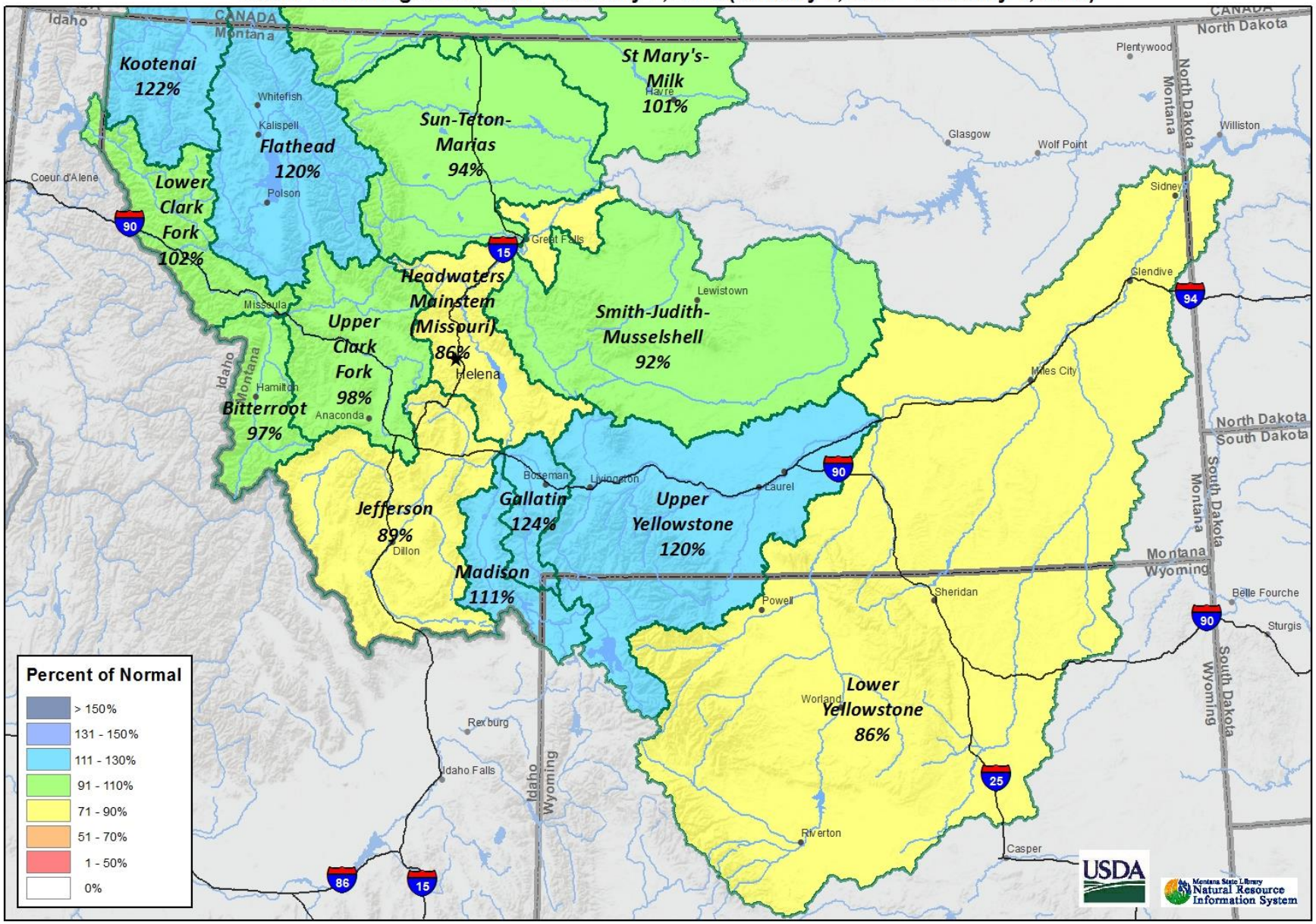
Mountain and valley precipitation totals varied across the state over the course of January. Most mountain locations received near to above normal precipitation, with the exception being in southwest Montana where the headwaters of the Jefferson River basin experienced below average precipitation for the month. This area of below average precipitation spans the valleys of the tributaries of the Jefferson River and into the Flint and Rock Creek sub-basins west of the Divide, and north into the Missouri River valley around Helena. Most mountain locations across the state received near to above normal snowfall through the month. One month of below normal valley precipitation is not make or break in January with regards to spring runoff, and all basins remain near to above average for water year-to-date precipitation totals (Oct 1- Current).

***Precipitation***

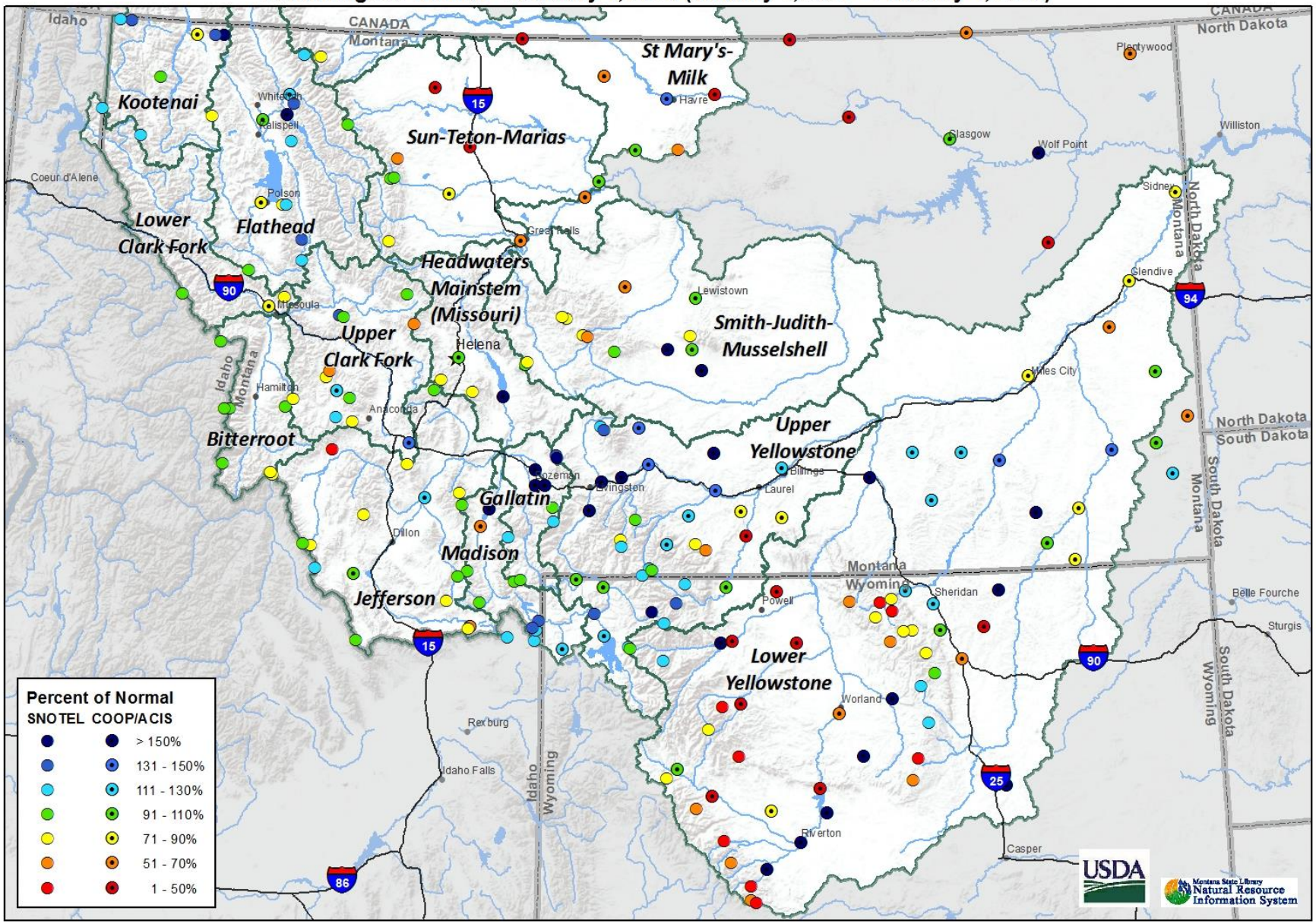
| ***2/1/2018*** | ***Monthly % Avg*** | ***Water Year % Avg*** | ***WY % of Last Year*** |
|---|---|---|---|
| Columbia River Basin | 109 | 117 | 110 |
| Kootnenai in Montana | 122 | 111 | 97 |
| Flathead in Montana | 120 | 121 | 107 |
| Upper Clark Fork | 98 | 123 | 126 |
| Bitterroot | 97 | 107 | 116 |
| Lower Clark Fork | 102 | 113 | 107 |
| Missouri River Basin | 101 | 110 | 90 |
| Jefferson | 89 | 99 | 92 |
| Madison | 111 | 106 | 82 |
| Gallatin | 124 | 120 | 98 |
| Headwaters Mainstem | 86 | 123 | 115 |
| Smith-Judith-Musselshell | 92 | 111 | 107 |
| Sun-Teton-Marias | 94 | 122 | 112 |
| St. Mary-Milk | 101 | 119 | 84 |
| Yellowstone River Basin | 102 | 115 | 86 |
| Upper Yellowstone | 120 | 134 | 102 |
| Lower Yellowstone | 86 | 99 | 72 |

| | | | |
|---|---|---|---|
| West of Divide | 109 | 117 | 110 |
| East of Divide | 100 | 112 | 90 |
| *Montana State-Wide* | 108 | 117 | 101 |

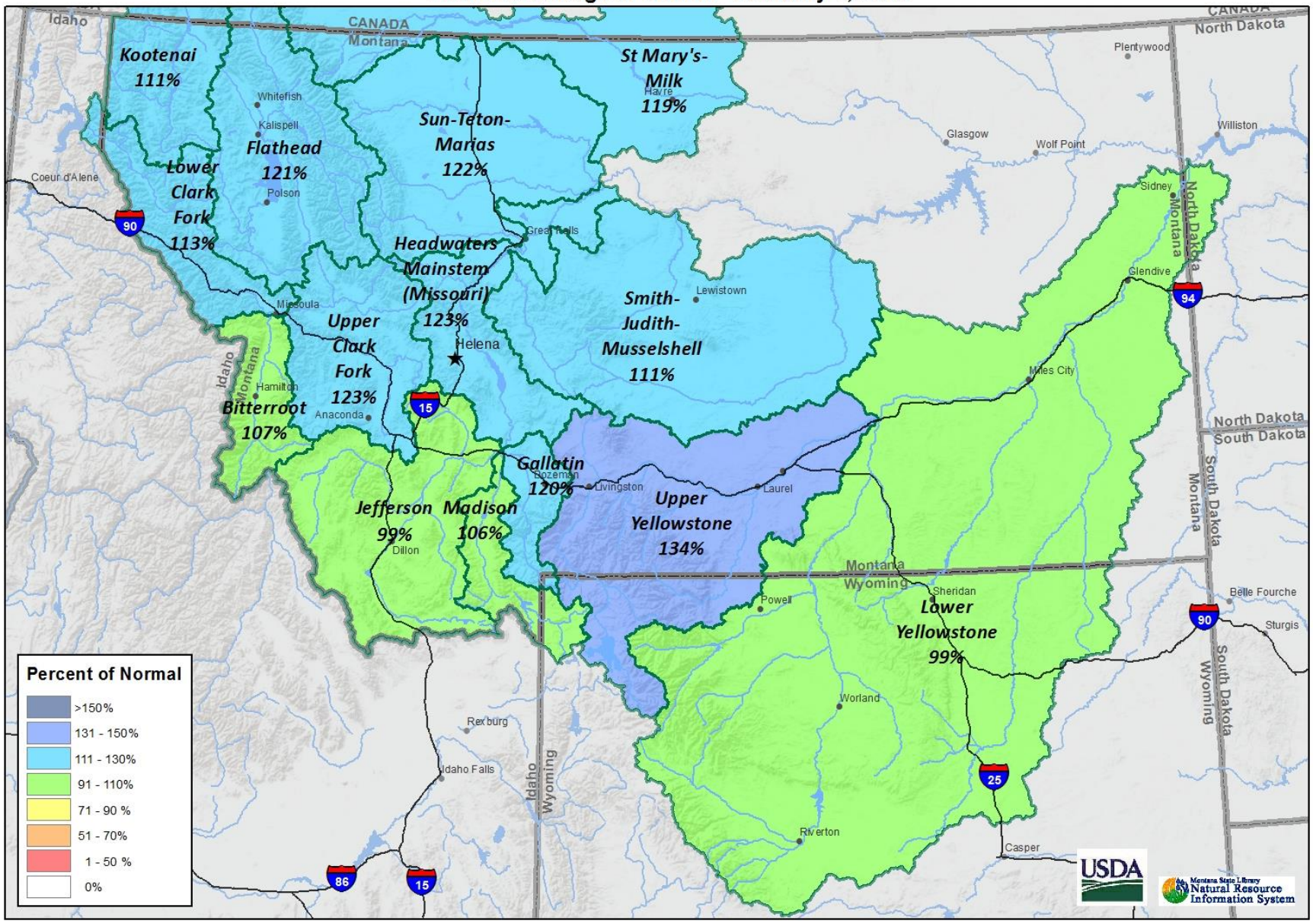
**Montana Data Collection Office**
**Monthly Precipitation**
**Basin Percentage of Normal - February 1, 2018 (January 1, 2017 - February 1, 2018)**



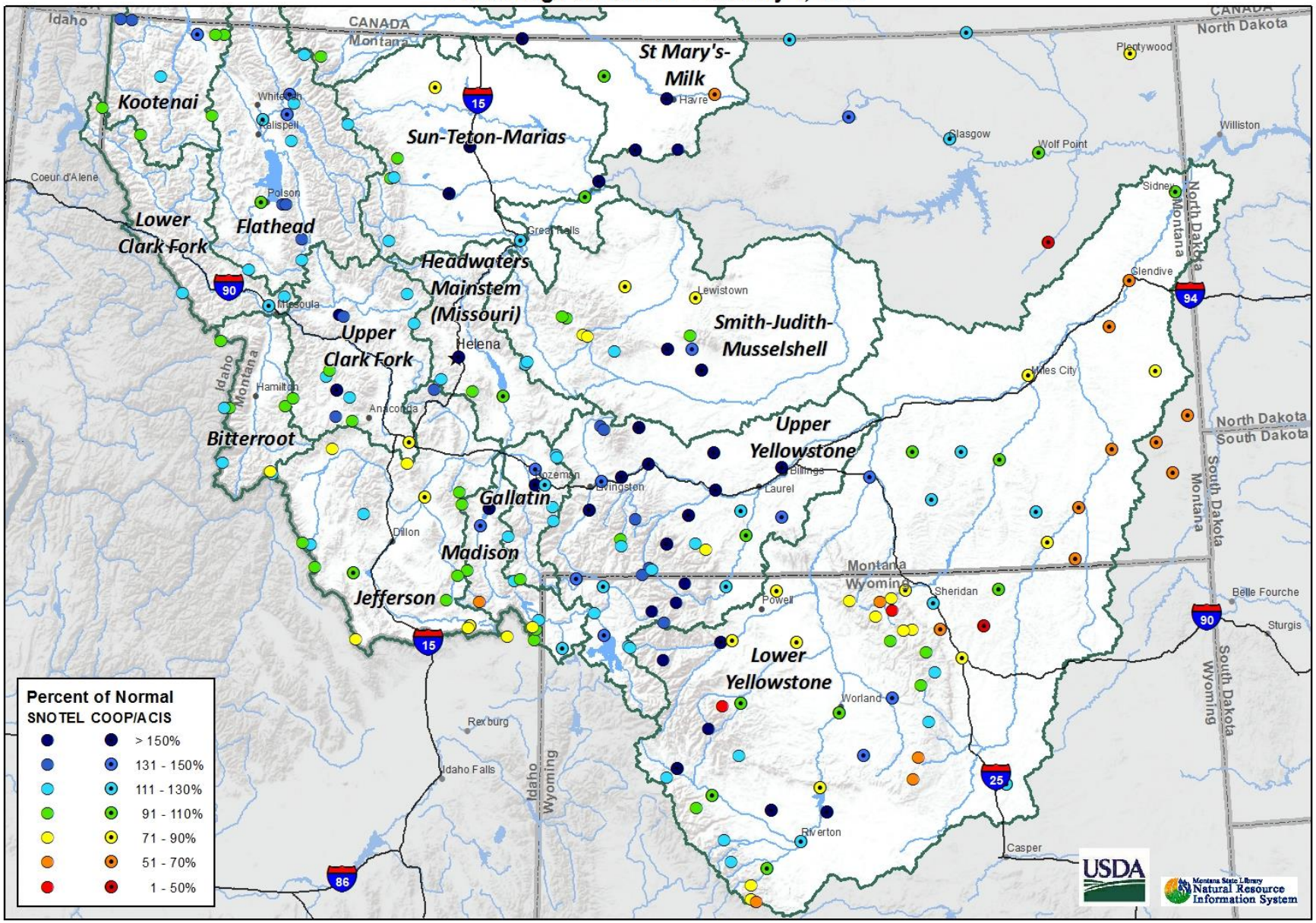
**Montana Data Collection Office**
**Monthly Precipitation**
**Percentage of Normal - February 1, 2018 (January 1, 2017 - February 1, 2018)**



**Montana Data Collection Office**
**Water Year to Date Precipitation**
**Basin Percentage of Normal - February 1, 2018**



**Montana Data Collection Office**
**Water Year to Date Precipitation**
**Percentage of Normal - February 1, 2018**



# Reservoirs - Overview

Basin-wide reservoir storage is near to above average at most locations across the state of Montana. Although demand was high on many irrigator operated reservoirs this summer due to the lack of summer precipitation, many remain in good standing for February 1st. Should the weather patterns continue to deliver above normal snowfall this winter and spring, inflows to reservoirs should be adequate to fill in most locations. Caution should be emphasized though as a dry spring could have major impacts on water supply.

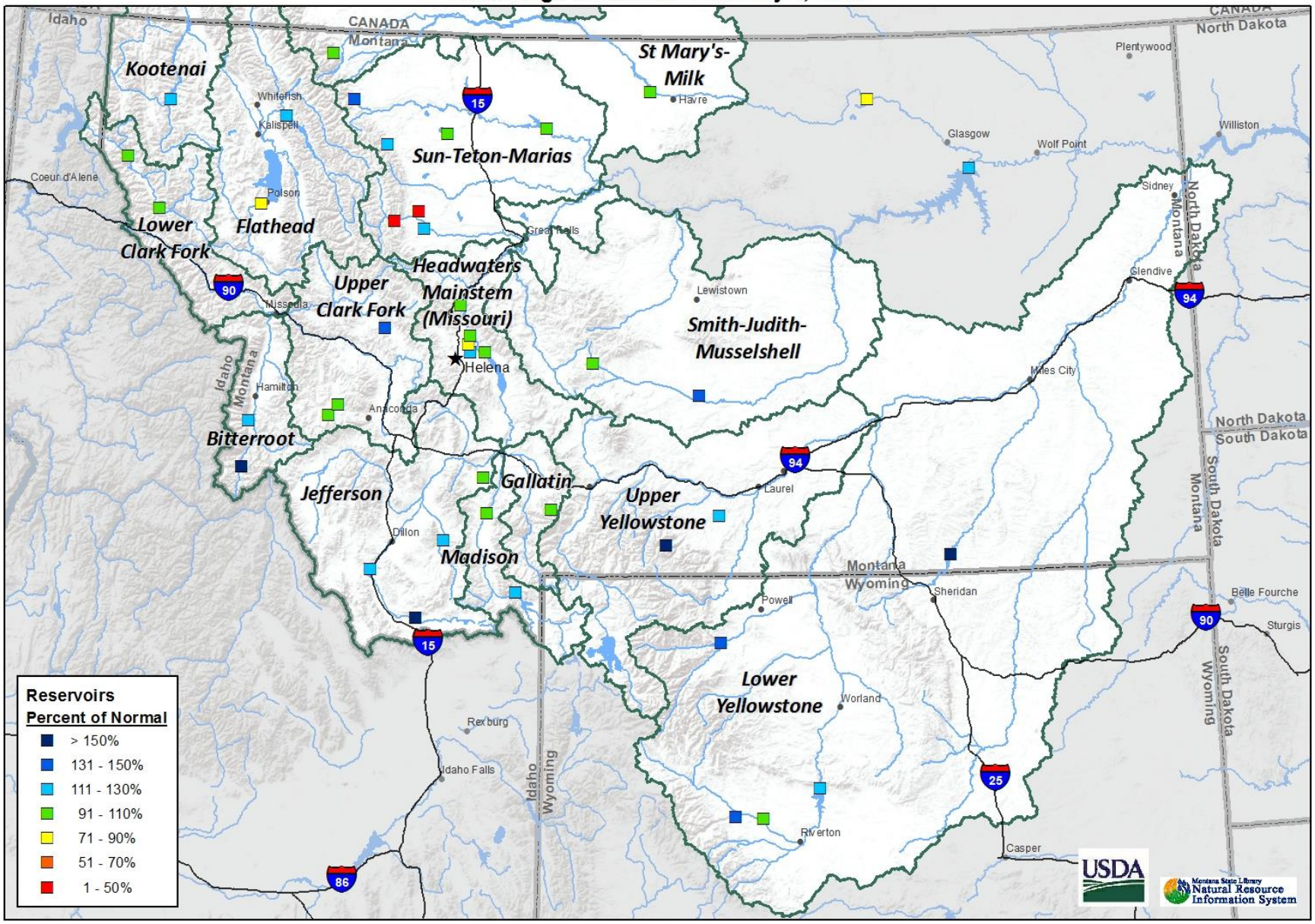
Please view the individual basin reports for detailed reservoir content information.

***Reservoir Storage***

| ***2/1/2018*** | ***% Average*** | ***% Capacity*** | ***% Last Year*** |
|---|---|---|---|
| Columbia River Basin | 116 | 66 | 101 |
| Kootnenai in Montana | 120 | 60 | 106 |
| Flathead in Montana | 114 | 72 | 96 |
| Upper Clark Fork | 105 | 72 | 107 |
| Bitterroot | 137 | 35 | 101 |
| Lower Clark Fork | 96 | 90 | 94 |
| Missouri River Basin | 114 | 77 | 102 |
| Jefferson | 129 | 59 | 145 |
| Madison | 114 | 84 | 106 |
| Gallatin | 103 | 54 | 103 |
| Headwaters Mainstem | 117 | 80 | 101 |
| Smith-Judith-Musselshell | 135 | 73 | 117 |
| Sun-Teton-Marias | 100 | 52 | 103 |
| St. Mary-Milk | 94 | 37 | 89 |
| Yellowstone River Basin | 107 | 63 | 98 |
| Upper Yellowstone | 129 | 60 | 108 |
| Lower Yellowstone | 106 | 63 | 97 |

| | | | |
|---|---|---|---|
| West of Divide | 116 | 66 | 101 |
| East of Divide | 114 | 76 | 102 |
| *Montana State-Wide* | 114 | 73 | 101 |

**Montana Data Collection Office**
**Reservoir Levels**
**Percentage of Normal - February 1, 2018**



# Kootenai River Basin

Both precipitation and temperatures were above average for the Kootenai River Basin during January. Poorman Creek SNOTEL had over 20 days during the month that the daily maximum temperature was above freezing. Due to the warm temperatures some of the mountain precipitation fell in the form of rain. The basin did receive significant snow accumulation during the 2nd half of the month. From January 18th to 28th Poorman Creek SNOTEL received over 27 inches of dense snow (6 inches of SWE). Unfortunately this new snowfall was quickly followed by an inch of rain. The good news is that the deep snowpack retained the moisture from this rain. Overall, water year-to-date precipitation in the Kootenai River basin is above average.

## *Kootenai River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *KOOTENAY in CANADA* | 103% | 72% |
| *KOOTENAI MAINSTEM* | 107% | 61% |
| *TOBACCO* | 117% | 85% |
| *FISHER* | 104% | 78% |
| *YAAK* | 122% | 72% |
| *KOOTENAI RIVER BASIN in MONTANA* | 112% | 71% |
| *KOOTENAI ab BONNERS FERRY* | 110% | 74% |
| **Basin-Wide Snowpack** | **112%** | **71%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 123% | 111% | 114% |
| Valley Precipitation | 86% | 133% | 176% |
| **Basin-Wide Precipitation** | **122%** | **111%** | **115%** |

**WYTD Precipitation is October 1st- Current*

| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Reservoir Storage** | **120%** | **60%** | **113%** |

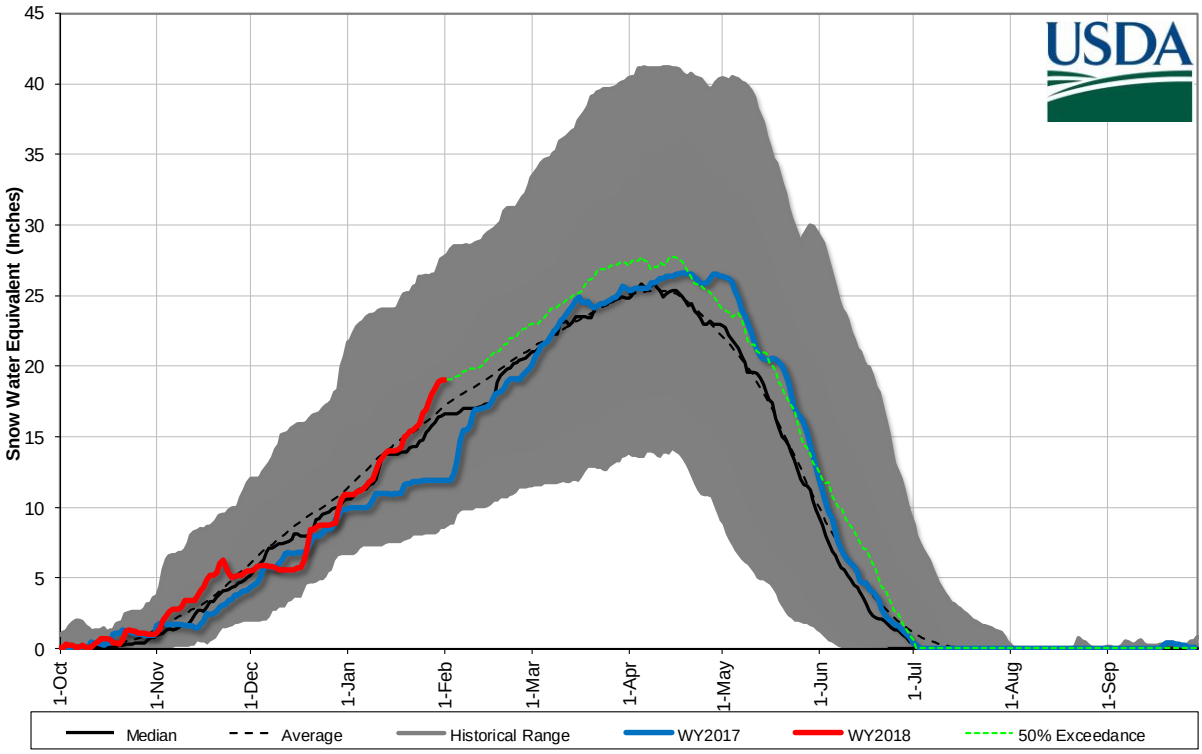
**See Reservoir Storage Table for storage in individual reservoirs*

***End of Month Storage***

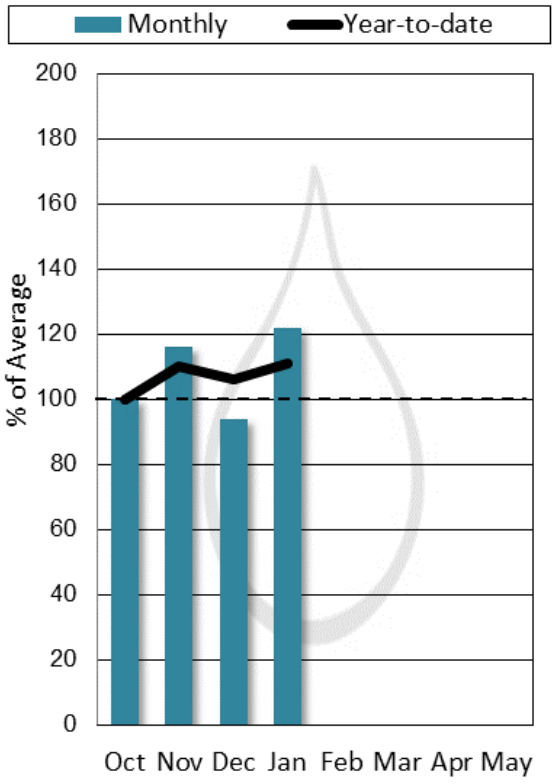
| | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Lake Koocanusa | 3425.9 | 3243.9 | 2865.0 | 5748.0 | **120%** | **60%** |

**Kootenai River Basin Snowpack with Non-Exceedence Projections**

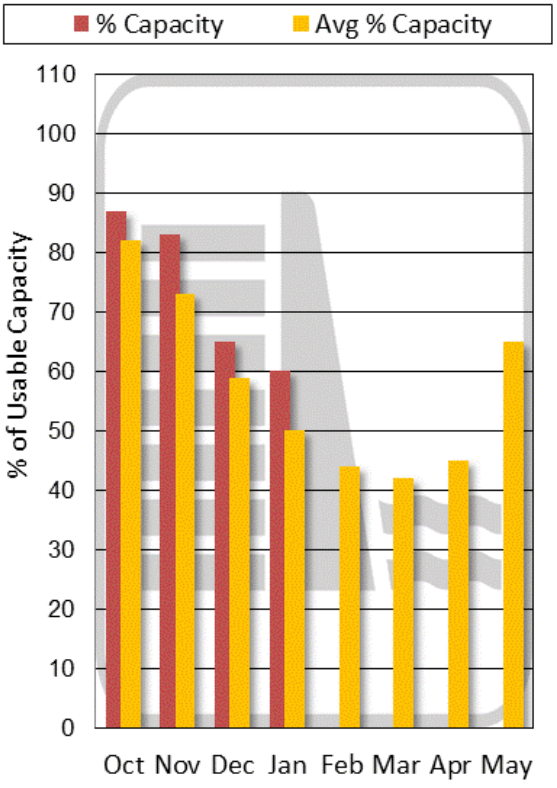
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

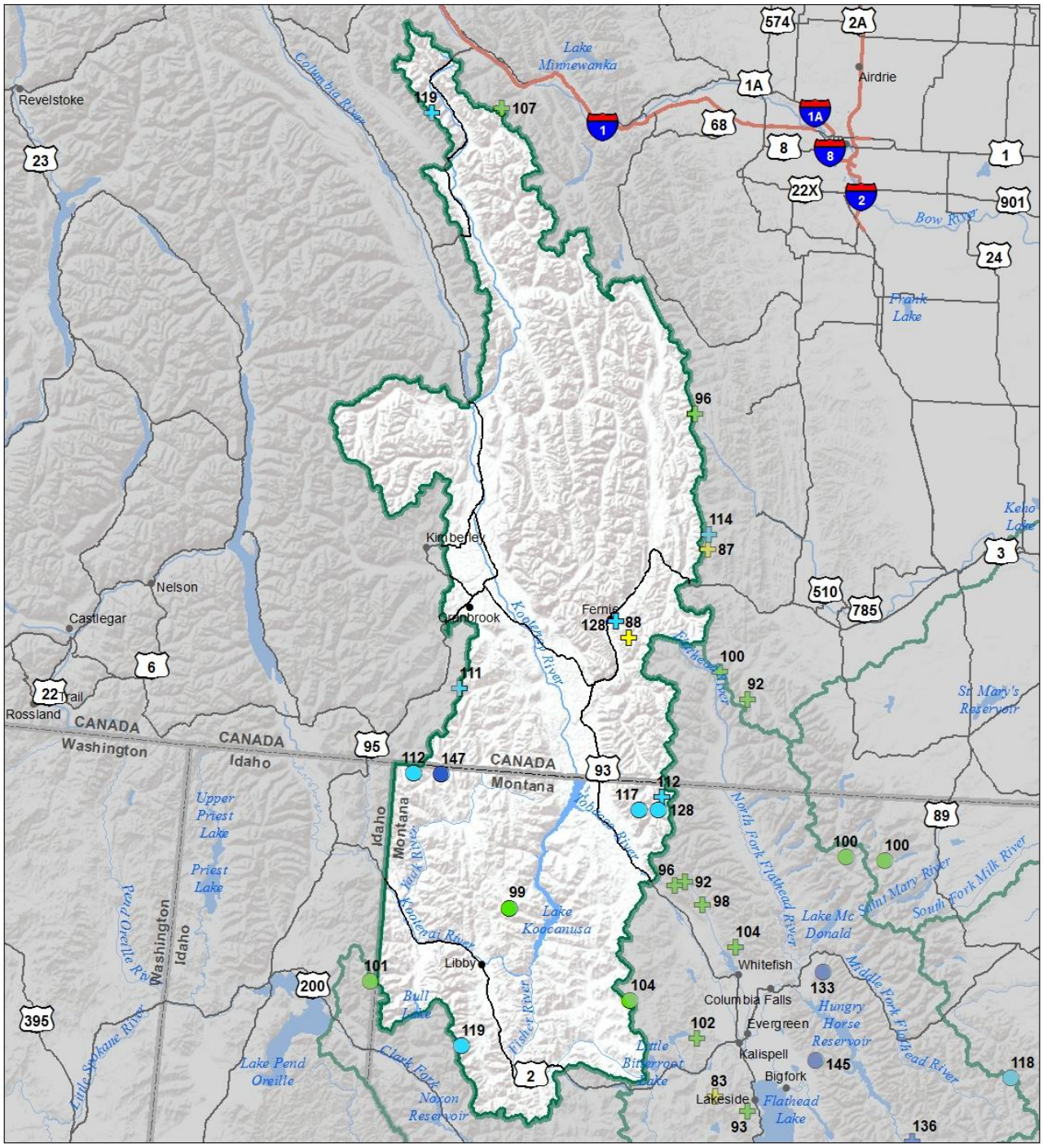



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Kootenai River Basin
# Snow Water Equivalent
# Percentage of Normal
# February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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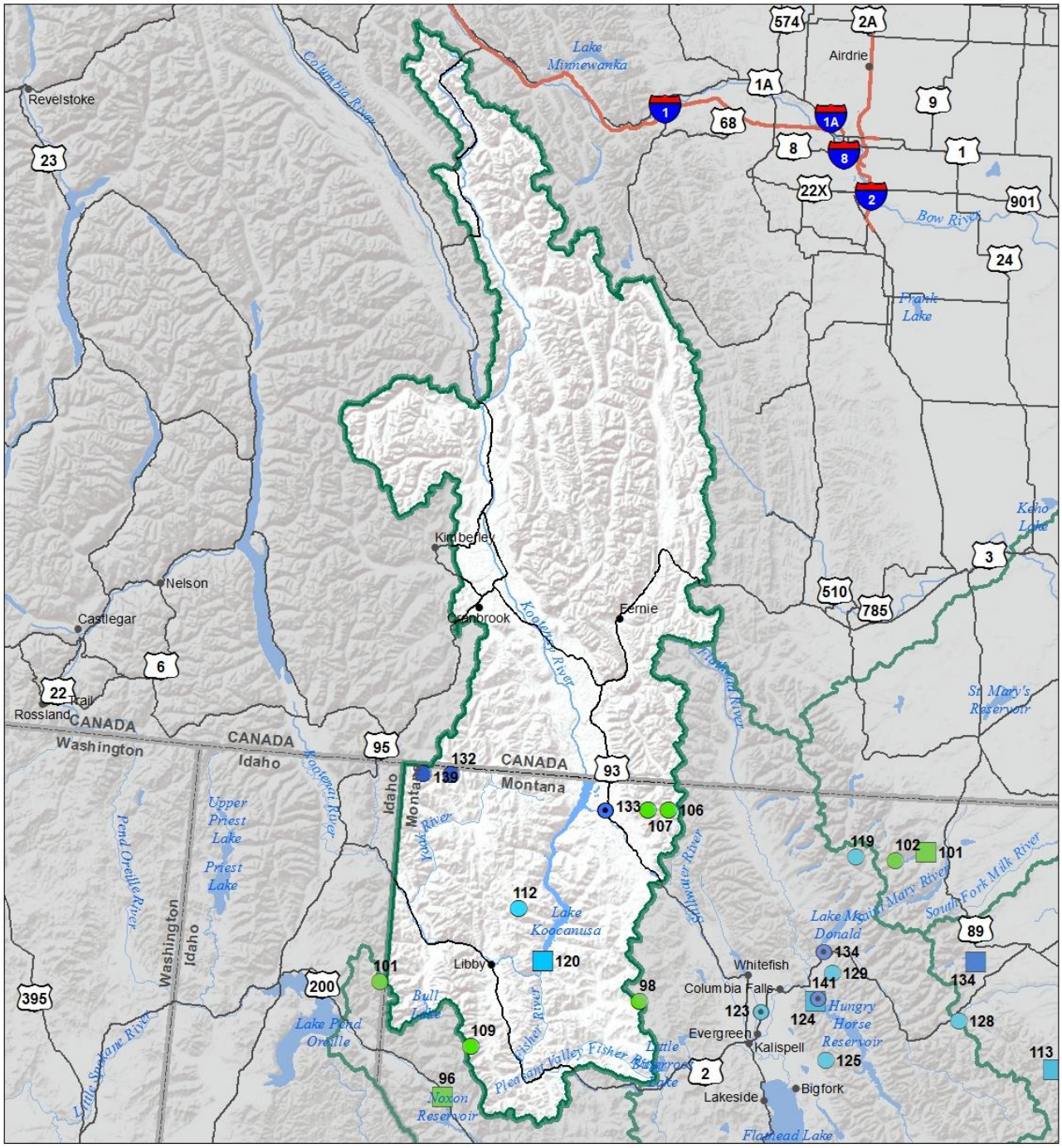
# Kootenai River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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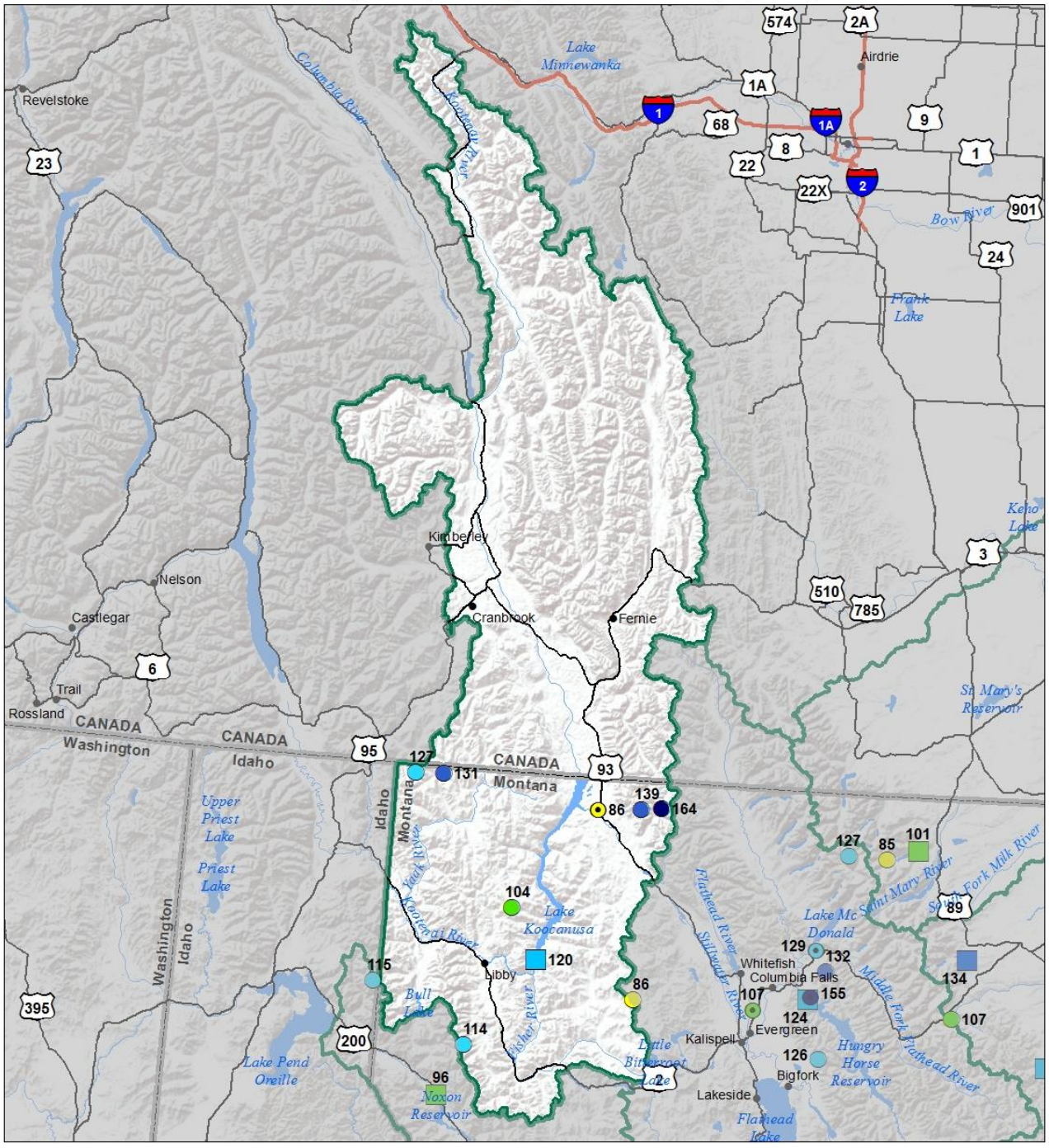
**Kootenai River Basin**
**Monthly Precipitation and Reservoir Levels**
**Percentage of Normal**
**February 1, 2018 (January 1, 2018 - February 1, 2018)**




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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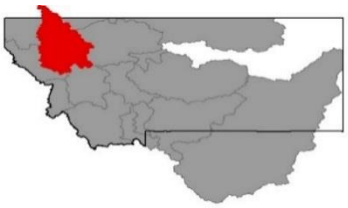


# Flathead River Basin

January brought significant precipitation to the Flathead River basin. SNOTEL sites received about 130% of their normal January snow water accumulation. Similar to the rest of northwest Montana temperatures were above average and some of the precipitation fell in the form of rain. Mid-month Flattop Mountain SNOTEL received over 1.5 inches of rain. Then from January 18th to the 28th the site received over 24 inches of dense snow (4.7 inches of SWE), which was quickly followed by another inch of rain. Lower elevations also received significant January precipitation. Several of the basin's lower elevation SNOTEL sites have already exceeded their normal peak snow water equivalent value, which is about a month earlier than normal. Overall, water year-to-date precipitation in the Flathead River basin is above average.

***Flathead River Basin Data Summary***

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *NF FLATHEAD in CANADA* | 97% | 67% |
| *NF FLATHEAD in MONTANA* | 107% | 76% |
| *MIDDLE FORK FLATHEAD* | 111% | 78% |
| *SOUTH FORK FLATHEAD* | 141% | 72% |
| *STILLWATER-WHITEFISH* | 98% | 75% |
| *SWAN* | 136% | 73% |
| *MISSION VALLEY* | 132% | 85% |
| *LITTLE BITTERROOT-ASHLEY* | 94% | 100% |
| *JOCKO* | 121% | 71% |
| *FLATHEAD in MONTANA* | 115% | 78% |
| **Basin-Wide Snowpack** | ***114%*** | ***77%*** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 121% | 122% | 111% |
| Valley Precipitation | 96% | 117% | 161% |
| **Basin-Wide Precipitation** | **120%** | **121%** | **113%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Reservoir Storage** | 114% | 72% | 119% |

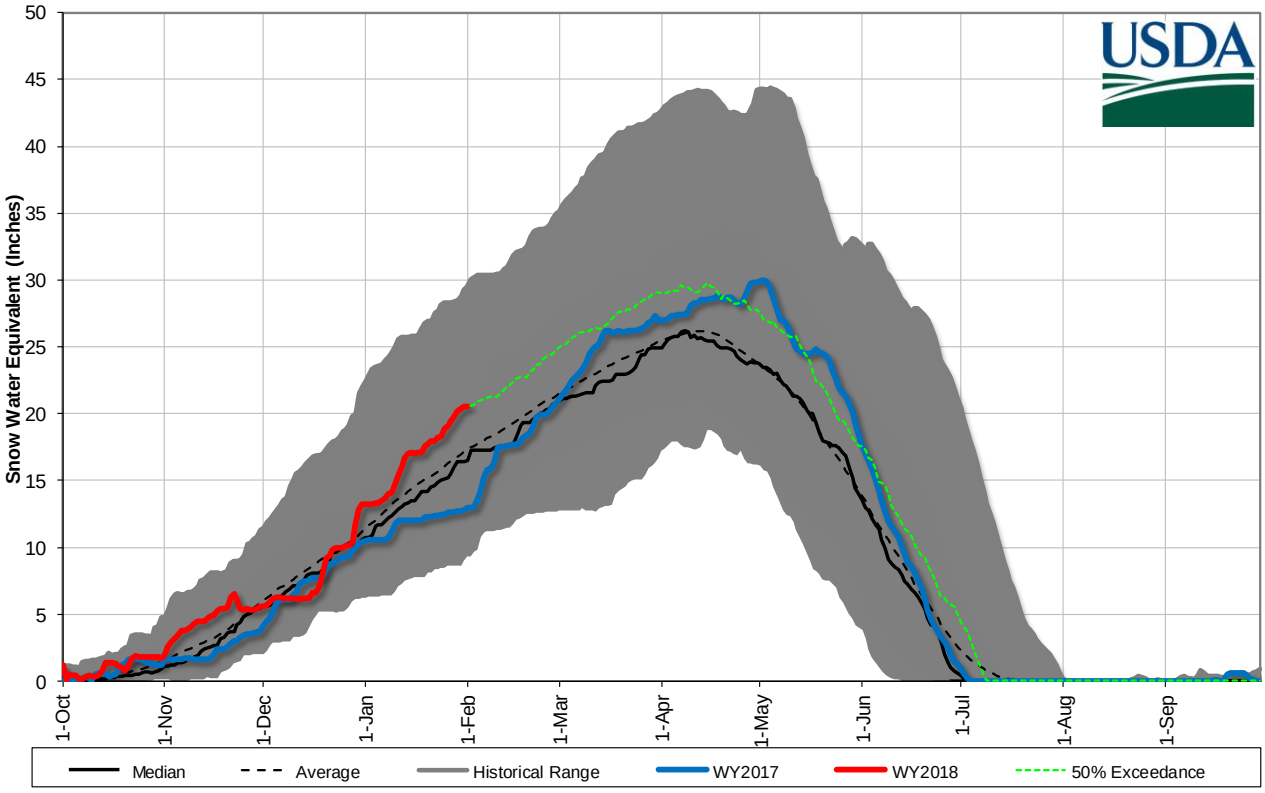
**See Reservoir Storage Table for storage in individual reservoirs*

***End of Month Storage***

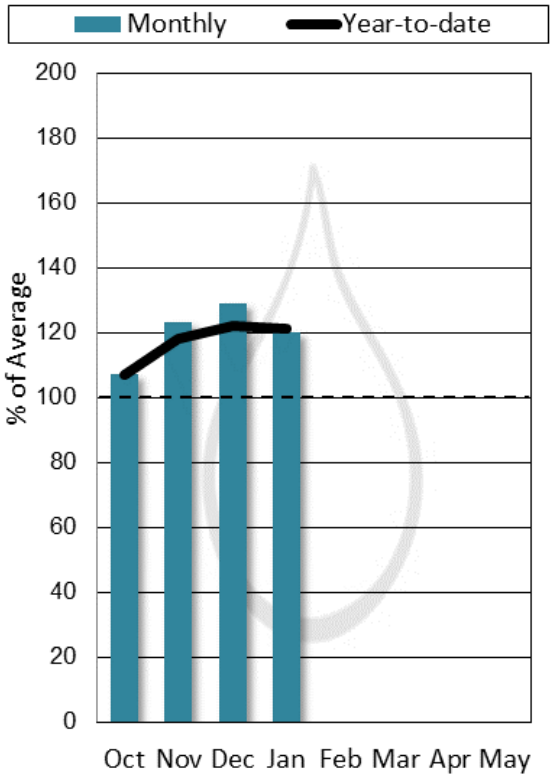
| | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Camas (4) | | 16.9 | 18.2 | 45.2 | | |
| Lower Jocko Lake | | 0.0 | 0.0 | 6.4 | | |
| Mission Valley (8) | | 28.5 | 30.9 | 100.0 | | |
| Hungry Horse Lake | 2940.4 | 3021.5 | 2375.0 | 3451.0 | **124%** | **85%** |
| Flathead Lake | 858.2 | 925.5 | 955.6 | 1791.0 | **90%** | **48%** |

**Flathead River Basin Snowpack with Non-Exceedence Projections**

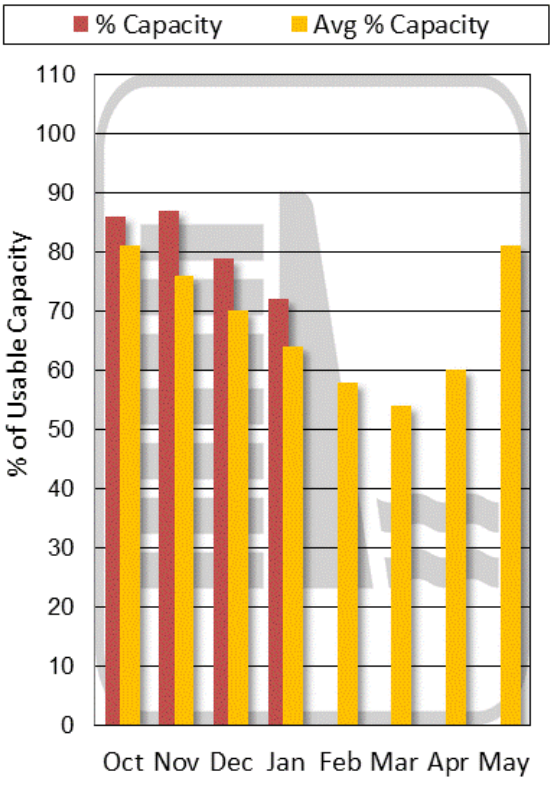
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

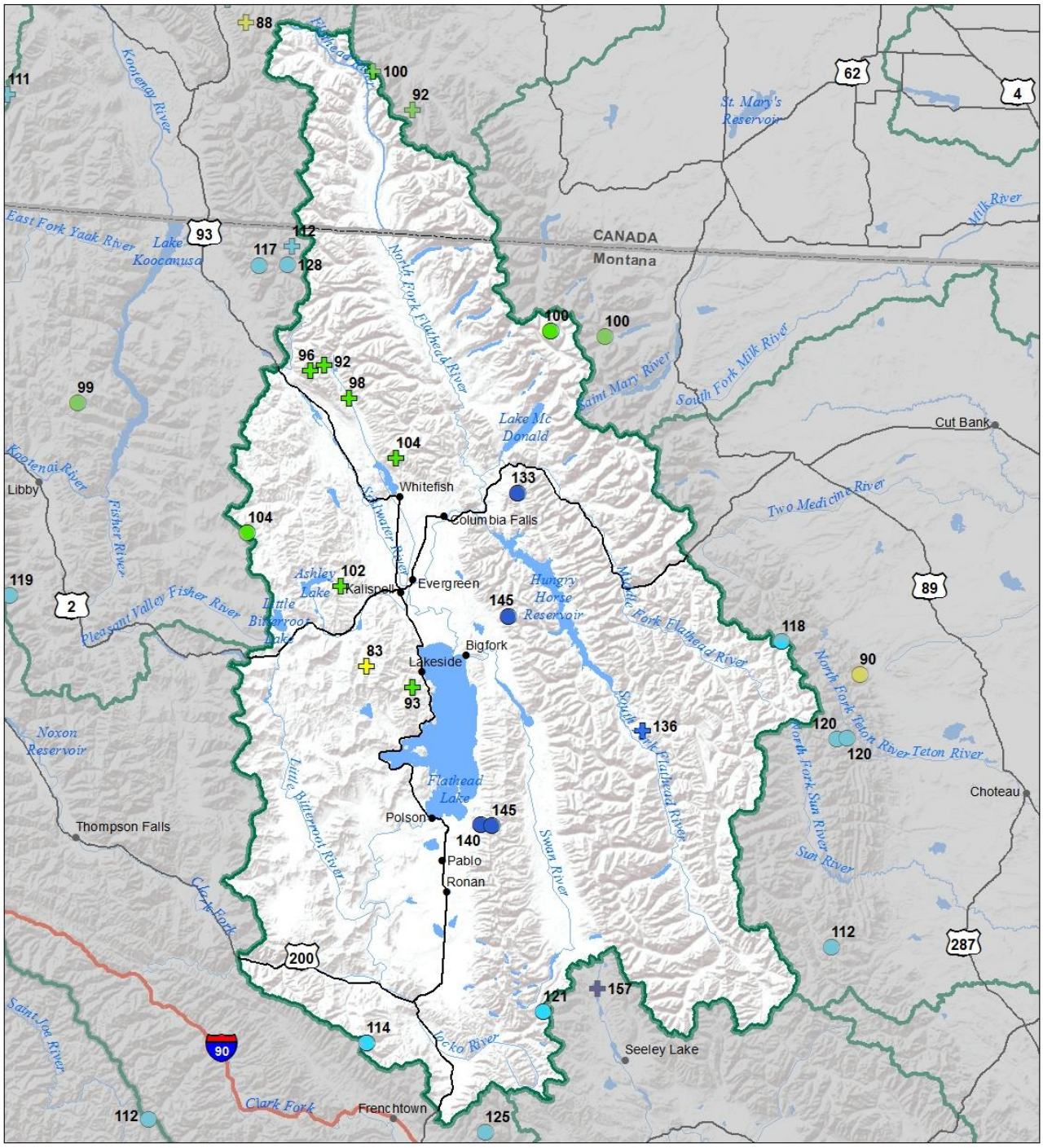



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Flathead River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | Snowcourse | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | 0% | 91 - 110% | 0% |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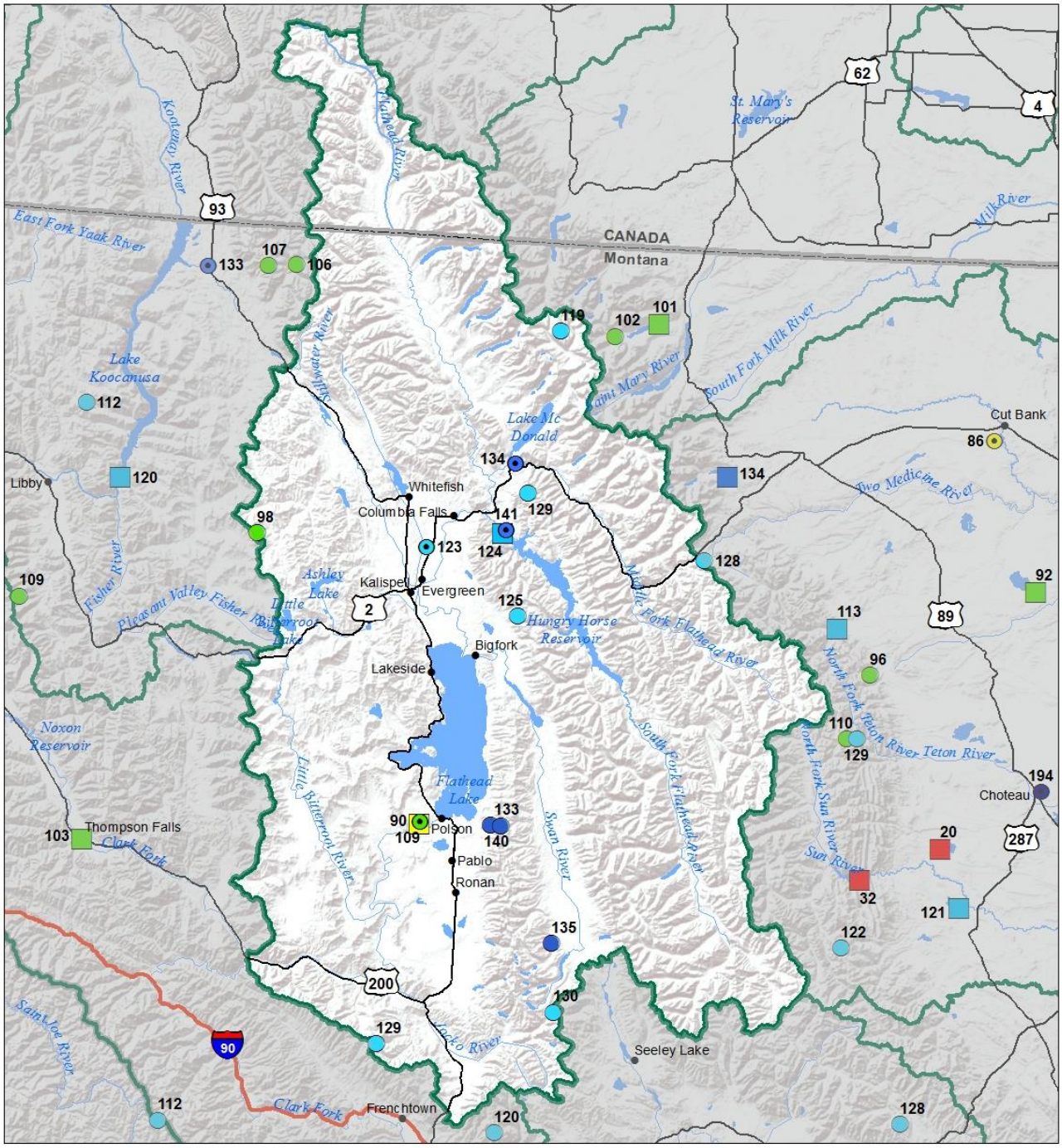
# Flathead River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




### Precipitation
### Percent of Normal

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

### Reservoirs
### Percent of Normal

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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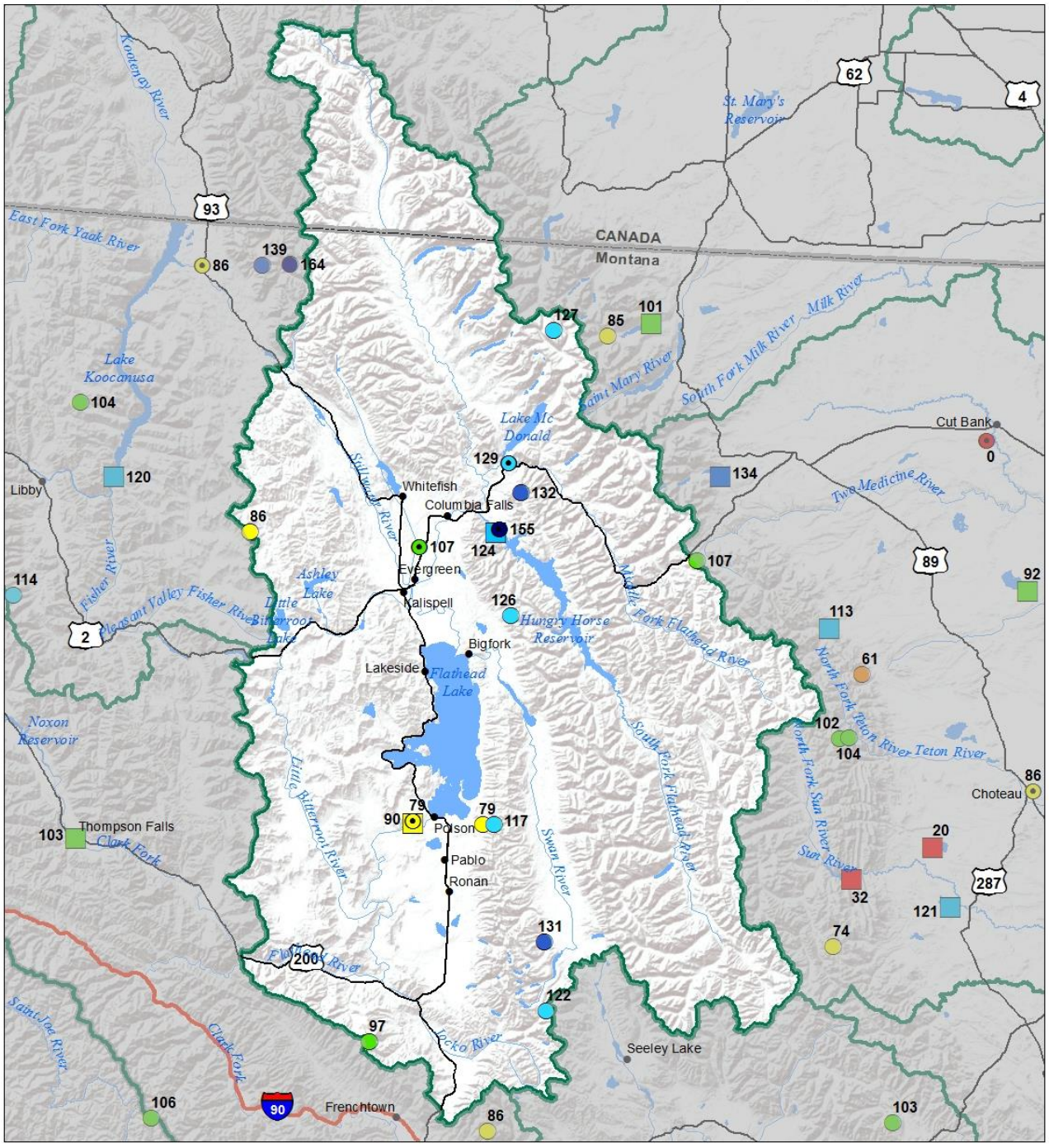
# Flathead River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)

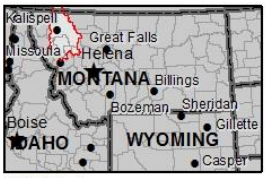



**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%

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# Upper Clark Fork River Basin

January precipitation was near average in the Upper Clark Fork River Basin. The basin did not receive as much precipitation from the storm system that brought several inches to the Lower Clark Fork region. However, the basin does currently have a well above normal snowpack. Nevada Ridge SNOTEL has about 13.3 inches of snow water, which marks its 2nd deepest snowpack in 24 years of record. Low elevation SNOTEL sites have also had significant precipitation this water year. Over half of the basin's SNOTEL sites are above or near their normal seasonal snowpack peak, which normally doesn't occur for about another month. Overall, water year-to-date precipitation in the Upper Clark Fork River basin is above average.

## *Upper Clark Fork River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *CLARK FORK ab FLINT CREEK* | 151% | 80% |
| *FLINT CREEK* | 131% | 81% |
| *ROCK CREEK* | 128% | 68% |
| *CLARK FORK ab BLACKFOOT* | 141% | 78% |
| *BLACKFOOT* | 139% | 80% |
| **Basin-Wide** | **140%** | **78%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 97% | 121% | 98% |
| Valley Precipitation | 131% | 185% | 126% |
| **Basin-Wide Precipitation** | **98%** | **123%** | **98%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

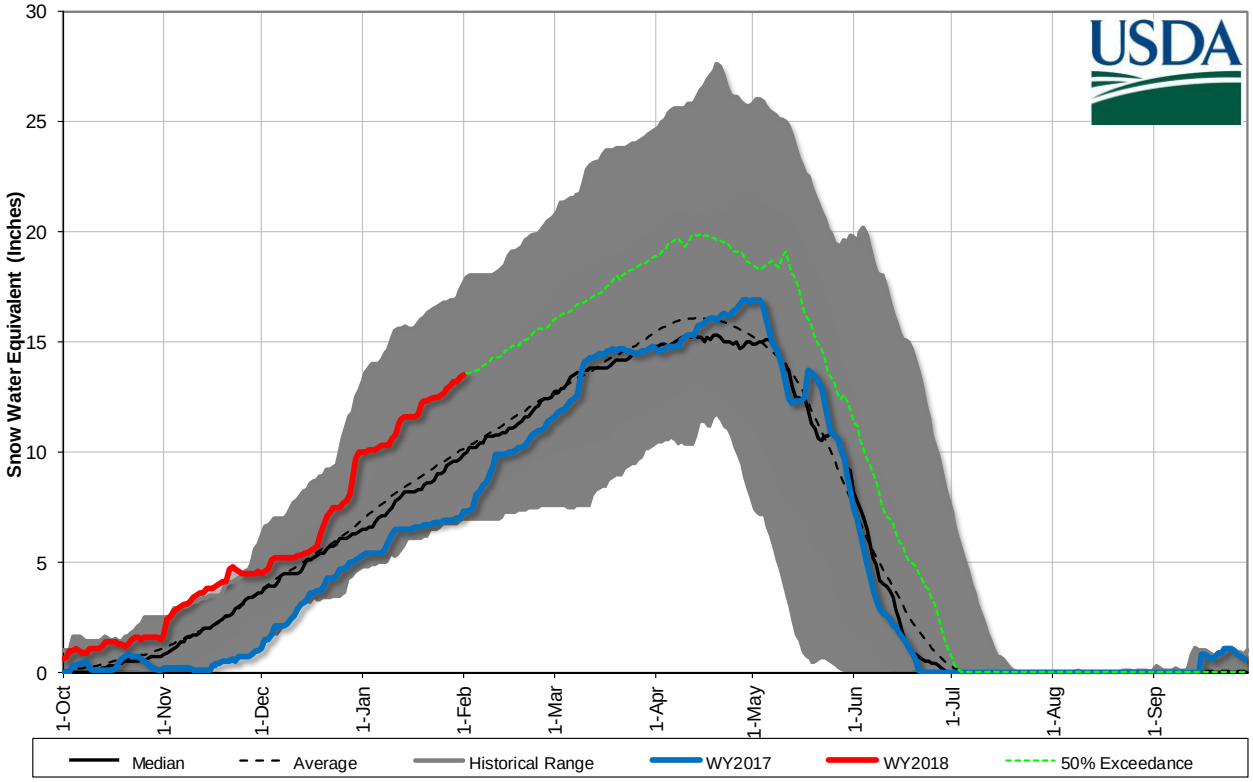
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **105%** | **72%** | **98%** |

**See Reservoir Storage Table for storage in individual reservoirs*

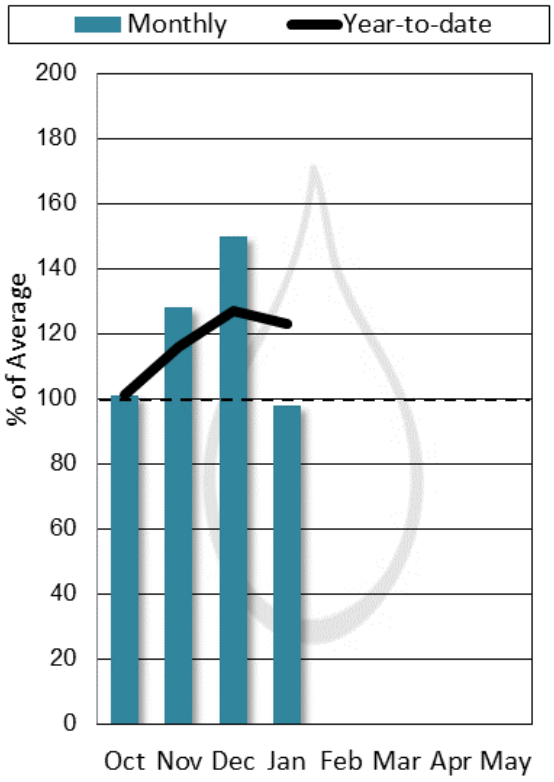
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| East Fork Rock Creek Res | 7.9 | 8.2 | 7.5 | 15.6 | **106%** | **51%** |
| Georgetown Lake | 27.6 | 27.9 | 27.8 | 31.0 | **99%** | **89%** |
| Lower Willow Creek Reservoir | | | 1.9 | 4.9 | | |
| Nevada Creek Res | 6.8 | 3.6 | 5.0 | 12.6 | **137%** | **54%** |

**Upper Clark Fork River Basin Snowpack with Non-Exceedence Projections**

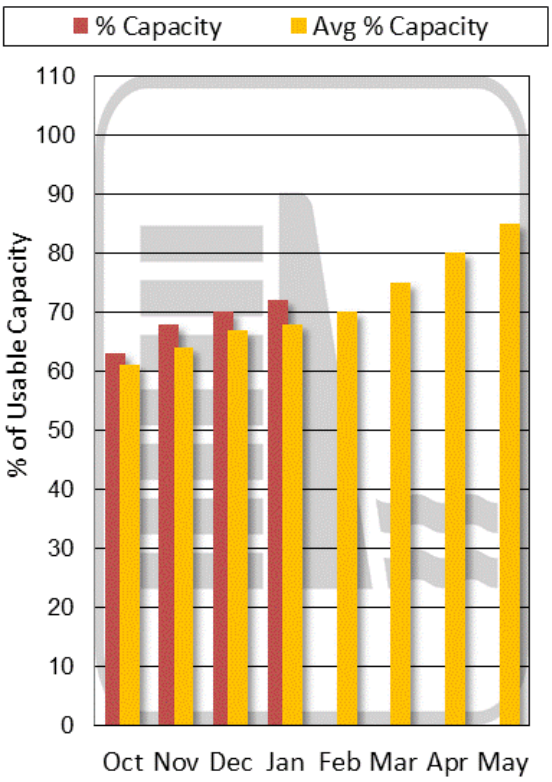
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

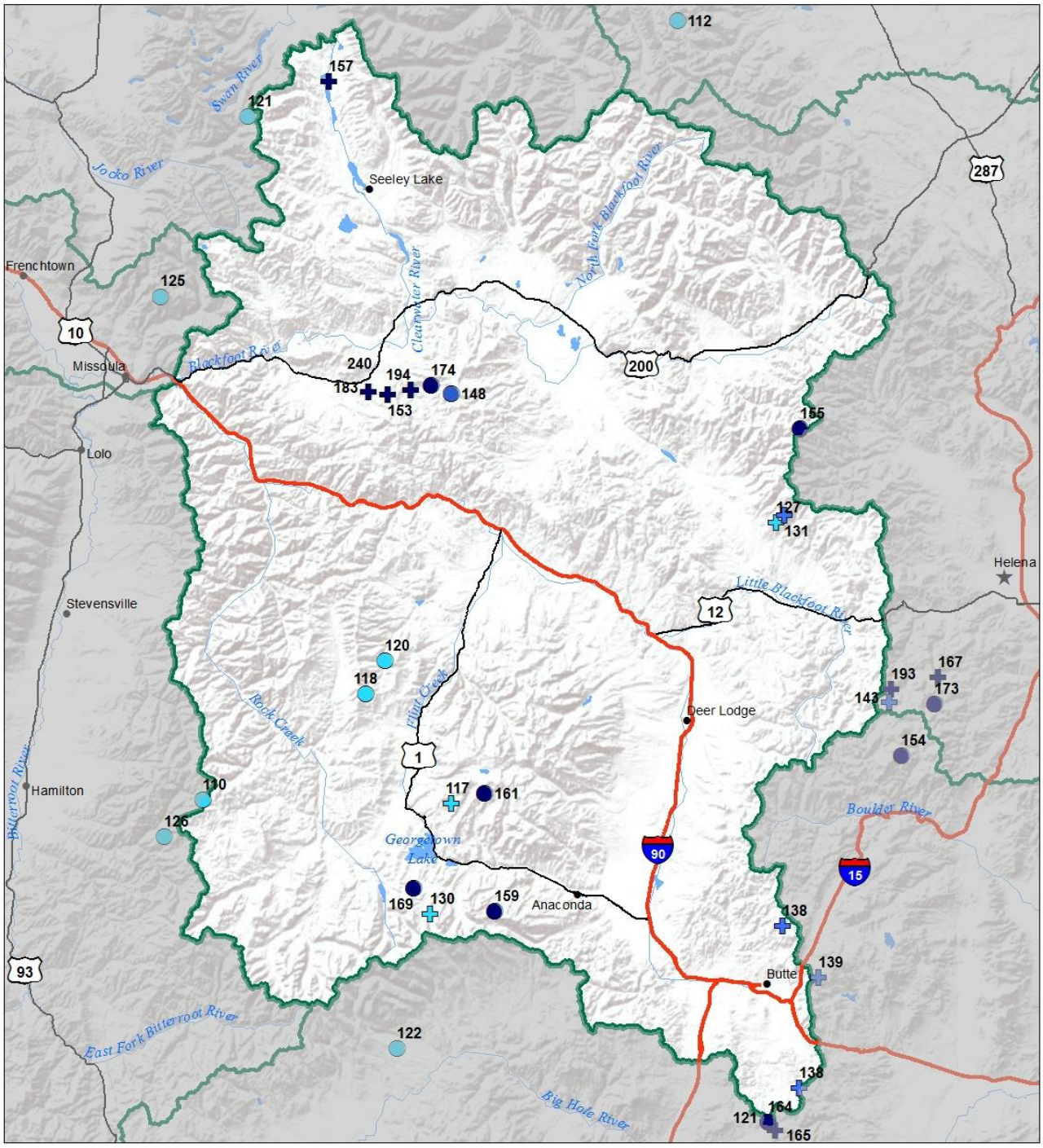



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Upper Clark Fork River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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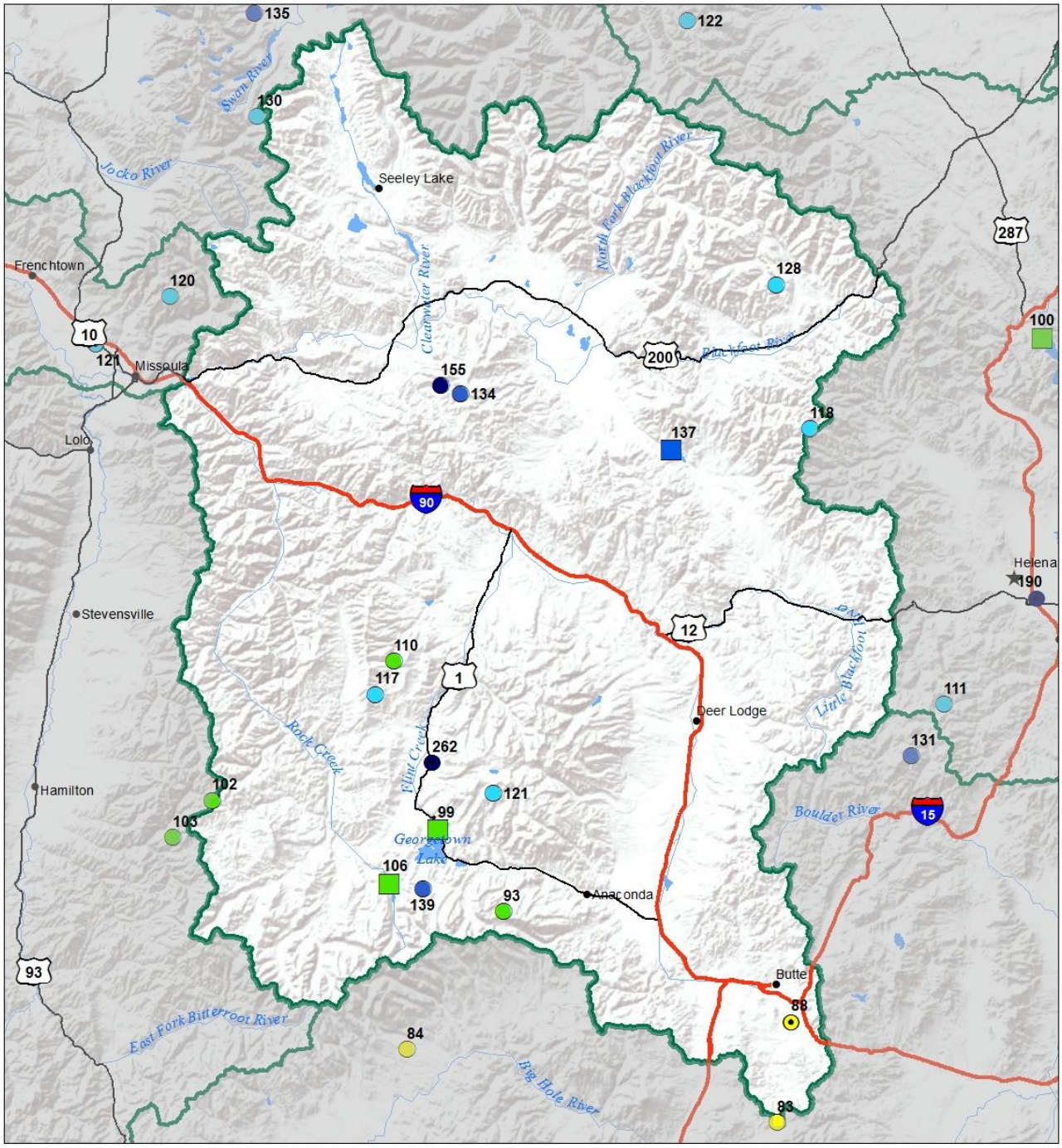
# Upper Clark Fork River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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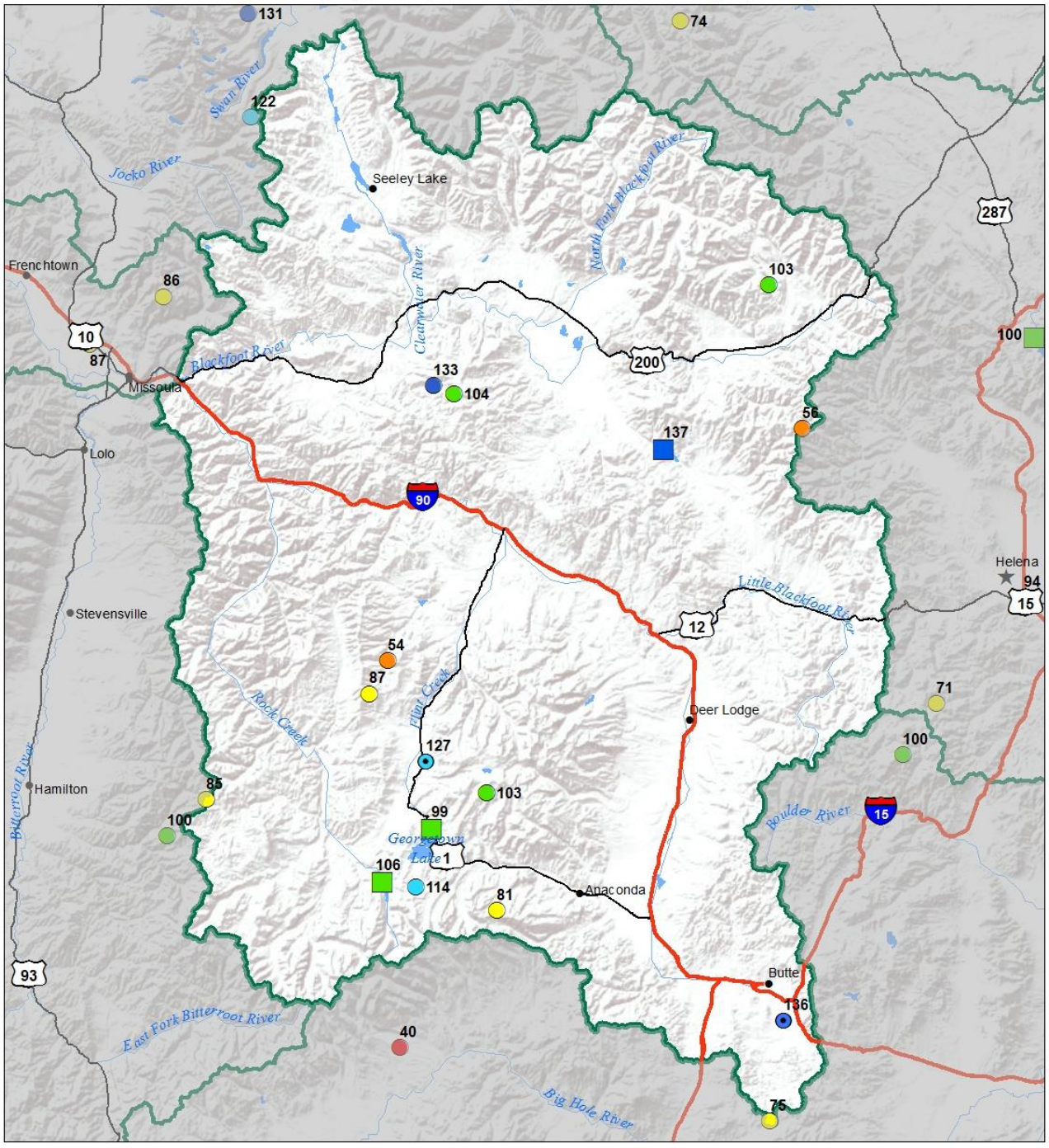
# Upper Clark Fork River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)

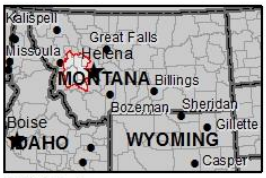



**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%

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# Bitterroot River Basin

January precipitation was near average in the Bitterroot River Basin. The first week of the month was relatively dry, but precipitation trickled in after that. The basin's largest storm of the month arrived on the 18th and Twin Lakes SNOTEL was the largest benefactor. From the 18th to the 27th the site received over 17 inches dense snow (3.6 inches of SWE). However, this snow was quickly followed by about an inch of rain. Fortunately, with over 90 inches of depth at upper elevations the snowpack was deep enough to retain this precipitation. Currently both water year-to-date precipitation and the basin wide snowpack are above average in the Bitterroot River basin.

## *Bitterroot River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *WEST FORK BITTERROOT* | 120% | 80% |
| *EAST SIDE BITTERROOT* | 120% | 71% |
| *WEST SIDE BITTERROOT* | 113% | 79% |
| **Basin-Wide** | **115%** | **78%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 97% | 107% | 92% |
| Valley Precipitation | % | % | % |
| **Basin-Wide Precipitation** | **97%** | **107%** | **92%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

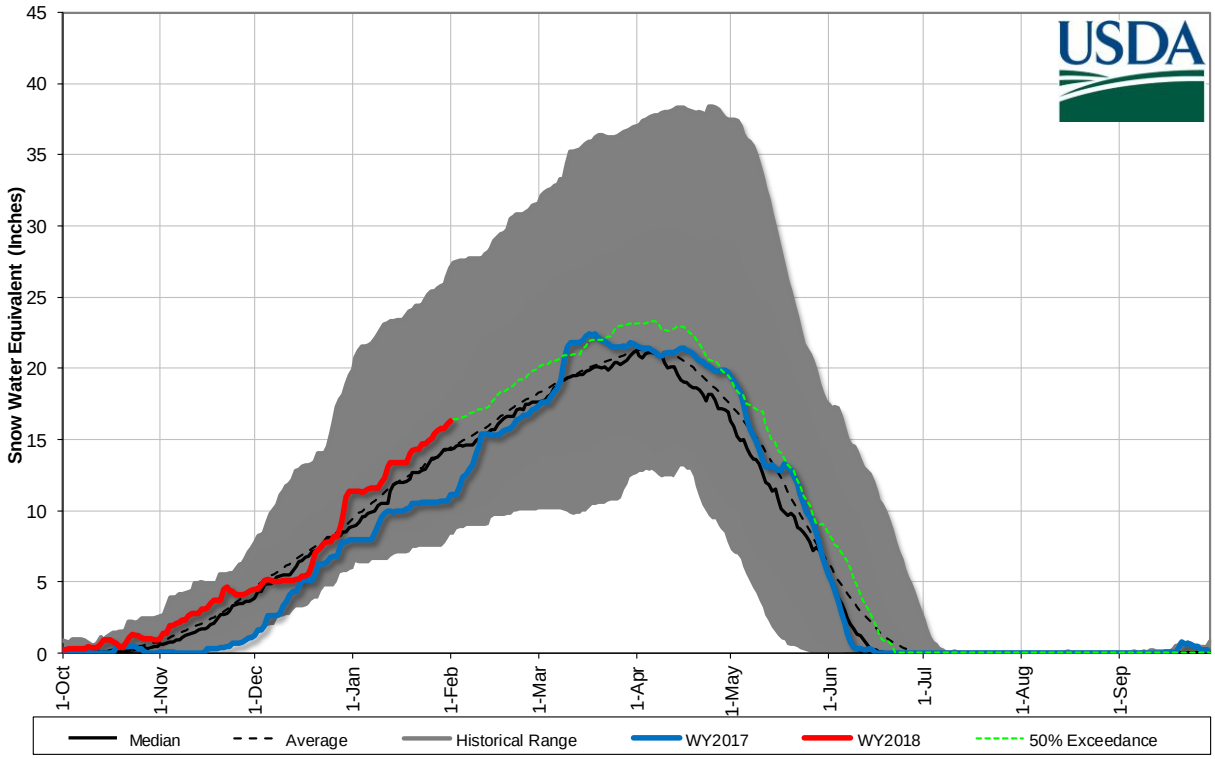
| | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **137%** | **35%** | **135%** |

**See Reservoir Storage Table for storage in individual reservoirs*

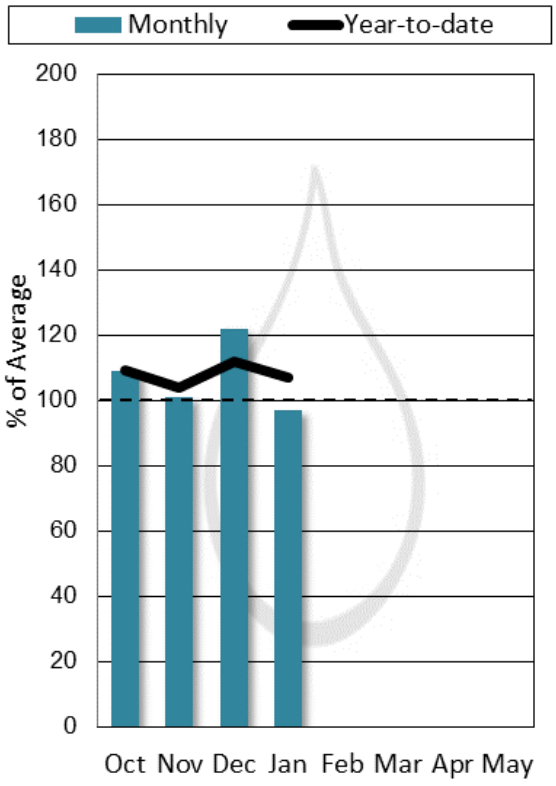
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Painted Rocks Lake | 9.1 | 6.0 | 5.9 | 31.7 | **153%** | **29%** |
| Lake Como | 14.1 | 16.8 | 11.0 | 34.9 | **129%** | **41%** |

**Bitterroot River Basin Snowpack with Non-Exceedence Projections**

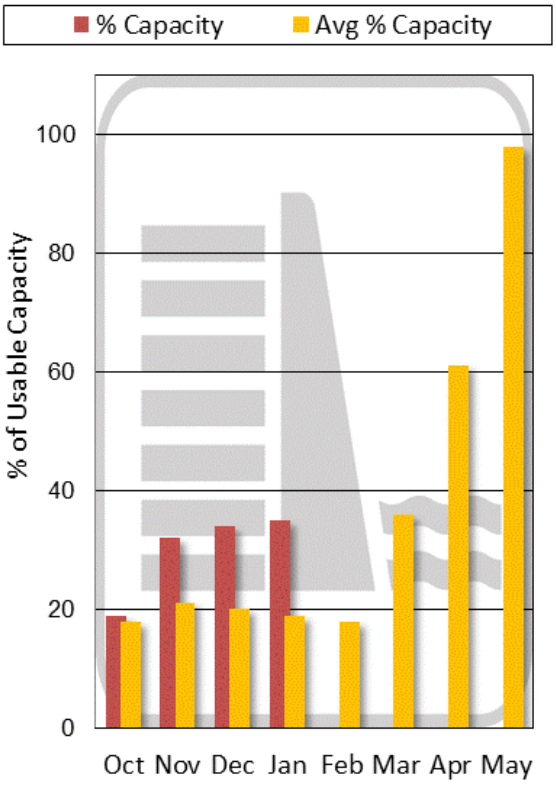
***Based on provisional SNOTEL daily data as of 2/1/2018***




## Mountain and Valley Precipitation

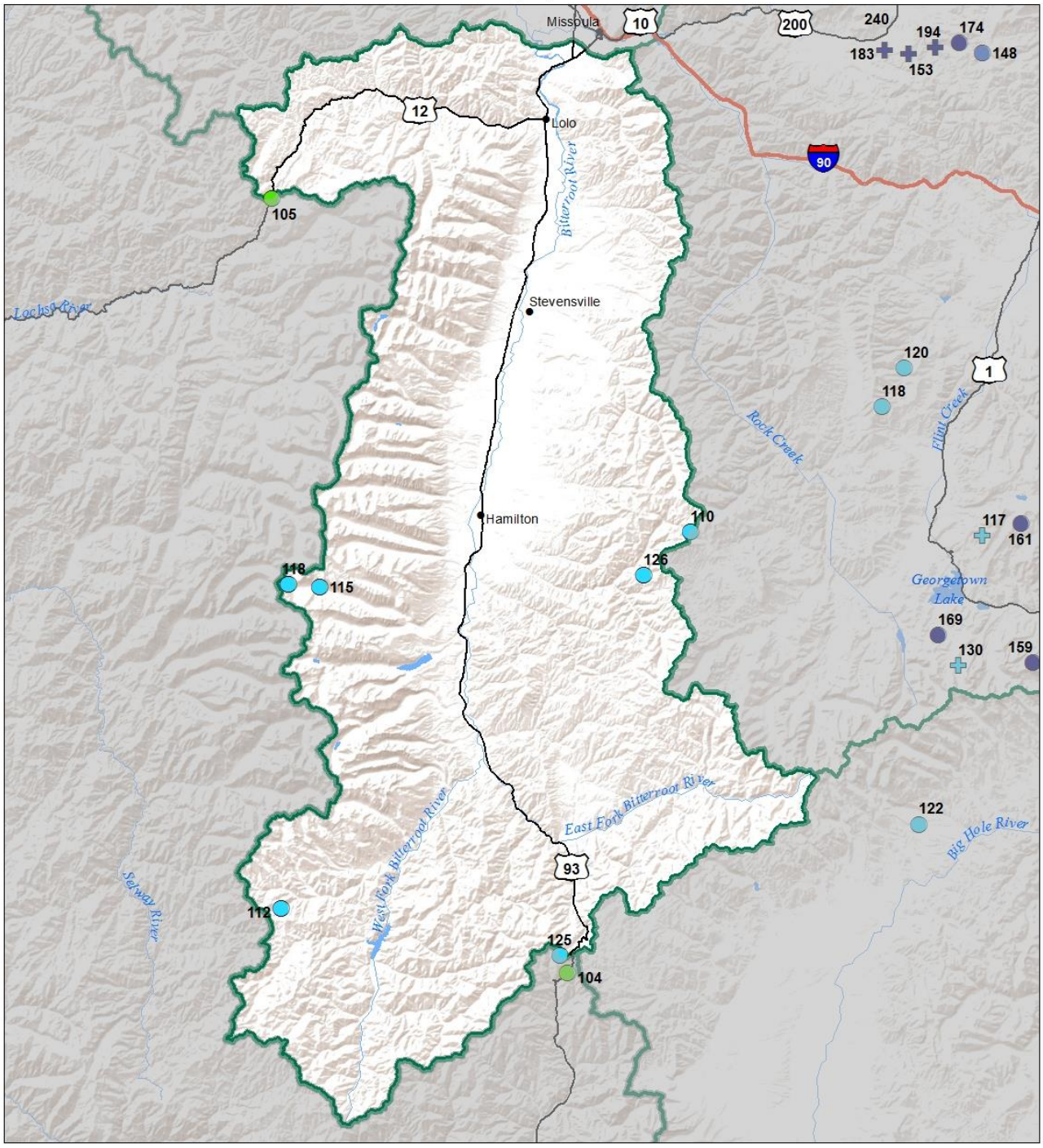



## End of Month Reservoir Storage




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Bitterroot River Basin
# Snow Water Equivalent
# Percentage of Normal
# February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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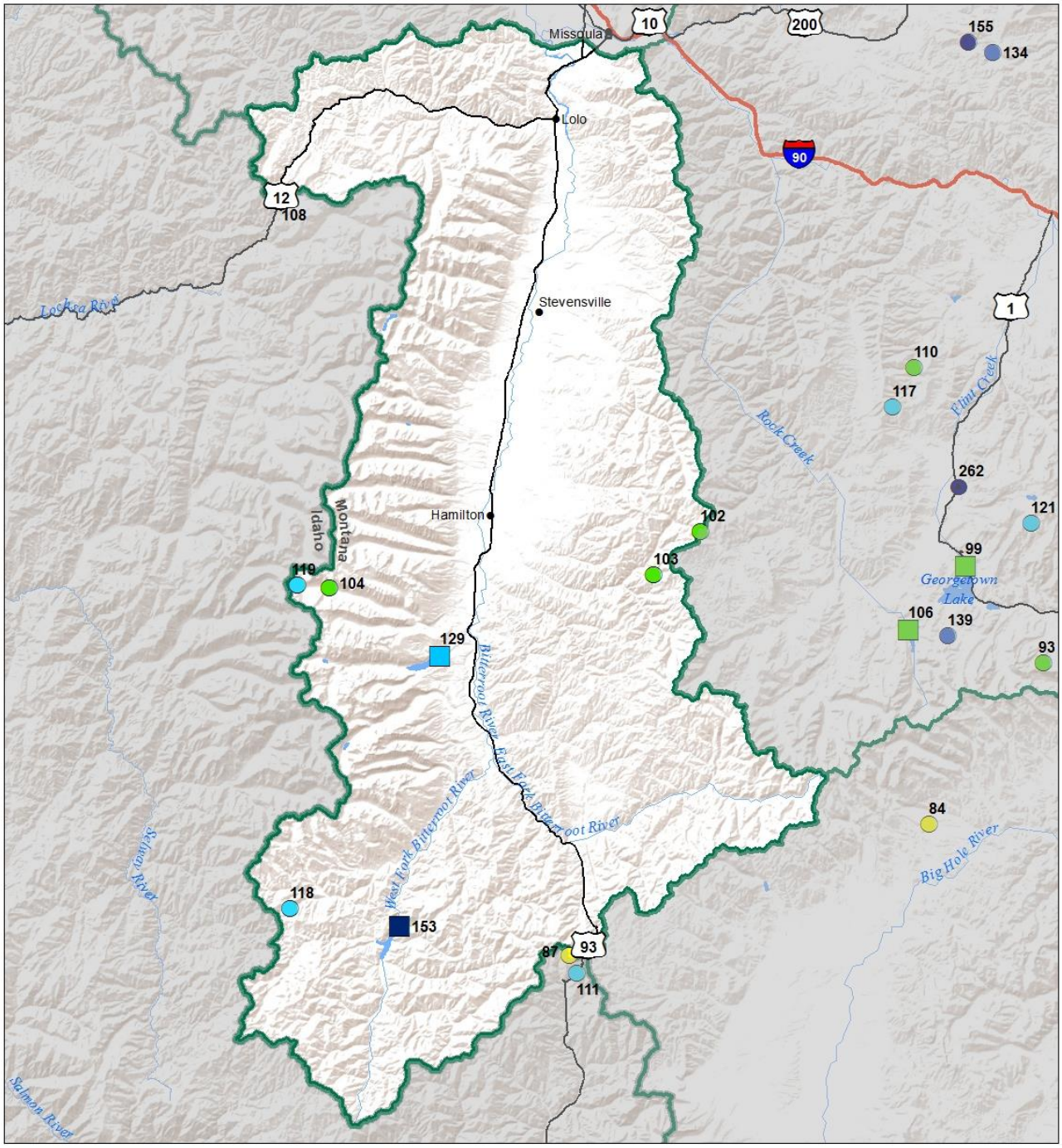
**Bitterroot River Basin**
**Water Year to Date Precipitation and Reservoir Levels**
**Percentage of Normal**
**February 1, 2018**




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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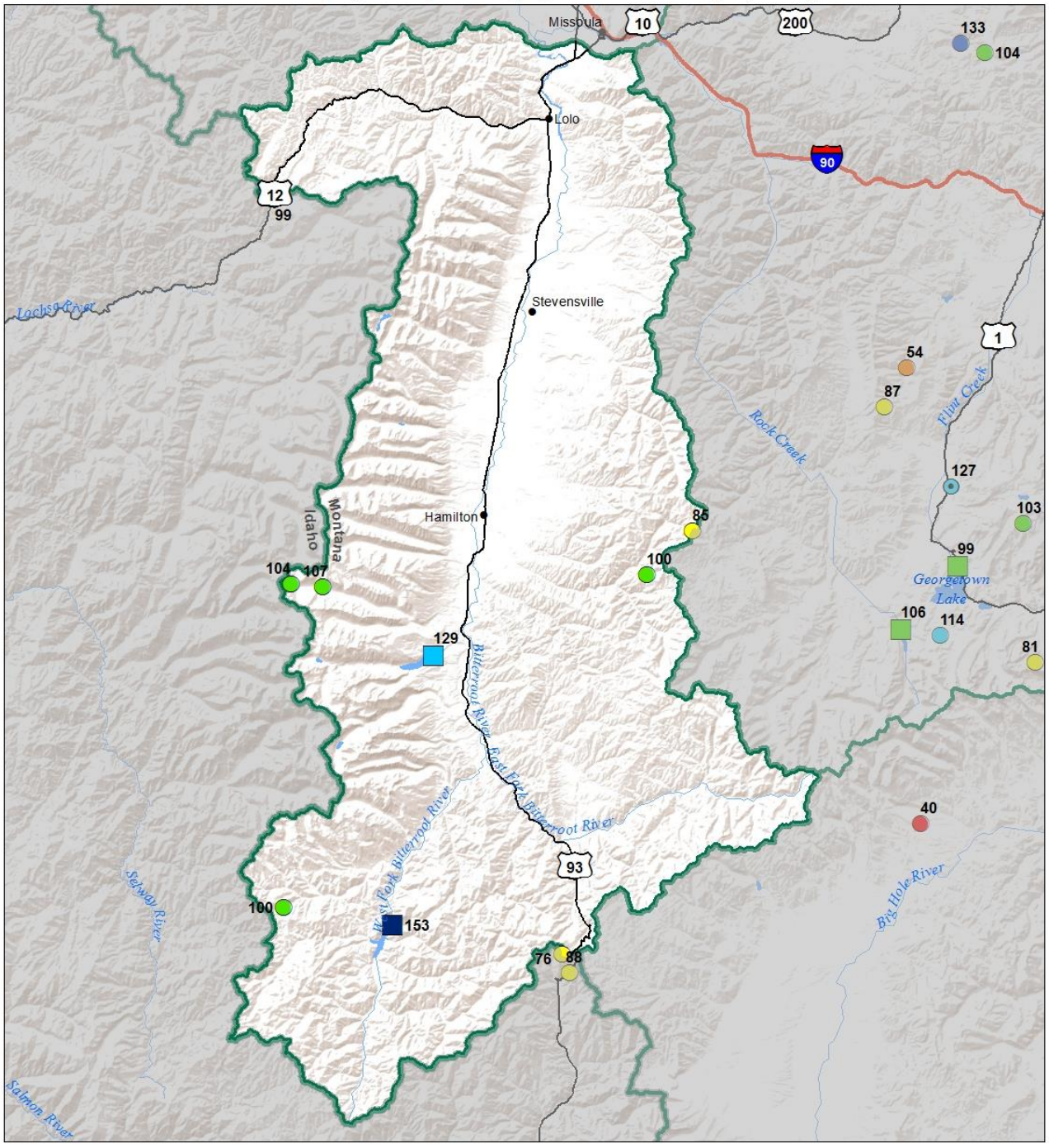
**Bitterroot River Basin**
**Monthly Precipitation and Reservoir Levels**
**Percentage of Normal**
**February 1, 2018 (January 1, 2018 - February 1, 2018)**




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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# Lower Clark Fork River Basin

January precipitation was near average in the Lower Clark Fork River Basin. Moisture trickled in, but it was during the last week that the basin received it largest storm of the month. From January 18th to the 28th Hoodoo Basin SNOTEL received 27 inches of snow (2.9 inches of SWE) increasing the site's settled snow depth to 106 inches. Unfortunately, this snowfall was followed by above average temperatures and over an inch of rain. Lower elevations within the basin have also been favored with moisture this water year. At 4250 feet Humboldt Gulch SNOTEL currently has just over 11 inches of snow water, which is about an inch above the sites normal snowpack peak and a month early. Overall, water year-to-date precipitation in the Lower Clark Fork River basin is above average.

## *Lower Clark For River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *LOWER CLARK FORK RIVER BASIN* | 113% | 72% |
| **Basin-Wide** | **113%** | **72%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 103% | 113% | 105% |
| Valley Precipitation | 87% | 121% | 149% |
| **Basin-Wide Precipitation** | **102%** | **113%** | **106%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

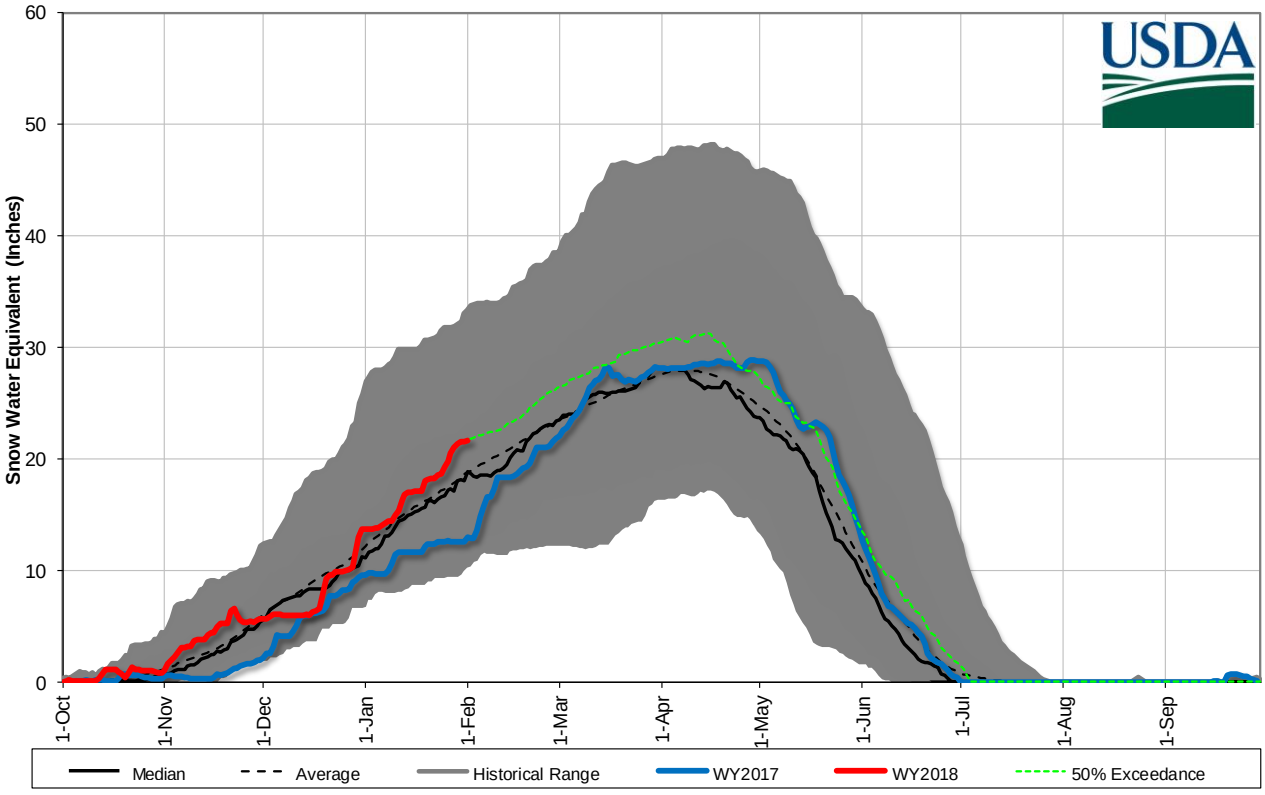
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **96%** | **90%** | **102%** |

**See Reservoir Storage Table for storage in individual reservoirs*

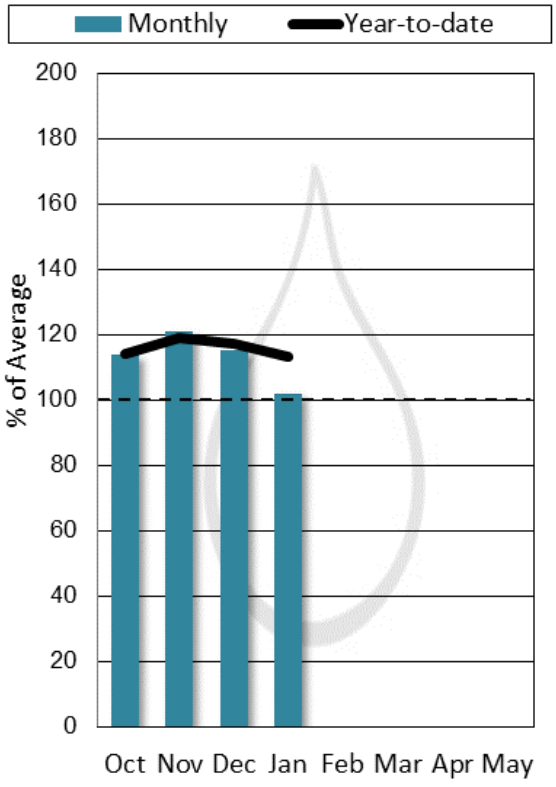
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Noxon Rapids Reservoir | 301.4 | 321 | 315 | 335 | **96%** | **90%** |

**Lower Clark Fork River Basin Snowpack with Non-Exceedence Projections**

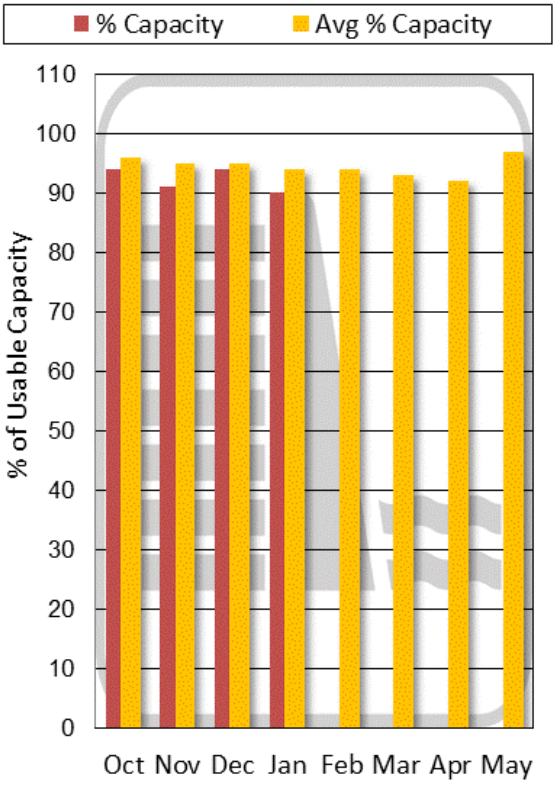
***Based on provisional SNOTEL daily data as of 2/1/2018***




## Mountain and Valley Precipitation

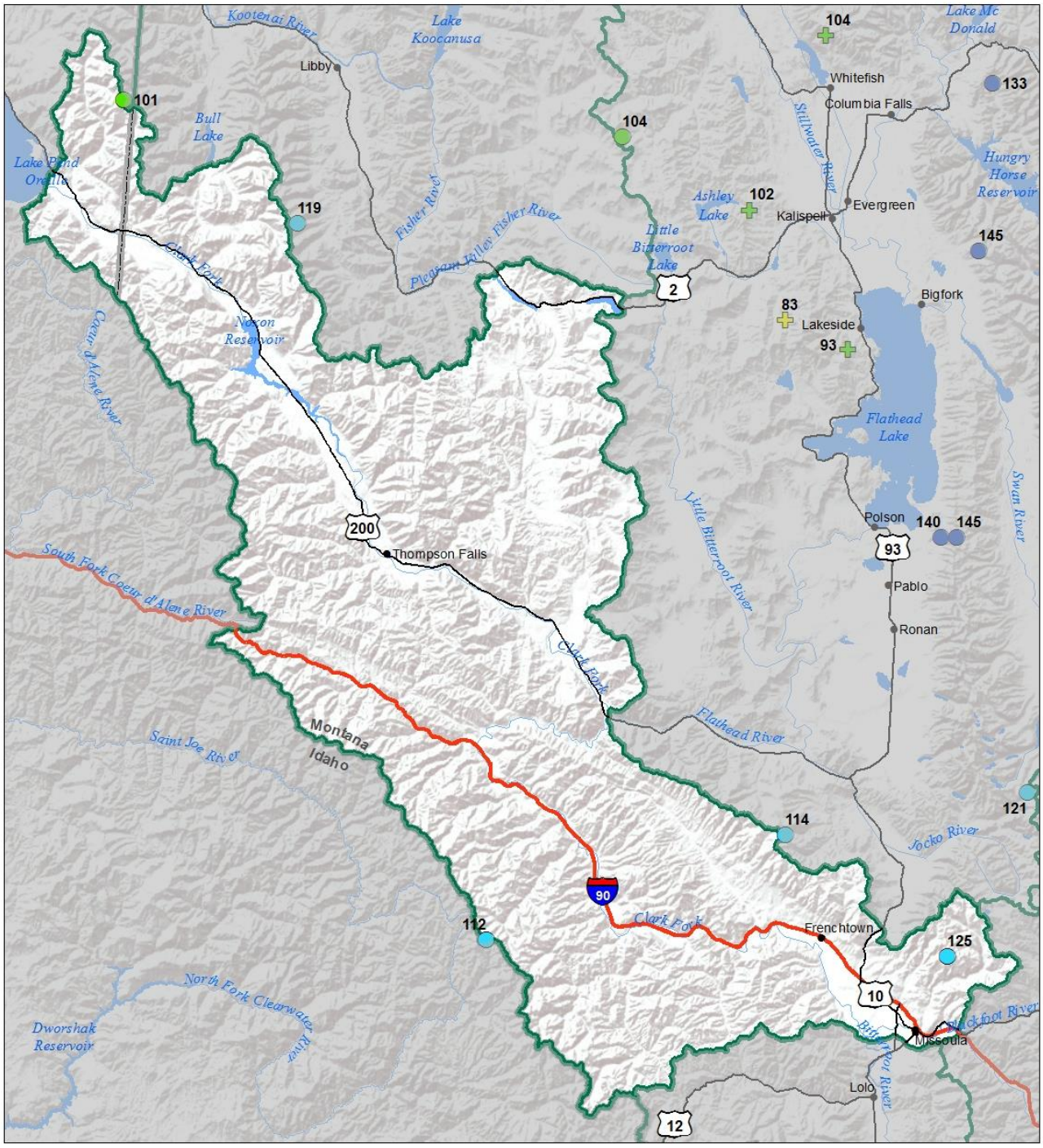



## End of Month Reservoir Storage




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Lower Clark Fork River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | Snowcourse | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | 0% | 91 - 110% | 0% |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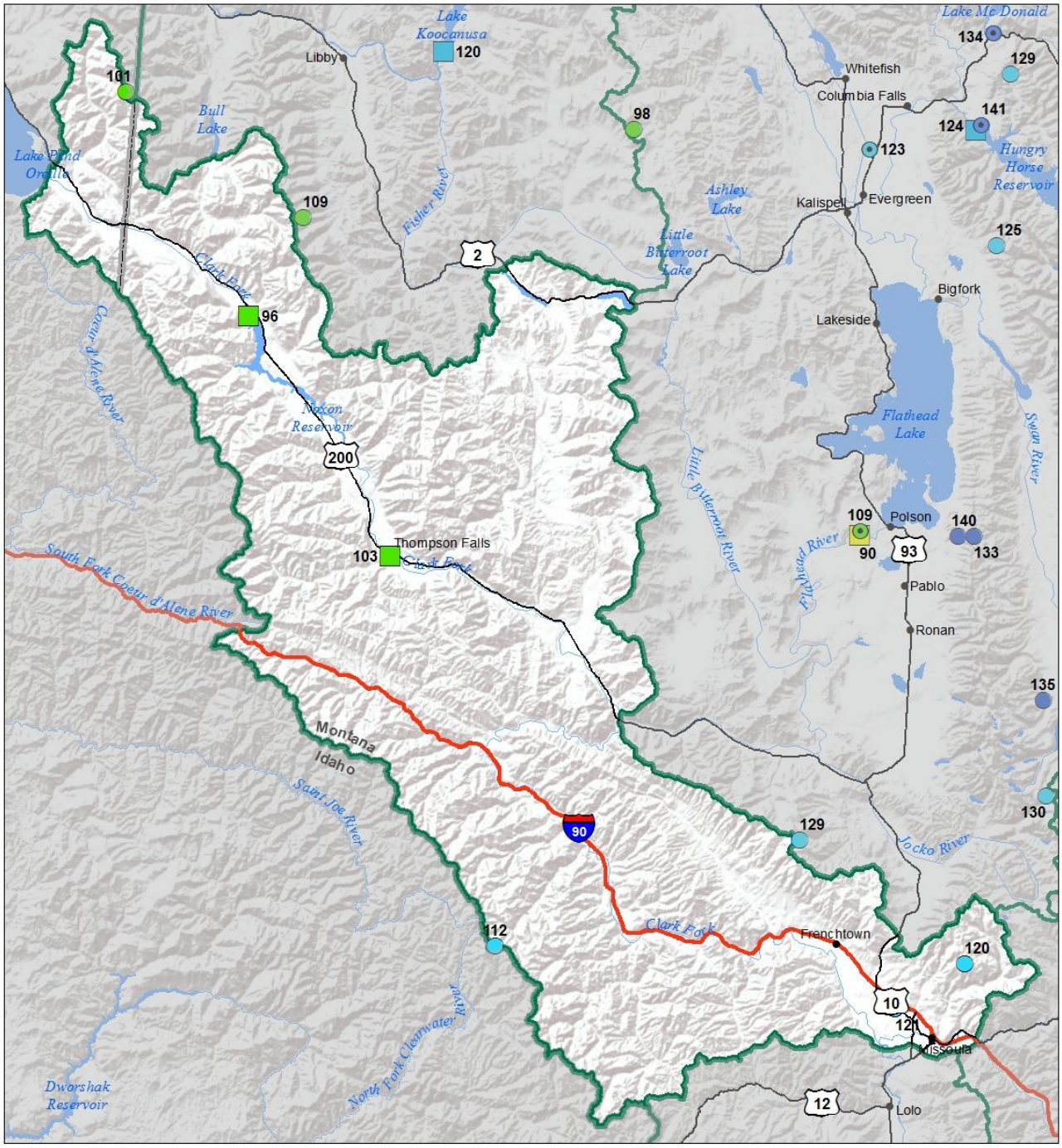
# Lower Clark Fork River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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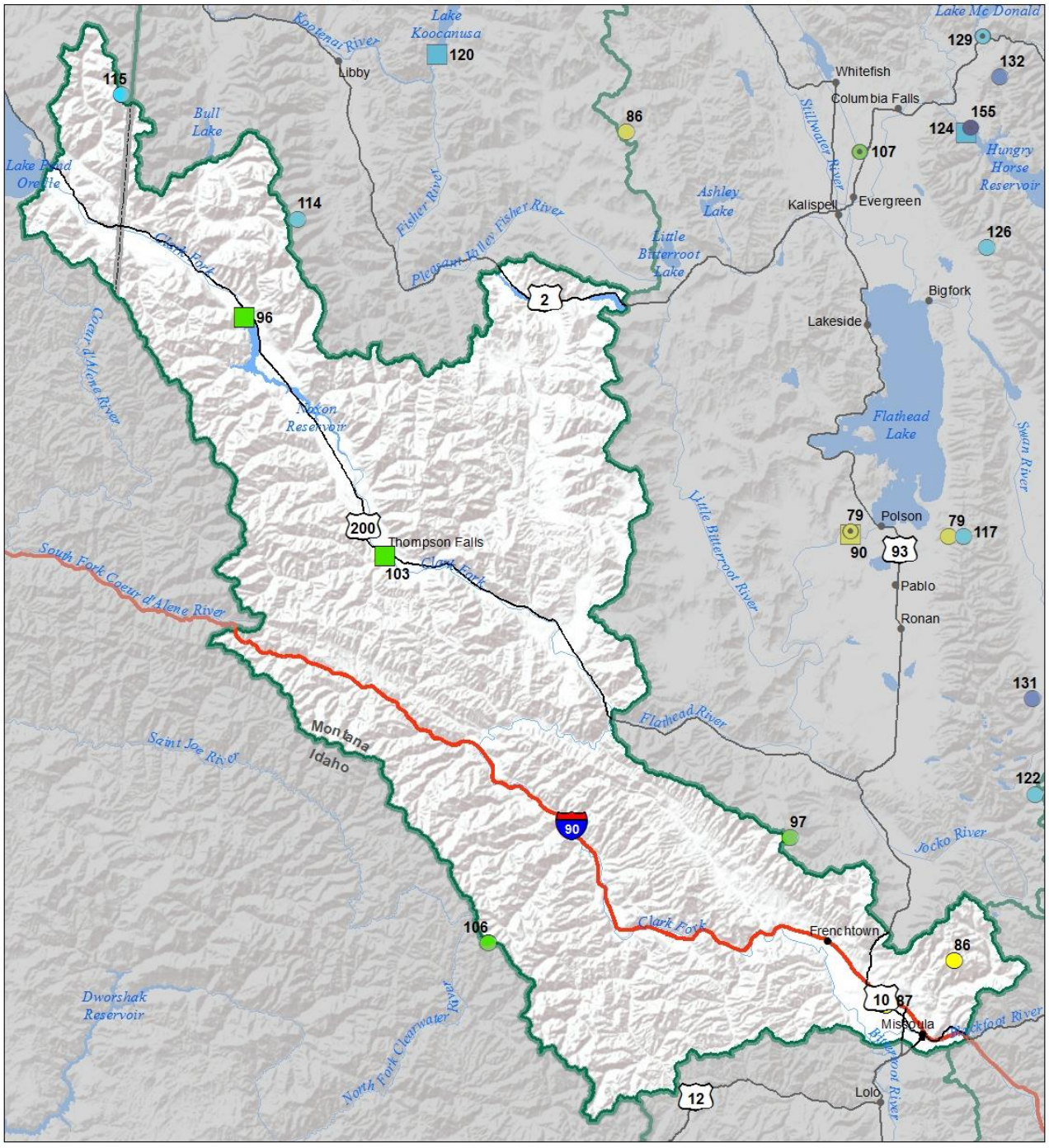
# Lower Clark Fork River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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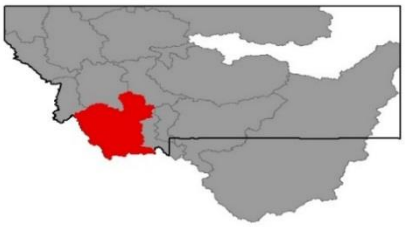
# Jefferson River Basin



Overall, snowpack is looking good for February 1st in the Jefferson River basin. Aside from the first week in January, snowfall was consistent through the month helping to keep overall basin snowpack totals above normal for this time. As usual, the deepest snowpack can be found in the Big Hole River basin in the Beaverhead Range where Darkhorse Lake SNOTEL is reporting 23.3" of snow water equivalent, which is 132% of normal for this date. All four sub-basins of the Jefferson have basin-wide snowpack totals that are above normal, but there are some areas within the Beaverhead sub-basin where snowpack is below normal. The headwaters of the River above Lima Reservoir in the southern Gravelly and Centennial Ranges have a snowpack that ranges from 63% to 94% of normal, SNOTEL sites further downstream (west and north) are reporting conditions closer to normal, or above normal. On Feb 1st about 50% to 70% of the seasonal snowpack has typically accumulated at mountain locations, meaning there is plenty of winter and spring for conditions to improve, or degrade. Overall, the snowpack is off to a good start, but there are still the critical months of March-May yet to come.

## *Jefferson River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *BEAVERHEAD* | 114% | 88% |
| *RUBY* | 123% | 68% |
| *BIGHOLE* | 133% | 79% |
| *BOULDER* | 150% | 82% |
| **Basin-Wide** | **127%** | **79%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 89% | 99% | 106% |
| Valley Precipitation | 110% | 90% | 194% |
| **Basin-Wide Precipitation** | **89%** | **99%** | **108%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

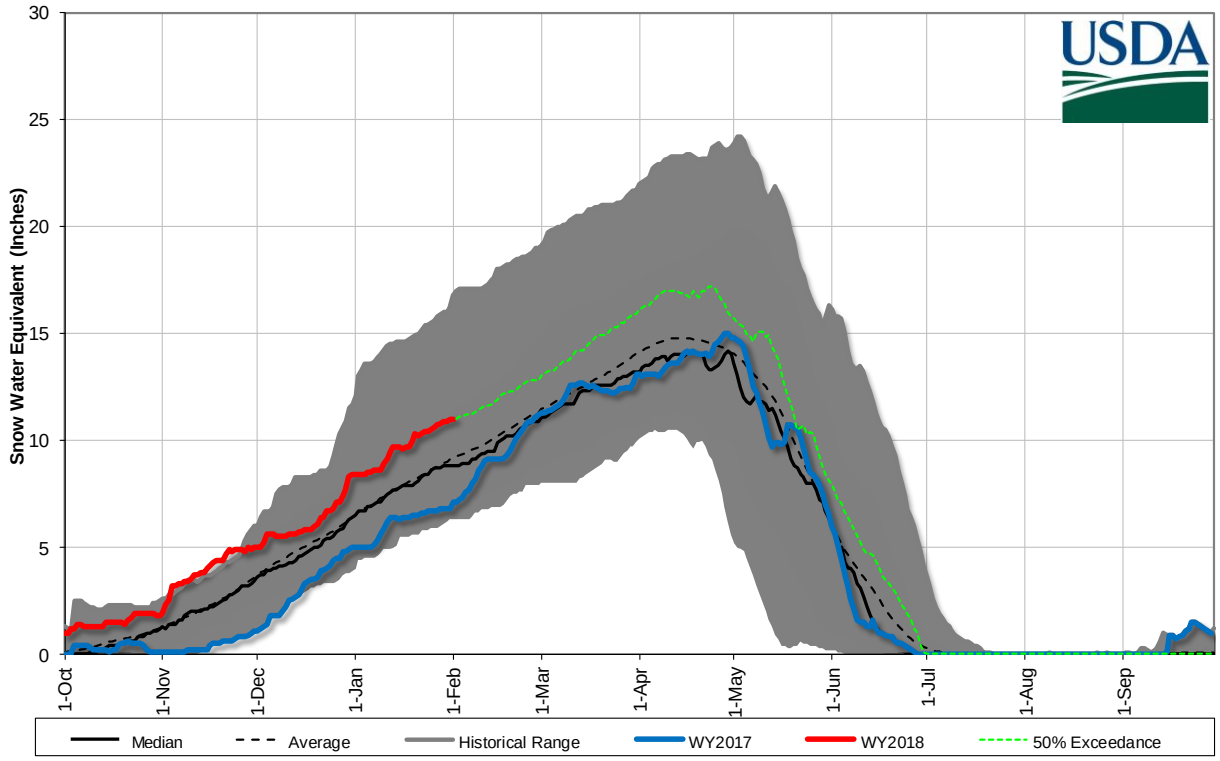
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **129%** | **59%** | **89%** |

**See Reservoir Storage Table for storage in individual reservoirs*

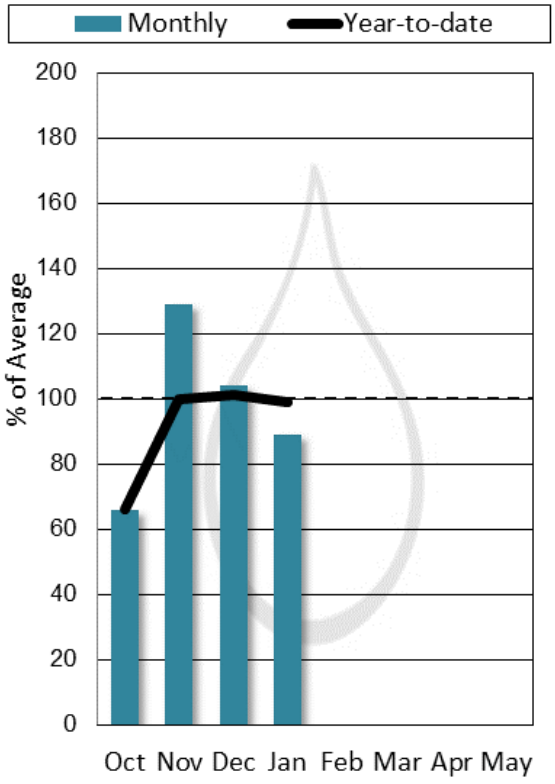
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Lima Reservoir | 53.7 | 34.5 | 29.3 | 84.0 | **183%** | **64%** |
| Clark Canyon Res | 144.1 | 96.0 | 121.7 | 255.6 | **118%** | **56%** |
| Ruby River Reservoir | 27.2 | 25.3 | 23.2 | 38.8 | **117%** | **70%** |

**Jefferson River Basin Snowpack with Non-Exceedence Projections**

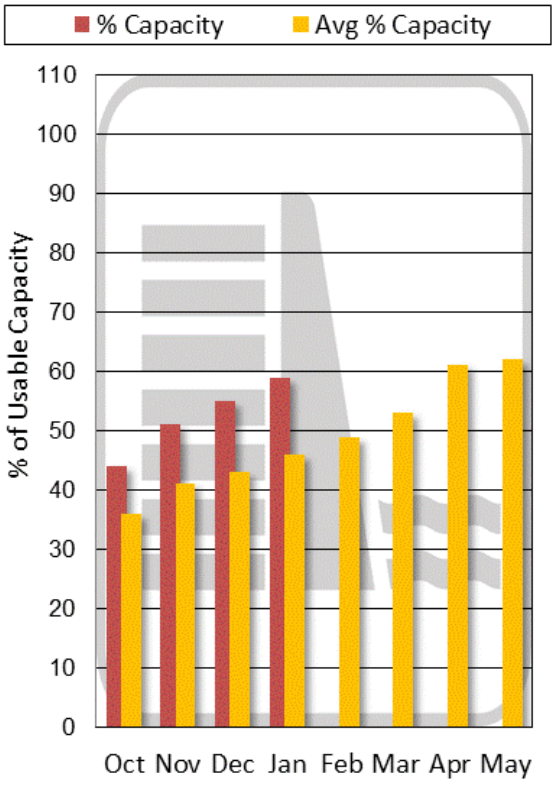
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

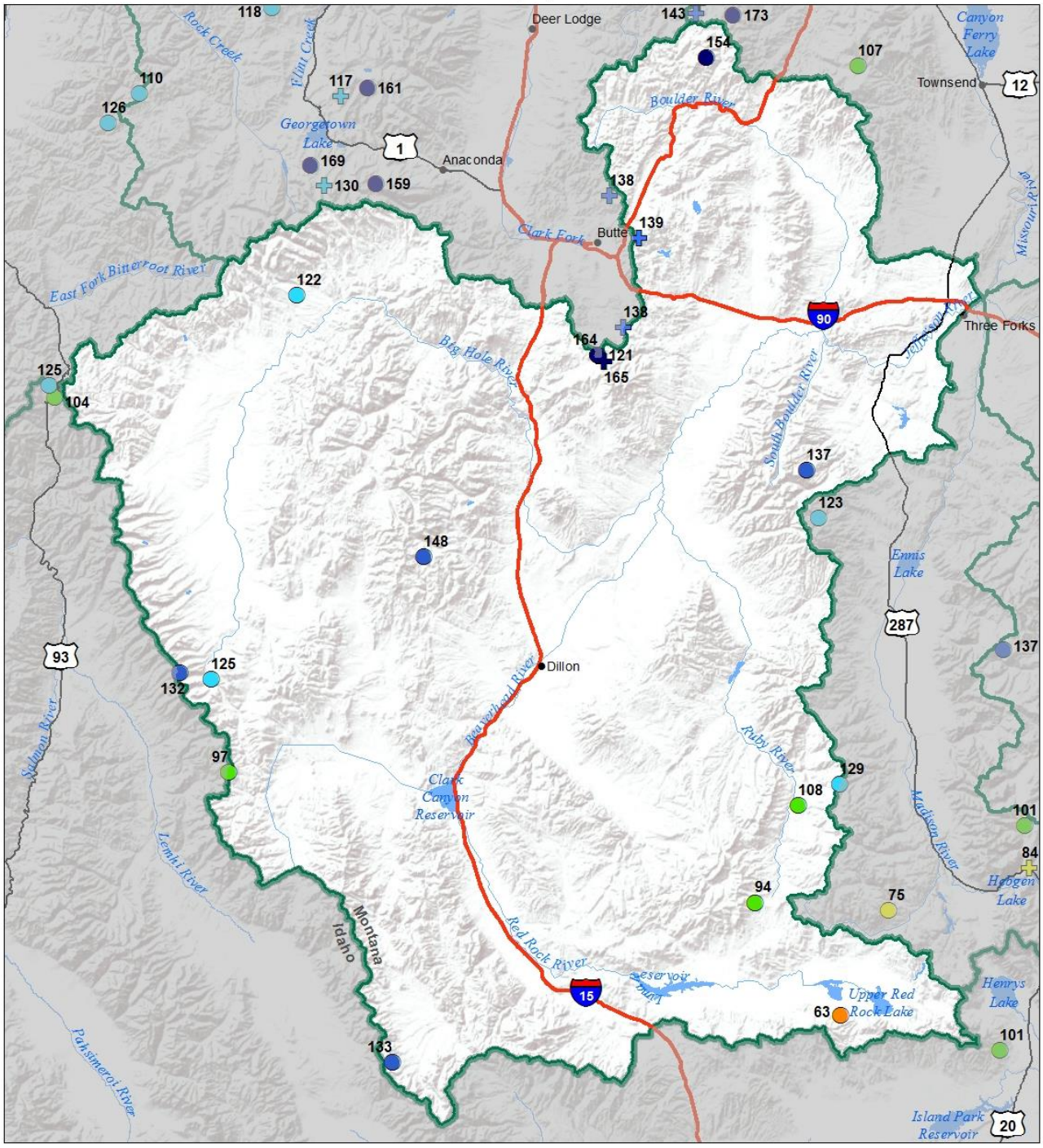



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Jefferson River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | Snowcourse | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | 0% | 91 - 110% | 0% |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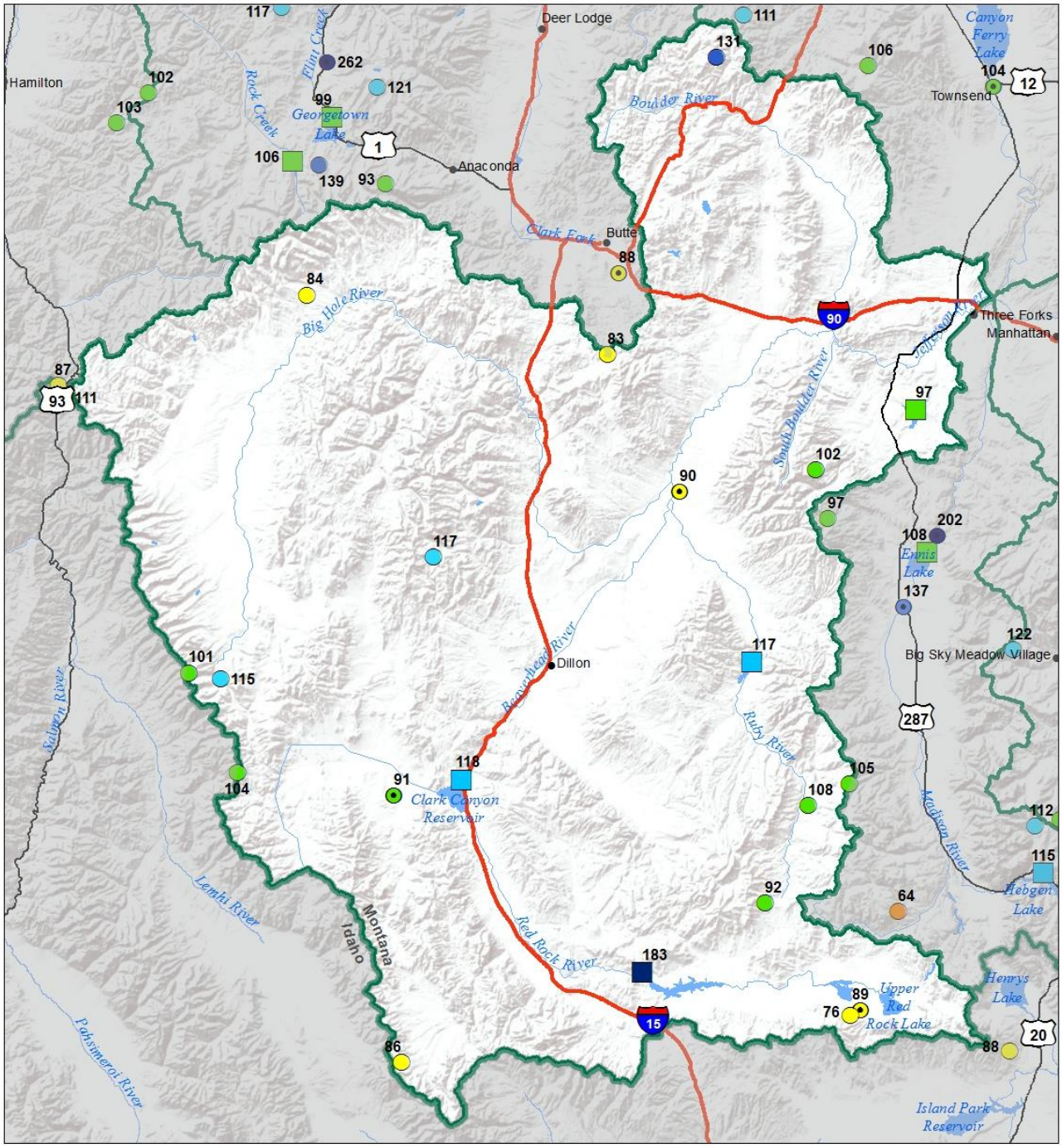
# Jefferson River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




### Precipitation
### Percent of Normal

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

### Reservoirs
### Percent of Normal

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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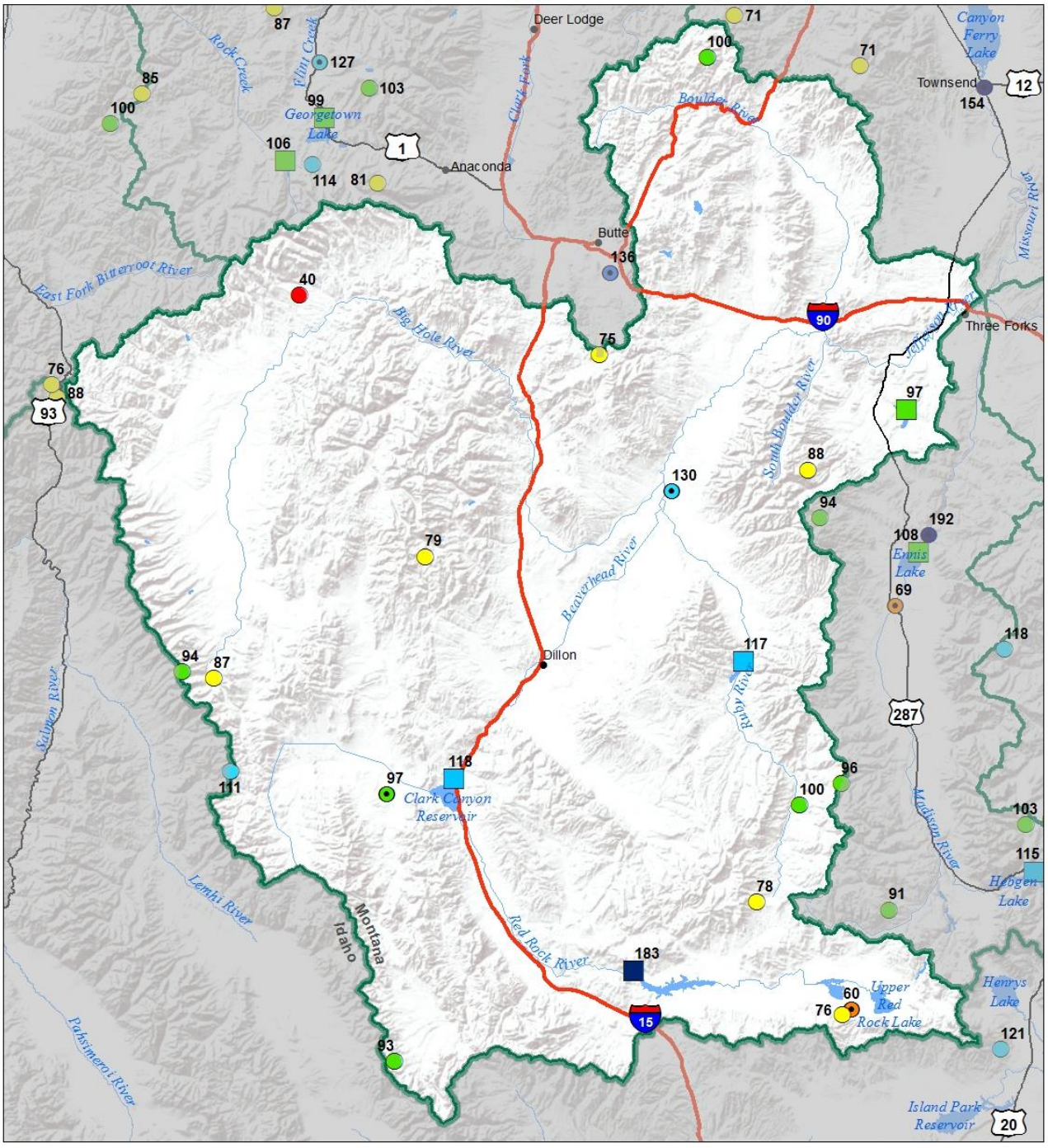
# Jefferson River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)

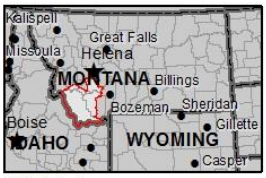



**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%

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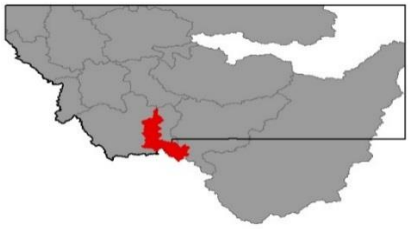
# Madison River Basin



Four months into the snow accumulation season the snowpack is in good shape on Feb 1st in the greater Madison River basin. Snowpack totals are above normal, and above last year across the basin. SNOTEL sites in the Gravelly range reported 131% of normal snowfall for January, sites above Hebgen Lake reported 150% to 170% for the month, and sites lower in the Tobacco Root range reported 72% to 104%. Most SNOTEL sites in the basin is reporting normal to above normal snowpack for Feb 1st, the Teepee Creek SNOTEL site in the southern Gravelly Range is currently 76% of normal. The snow survey staff will be visiting this site next week to confirm these readings. Being a little more than halfway through the year the snowpack is on the right track, and weather patterns have been favorable for mountain snowfall. The big months of Mar-May are yet to come and they typically determine the amount of snow water available for runoff in the spring in the Madison River basin. Only time will tell.

## *Madison River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *MADISON abv HEBGEN LAKE* | 111% | 102% |
| *MADISON blw HEBGEN LAKE* | 115% | 75% |
| **Basin-Wide** | **114%** | **86%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 110% | 102% | 125% |
| Valley Precipitation | 121% | 144% | 173% |
| **Basin-Wide Precipitation** | **111%** | **106%** | **130%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

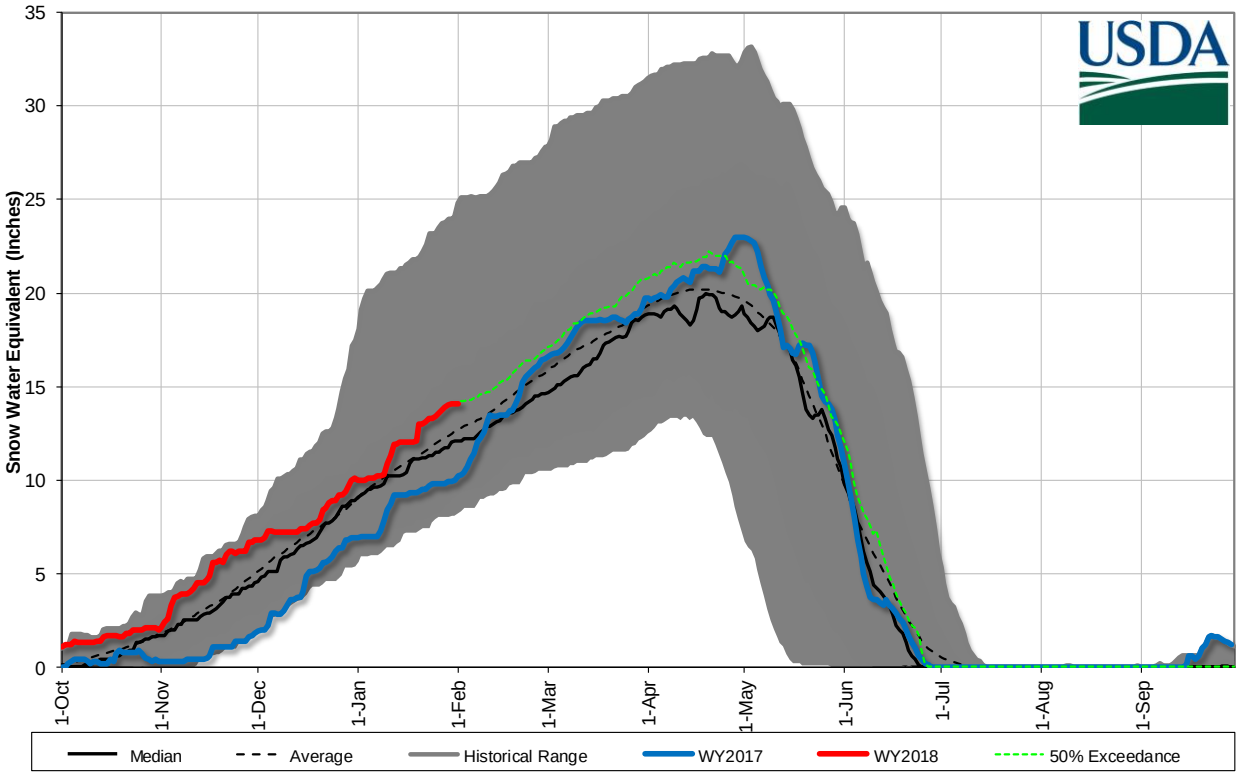
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **114%** | **84%** | **108%** |

**See Reservoir Storage Table for storage in individual reservoirs*

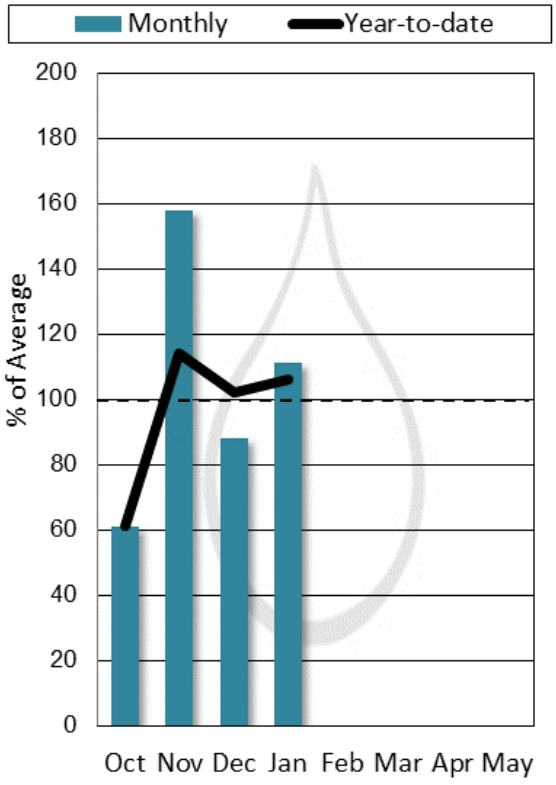
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Ennis Lake | 32.1 | 28.9 | 29.8 | 41.0 | **108%** | **78%** |
| Hebgen Lake | 320.1 | 305.2 | 279.0 | 378.8 | **115%** | **85%** |

**Madison River Basin Snowpack with Non-Exceedence Projections**

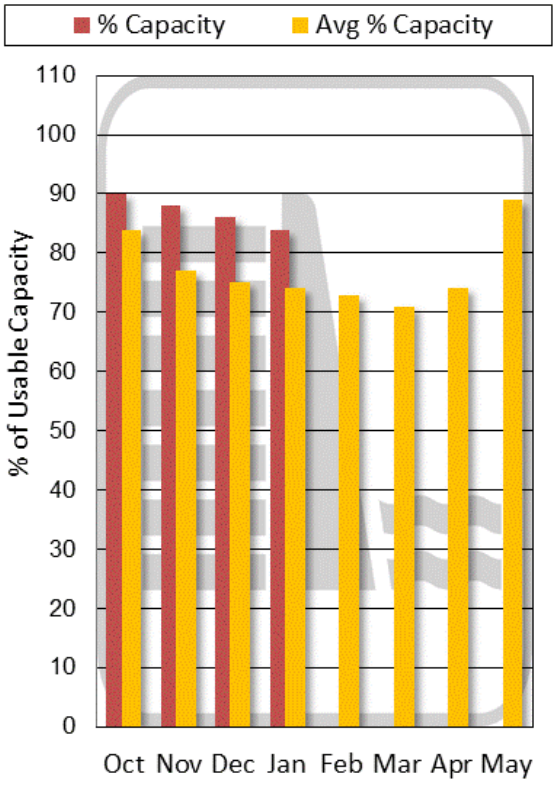
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

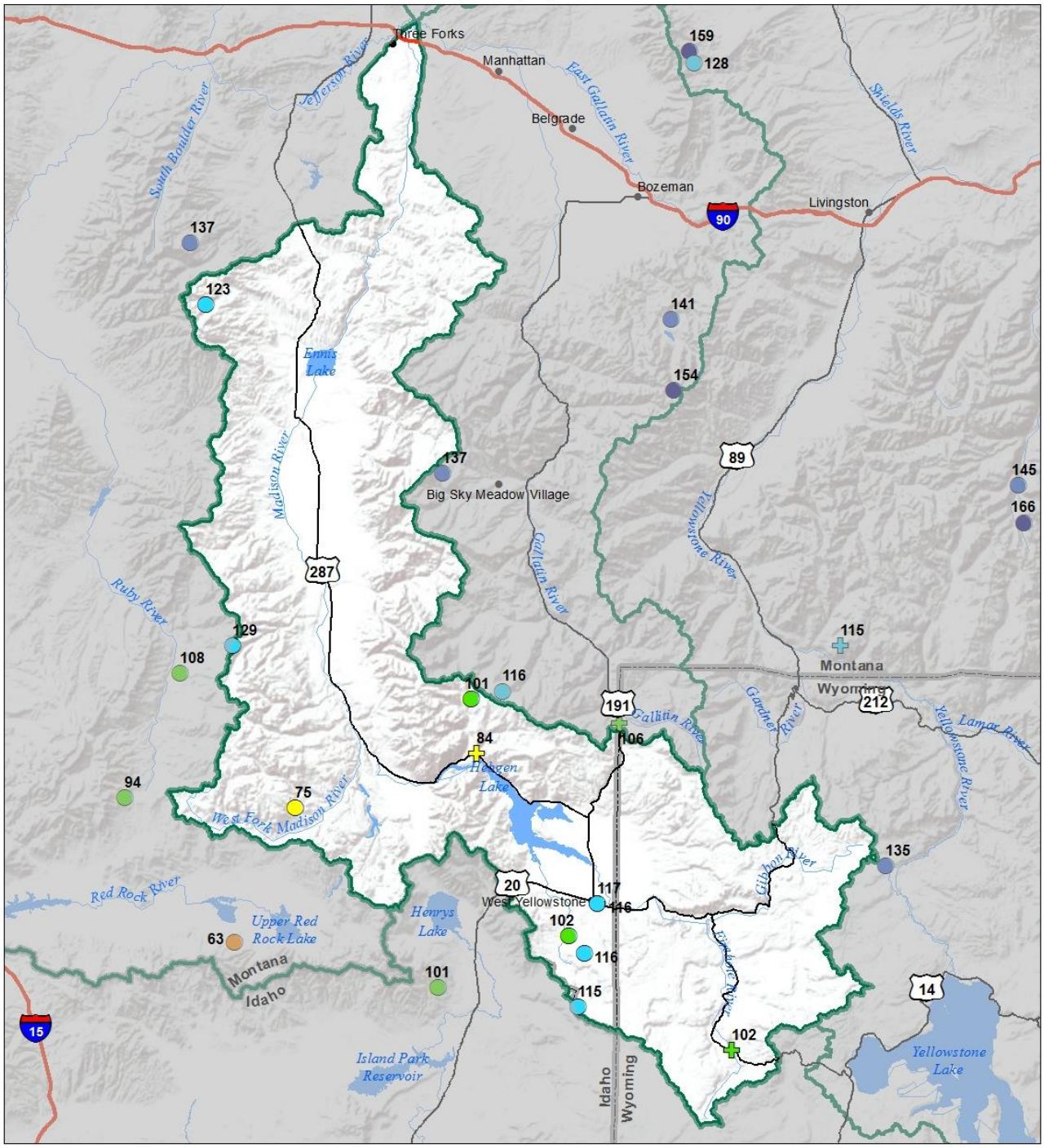



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Madison River Basin
# Snow Water Equivalent
# Percentage of Normal
# February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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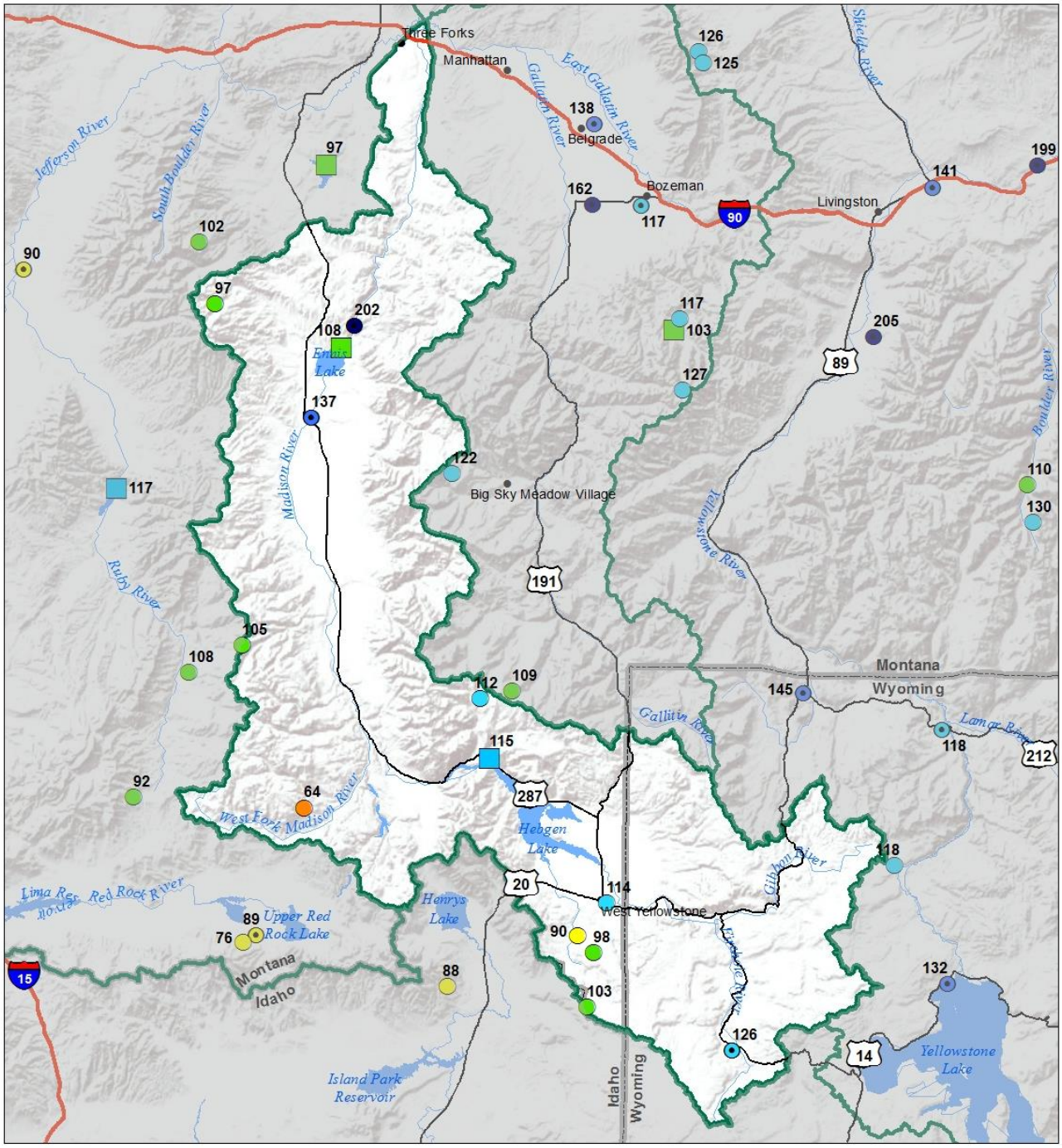
# Madison River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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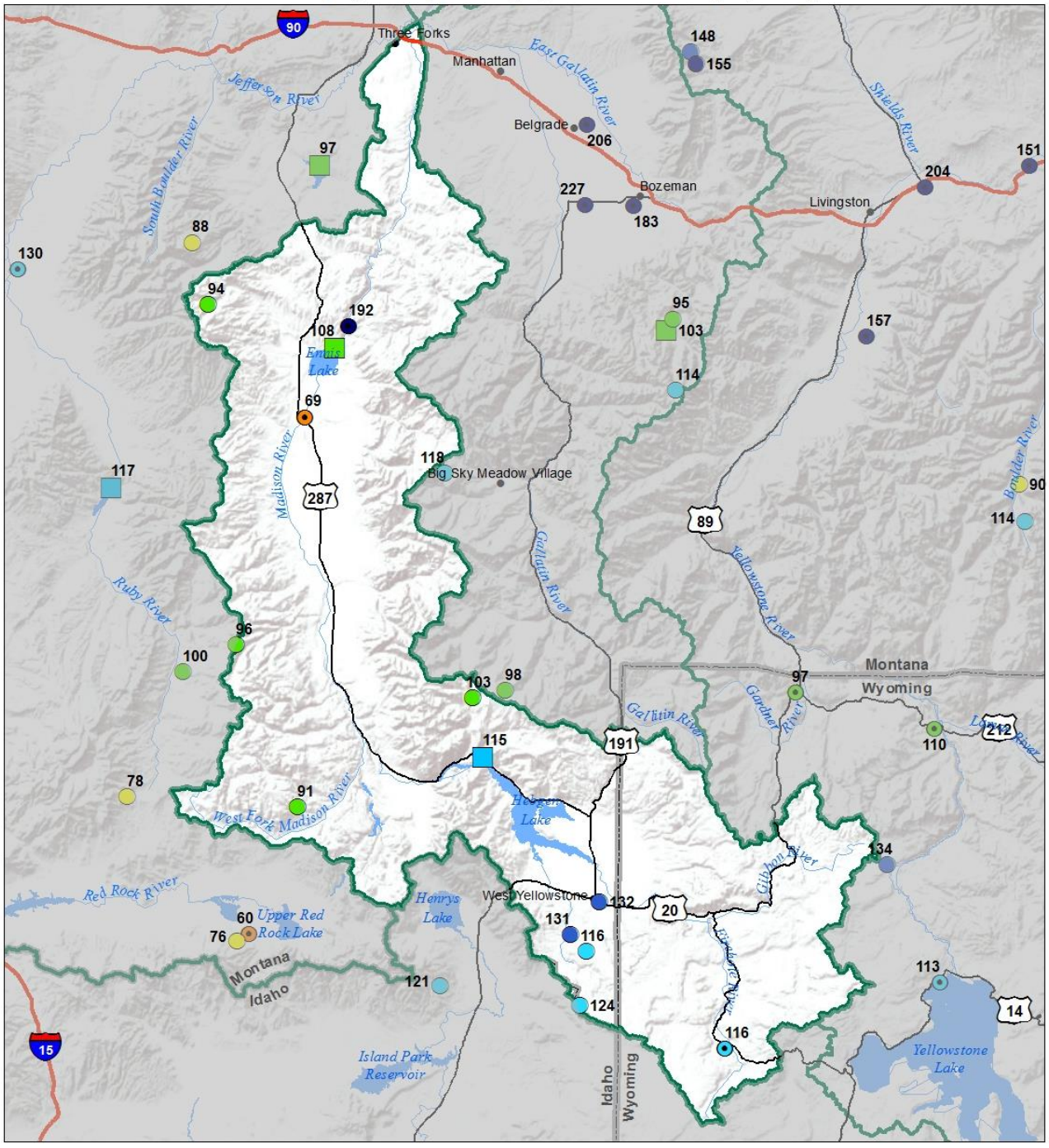
# Madison River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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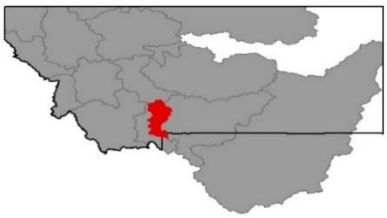


## Gallatin River Basin

Last year at this time the Gallatin River basin was flirting with the lowest basin-wide snowpack totals in the last 35 years, this year we are proud to report that the snowpack is well above normal on Feb 1st in all of the Gallatin sub-basins. Snow totals for the month of January in the Hyalite basin ranged from 125% to 171% of normal, sites in the Gallatin above Gateway ranged from 107% to 120%, and the Bridger Range reported 141% to 160% of normal. The Brackett Creek SNOTEL site in the northern Bridger Range reported the second highest monthly snow water equivalent (SWE) increase in 24 years of record during January, where 6.8" of SWE was added to the snowpack. Bridger Bowl, located south of Brackett Creek reported snowfall 17 of the 31 days in January, keeping local skiers happy. While the northern end of the Gallatin Basin was favored, snowpack totals for the month in Hyalite and the mountains feeding the Upper Gallatin also received above normal snowfall for the month. It's hard not to paint a rosy picture about snow conditions at this point, but things can, and have changed in the past between Feb 1 and when runoff occurs. March-May is when we add the bulk of the snow water to the snowpack "mountain reservoir", so there is still a lot of time for conditions to improve, or degrade. A good start is just that, a start. The weather patterns have been favorable, fingers crossed they stay that way until runoff.

### *Gallatin River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *UPPER GALLATIN* | 115% | 79% |
| *HYALITE* | 149% | 77% |
| *BRIDGER* | 145% | 77% |
| **Basin-Wide** | **129%** | **78%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 120% | 120% | 121% |
| Valley Precipitation | 192% | 125% | 136% |
| **Basin-Wide Precipitation** | **124%** | **120%** | **122%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **103%** | **54%** | **100%** |

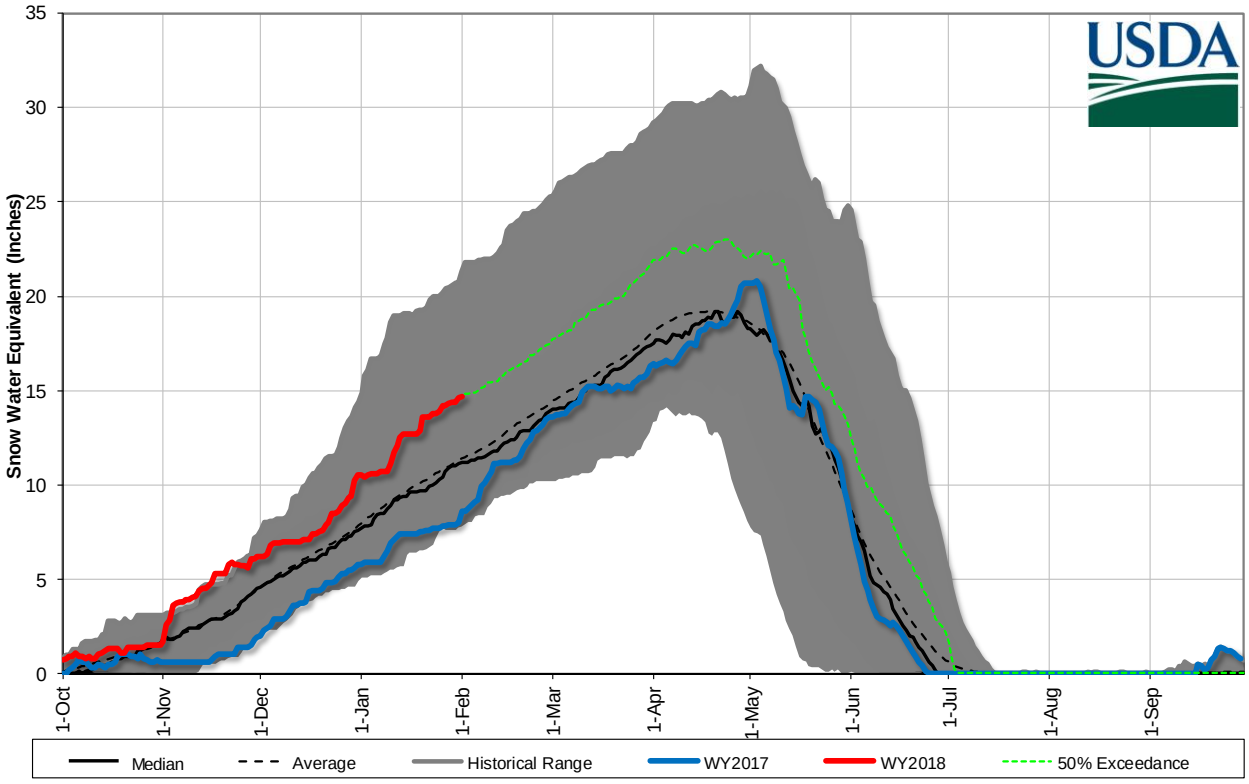
**See Reservoir Storage Table for storage in individual reservoirs*

***End of Month Storage***

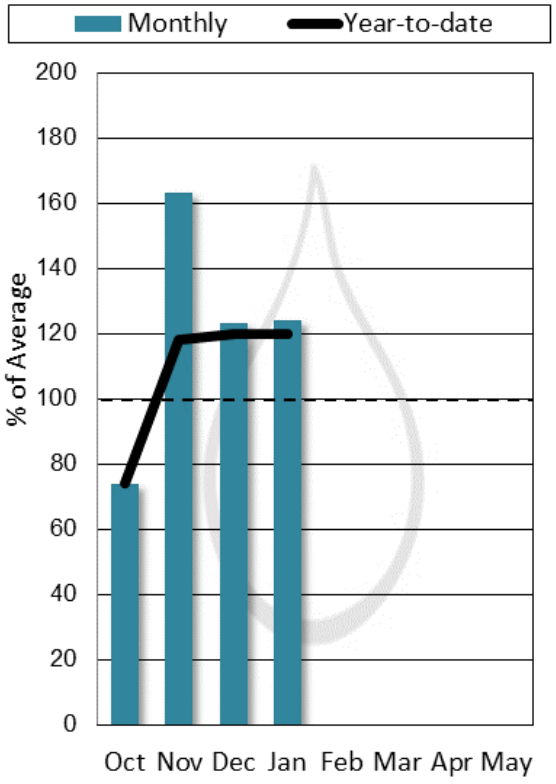
| | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Middle Creek Res | 5.5 | 5.3 | 5.3 | 10.2 | **103%** | **54%** |

**Gallatin River Basin Snowpack with Non-Exceedence Projections**

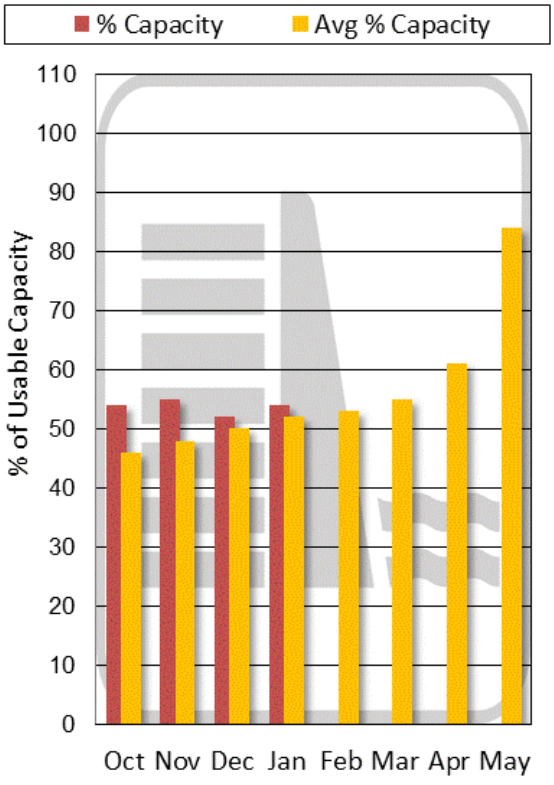
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

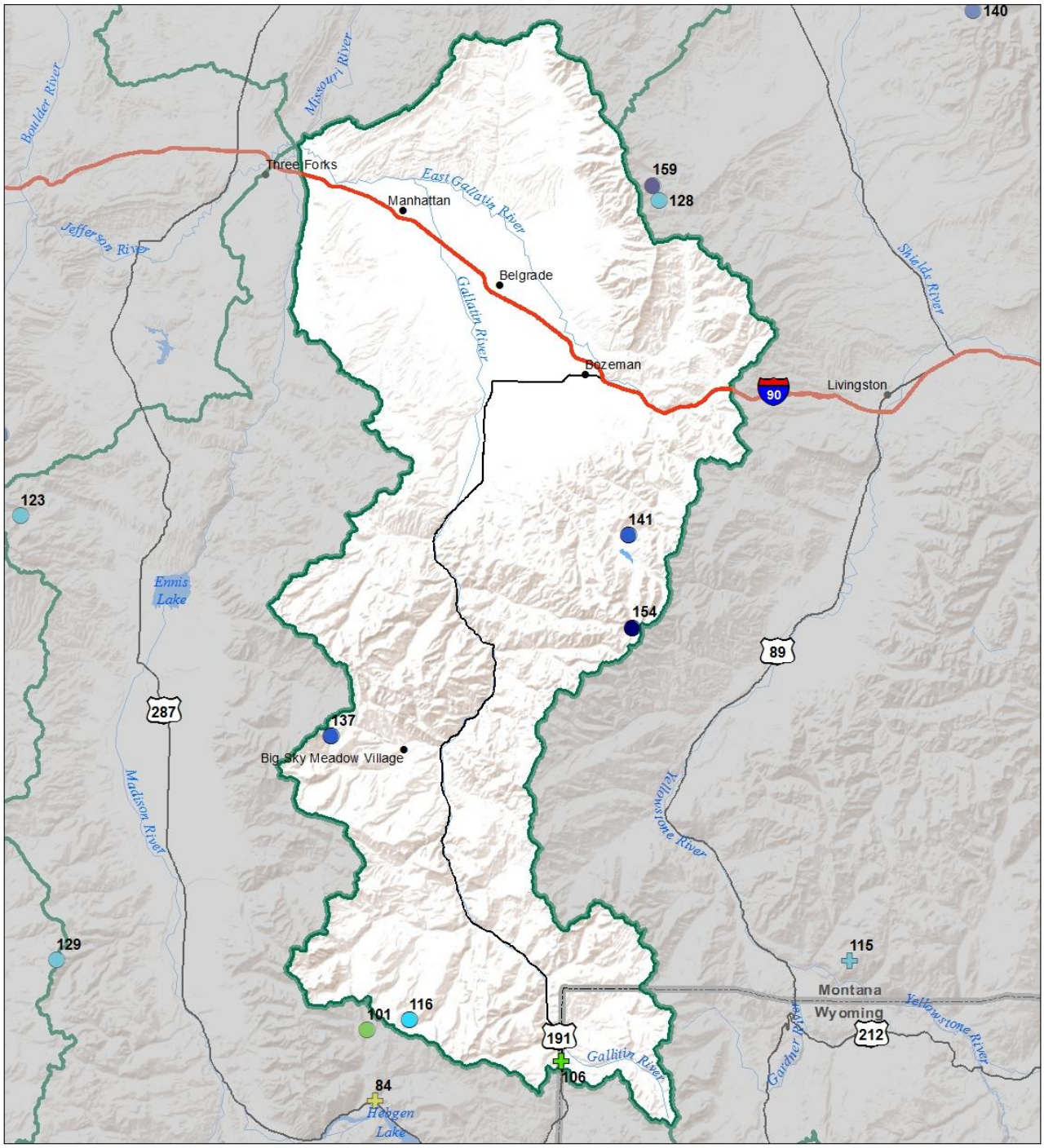



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Gallatin River Basin
# Snow Water Equivalent
# Percentage of Normal
# February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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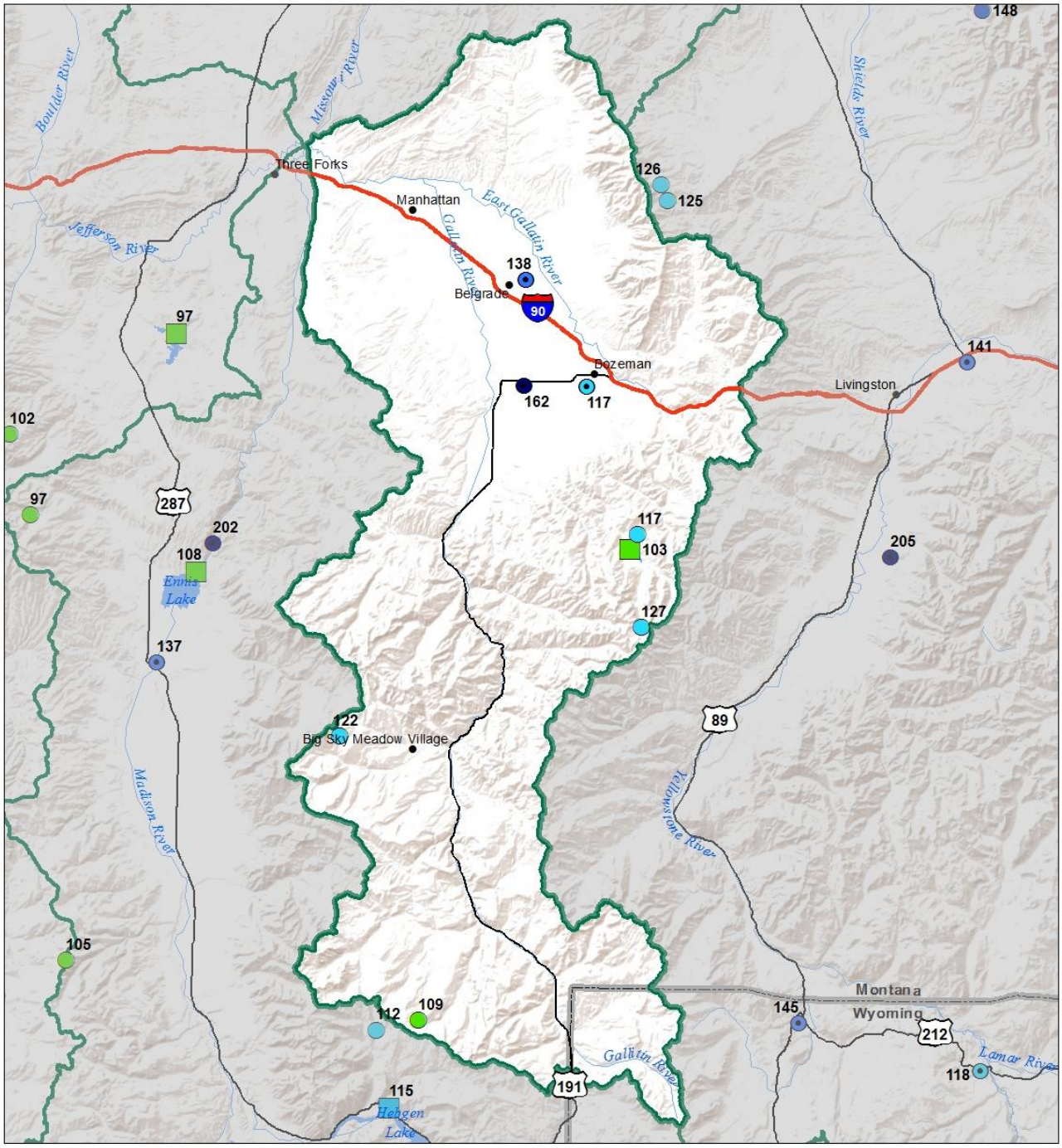
# Gallatin River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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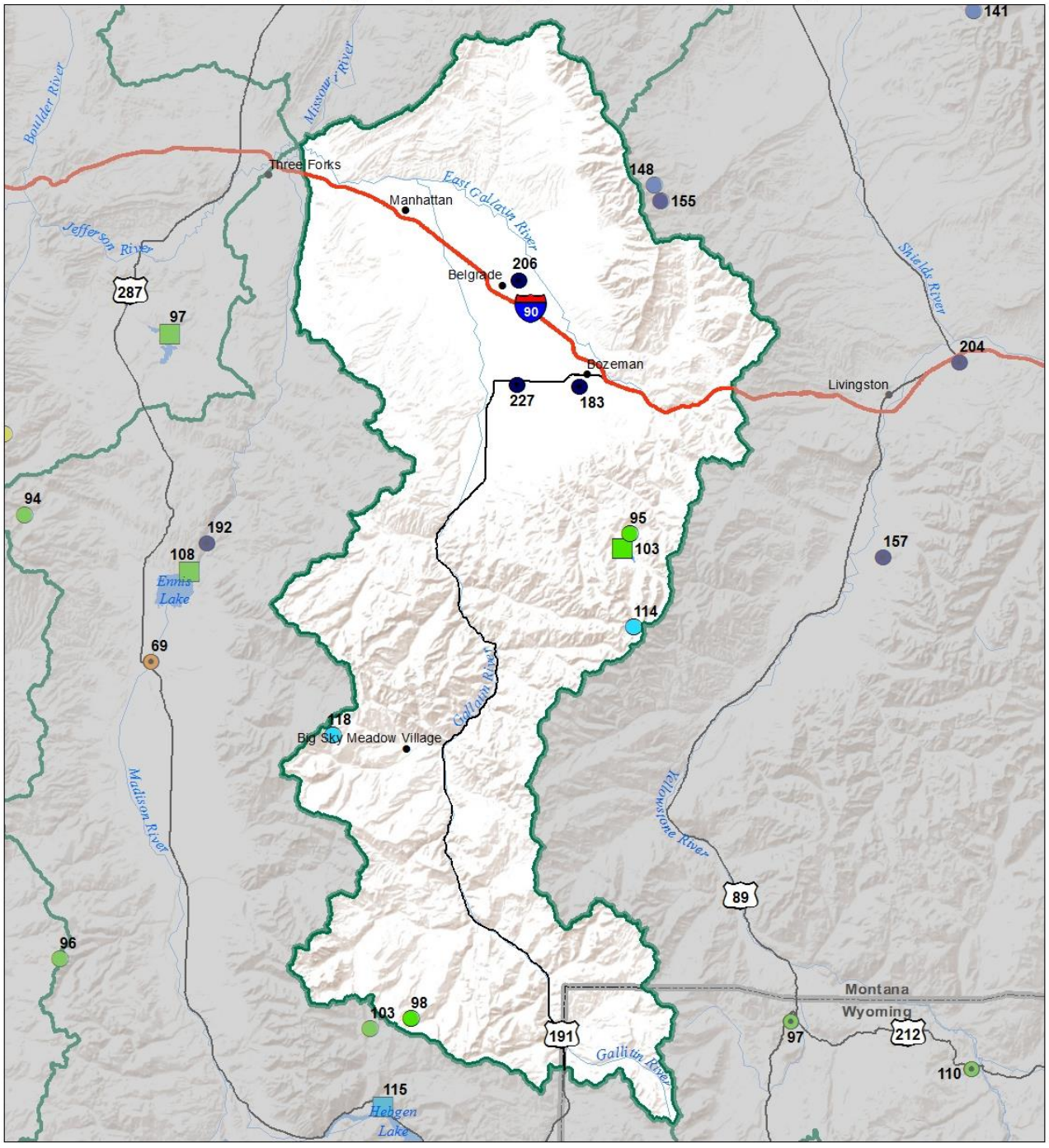
# Gallatin River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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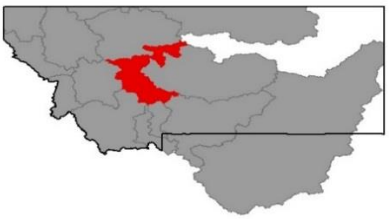


# Headwaters Mainstem (Missouri) River Basin

Since November 1st, precipitation has been abundant in the mountains around Helena and below the confluence of the Missouri. January provided consistent snowfall to the mountains with snow totals for Feb 1st at 148% of normal, compared to 85% of normal last year. Typically, about 55% to 65% of the seasonal snowpack has accumulated by this point of the year. The abundance of early season moisture this year has already surpassed the normal snowpack peak totals (which typically occurs in mid-April to early May) at two sites in the basin. Frohner Meadow SNOTEL, west of Helena, has already accumulated 8.5" of snow water equivalent (SWE) – the normal peak for the year is 7.6". Nevada Ridge SNOTEL, located west of Stemple Pass has accumulated 15.5" of SWE, the normal annual peak is 14.3". Other SNOTEL and snowcourses are reporting well above normal snowpack for this date. Snowpack is excellent for this date but the critical spring months are yet to come. If the wet weather patterns persist snowpack should provide ample runoff this spring and summer. Stay tuned.

## *Headwaters Missouri Mainstem River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *HEADWATERS MAINSTEM* | 148% | 85% |
| *SMITH-JUDITH-MUSSELSHELL* | 126% | 62% |
| *SUN-TETON-MARIAS* | 115% | 84% |
| *MAINSTEM ab FT PECK RES* | 126% | 75% |
| *MILK RIVER BASIN* | 84% | 70% |
| **Basin-Wide** | **126%** | **75%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 84% | 121% | 102% |
| Valley Precipitation | 118% | 153% | 176% |
| **Basin-Wide Precipitation** | **86%** | **123%** | **107%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

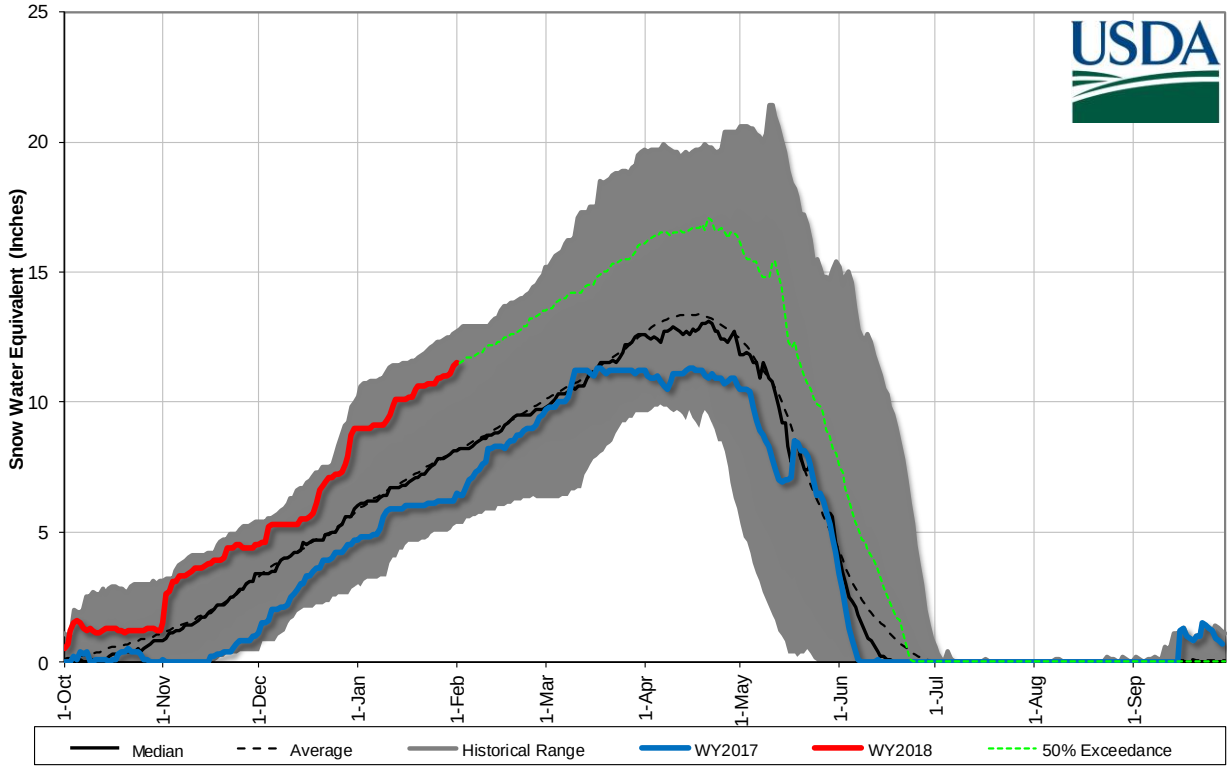
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **115%** | **80%** | **113%** |

**See Reservoir Storage Table for storage in individual reservoirs*

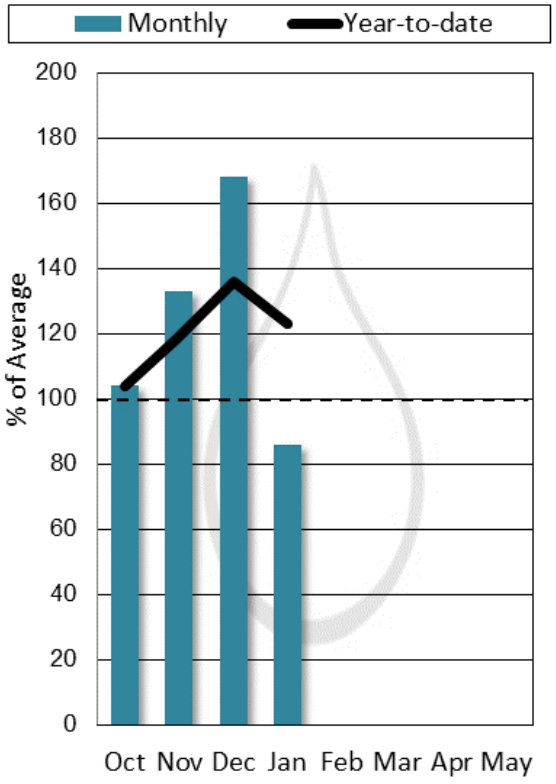
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Canyon Ferry Lake | 1468.6 | 1417.5 | 1531.0 | 2043.0 | **96%** | **72%** |
| Helena Valley Reservoir | 5.9 | 6.5 | 4.7 | 9.2 | **126%** | **64%** |
| Lake Helena | 9.9 | 9.8 | 10.9 | 12.7 | **90%** | **78%** |
| Hauser Lake & Lake Helena | 70.0 | 69.6 | 73.5 | 74.6 | **95%** | **94%** |
| Holter Lake | 80.9 | 80.9 | 80.7 | 81.9 | **100%** | **99%** |
| Fort Peck Lake | 15183.0 | 14970.4 | 12953.0 | 18910.0 | **117%** | **80%** |

**Missouri River Basin below Toston above Smith River Inflow Snowpack with Non-Exceedence Projections**

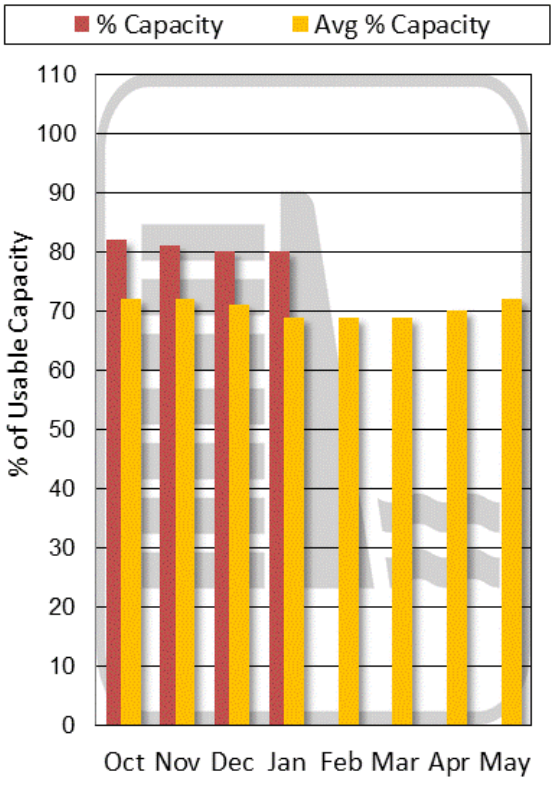
***Based on provisional SNOTEL daily data as of 2/1/2018***




## Mountain and Valley Precipitation

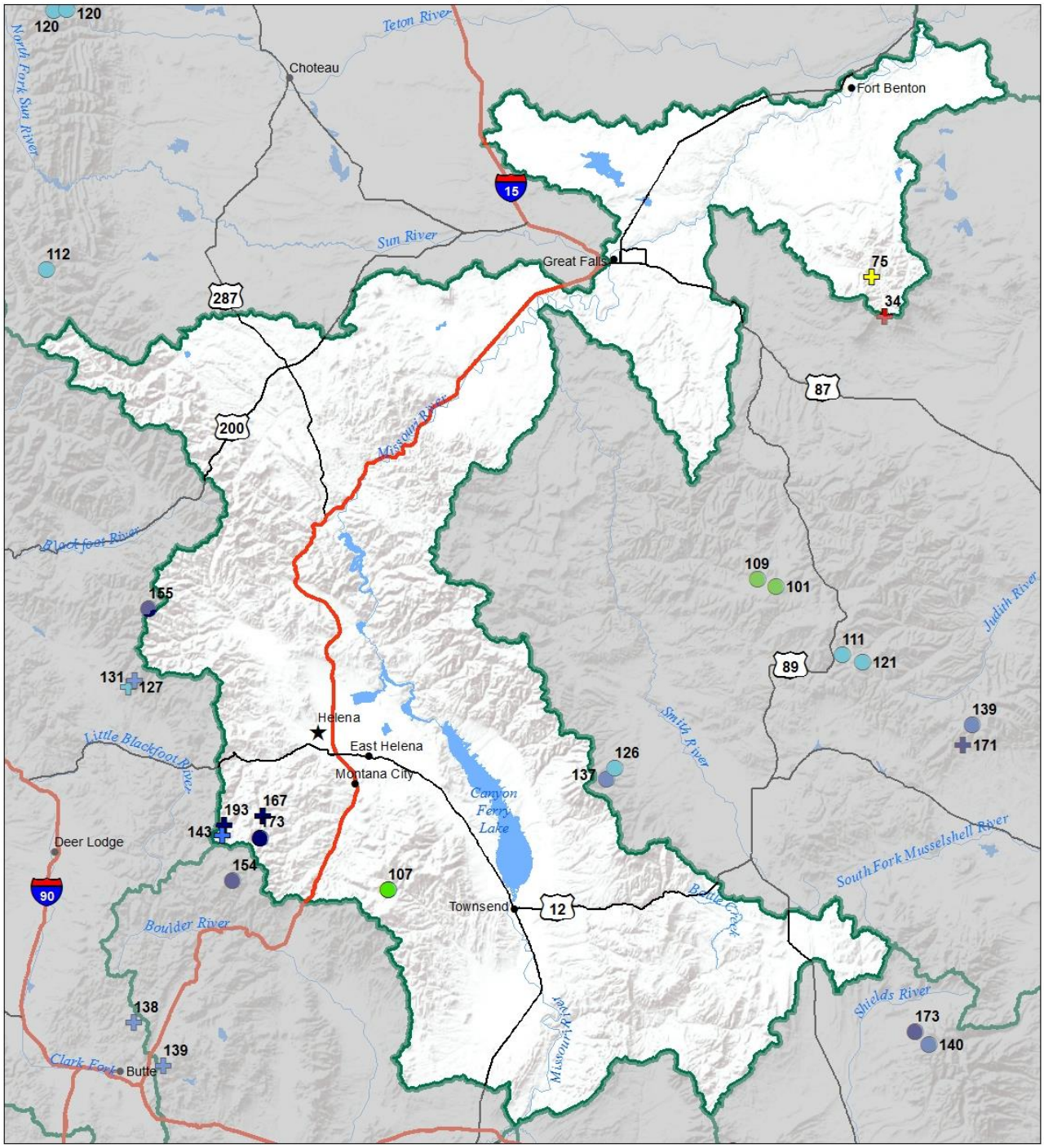



## End of Month Reservoir Storage




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Headwaters Mainstem (Missouri) River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | Snowcourse | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | 0% | 91 - 110% | 0% |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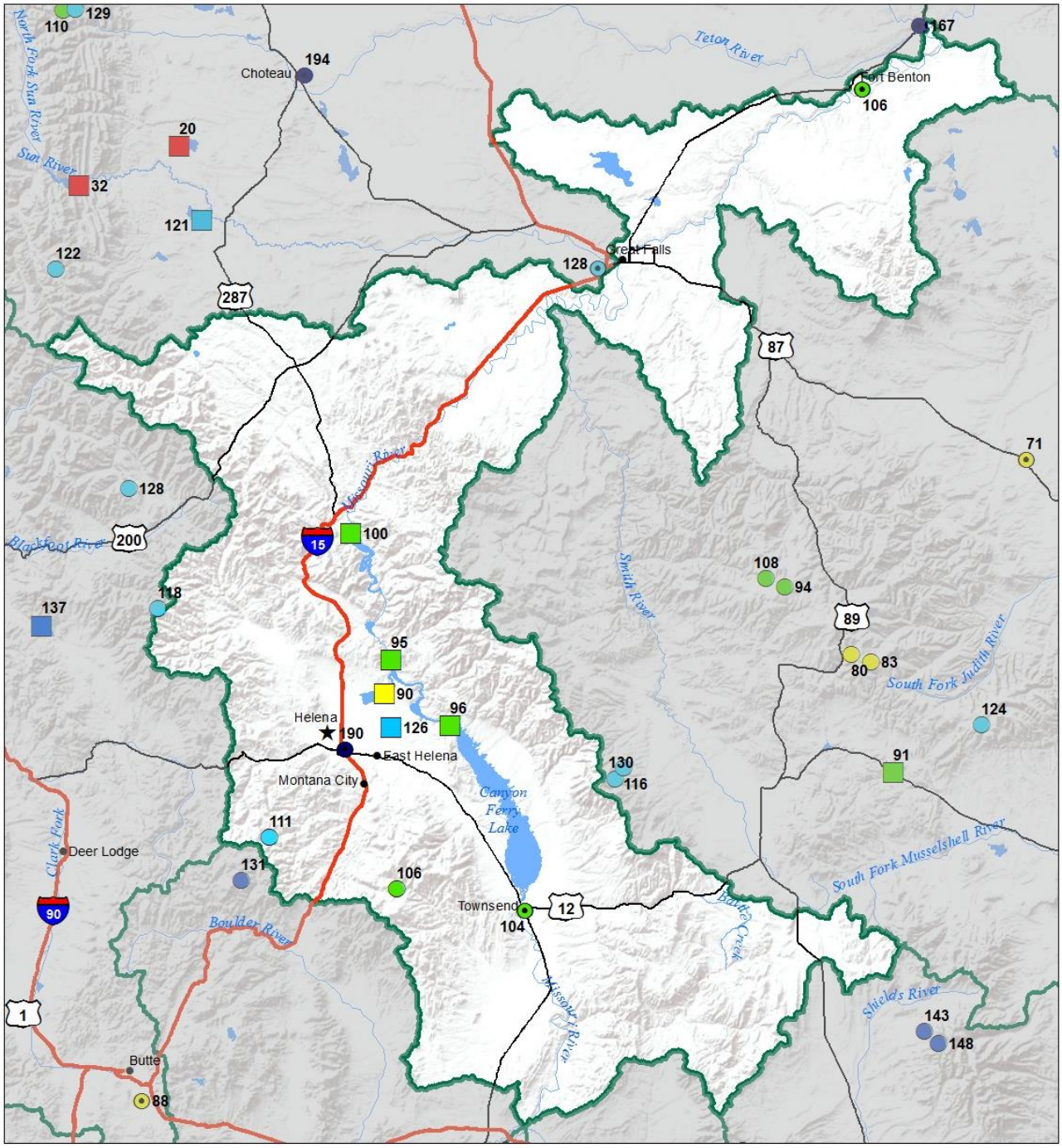
# Headwaters Mainstem (Missouri) River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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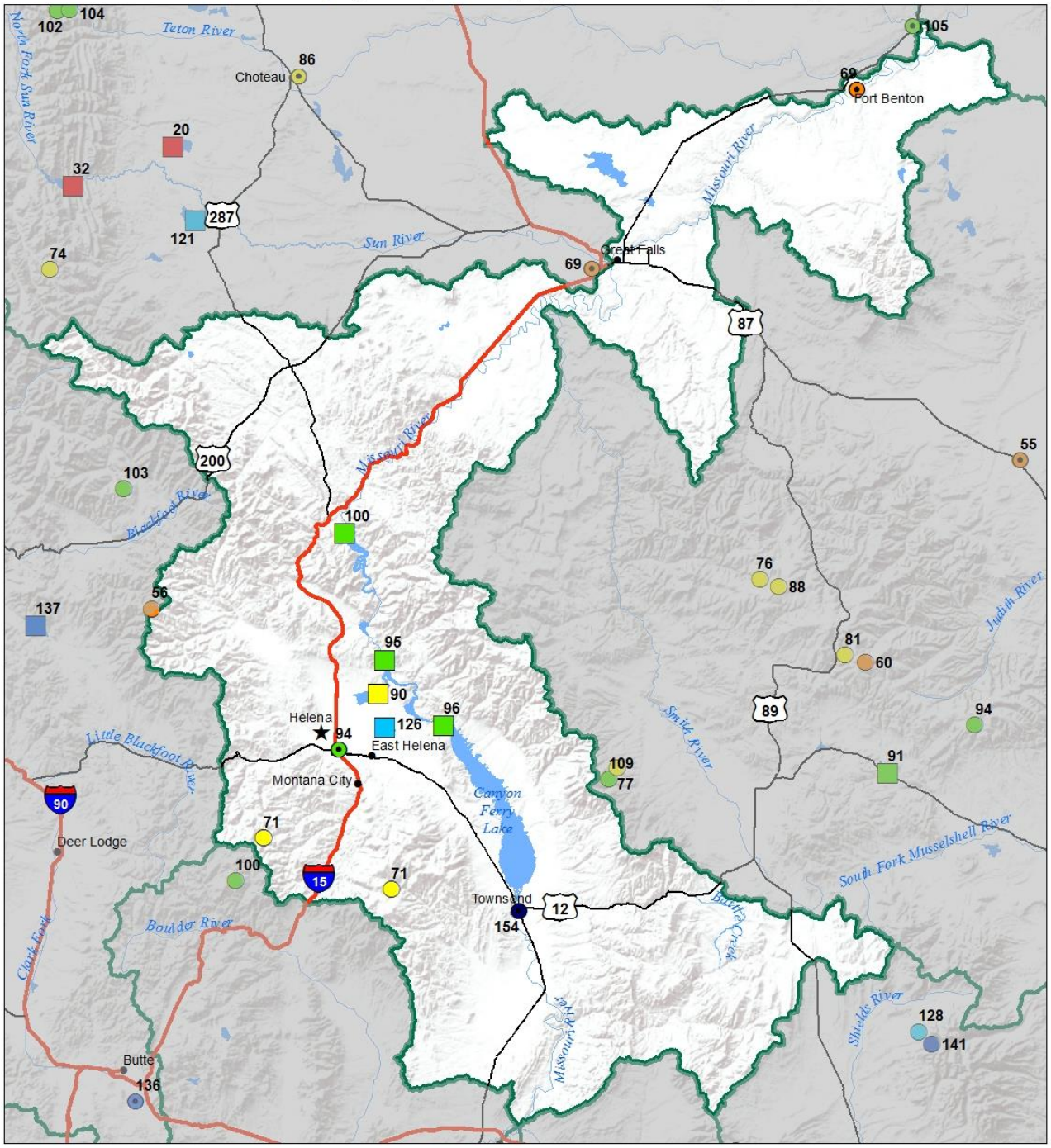
# Headwaters Mainstem (Missouri) River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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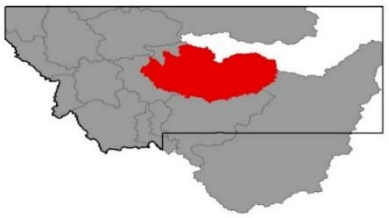
# Smith-Judith-Musselshell River Basin



A dismal start to the winter last year resulted in snowpack totals for February 1st that were record low in the Smith-Judith-Musselshell River basin. Fortunately, this year has been quite different. The seasonal snowpack grew with force at the beginning of November when a storm blanketed the basin. Consistent snowfall through the winter has helped the snowpack to remain above normal on Feb 1st at 125% of normal basin-wide. The best snowpack can be found in the Musselshell River basin, which is 157% of normal, compared to 68% of normal last year. Only the Highwood (Island) Range has snowpack which is below normal for this date (51%). It's still very early in the snow season to make predictions on streamflow volumes this spring as the basin is heavily driven by spring snowfall and valley precipitation. The months of March-May typically yield a substantial portion of the seasonal precipitation, so a close eye will be kept on totals from those months. Early winter has been generous with precipitation, let's hope this continues through spring.

## *Smith Judith Musselshell River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *SMITH* | 120% | 60% |
| *HIGHWOOD* | 51% | 48% |
| *JUDITH* | 120% | 59% |
| *MUSSELSHELL* | 157% | 68% |
| **Basin-Wide** | **126%** | **62%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 88% | 108% | 97% |
| Valley Precipitation | 138% | 140% | 173% |
| **Basin-Wide Precipitation** | **92%** | **111%** | **104%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

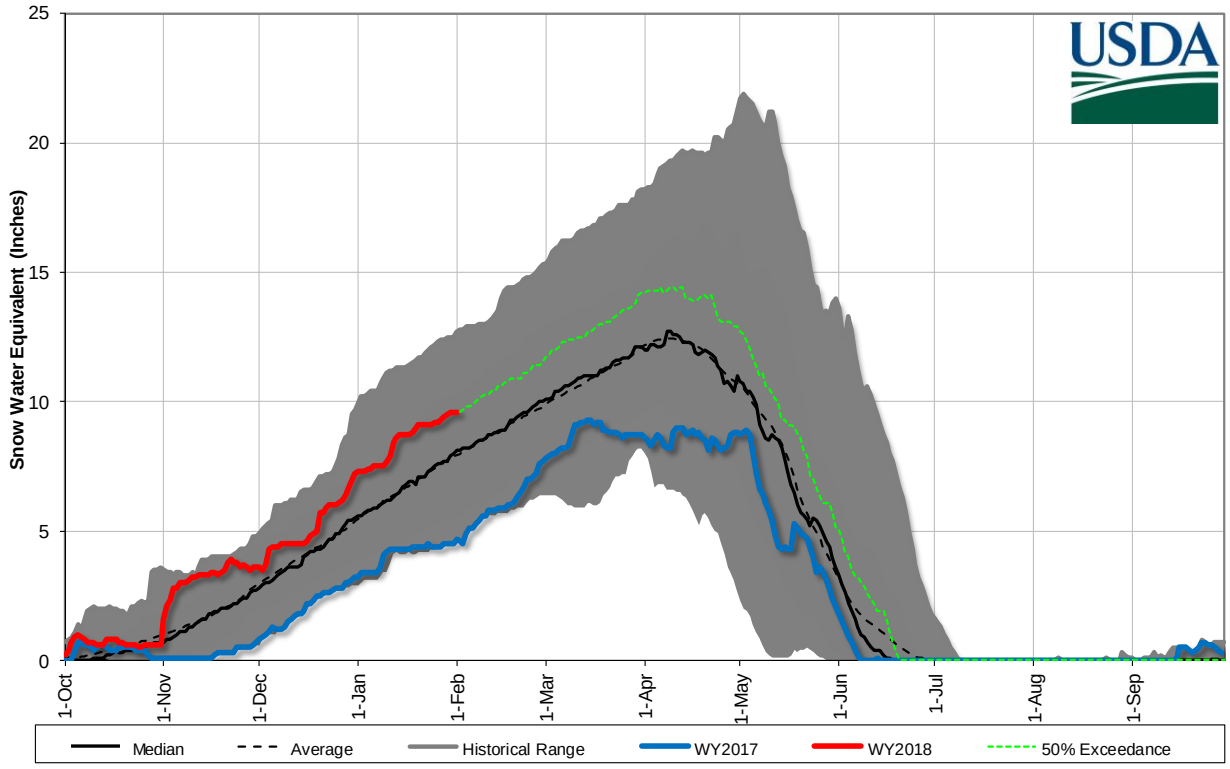
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **135%** | **73%** | **115%** |

**See Reservoir Storage Table for storage in individual reservoirs*

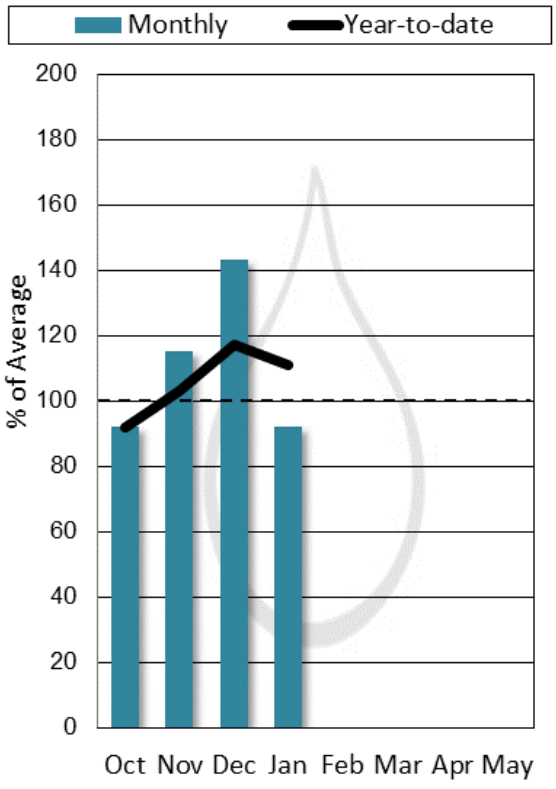
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Smith River Res | | 4.7 | 5.5 | 10.6 | | |
| Ackley Lake | | 3.6 | 2.6 | 7.0 | | |
| Bair Res | 2.6 | 3.4 | 2.9 | 7.0 | **91%** | **38%** |
| Martinsdale Res | | 5.9 | 7.7 | 23.1 | | |
| Deadman's Basin Res | 55.4 | 45.9 | 40.1 | 72.2 | **138%** | **77%** |

**Smith-Judith-Musselshell River Basin Snowpack with Non-Exceedence Projections**

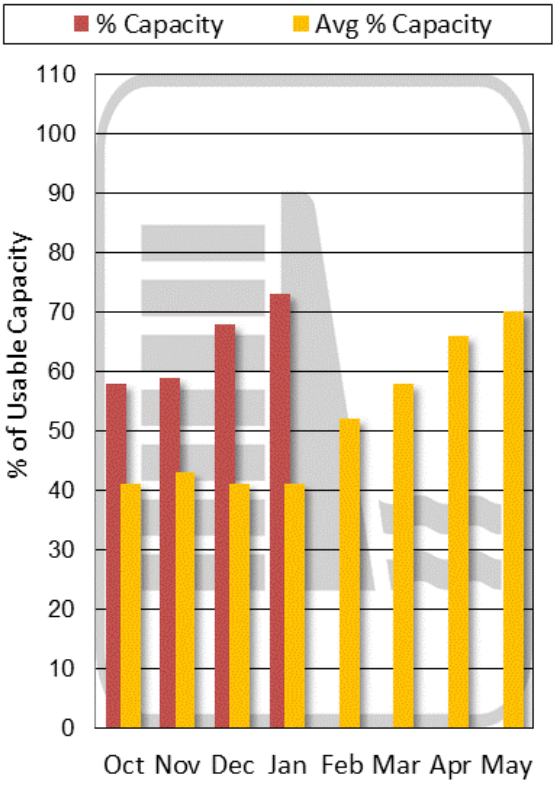
***Based on provisional SNOTEL daily data as of 2/1/2018***




## Mountain and Valley Precipitation

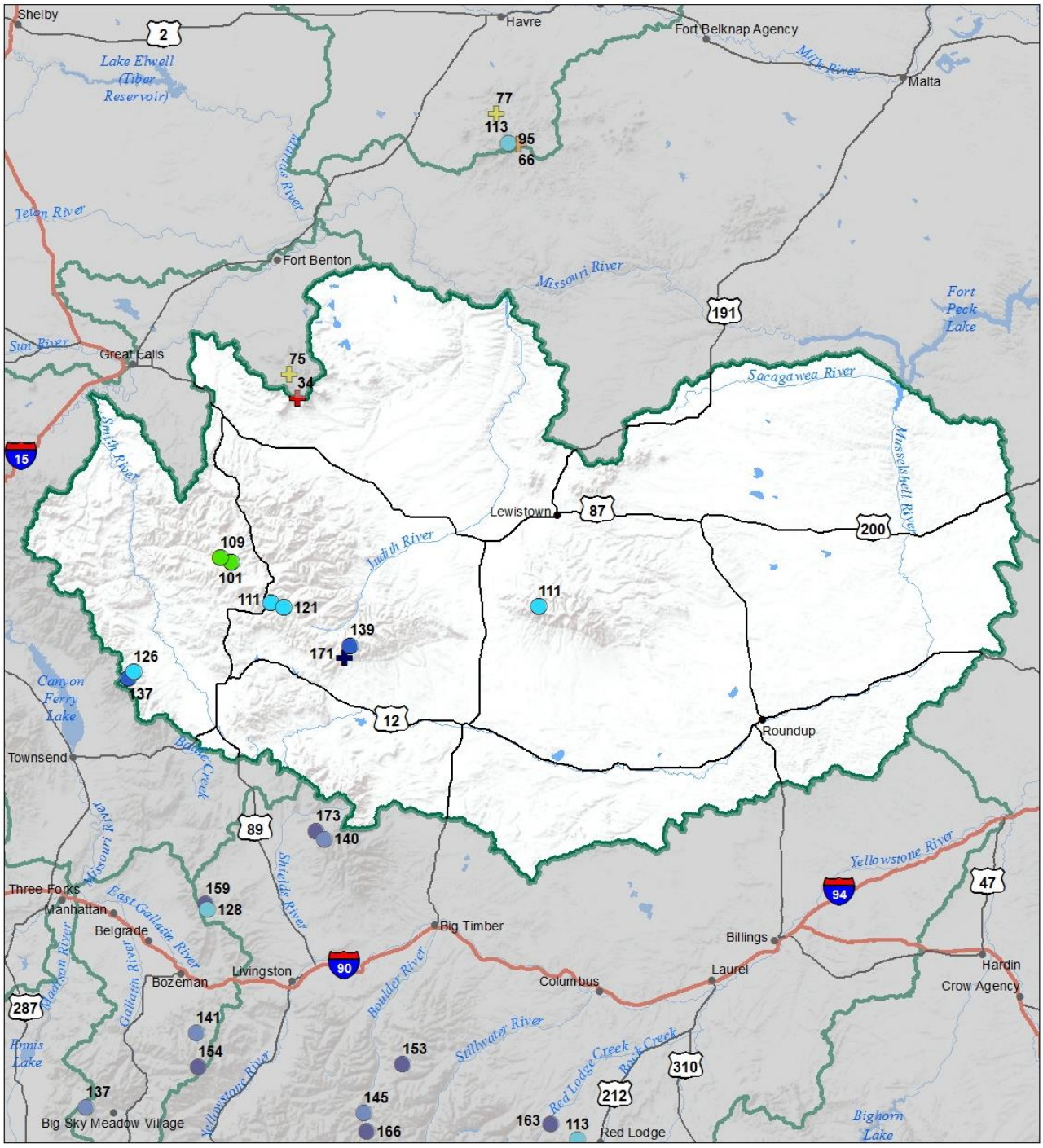



## End of Month Reservoir Storage




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Smith-Judith-Musselshell River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | Snowcourse | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | 0% | 91 - 110% | 0% |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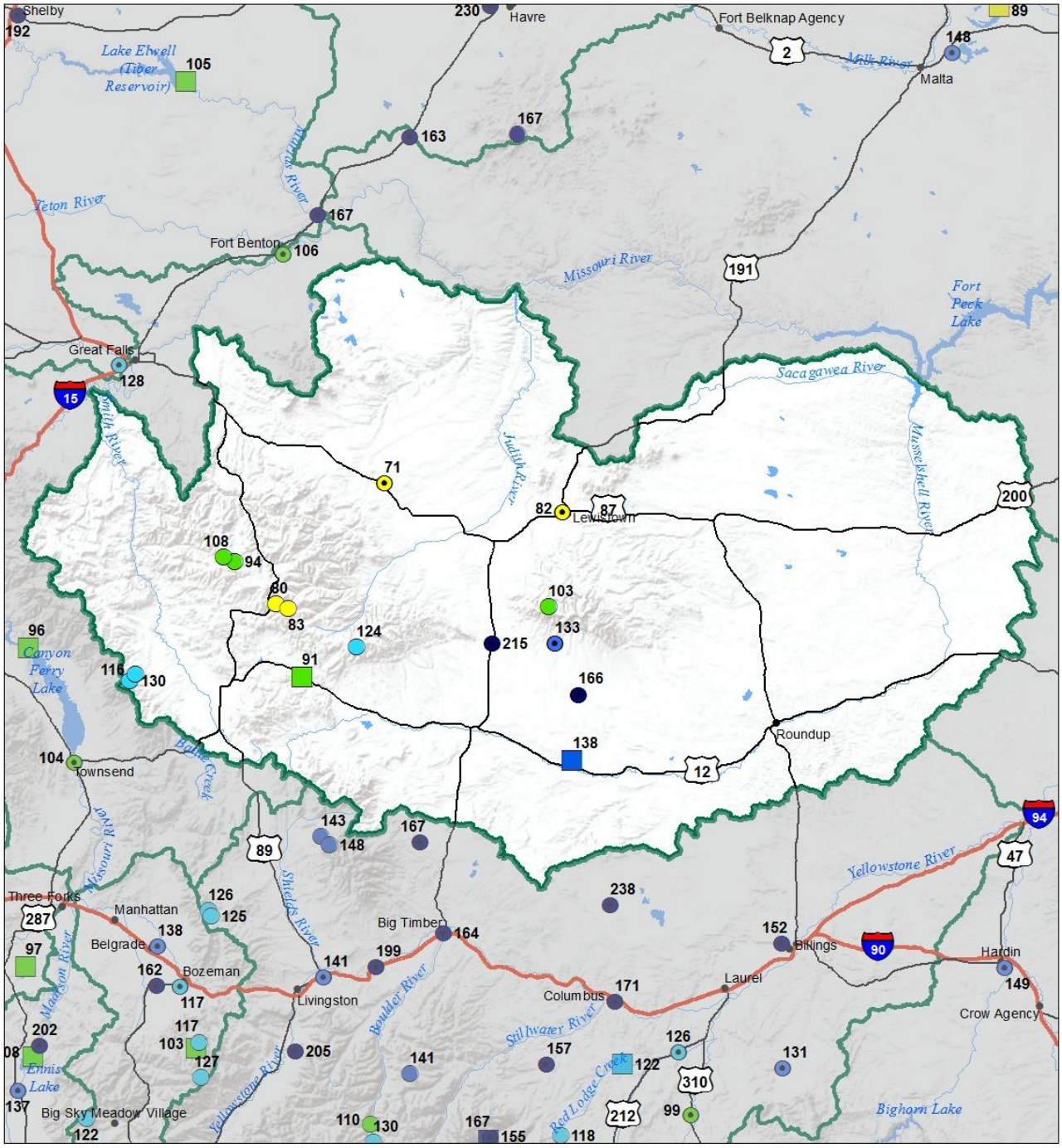
# Smith-Judith-Musselshell River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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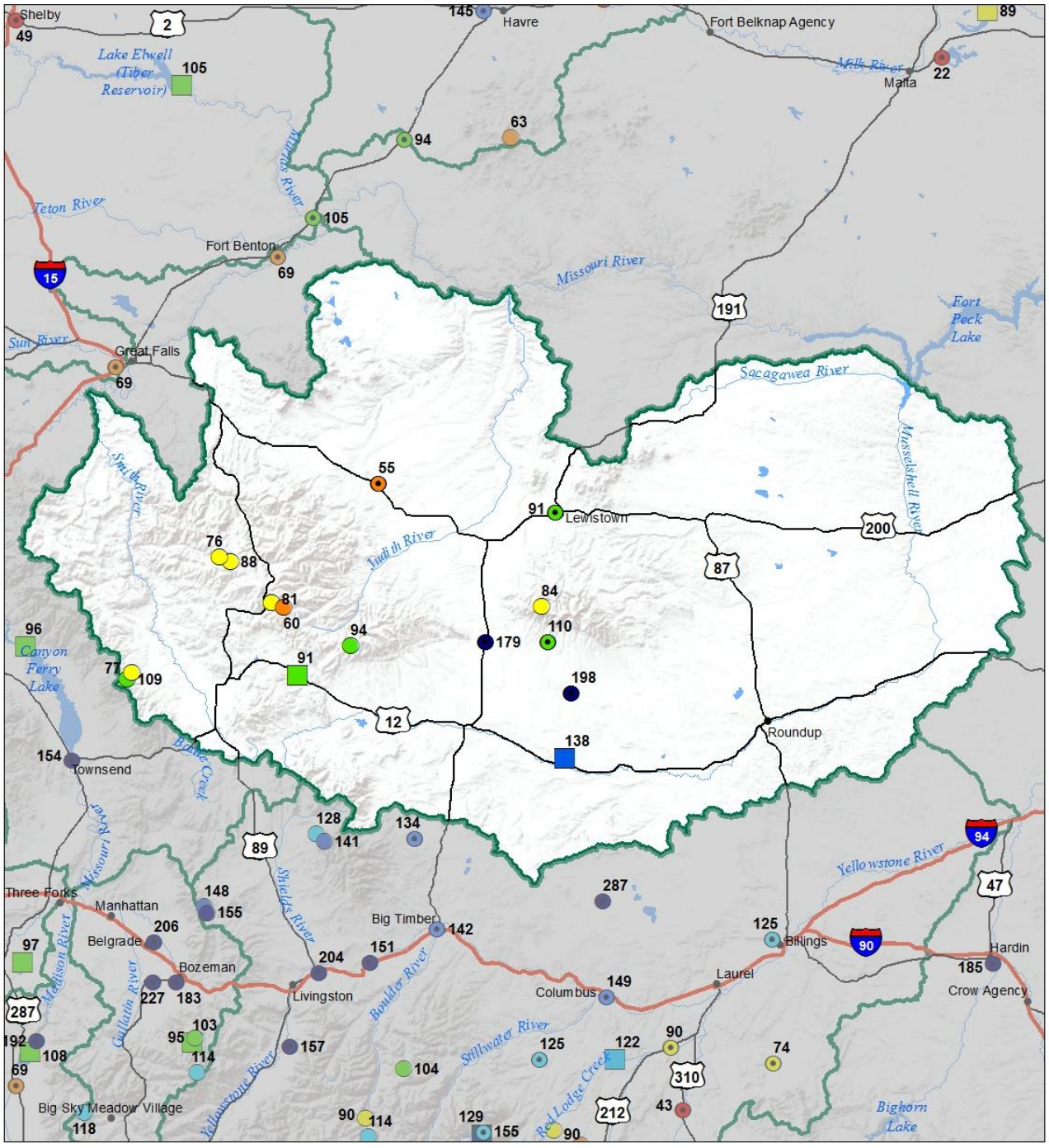
# Smith-Judith-Musselshell River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)

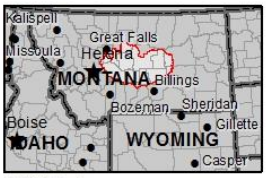



**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%

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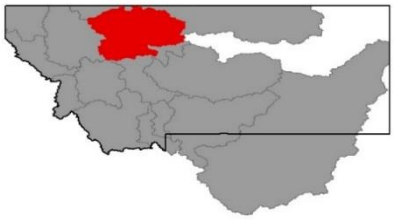
# Sun-Teton-Marias River Basin



The first week of January was relatively dry in the Sun-Teton-Marias River basin, but overall precipitation arrived consistently this month. The basin's largest storm of the month occurred during the last week. During this time Mount Lockhart SNOTEL received over 8 inches of snow (1.2 inches of SWE). Fortunately this storm was not followed by high elevation rain, like it did on much of the west side of the Continental Divide. Currently all sites within the Sun-Teton-Marias River basin have an above normal snowpack with the exception of Dupuyer Creek SNOTEL. It is also worth noting that due to weather the Badger Pass SNOTEL site was not sampled this month as planned, and because the site was destroyed by fire in October the snow water equivalent value was estimated for February 1st. Overall, the basin wide snowpack in the Sun-Teton-Marias River basin is above normal, which is much better than last year at this time.

## *Sun-Teton-Marias River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *SUN* | 118% | 79% |
| *TETON* | 114% | 90% |
| *MARIAS* | 112% | 82% |
| **Basin-Wide** | **115%** | **84%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 96% | 119% | 104% |
| Valley Precipitation | 45% | 172% | 197% |
| **Basin-Wide Precipitation** | **94%** | **122%** | **109%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

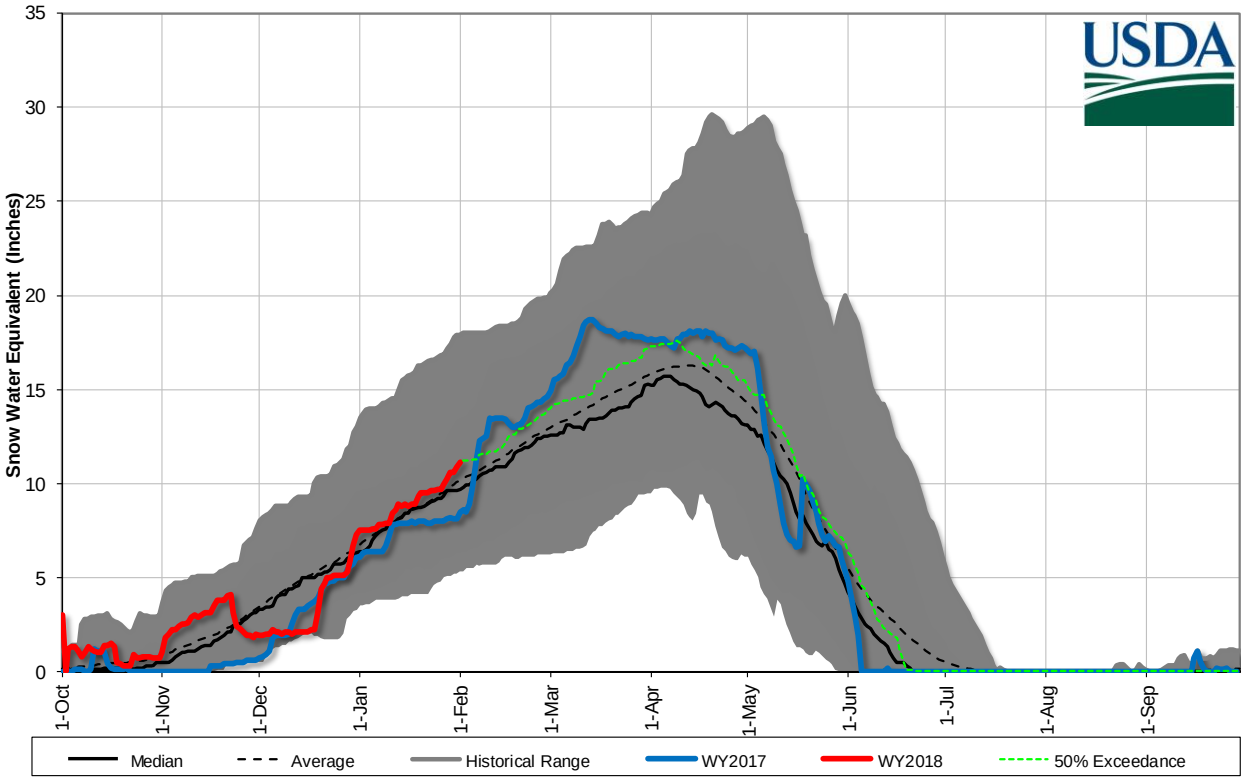
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **100%** | **52%** | **97%** |

**See Reservoir Storage Table for storage in individual reservoirs*

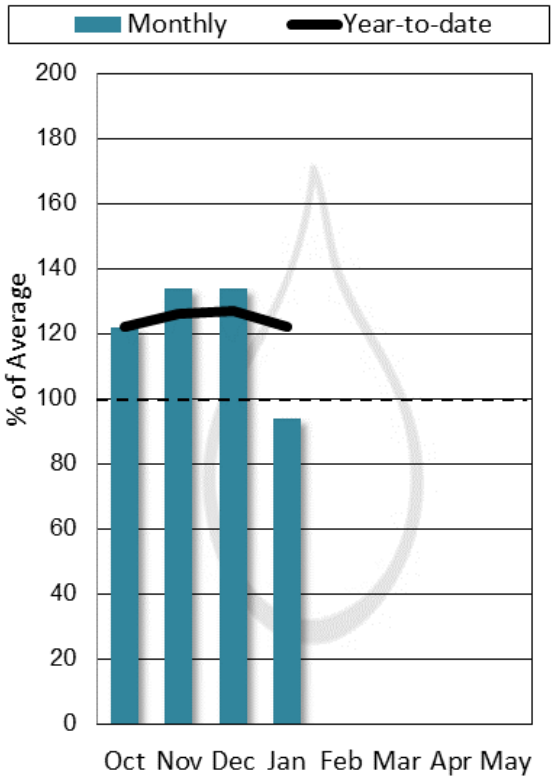
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Gibson Res | 12.6 | 31.8 | 39.9 | 99.1 | **32%** | **13%** |
| Pishkun Res | 3.5 | 4.5 | 17.5 | 32.0 | **20%** | **11%** |
| Willow Creek Res - Augusta | 27.7 | 27.7 | 22.9 | 32.2 | **121%** | **86%** |
| Lower Two Medicine Lake | 11.0 | 10.3 | 8.2 | 11.9 | **134%** | **92%** |
| Four Horns Lake | | 12.5 | 10.2 | 19.2 | | |
| Swift Res | 17.3 | 11.9 | 15.3 | 30.0 | **113%** | **58%** |
| Lake Frances | 53.2 | 37.9 | 57.5 | 112.0 | **92%** | **47%** |
| Lake Elwell (Tiber) | 736.4 | 711.6 | 700.8 | 1347.0 | **105%** | **55%** |
| Nilan Reservoir | | 5.8 | 6.3 | 11.0 | | |

**Sun-Teton-Marias River Basin Snowpack with Non-Exceedence Projections**

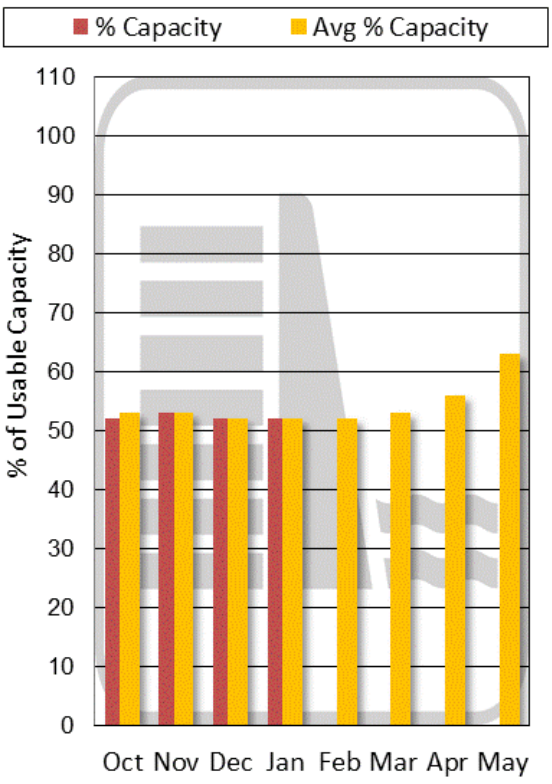
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

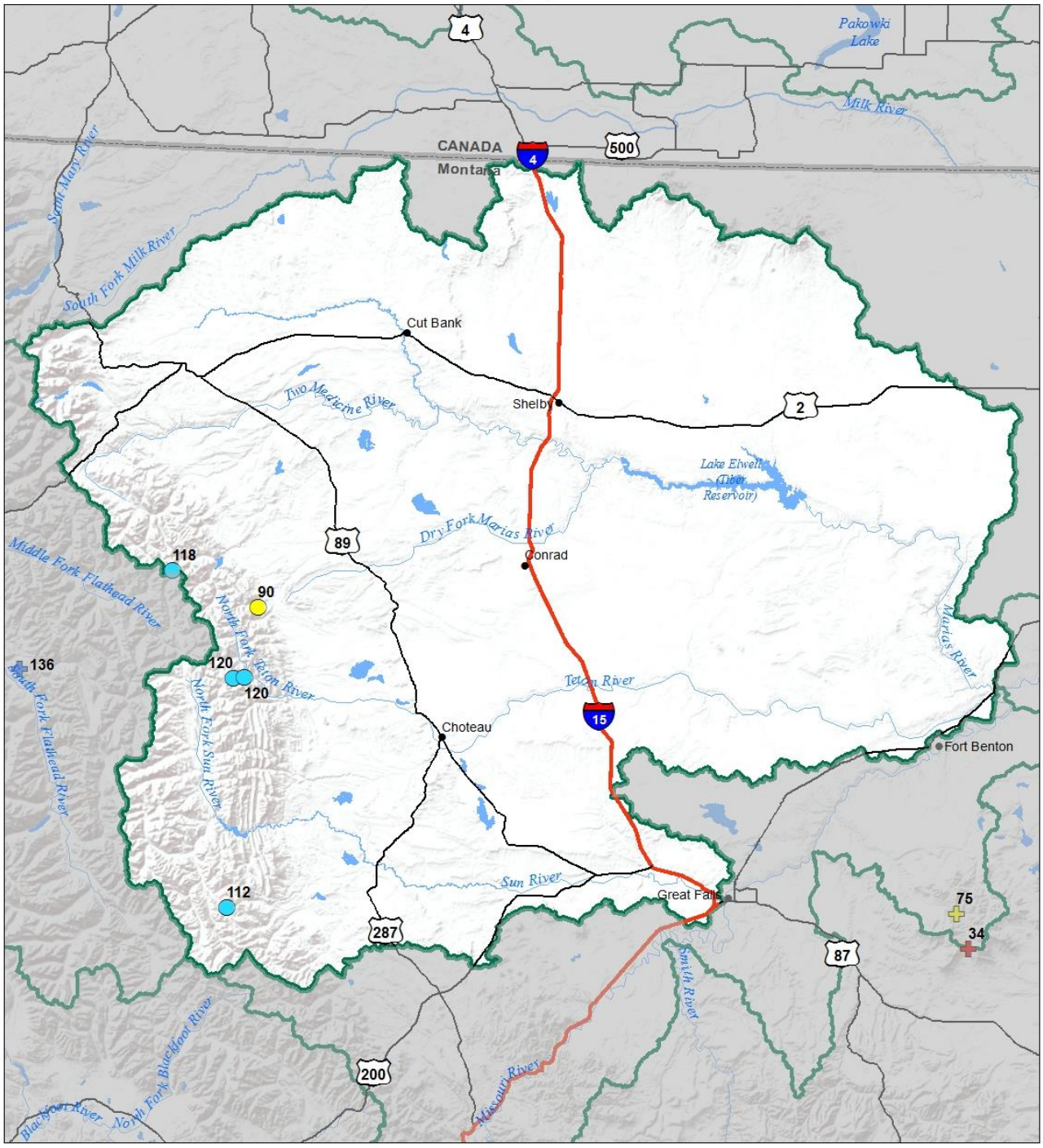



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Sun-Teton-Marias River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | Snowcourse | | |
|---|---|---|---|---|---|
| > 150% | 71 - 90% | | > 150% | 71 - 90% | |
| 131 - 150% | 51 - 70% | | 131 - 150% | 51 - 70% | |
| 111 - 130% | 1 - 50% | | 111 - 130% | 1 - 50% | |
| 91 - 110% | 0% | | 91 - 110% | 0% | |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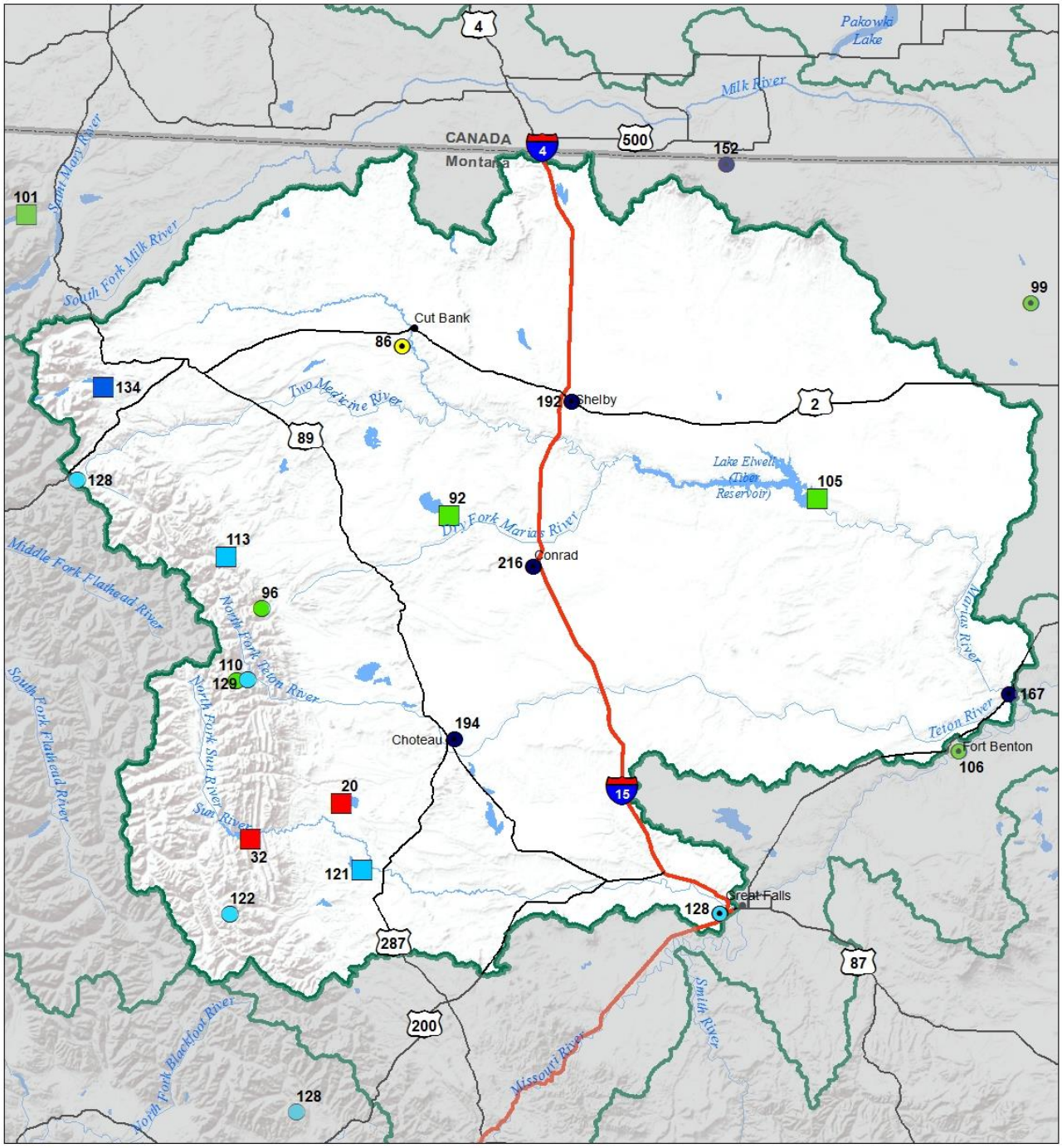
# Sun-Teton-Marias River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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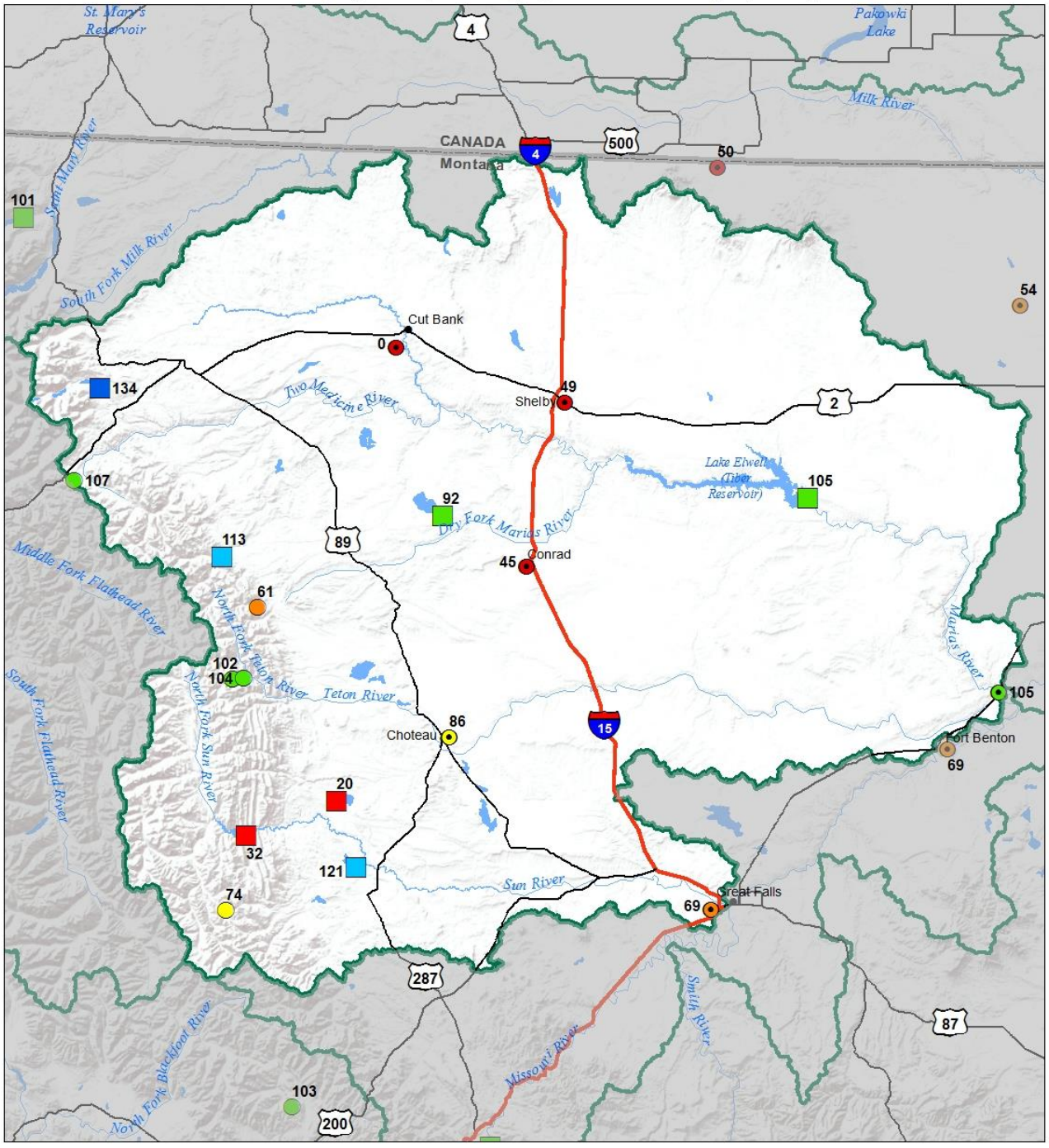
# Sun-Teton-Marias River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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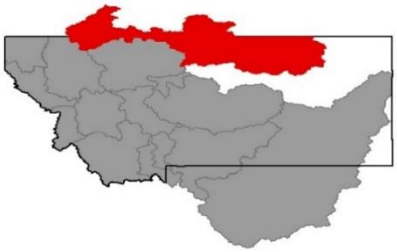
# St. Mary-Milk River Basin



January was a month of mixed precipitation in the Saint Mary-Milk River basin. Above average temperatures brought rain and snow to all elevations. The basin's highest elevation site, Flattop Mountain SNOTEL in Glacier National Park, had over 11 days in which the daily maximum temperature was above freezing. Mid-month Flattop Mountain received over 1.5 inches of rain. With that said the high elevation snowpack was over 90 inches deep and retained this moisture. There is now over 100 inches of snow at upper elevations and the basin wide snowpack is at normal conditions. Further to the east the Bears Paw Mountains have a slightly below average snowpack. Overall, water year-to-date precipitation in the Saint Mary-Milk River basin is above average.

## *St. Mary-Milk River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *ST. MARY* | 100% | 77% |
| *BEARPAW MOUNTAINS* | 84% | 70% |
| *CYPRESS HILLS, CANADA* | % | % |
| *MILK RIVER BASIN* | 84% | 70% |
| **Basin-Wide** | **97%** | **76%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation (St. Mary) | 112% | 112% | 107% |
| Mountain Precipitation (Bearpaw Mtns) | 63% | 167% | 188% |
| Valley Precipitation | 58% | 123% | 269% |
| **Basin-Wide Precipitation** | **101%** | **119%** | **142%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

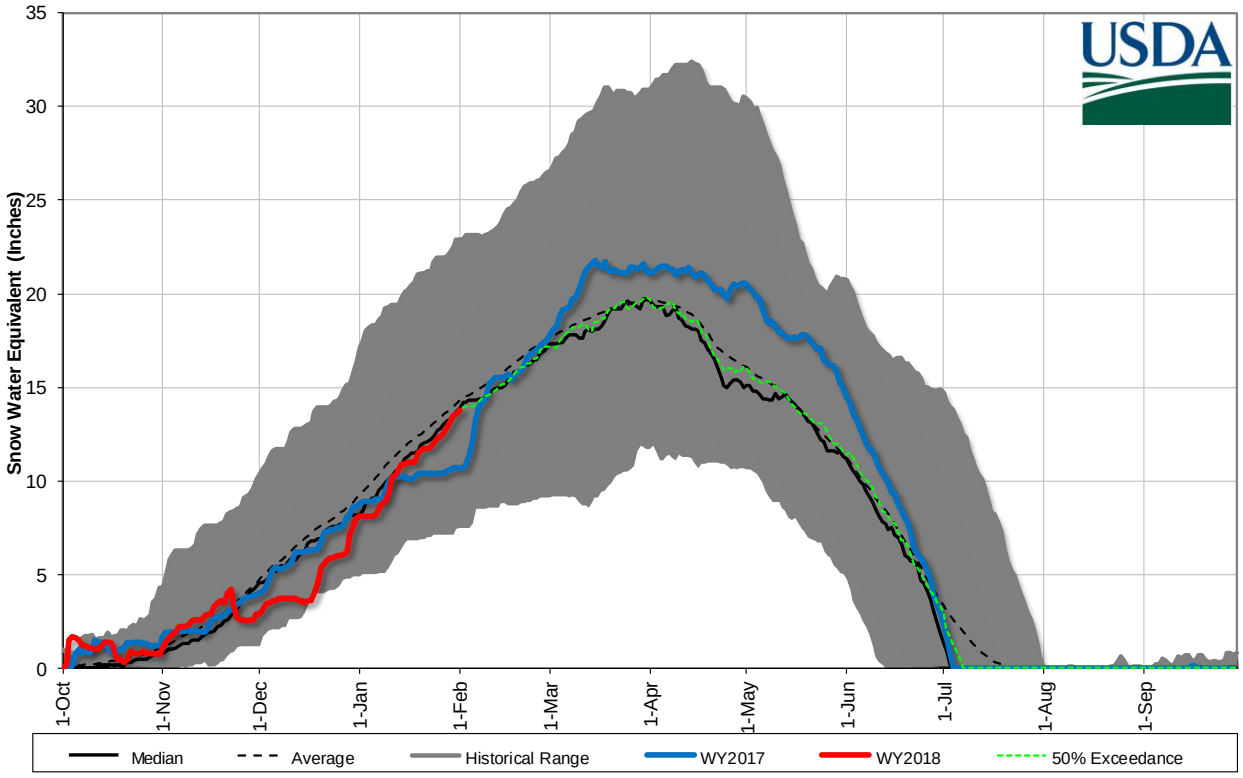
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **94%** | **37%** | **106%** |

**See Reservoir Storage Table for storage in individual reservoirs*

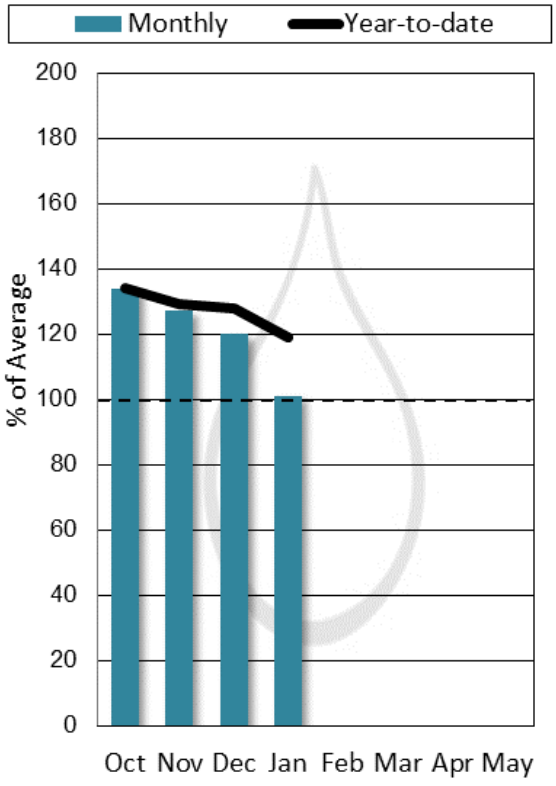
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Lake Sherburne | 28.7 | 45.5 | 28.5 | 64.3 | **101%** | **45%** |
| Fresno Res | 38.4 | 53.0 | 41.7 | 127.0 | **92%** | **30%** |
| Nelson Res | 28.2 | 9.5 | 31.5 | 66.8 | **89%** | **42%** |

**Saint Mary-Milk River Basin Snowpack with Non-Exceedence Projections**

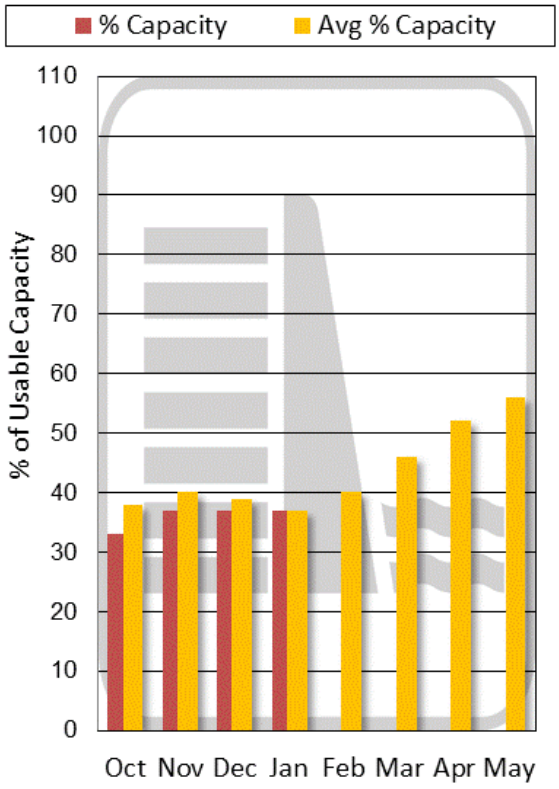
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

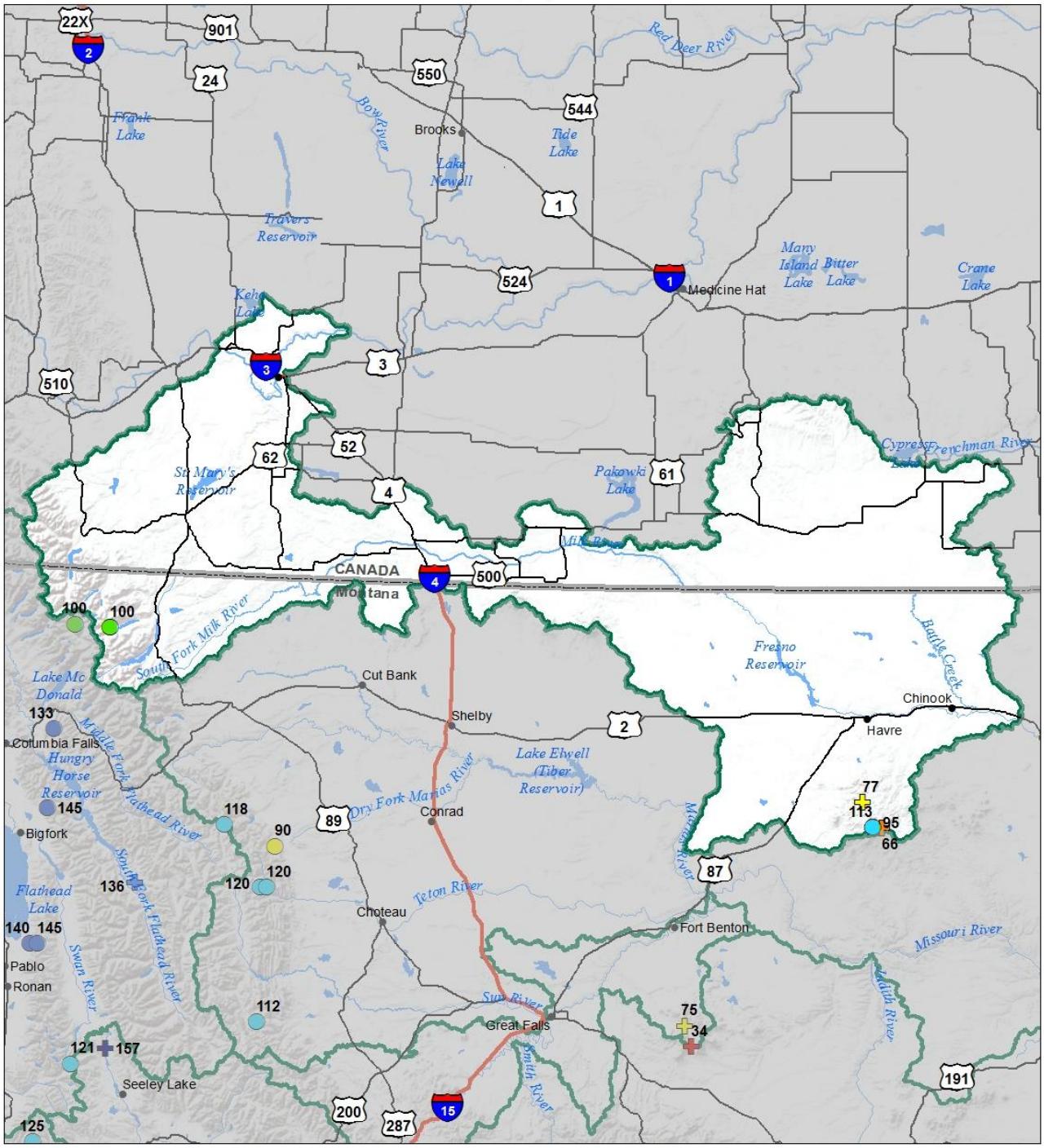



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# St Mary's-Milk River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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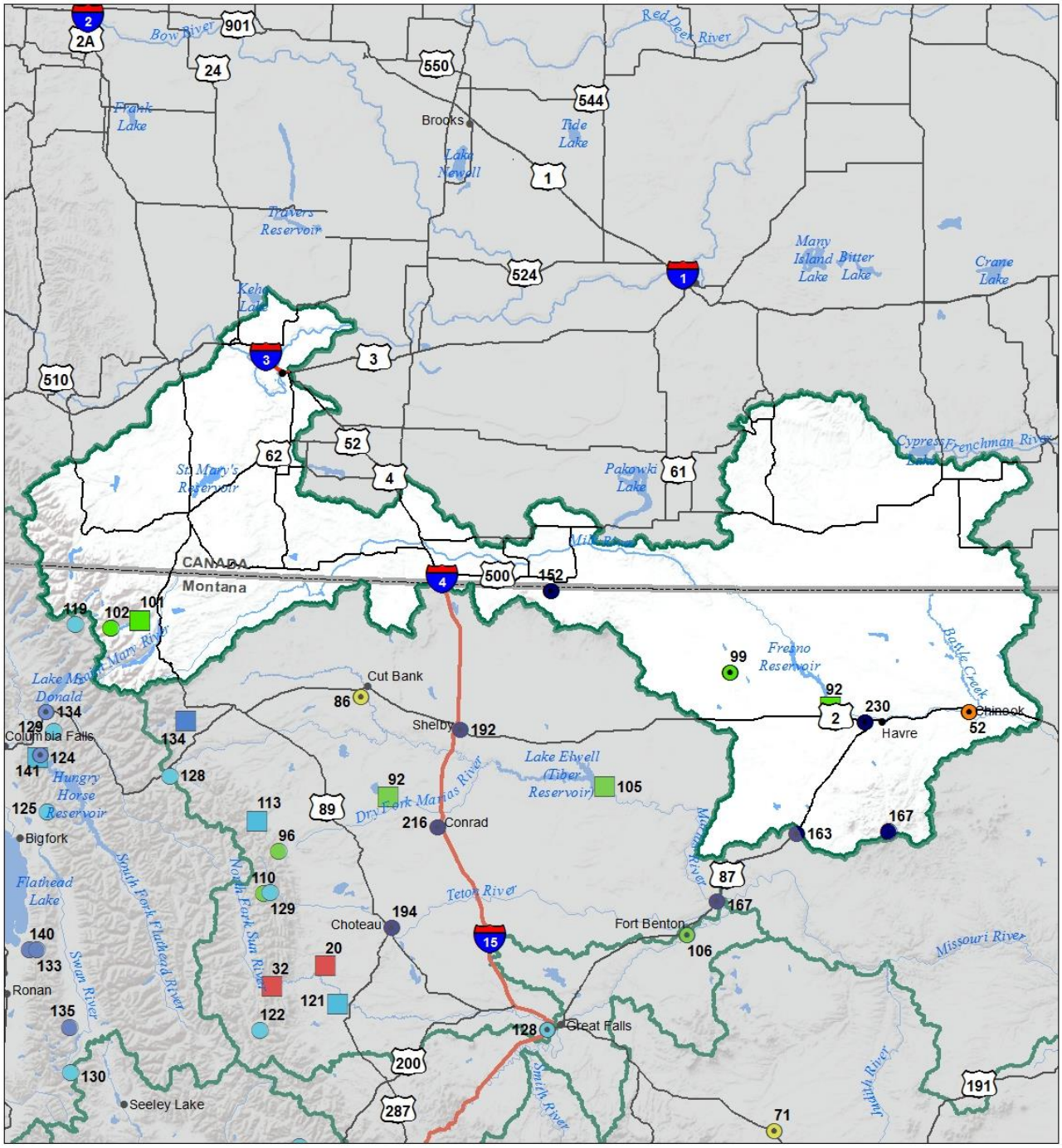
# St Mary's-Milk River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
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| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
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- 71 - 90%
- 51 - 70%
- 1 - 50%

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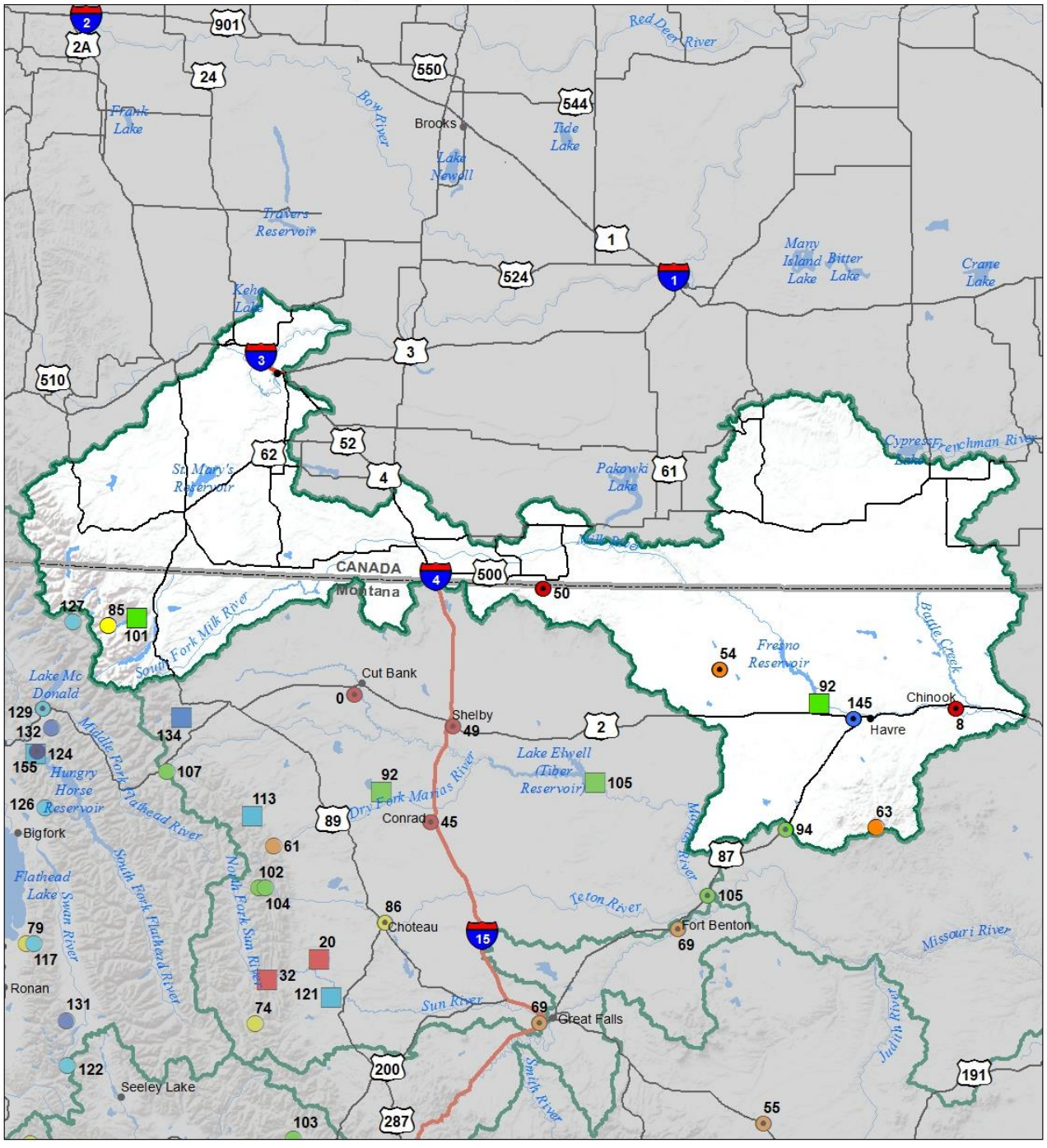
# St Mary's-Milk River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)

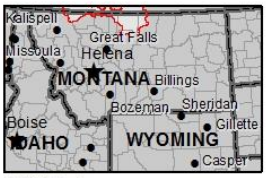



**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%

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# Upper Yellowstone River Basin

Last year was a good year for irrigators and water users in the Upper Yellowstone River basin, peak snowpack was well above normal, ensuring more than adequate water supply for all needs. So far, this year looks to be no different. Actually, compared to last year the snowpack is well above where it was at on February 1st. The lowest snowpack totals in the basin are far from "low", in the Red Lodge Rock Creek Basin snowpack is 124% of normal, the "best" snowpack in the greater basin can be found in the Clark's Fork of the Yellowstone where snow totals are 162% of normal on Feb 1. Four sites used to index snowpack in this basin are the second highest on record for this date, and many in the basin are ranked in the top 5 of the last 35 years. Fisher Creek SNOTEL located north of Cooke City, MT has the second deepest snowpack in 20 years of record for snow depth measurements, with 104" of settled snowpack on the ground. That's DEEP! The weather patterns have been favorable for this region of Montana so far this year, and let's hope it stays that way. The spring months are the most critical with regards to precipitation, both snow and rain, and are typically the biggest months with regards to volume of snow water added to the seasonal snowpack. The basin isn't set yet for spring runoff, but it is off to a good start.

## *Upper Yellowstone River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *YELLOWSTONE ab LIVINGSTON* | 145% | 107% |
| *SHIELDS* | 147% | 67% |
| *BOULDER-STILLWATER* | 157% | 83% |
| *RED LODGE-ROCK CREEK* | 124% | 106% |
| *CLARK'S FORK* | 162% | 115% |
| **Basin-Wide** | **148%** | **104%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 117% | 130% | 126% |
| Valley Precipitation | 155% | 171% | 185% |
| **Basin-Wide Precipitation** | **120%** | **134%** | **132%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

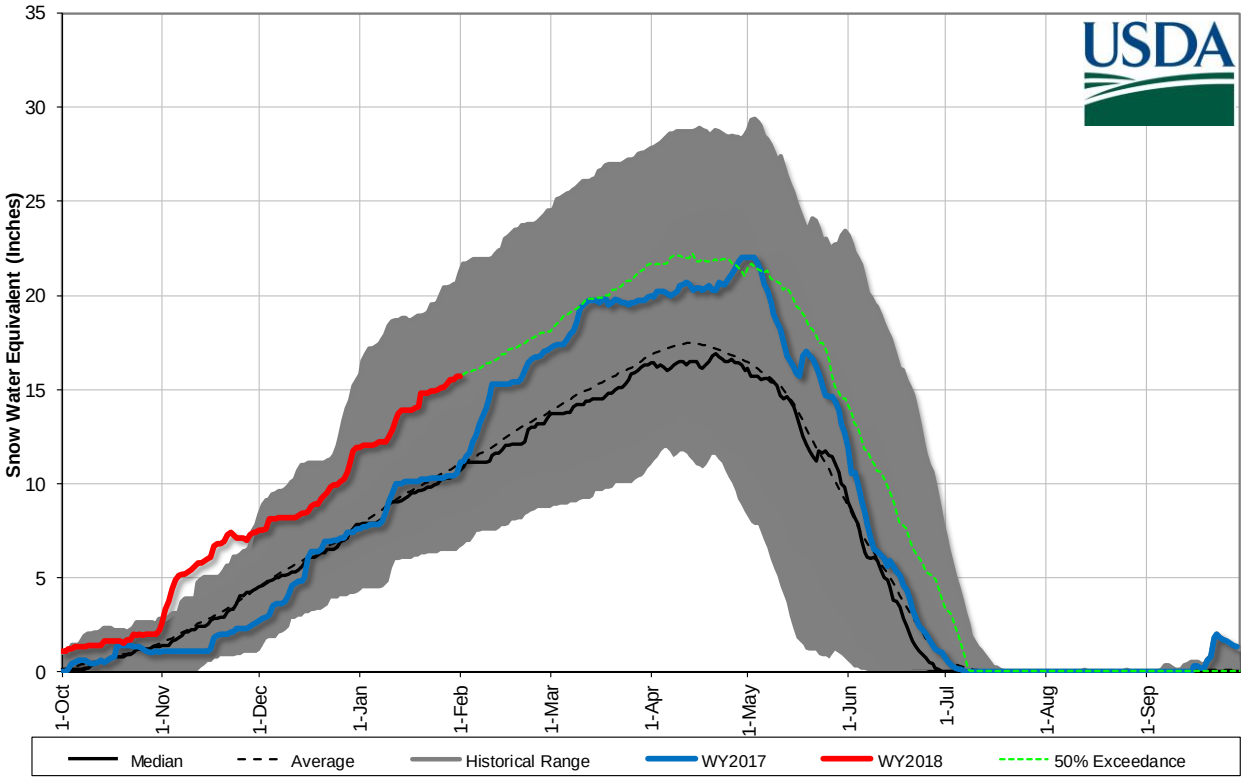
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **129%** | **60%** | **120%** |

**See Reservoir Storage Table for storage in individual reservoirs*

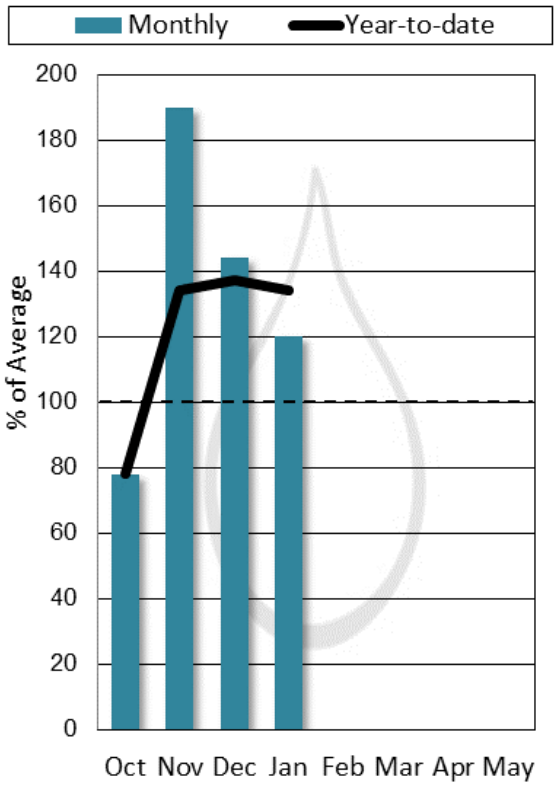
| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Mystic Lake | 8.2 | 8.3 | 5.3 | 21.0 | **155%** | **39%** |
| Cooney Res | 20.9 | 18.8 | 17.2 | 27.4 | **122%** | **76%** |

**Upper Yellowstone River Basin Snowpack with Non-Exceedence Projections**

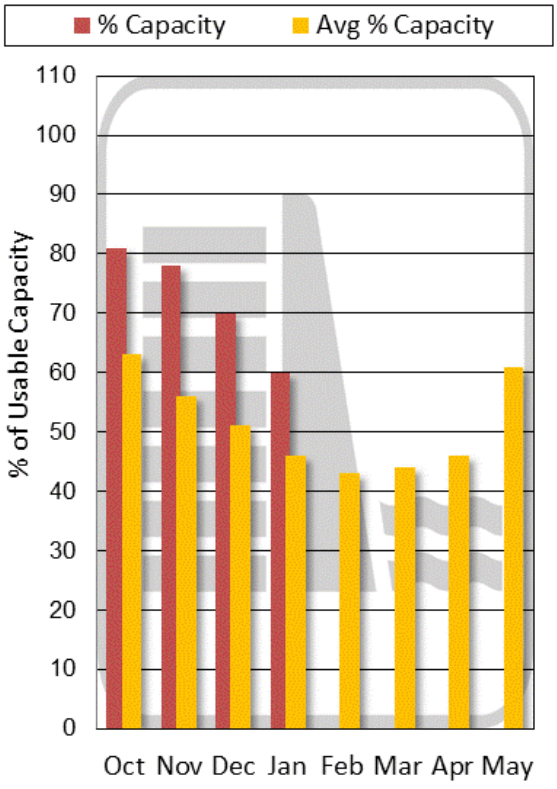
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

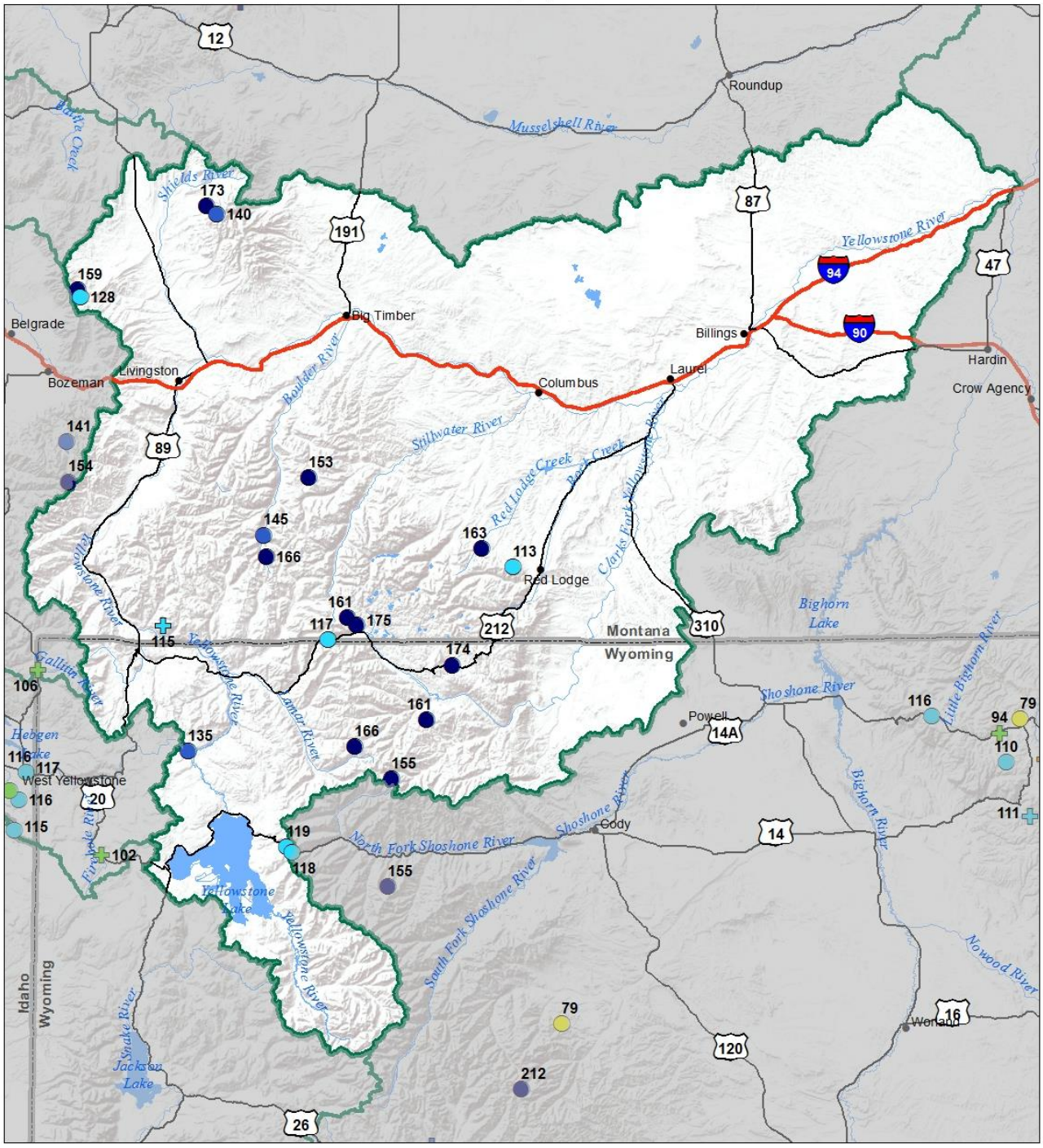



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Upper Yellowstone River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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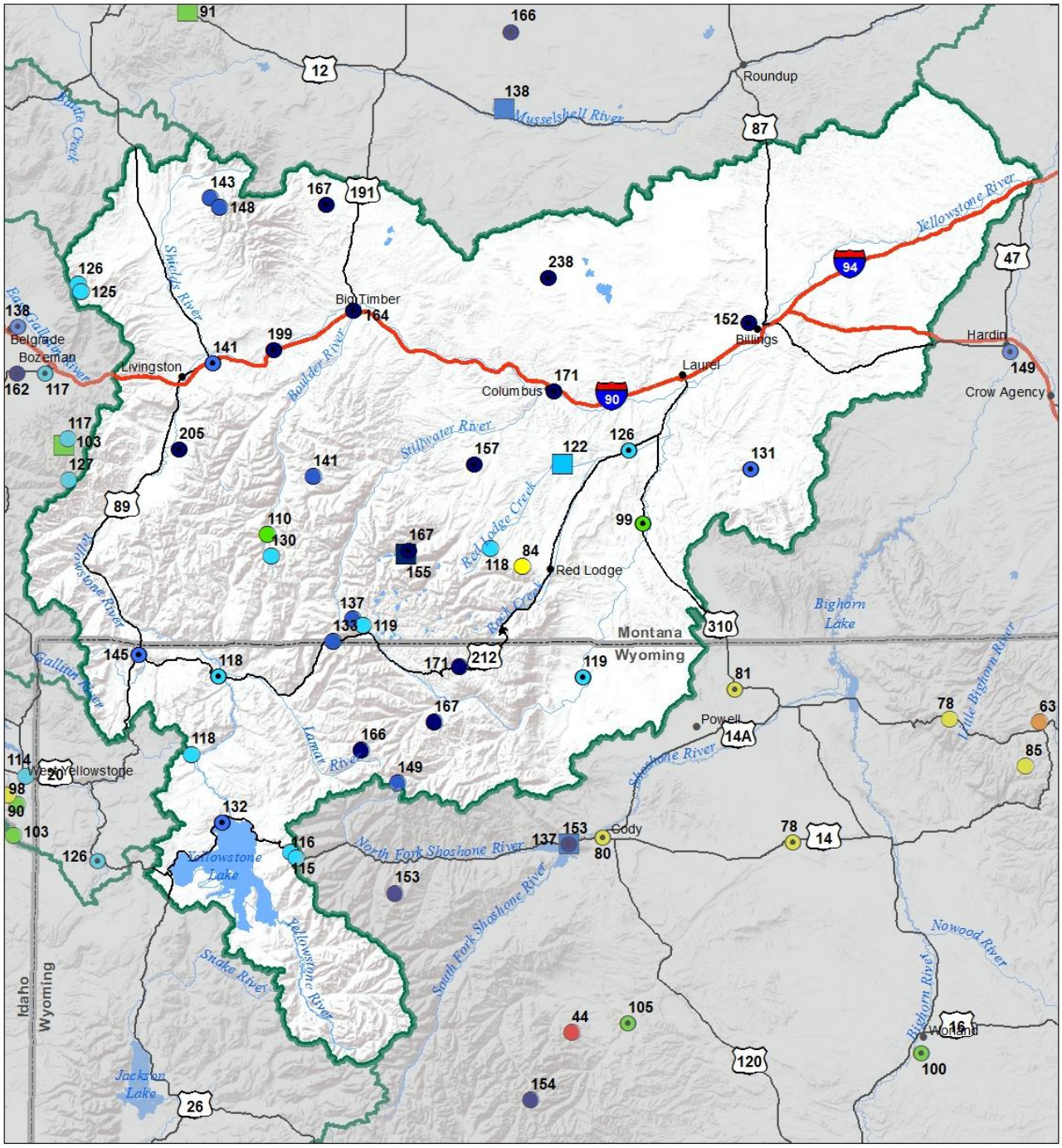
# Upper Yellowstone River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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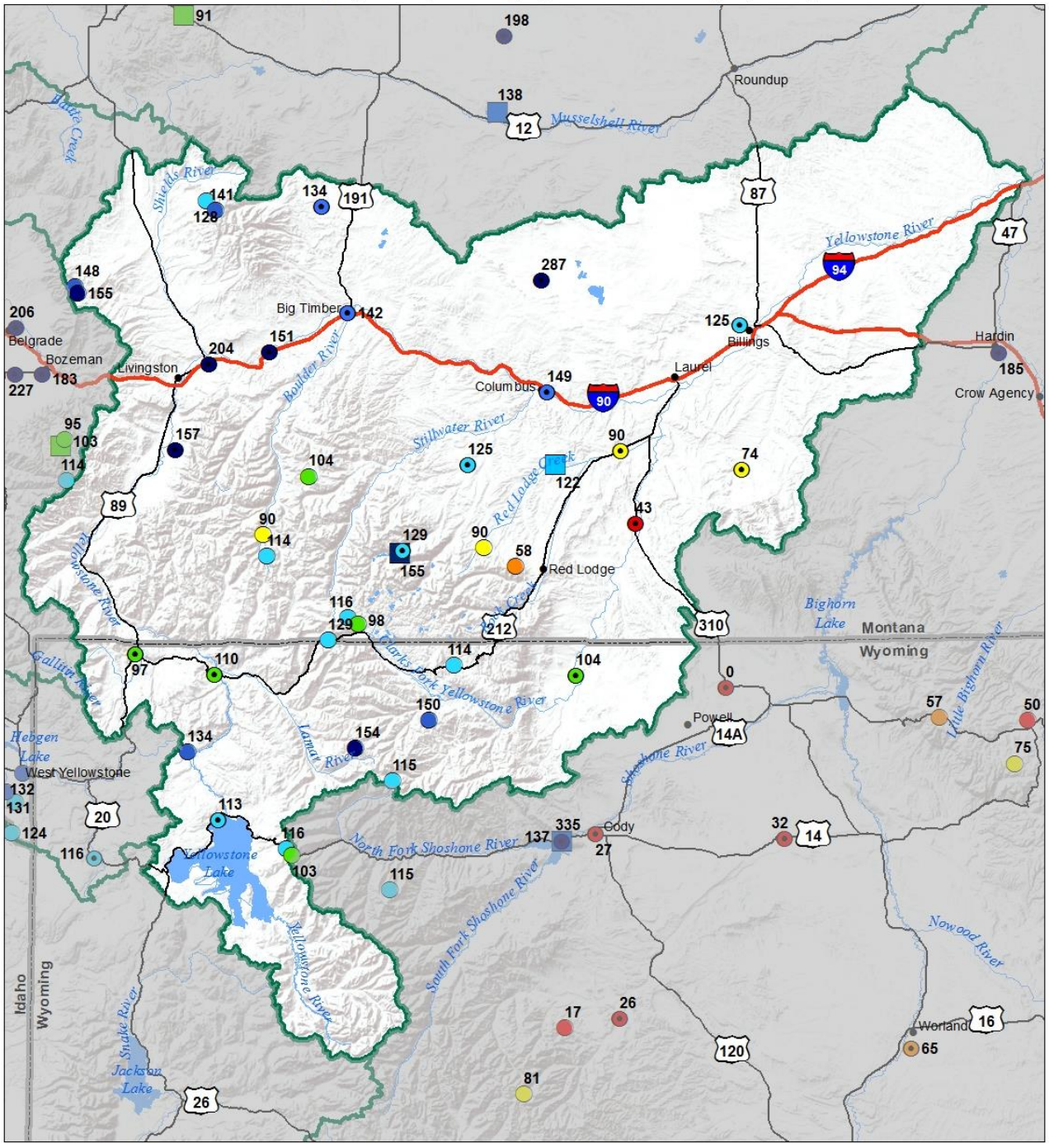
# Upper Yellowstone River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)

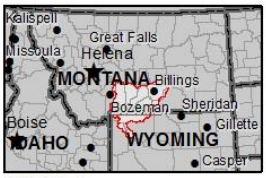



**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%

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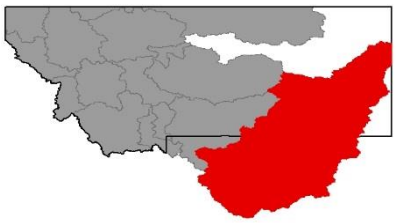
# Lower Yellowstone River Basin



Snowfall over the month of January favored the northwest part of the greater Lower Yellowstone River basin, with the mountains feeding the Shoshone River basin receiving above normal snow totals for the month. Near normal snowfall was experienced in the Tongue and Powder River basins, and below normal snowfall was recorded in the Wind River basin. In general, higher elevation sites across the basin tend to have higher percentages of normal snowpack and are above normal for this date. Lower elevation sites have lower percentages for Feb 1, but remain close to normal for this date in many areas. The region area which has a few sites which are below normal is the east side of the northern Bighorns, where 4 SNOTEL sites range from 62% to 88% of normal. Feb 1 is early in the snow season for these basins where spring precipitation in both snow and rain form tend to be dominant drivers of spring and summer runoff. What does that mean? The (typically) big months are still to come and will play a crucial role in determining how much water is available for irrigation and recreation this summer. Stay tuned.

## *Lower Yellowstone River Basin Data Summary*

| ***Snowpack*** | **Percent of 1981-2010 Normal (Median)** | **Last Year Percentage of Normal (Median)** |
|---|---|---|
| *WIND RIVER BASIN* | 118% | 171% |
| *SHOSHONE RIVER BASIN* | 140% | 123% |
| *BIGHORN RIVER BASIN* | 129% | 108% |
| *LITTLE BIGHORN BASIN* | 100% | 106% |
| *TONGUE RIVER BASIN* | 96% | 103% |
| *POWDER RIVER BASIN* | 114% | 86% |
| **Basin-Wide** | **115%** | **126%** |

| ***Precipitation*** | **Monthly Percentage of Average** | **WYTD Percentage of 1981-2010 Average*** | **WYTD Last Year Percentage of Average** |
|---|---|---|---|
| Mountain Precipitation | 77% | 99% | 131% |
| Valley Precipitation | 115% | 101% | 151% |
| **Basin-Wide Precipitation** | **86%** | **99%** | **137%** |

*Water Year-to-Date (WYTD) Precipitation is October 1st - Current

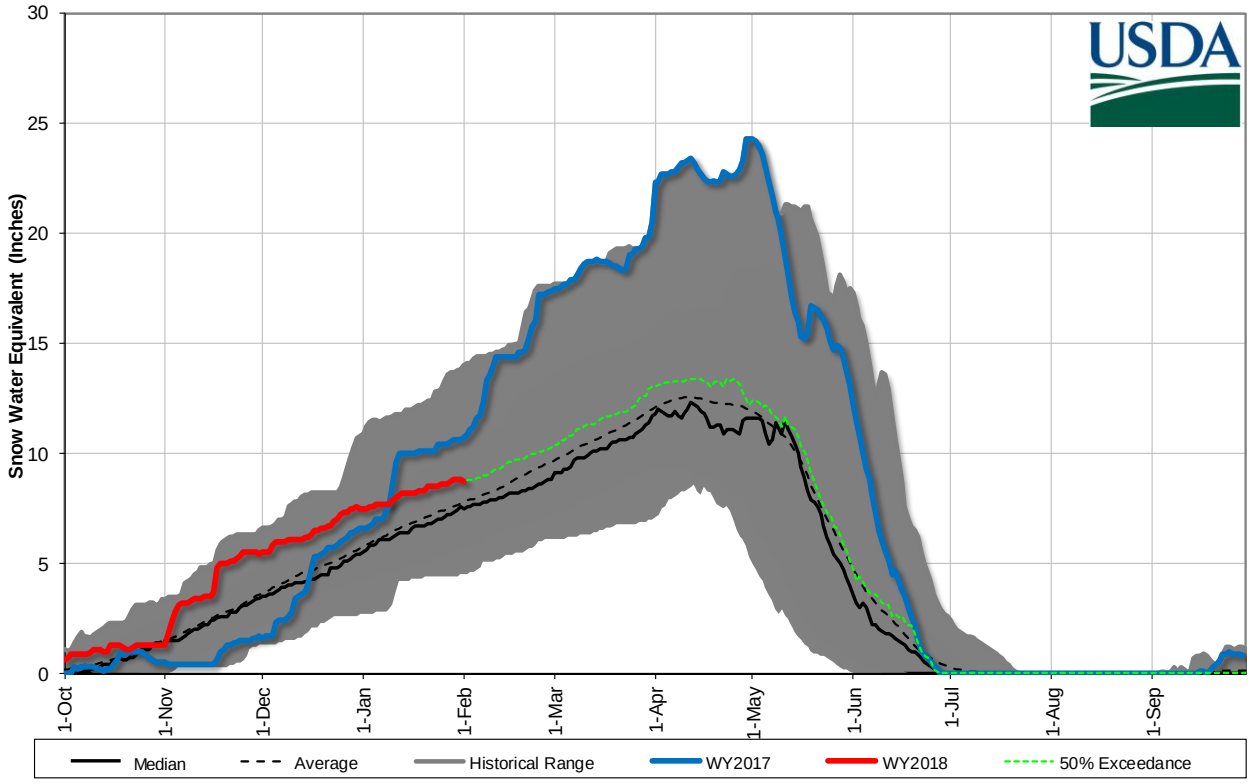
| ***Reservoir Storage*** | **Percentage of Average** | **Percentage of Capacity (Total)** | **Last Year Percentage of Average** |
|---|---|---|---|
| **Basin-Wide Storage** | **106%** | **63%** | **109%** |

**See Reservoir Storage Table for storage in individual reservoirs*

| ***End of Month Storage*** | **Current (KAF)** | **Last Year (KAF)** | **Average (KAF)** | **Capacity (KAF)** | **% Average** | **% Capacity** |
|---|---|---|---|---|---|---|
| Bighorn Lake | 856.5 | 876.3 | 825.9 | 1356.0 | **104%** | **63%** |
| Tongue River Res | 48.9 | 50.2 | 26.7 | 79.1 | **183%** | **62%** |

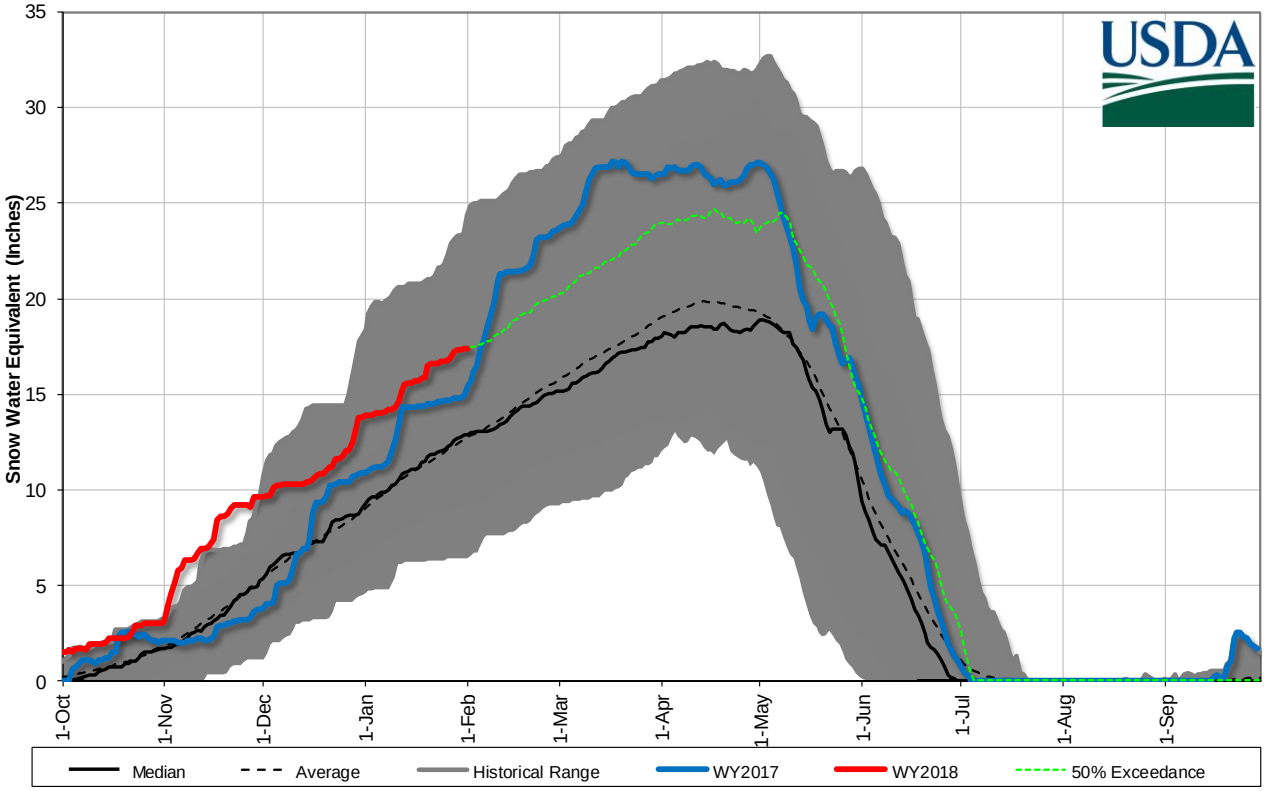
**Wind River Basin Snowpack with Non-Exceedence Projections**

***Based on provisional SNOTEL daily data as of 2/1/2018***



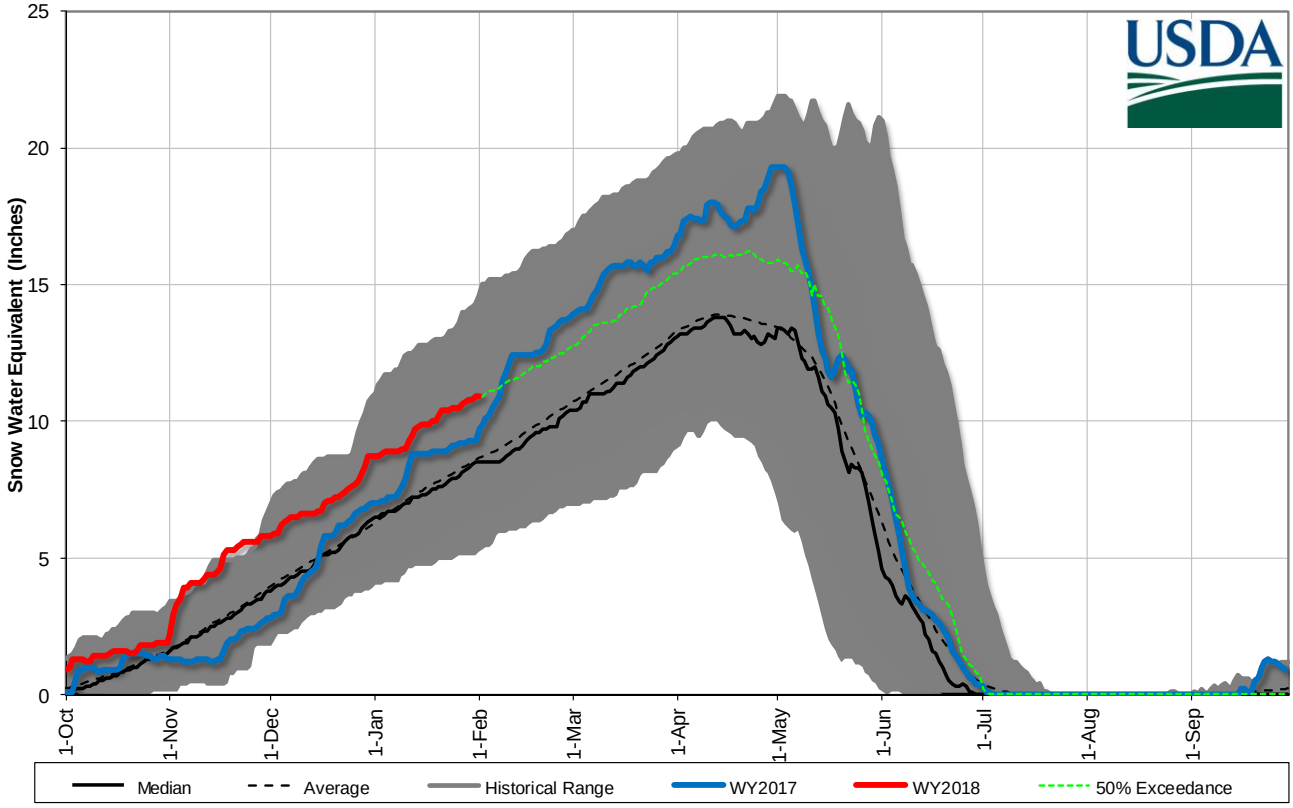

**Shoshone River Basin Snowpack with Non-Exceedence Projections**

***Based on provisional SNOTEL daily data as of 2/1/2018***



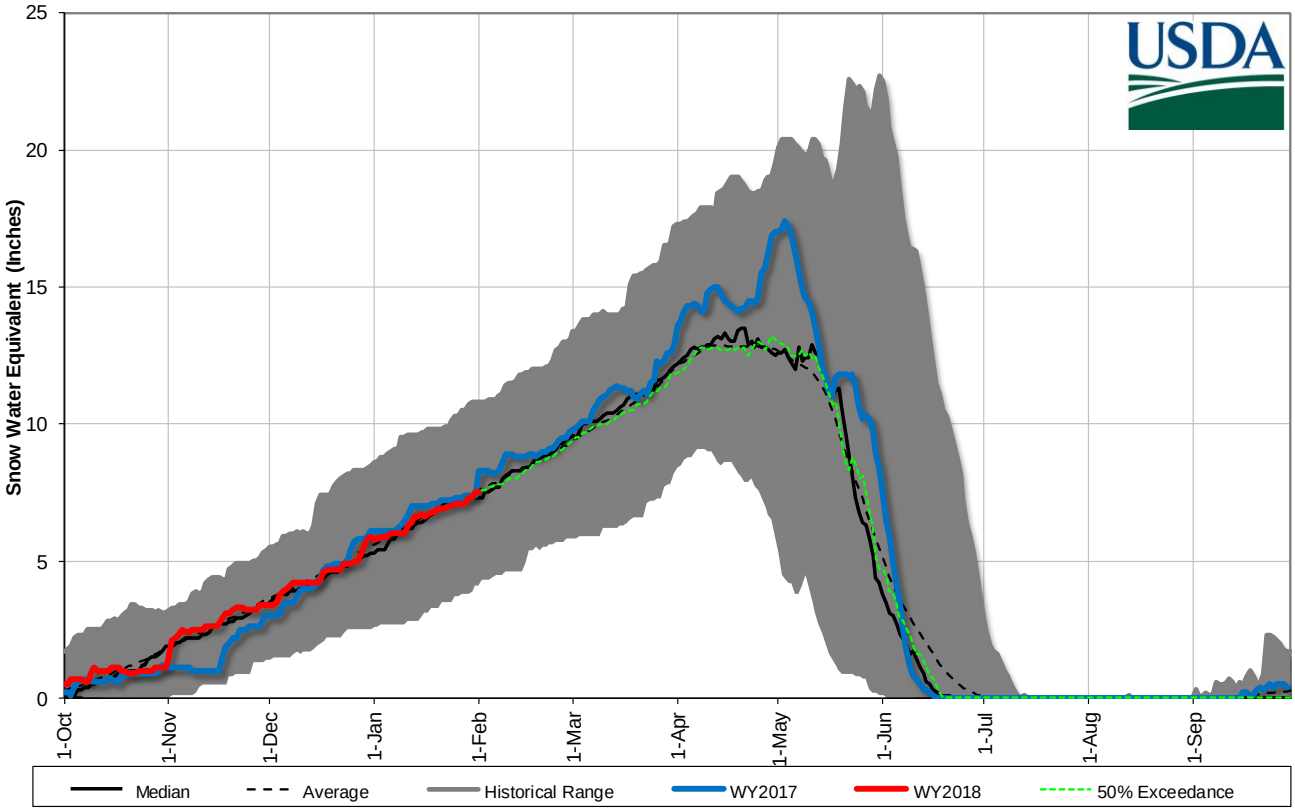
## Bighorn River Basin Snowpack with Non-Exceedence Projections

*Based on provisional SNOTEL daily data as of 2/1/2018*



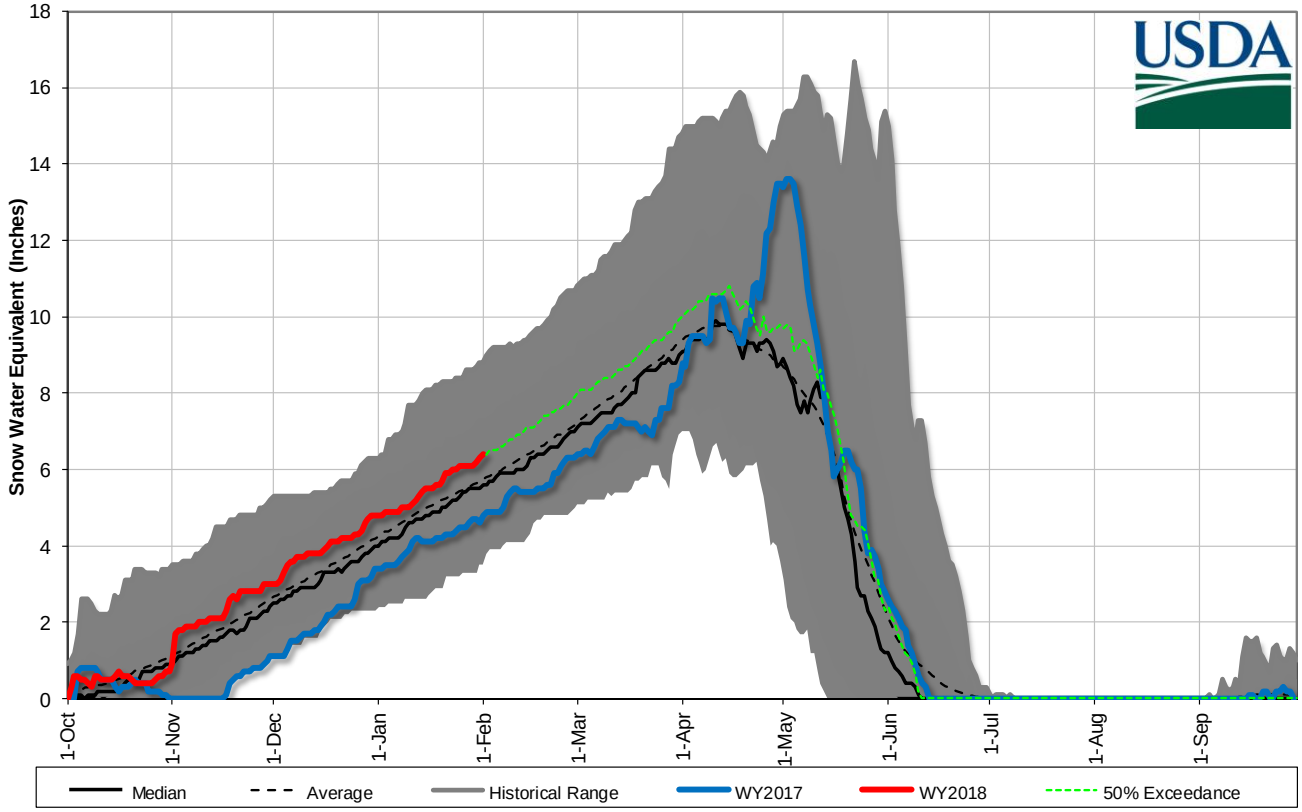

## Tongue River Basin Snowpack with Non-Exceedence Projections

*Based on provisional SNOTEL daily data as of 2/1/2018*

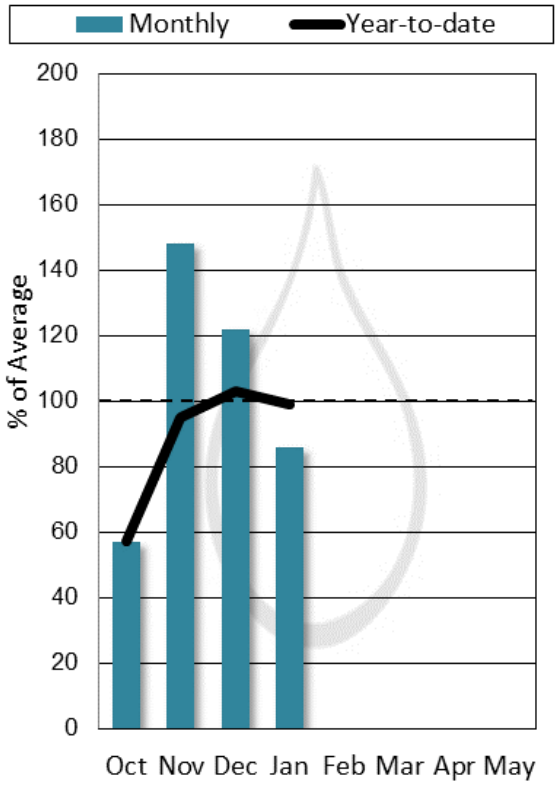


**Powder River Basin Snowpack with Non-Exceedence Projections**

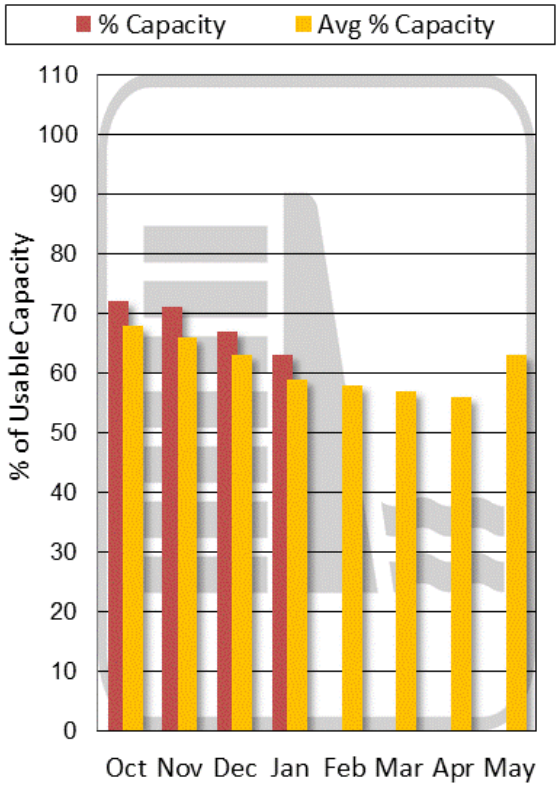
***Based on provisional SNOTEL daily data as of 2/1/2018***




**Mountain and Valley Precipitation**

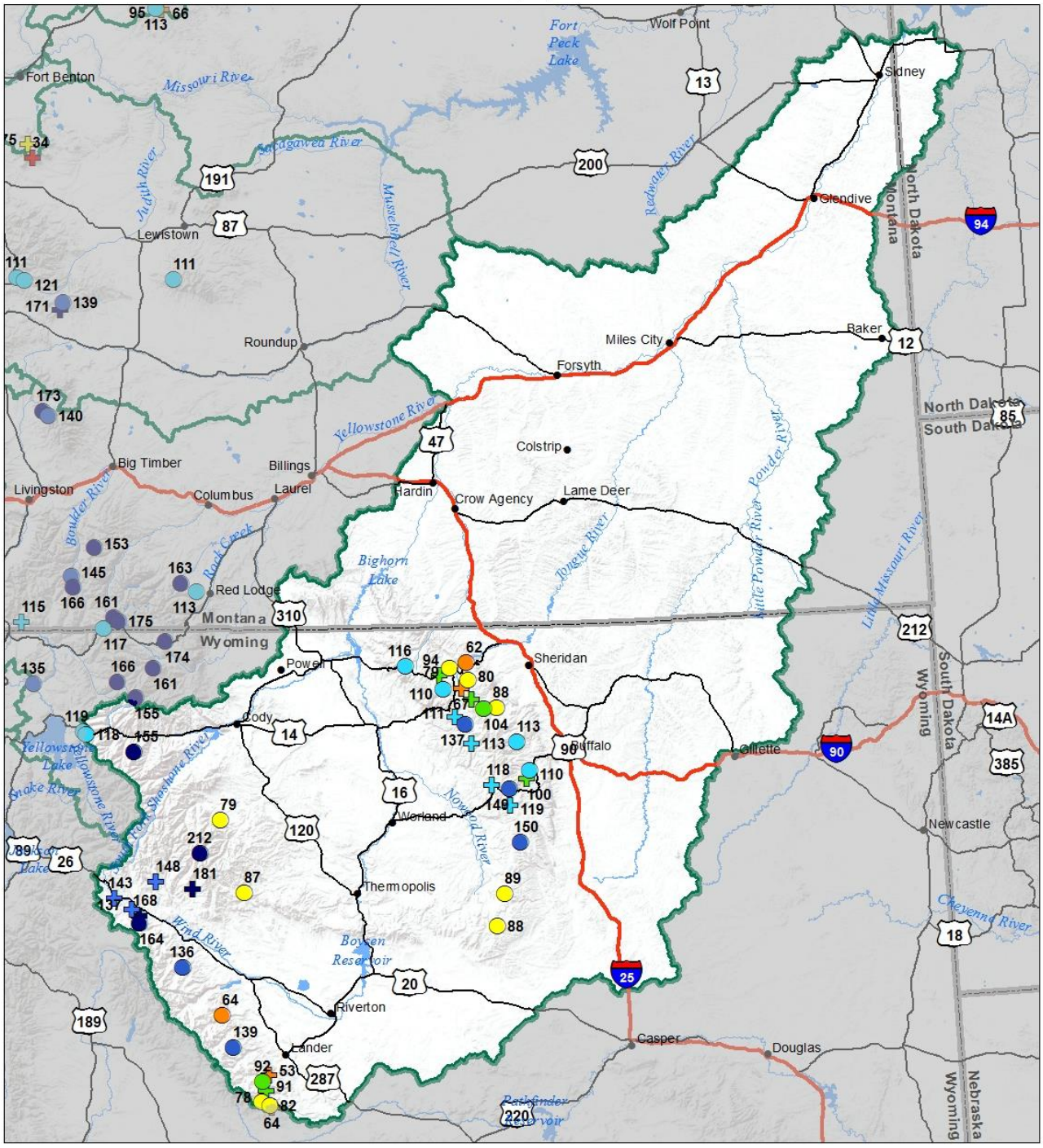



**End of Month Reservoir Storage**




Storage above is averaged for all reservoirs in the basin. For individual reservoirs see table below.

# Lower Yellowstone River Basin
## Snow Water Equivalent
## Percentage of Normal
## February 1, 2018




**Snow Water Equivalent**
**Percent of Normal**

| SNOTEL | | | | Snowcourse | | | |
|---|---|---|---|---|---|---|---|
| > 150% | 71 - 90% | | | > 150% | 71 - 90% | | |
| 131 - 150% | 51 - 70% | | | 131 - 150% | 51 - 70% | | |
| 111 - 130% | 1 - 50% | | | 111 - 130% | 1 - 50% | | |
| 91 - 110% | 0% | | | 91 - 110% | 0% | | |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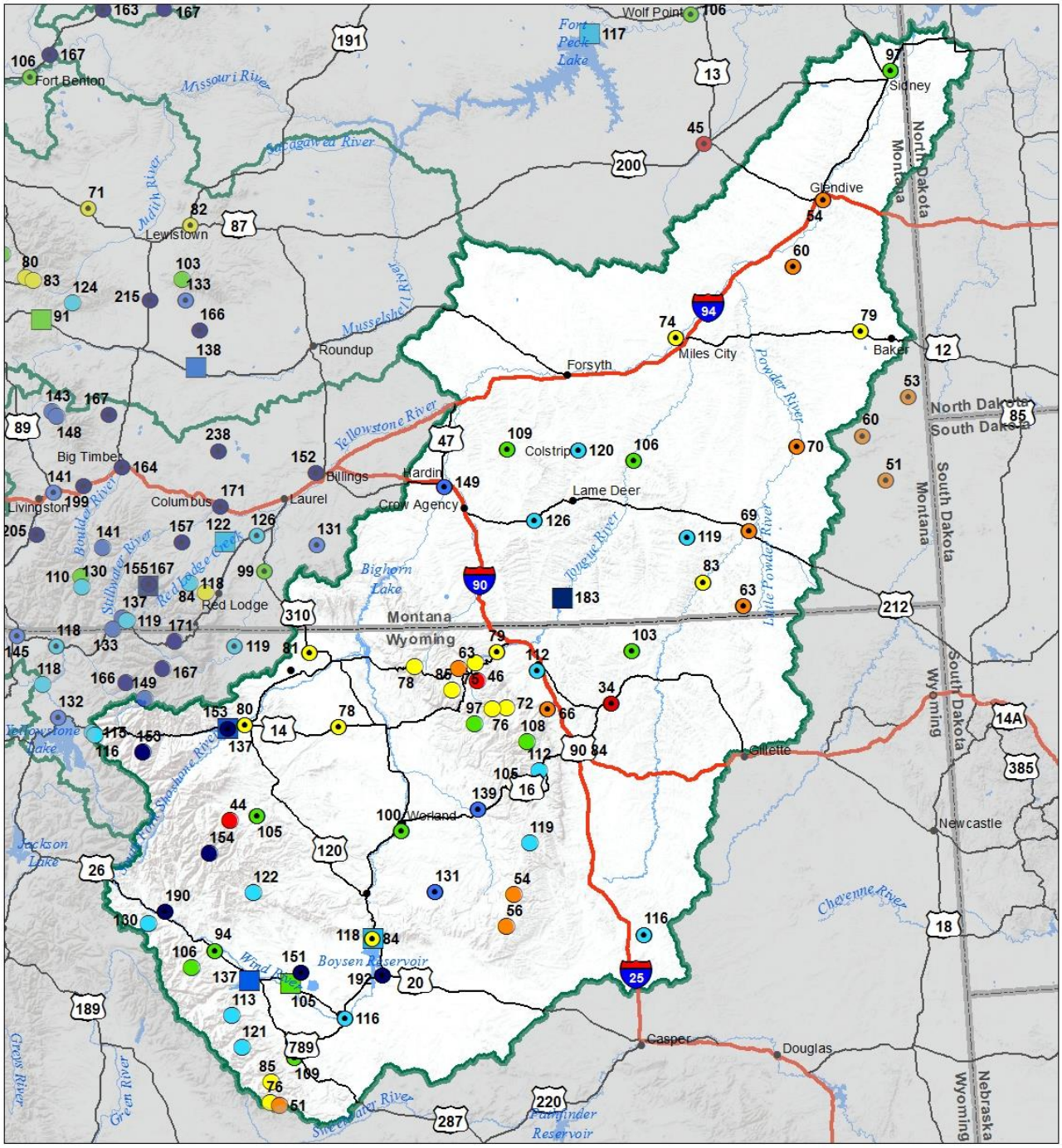
# Lower Yellowstone River Basin
## Water Year to Date Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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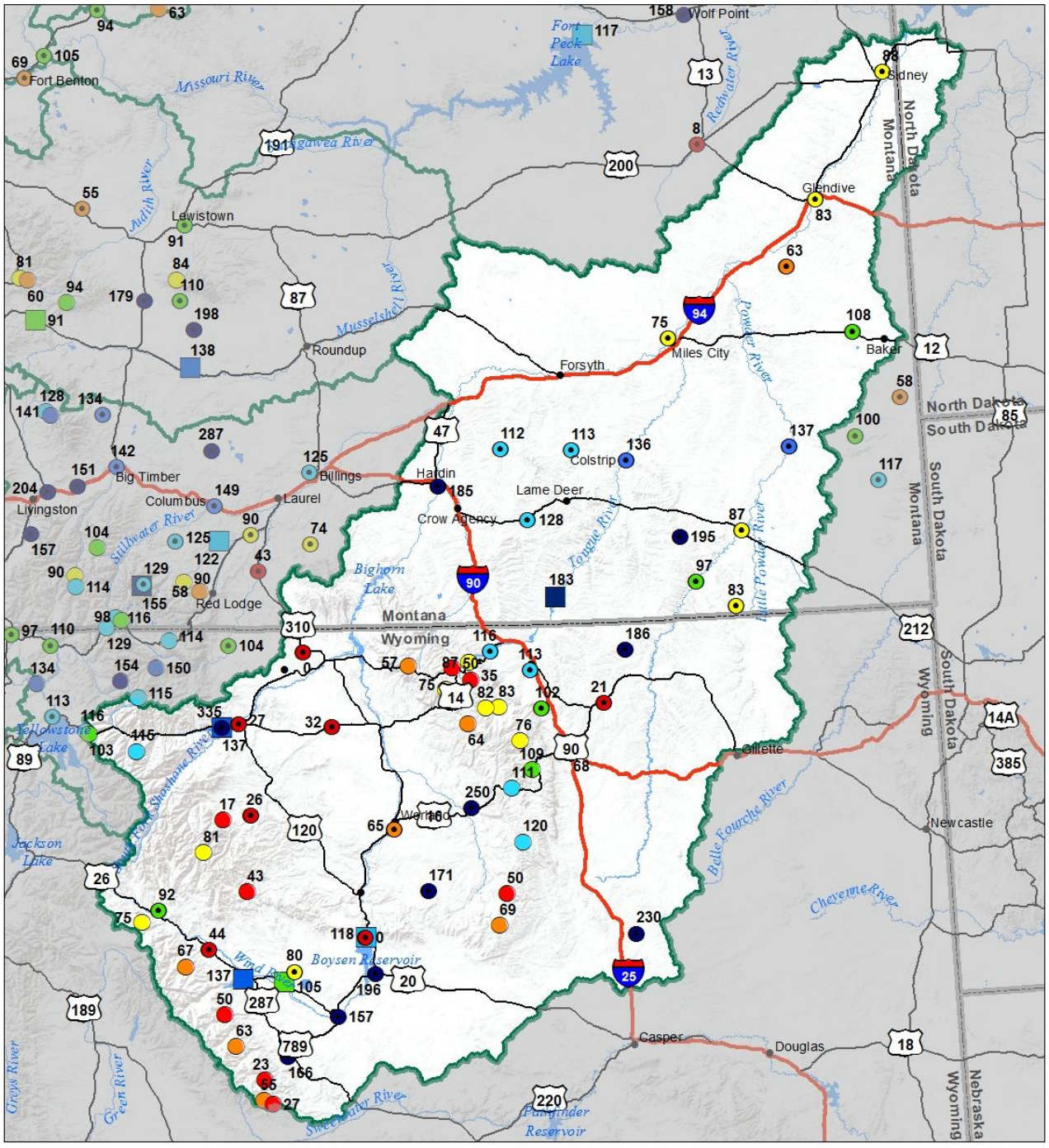
# Lower Yellowstone River Basin
## Monthly Precipitation and Reservoir Levels
## Percentage of Normal
## February 1, 2018 (January 1, 2018 - February 1, 2018)




**Precipitation**
**Percent of Normal**

| SNOTEL | | COOP/ACIS | |
|---|---|---|---|
| > 150% | 71 - 90% | > 150% | 71 - 90% |
| 131 - 150% | 51 - 70% | 131 - 150% | 51 - 70% |
| 111 - 130% | 1 - 50% | 111 - 130% | 1 - 50% |
| 91 - 110% | | 91 - 110% | |

**Reservoirs**
**Percent of Normal**

- > 150%
- 131 - 150%
- 111 - 130%
- 91 - 110%
- 71 - 90%
- 51 - 70%
- 1 - 50%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# Data Summary (SNOTEL and Snowcourse)

| **Montana Snow Sites** | Network | Elevation (ft) | Depth (in) | SWE (in) | Median (in) | % Median | Last Year SWE (in) | Last Year % Median |
|---|---|---|---|---|---|---|---|---|
| Albro Lake | SNOTEL | 8300 | 48 | 15.1 | 11 | 137 | 8 | 73 |
| Ambrose | SC | 6480 | | | | | | |
| Arch Falls | SC | 7350 | | | | | | |
| Ashley Divide | SC | 4820 | 19 | 4.6 | 4.5 | 102 | 4.8 | 107 |
| Badger Pass | SNOTEL | 6900 | | 23 | 19.5 | 118 | 15.2 | 78 |
| Banfield Mountain | SNOTEL | 5600 | 49 | 12 | 12.1 | 99 | 6.9 | 57 |
| Baree Creek | SC | 5500 | | | | | | |
| Baree Midway | SC | 4600 | | | | | | |
| Baree Trail | SC | 3800 | | | | | | |
| Barker Lakes | SNOTEL | 8250 | 47 | 12.7 | 8 | 159 | 5 | 63 |
| Basin Creek | SNOTEL | 7180 | 29 | 7.4 | 4.5 | 164 | 2.9 | 64 |
| Bassoo Peak | SC | 5150 | | | | | | |
| Beagle Springs | SNOTEL | 8850 | 29 | 6.9 | 5.2 | 133 | 5.7 | 110 |
| Bear Basin | SC | 8150 | | | | | | |
| Bear Mountain | SNOTEL | 5400 | 117 | 36.9 | 36.6 | 101 | 20.3 | 55 |
| Beartooth Lake | SNOTEL | 9360 | 82 | 24.2 | 13.9 | 174 | 17.6 | 127 |
| Beaver Creek | SNOTEL | 7850 | 46 | 11.6 | 11.5 | 101 | 8.1 | 70 |
| Big Snowy | SC | 7150 | | | | | | |
| Bisson Creek | SNOTEL | 4920 | 30 | 8.8 | 6.3 | 140 | 5.1 | 81 |
| Black Bear | SNOTEL | 8170 | 90 | 26.7 | 23.3 | 115 | 22.7 | 97 |
| Black Mountain | SC | 7750 | | | | | | |
| Black Pine | SNOTEL | 7210 | 28 | 7.3 | 6.2 | 118 | 6.3 | 102 |
| Blacktail | SC | 5650 | 31 | 8.2 | 8.8 | 93 | 7.1 | 81 |
| Blacktail Mtn | SNOTEL | 5650 | 29 | 7.9 | | | 6.3 | |
| Bloody Dick | SNOTEL | 7600 | 36 | 9.5 | 7.6 | 125 | 6.6 | 87 |
| Bots Sots | SC | 7750 | | | | | | |
| Boulder Mountain | SNOTEL | 7950 | 60 | 17.2 | 12.6 | 137 | 7.2 | 57 |
| Box Canyon | SNOTEL | 6670 | 31 | 8.4 | 5.8 | 145 | 4.7 | 81 |
| Boxelder Creek | SC | 5100 | 13 | 2.9 | 4.4 | 66 | 1.8 | 41 |
| Brackett Creek | SNOTEL | 7320 | 58 | 18.1 | 11.4 | 159 | 8.7 | 76 |
| Bristow Creek | SC | 3900 | | | | | | |
| Brush Creek Timber | SC | 5000 | | | | | | |
| Bull Mountain | SC | 6600 | | | | | | |
| Burnt Mtn | SNOTEL | 5880 | 15 | 3.9 | 2.4 | 163 | 5 | 208 |
| Cabin Creek | SC | 5200 | | | | | | |
| Calvert Creek | SNOTEL | 6430 | 27 | 6.7 | 5.5 | 122 | 5.2 | 95 |
| Camp Senia | SC | 7890 | | | | | | |
| Canyon | SNOTEL | 7870 | 45 | 11.1 | 8.2 | 135 | 10.6 | 129 |
| Carrot Basin | SNOTEL | 9000 | 70 | 19.4 | 16.7 | 116 | 13.8 | 83 |
| Chessman Reservoir | SC | 6200 | 15 | 3.5 | 2.1 | 167 | 3.5 | 167 |
| Chicago Ridge | SC | 5800 | 90 | 26 | | | 16.4 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Chicken Creek | SC | 4060 | 50 | 10.6 | 10.8 | 98 | 7.3 | 68 |
| Clover Meadow | SNOTEL | 8600 | 49 | 13.3 | 10.3 | 129 | 6.6 | 64 |
| Cole Creek | SNOTEL | 7850 | 35 | 9.5 | 8.4 | 113 | 6.4 | 76 |
| Combination | SNOTEL | 5600 | 12 | 3.6 | 3 | 120 | 3.4 | 113 |
| Copper Bottom | SNOTEL | 5200 | 29 | 7.5 | | | 6.2 | |
| Copper Camp | SNOTEL | 6950 | | | | | 16.6 | |
| Copper Mountain | SC | 7700 | 33 | 8.6 | 6.2 | 139 | 5 | 81 |
| Cottonwood Creek | SC | 6400 | | | | | | |
| Coyote Hill | SC | 4200 | 39 | 9.4 | 6 | 157 | 6 | 100 |
| Crevice Mountain | SC | 8400 | 32 | 6.9 | 6 | 115 | 5.8 | 97 |
| Crystal Lake | SNOTEL | 6050 | 29 | 8.2 | 7.4 | 111 | 4.6 | 62 |
| Dad Creek Lake | SC | 8800 | | | | | | |
| Daisy Peak | SNOTEL | 7600 | 33 | 8.2 | 5.9 | 139 | 2.9 | 49 |
| Daly Creek | SNOTEL | 5780 | 34 | 8.3 | 6.6 | 126 | 5.8 | 88 |
| Darkhorse Lake | SNOTEL | 8600 | 73 | 23.3 | 17.6 | 132 | 17.3 | 98 |
| Deadman Creek | SNOTEL | 6450 | 30 | 7.2 | 6.5 | 111 | 3.2 | 49 |
| Desert Mountain | SC | 5600 | | | | | | |
| Discovery Basin | SC | 7050 | 31 | 6.9 | 5.9 | 117 | 4 | 68 |
| Divide | SNOTEL | 7800 | 26 | 5.8 | 6.2 | 94 | 4 | 65 |
| Dix Hill | SC | 6400 | 30 | 8.4 | 6.6 | 127 | 5.4 | 82 |
| Dupuyer Creek | SNOTEL | 5750 | 21 | 4.5 | 5 | 90 | 4.8 | 96 |
| Eagle Creek | SC | 7000 | | | | | | |
| East Boulder Mine | SNOTEL | 6335 | 15 | 5.2 | | | 4.4 | |
| El Dorado Mine | SC | 7800 | | | | | | |
| Elk Horn Springs | SC | 7800 | | | | | | |
| Elk Peak | SNOTEL | 7600 | 61 | 21.2 | | | 7.9 | |
| Elk Peak | SC | 8000 | | | | | | |
| Emery Creek | SNOTEL | 4350 | 51 | 12.6 | 9.5 | 133 | 6.4 | 67 |
| Fatty Creek | SC | 5500 | | | | | | |
| Fish Creek | SC | 8000 | 37 | 9.1 | 5.5 | 165 | 4.1 | 75 |
| Fisher Creek | SNOTEL | 9100 | 104 | 33.1 | 20.6 | 161 | 19.1 | 93 |
| Flattop Mtn. | SNOTEL | 6300 | 102 | 28.5 | 28.5 | 100 | 23 | 81 |
| Fleecer Ridge | SC | 7500 | | | | | | |
| Foolhen | SC | 8280 | | | | | | |
| Forest Lake | SC | 6400 | | | | | | |
| Four Mile | SC | 6900 | | | | | | |
| Freight Creek | SC | 6000 | | | | | | |
| Frohner Meadow | SNOTEL | 6480 | 29 | 7.8 | 4.5 | 173 | 5.3 | 118 |
| Garver Creek | SNOTEL | 4250 | 37 | 10 | 6.8 | 147 | 4.3 | 63 |
| Gibbons Pass | SC | 7100 | | | | | | |
| Goat Mountain | SC | 7000 | | | | | | |
| Government Saddle | SC | 5270 | 80 | 24 | | | 14.8 | |
| Grave Creek | SNOTEL | 4300 | 50 | 13.9 | 10.9 | 128 | 7.1 | 65 |
| Griffin Creek Divide | SC | 5150 | | | | | | |
| Hand Creek | SNOTEL | 5035 | 34 | 8 | 7.7 | 104 | 6 | 78 |
| Hawkins Lake | SNOTEL | 6450 | 69 | 18 | 16.1 | 112 | 12.1 | 75 |
| **Haymaker** | SC | 8050 | | | | | | |

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|---|---|---|---|---|---|---|---|---|
| Hebgen Dam | SC | 6550 | 22 | 5.7 | 6.8 | 84 | 6.2 | 91 |
| Hell Roaring Divide | SC | 5770 | 70 | 20.6 | 19.9 | 104 | 12.9 | 65 |
| Herrig Junction | SC | 4850 | 69 | 16.2 | 17.6 | 92 | 10.6 | 60 |
| Highwood Divide | SC | 5650 | 6 | 1.4 | 4.1 | 34 | 1.2 | 29 |
| Highwood Station | SC | 4600 | 8 | 2.1 | 2.8 | 75 | 2.1 | 75 |
| Holbrook | SC | 4530 | | | 6 | | | |
| Hoodoo Basin | SNOTEL | 6050 | 105 | 29.5 | 26.3 | 112 | 17.3 | 66 |
| Humboldt Gulch | SNOTEL | 4250 | 38 | 11 | 8.6 | 128 | 7 | 81 |
| Jakes Canyon | SC | 9040 | | | | | | |
| Johnson Park | SC | 6450 | 23 | 5.8 | 3.4 | 171 | 3.7 | 109 |
| Kishenehn | SC | 3890 | | | | | | |
| Kraft Creek | SNOTEL | 4750 | 44 | 12.8 | | | 8.1 | |
| Lake Camp | SC | 7780 | | | 6 | | 6.4 | 107 |
| Lakeview Canyon | SC | 6930 | | | | | | |
| Lakeview Ridge | SNOTEL | 7400 | 18 | 4.1 | 6.5 | 63 | 4.2 | 65 |
| Lemhi Ridge | SNOTEL | 8100 | 27 | 6.2 | 6.4 | 97 | 6.3 | 98 |
| Lick Creek | SNOTEL | 6860 | 32 | 8.3 | 5.9 | 141 | 4.2 | 71 |
| Little Park | SC | 7400 | | | | | | |
| Logan Creek | SC | 4300 | | | | | | |
| Lolo Pass | SNOTEL | 5240 | 73 | 19.7 | 18.7 | 105 | 14.3 | 76 |
| Lone Mountain | SNOTEL | 8880 | 50 | 15.3 | 11.2 | 137 | 8.8 | 79 |
| Lookout | SNOTEL | 5140 | 64 | 17.8 | 19.4 | 92 | 12.5 | 64 |
| Lower Twin | SNOTEL | 7900 | 47 | 13.5 | 11 | 123 | 7.4 | 67 |
| Lubrecht Flume | SNOTEL | 4680 | 24 | 6.6 | 3.8 | 174 | 3.5 | 92 |
| Lubrecht Forest No 3 | SC | 5450 | 20 | 4.9 | 3.2 | 153 | 2.8 | 88 |
| Lubrecht Forest No 4 | SC | 4650 | 12 | 3.3 | 1.8 | 183 | 1.8 | 100 |
| Lubrecht Forest No 6 | SC | 4040 | 20 | 4.8 | 2 | 240 | 3.3 | 165 |
| Lubrecht Hydroplot | SC | 4200 | 23 | 6.2 | 3.2 | 194 | 3 | 94 |
| Lupine Creek | SC | 7380 | | | 4.8 | | 6.8 | 142 |
| Madison Plateau | SNOTEL | 7750 | 61 | 16.3 | 14.1 | 116 | 13.9 | 99 |
| Many Glacier | SNOTEL | 4900 | 31 | 9.5 | 9.5 | 100 | 6.3 | 66 |
| Marias Pass | SC | 5250 | | | 10.6 | | 7.8 | 74 |
| Mineral Creek | SC | 4000 | | | | | | |
| Monument Peak | SNOTEL | 8850 | 71 | 19.9 | 12 | 166 | 10.5 | 88 |
| Moss Peak | SNOTEL | 6780 | 98 | 31.5 | 21.7 | 145 | 18.9 | 87 |
| Moulton Reservoir | SC | 6850 | 27 | 5.8 | 4.2 | 138 | 3.7 | 88 |
| Mount Allen No 7 | SC | 5700 | | | | | | |
| Mount Lockhart | SNOTEL | 6400 | 54 | 14.7 | 12.2 | 120 | 10 | 82 |
| Mudd Lake | SC | 7650 | | | | | | |
| Mule Creek | SNOTEL | 8300 | 49 | 13 | 8.8 | 148 | 8.1 | 92 |
| N Fk Elk Creek | SNOTEL | 6250 | 38 | 9.9 | 6.7 | 148 | 4.7 | 70 |
| Nevada Ridge | SNOTEL | 7020 | 37 | 13.3 | 8.6 | 155 | 8 | 93 |
| New World | SC | 6900 | | | 7.8 | | | |
| Nez Perce Camp | SNOTEL | 5650 | 36 | 9.6 | 8.6 | 112 | 8.4 | 98 |
| Noisy Basin | SNOTEL | 6040 | 112 | 36.9 | 25.4 | 145 | 18.1 | 71 |
| Norris Basin | SC | 7550 | | | 6.5 | | 6.5 | 100 |
| North Fork Jocko | SNOTEL | 6330 | 112 | 32.7 | 27.1 | 121 | 16.8 | 62 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Northeast Entrance | SNOTEL | 7350 | 30 | 7.5 | 6.4 | 117 | 6.9 | 108 |
| Onion Park | SNOTEL | 7410 | 35 | 8 | 7.9 | 101 | 3.5 | 44 |
| Ophir Park | SC | 7150 | 39 | 11.4 | 8.7 | 131 | 8 | 92 |
| Parker Peak | SNOTEL | 9400 | 73 | 21.6 | 13 | 166 | 17.1 | 132 |
| Peterson Meadows | SNOTEL | 7200 | 37 | 9.3 | 5.5 | 169 | 4.6 | 84 |
| Pickfoot Creek | SNOTEL | 6650 | 33 | 8.2 | 6.5 | 126 | 6.2 | 95 |
| Pike Creek | SNOTEL | 5930 | 29 | 7.2 | | | 1.4 | |
| Pipestone Pass | SC | 7200 | 15 | 3.3 | 2.4 | 138 | 2 | 83 |
| Placer Basin | SNOTEL | 8830 | 56 | 16.1 | 10.5 | 153 | 8.3 | 79 |
| Poorman Creek | SNOTEL | 5100 | 85 | 27.9 | 23.4 | 119 | 16.5 | 71 |
| Porcupine | SNOTEL | 6500 | 26 | 7.1 | 4.1 | 173 | 2.5 | 61 |
| Potomageton Park | SC | 7150 | | | | | | |
| Revais | SC | 4800 | | | | | | |
| Rock Creek Mdws | SC | 3400 | 43 | 12.6 | | | 7.8 | |
| Rocker Peak | SNOTEL | 8000 | 51 | 12.6 | 8.2 | 154 | 6.2 | 76 |
| Rocky Boy | SNOTEL | 4700 | 15 | 3.6 | 3.2 | 113 | 2.9 | 91 |
| Roland Summit | SC | 5120 | | | | | | |
| S Fork Shields | SNOTEL | 8100 | 44 | 12.9 | 9.2 | 140 | 4.5 | 49 |
| Sacajawea | SNOTEL | 6550 | 38 | 11.4 | 8.9 | 128 | 6.9 | 78 |
| Saddle Mtn. | SNOTEL | 7940 | 67 | 19.8 | 15.8 | 125 | 11 | 70 |
| Short Creek | SNOTEL | 7000 | 17 | 3.9 | 3.6 | 108 | 2.7 | 75 |
| Shower Falls | SNOTEL | 8100 | 65 | 18.6 | 12.1 | 154 | 9.7 | 80 |
| Skalkaho Summit | SNOTEL | 7250 | 59 | 15.4 | 14 | 110 | 9.2 | 66 |
| Sleeping Woman | SNOTEL | 6150 | 40 | 10.9 | 9.6 | 114 | 8.2 | 85 |
| Slide Rock Mountain | SC | 7100 | | | | | | |
| Spotted Bear Mountain | SC | 7000 | 42 | 11.8 | 8.7 | 136 | 7 | 80 |
| Spur Park | SNOTEL | 8100 | 59 | 15.5 | 12.8 | 121 | 8.6 | 67 |
| Stahl Peak | SNOTEL | 6030 | 87 | 25.8 | 22.1 | 117 | 22.1 | 100 |
| Stemple Pass | SC | 6600 | | | | | | |
| Storm Lake | SC | 7780 | 40 | 9.6 | 7.4 | 130 | 4.4 | 59 |
| Stringer Creek | SNOTEL | 6550 | 31 | 7.3 | 6.7 | 109 | 3.2 | 48 |
| Stryker Basin | SC | 6180 | 72 | 18.8 | 19.6 | 96 | 18.3 | 93 |
| Stuart Mountain | SNOTEL | 7400 | 85 | 25.5 | 20.4 | 125 | 15.4 | 75 |
| Taylor Road | SC | 4080 | 8 | 1.7 | 2.2 | 77 | 2.2 | 100 |
| Ten Mile Lower | SC | 6600 | 31 | 7.7 | 4 | 193 | 4.2 | 105 |
| Ten Mile Middle | SC | 6800 | 33 | 8.6 | 6 | 143 | 4.4 | 73 |
| Tepee Creek | SNOTEL | 8000 | 30 | 6.4 | 8.5 | 75 | 6.2 | 73 |
| Timberline Creek | SC | 8850 | | | | | | |
| Tizer Basin | SNOTEL | 6880 | 26 | 6.4 | 6 | 107 | 5.6 | 93 |
| Trinkus Lake | SC | 6100 | | | 25.2 | | 20 | 79 |
| Truman Creek | SC | 4060 | 11 | 2.4 | 2.9 | 83 | 4.3 | 148 |
| Twelvemile Creek | SNOTEL | 5600 | 51 | 12.6 | 11 | 115 | 10.5 | 95 |
| Twenty-One Mile | SC | 7150 | 40 | 10.6 | 10 | 106 | 8.4 | 84 |
| Twin Lakes | SNOTEL | 6400 | 96 | 29.4 | 24.9 | 118 | 18.3 | 73 |
| Upper Holland Lake | SC | 6200 | | | 20.6 | | 14.8 | 72 |
| Waldron | SNOTEL | 5600 | 31 | 7.9 | 6.6 | 120 | 6.7 | 102 |
| Warm Springs | SNOTEL | 7800 | 71 | 19.8 | 12.3 | 161 | 8.8 | 72 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Weasel Divide | SC | 5450 | 81 | 23 | 20.6 | 112 | 16.4 | 80 |
| West Yellowstone | SNOTEL | 6700 | 32 | 8.2 | 7 | 117 | 7.9 | 113 |
| Whiskey Creek | SNOTEL | 6800 | 40 | 9.8 | 9.6 | 102 | 9 | 94 |
| White Elephant | SNOTEL | 7710 | 61 | 16.2 | 16 | 101 | 13.1 | 82 |
| White Mill | SNOTEL | 8700 | 78 | 25.5 | 14.6 | 175 | 15.9 | 109 |
| Wolverine | SNOTEL | 7650 | 35 | 11.4 | 7.1 | 161 | 9.5 | 134 |
| Wood Creek | SNOTEL | 5960 | 27 | 6.5 | 5.8 | 112 | 4.3 | 74 |
| Wrong Creek | SC | 5700 | | | | | | |
| Wrong Ridge | SC | 6800 | | | | | | |
| Younts Peak | SNOTEL | 8350 | | | 9.6 | | 12.9 | 134 |

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# Montana Water Supply Outlook Report

**Natural Resources Conservation Service**