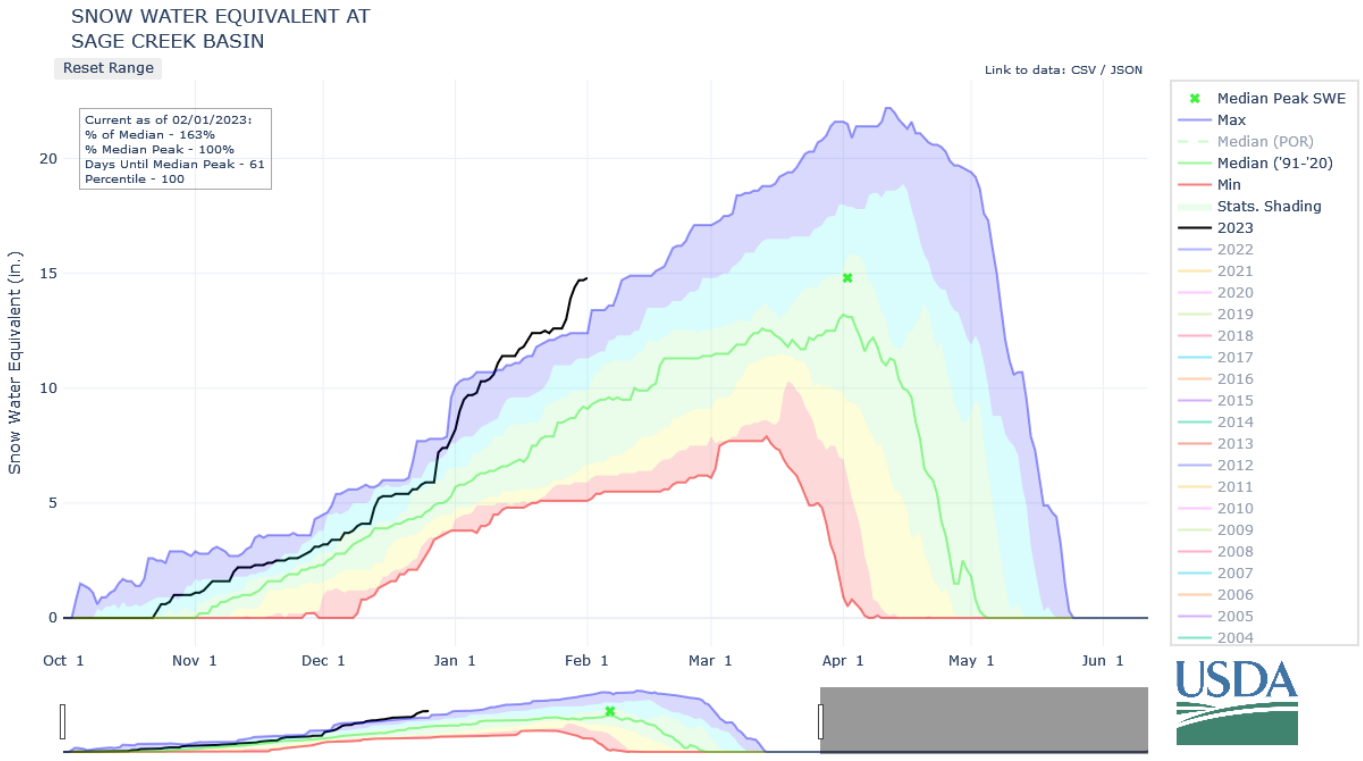
United States
Department of
Agriculture

Wyoming Basin & Water Supply Outlook Report

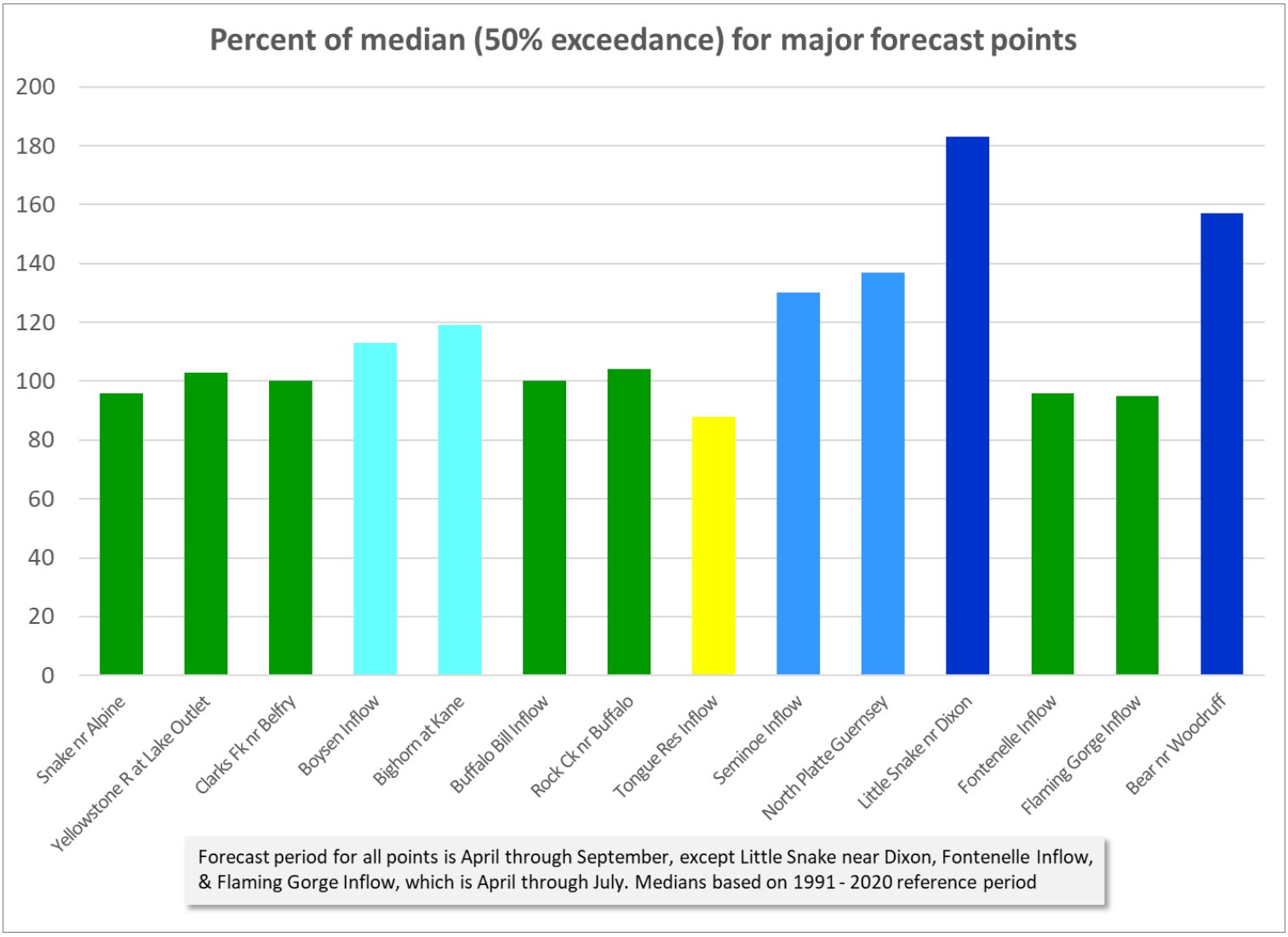
February 1, 2023

Natural
Resources
Conservation
Service



Graph of Snow Water Equivalent at Sage Creek Basin Snotel Site in Carbon County, Wyoming, February 1, 2023.

Forecasted stream flows for February 1st, 2023



Basin Outlook Reports
And
Federal - State - Private Cooperative Snow Surveys

For more information, contact:

Jeff Goats
100 East "B" Street, Casper, WY 82601
(307) 233-6768 jeff.goats@usda.gov

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

Note: The median is the official normal for snowpack (SWE), precipitation, reservoir storage, and streamflow calculations. Please refer to the **Appendix** of this report for more detailed information.

Wyoming Basin & Water Supply Outlook Report

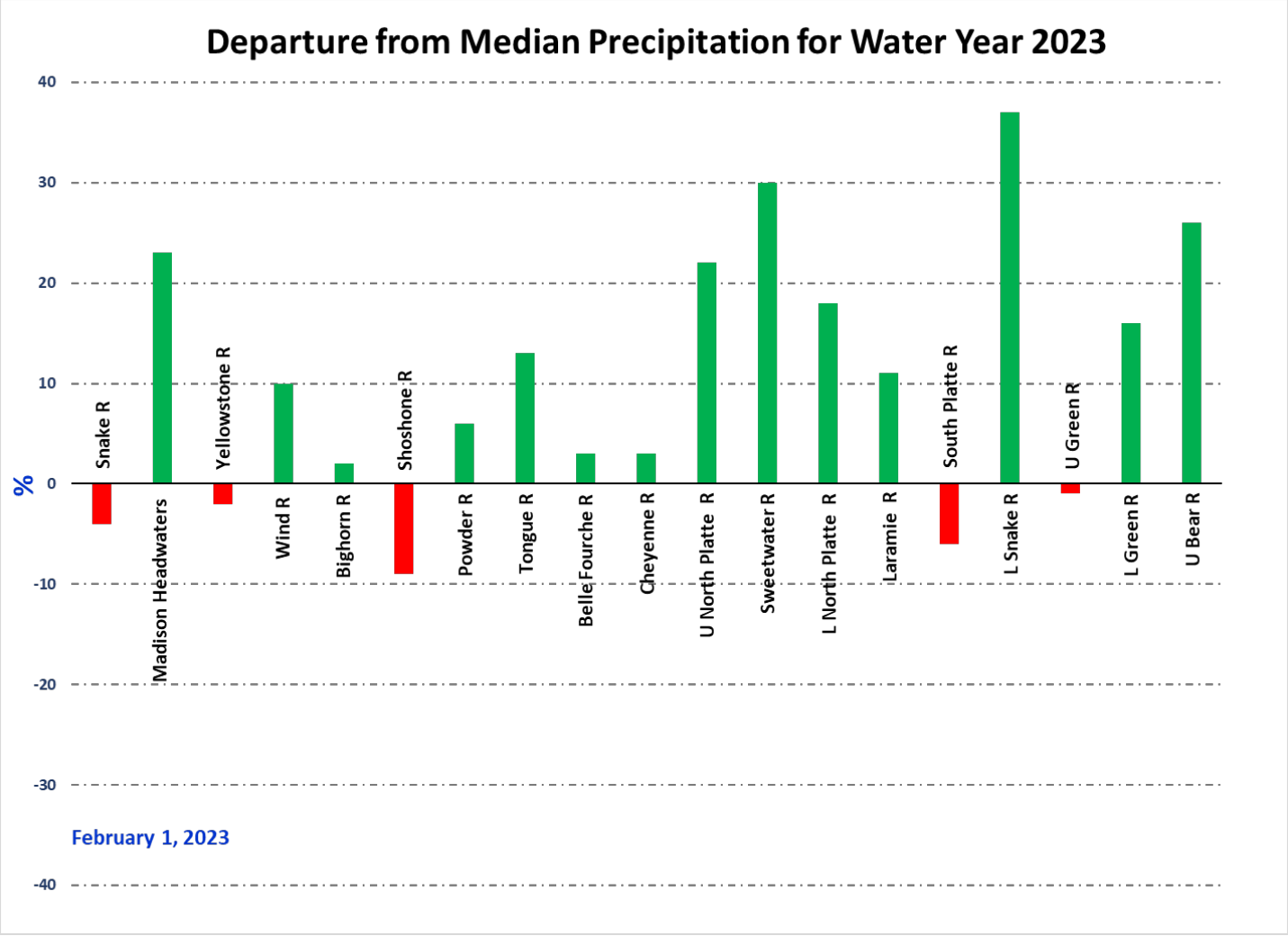
Snowpack

Snow water equivalent (SWE)across Wyoming for February 1st was at 121% of median. SWE in the Sweetwater River Basin was the highest at 157% of median and lowest for the Shoshone River Basin at 94% of median. *See the map on page 6 and the Appendix for further information.*

Precipitation

The Lower North Platte River Basin had the highest precipitation for the month at 257% of median. The Yellowstone River Headwaters in Wyoming had the lowest precipitation amount at 57% of median. The following graph displays the precipitation in major river basins and their departure from median for the water year beginning October 1, 2022.

See Appendix for further information.



Streams

Forecast median streamflow yields for April thru September in Wyoming basins (except Green, Little Snake and Cheyenne) average 114%. Forecast median stream flow yields for April thru July in Green, Little Snake, and Cheyenne average 120%. The Snake River and Yellowstone River in Wyoming, basins should yield about 101% and 102% of median. Yields from the Wind and Bighorn River basins should be about 118% and 111% of median. Yields from the Shoshone River basin should be 97% of median. Yields from the Powder and Tongue River basins should be about 109% and 103% of median. Yield for the Cheyenne River basin should be about 107% of median. Yields for the Sweetwater, Upper North Platte, Lower North Platte, and Laramie Rivers of Wyoming should be about 151%, 139%, 129%, and 125% of median, respectively. Yields for the Little Snake and Green River should be 176% and 107%.

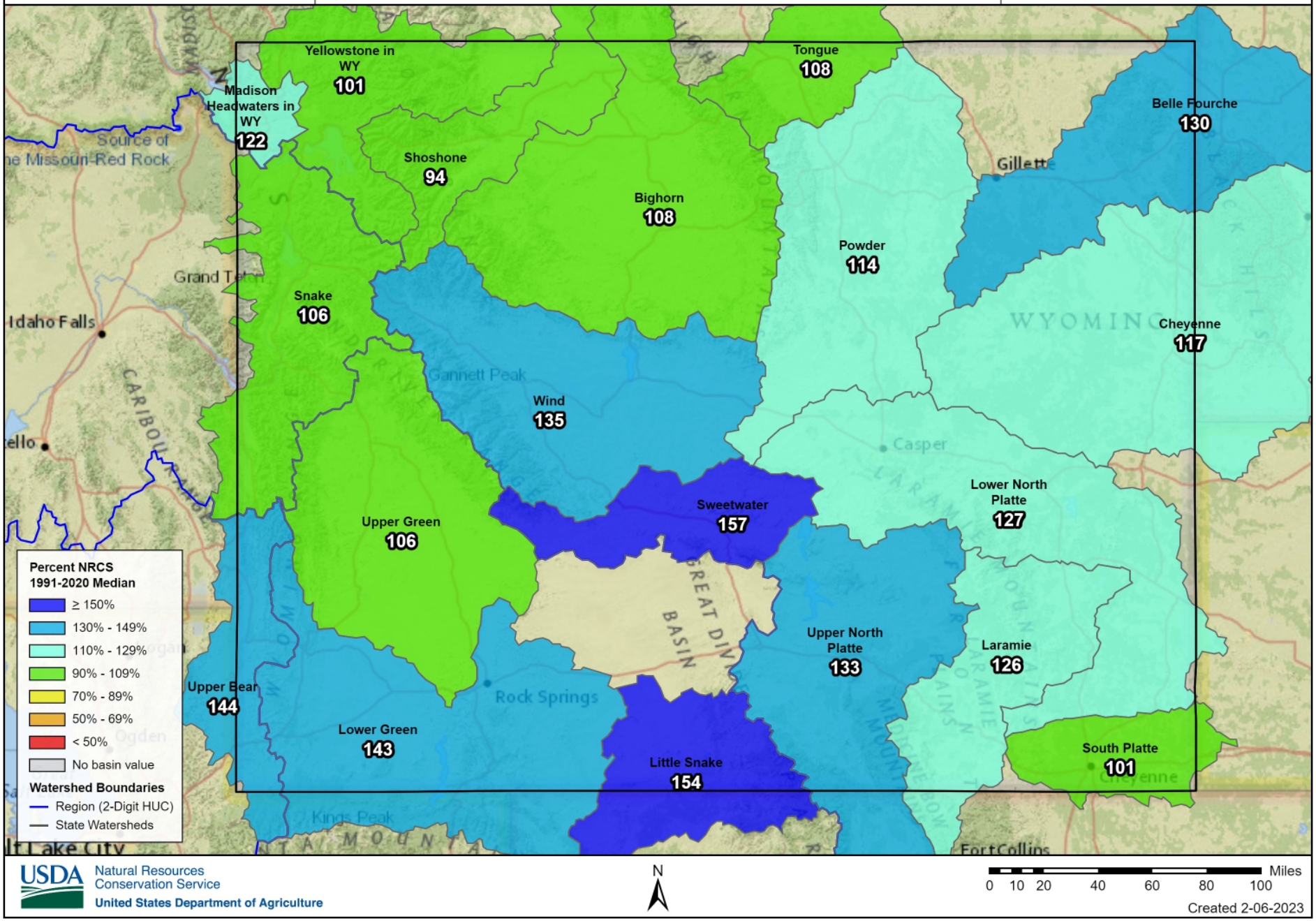
Reservoirs

Reservoir storage was 81% of median across the entire state. Reservoirs in the Snake River basin are much below median at 30%. Reservoirs in the Wind River basin are near median at 100%. Reservoirs on the Bighorn are slightly below median at 96%. The Buffalo Bill Reservoir on the Shoshone is near median at 104%. The Tongue River Reservoir is at 111% of median. Reservoirs in the Belle Fourche and Cheyenne River basins are near and below median at 97% and 80% respectively. Reservoirs on the Upper and Lower North Platte River are below median and near median at 69% and 95% respectively. Reservoirs on the Upper Green River are slightly below median at 95%. Reservoirs on the Lower Green River are below median at 80%. *See below for further information.*

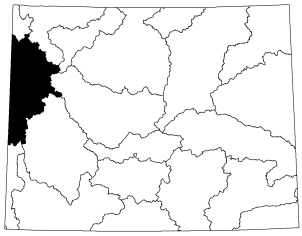
Wyoming Reservoir Levels

Basinwide Summary: February 1, 2023 (Medians based On 1991-2020 reference period)	Reservoir Storage Summary For the End of January 2023								
	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Alcova	157.6	157.4	156.4	184.3	86%	85%	85%	101%	101%
Angostura	63.3	79.2	93.3	122.1	52%	65%	76%	68%	85%
Belle Fourche	123.9	107.3	132.1	178.4	69%	60%	74%	94%	81%
Big Sandy	7.5	6.5	18.2	38.3	20%	17%	48%	41%	36%
Bighorn Lake	817.5	820.7	854.2	1356.0	60%	61%	63%	96%	96%
Boysen	560.6	586.7	551.9	596.0	94%	98%	93%	102%	106%
Buffalo Bill	465.2	387.6	446.7	646.6	72%	60%	69%	104%	87%
Bull Lake	73.8	87.8	80.9	151.8	49%	58%	53%	91%	109%
Deerfield	14.6	14.8	14.8	15.2	96%	98%	97%	99%	100%
Flaming Gorge Reservoir	2496.9	2900.9	3111.0	3749.0	67%	77%	83%	80%	93%
Fontenelle	166.8	180.2	165.4	344.8	48%	52%	48%	101%	109%
Glendo	257.5	287.0	281.5	506.4	51%	57%	56%	91%	102%
Grassy Lake	11.2	10.3	12.7	15.2	74%	68%	84%	88%	81%
Guernsey	13.7	0.0	13.9	45.6	30%	0%	30%	98%	0%
Jackson Lake	178.0	169.8	620.4	847.0	21%	20%	73%	29%	27%
Keyhole	117.9	127.9	117.2	193.8	61%	66%	60%	101%	109%
Meeks Cabin Reservoir	9.5	10.5	9.8	32.5	29%	32%	30%	97%	107%
Pactola	50.1	52.1	52.4	55.0	91%	95%	95%	96%	99%
Pathfinder	350.3	648.8	565.6	1016.5	34%	64%	56%	62%	115%
Pilot Butte	24.6	21.2	25.2	31.6	78%	67%	80%	98%	84%
Seminoe	446.9	287.3	595.8	1016.7	44%	28%	59%	75%	48%
Stateline Reservoir	6.1	5.5	5.7	12.0	50%	46%	48%	106%	96%
Tongue River Res	47.9	44.4	43.0	79.1	61%	56%	54%	111%	103%
Viva Naughton Res	30.7	27.1	30.2	42.4	69%	64%	71%	101%	90%
Woodruff Creek	2.2	1.8	2.2	4.0	55%	44%	55%	100%	80%
Woodruff Narrows Reservoir	13.5	12.8	36.0	57.3	24%	22%	63%	37%	35%

Snow Water Equivalent	Wyoming Basins Snow Water Equivalent (SWE) % of Median - Includes Manual Snow Courses Percent NRCS 1991-2020 Median	February 1st, 2023



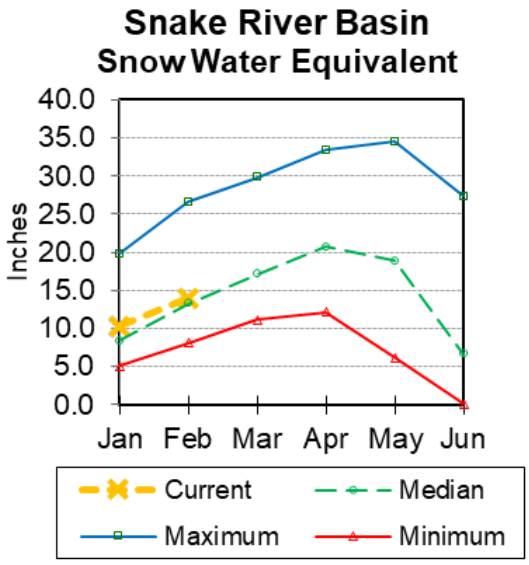
Snake River Basin

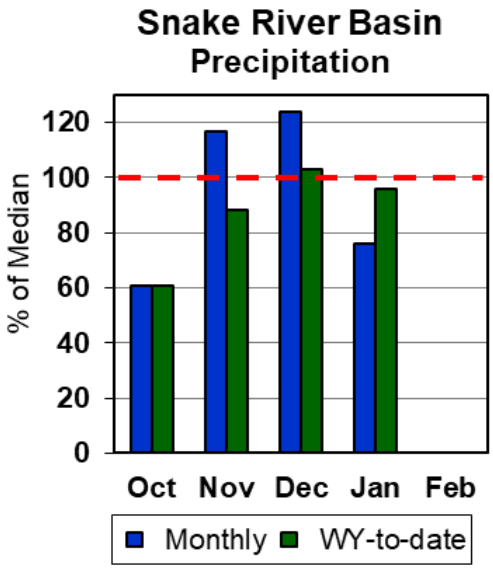


Snow

The overall Snake River basin SWE (portion above Palisades dam) is 106% of median. SWE in the Snake River Basin above Jackson Lake is 103% of median. Pacific Creek basin SWE is 97% of median. Buffalo Fork SWE is 97% of median. Gros Ventre River basin SWE is 97% of median. SWE in the Hoback River drainage is 100% of median. SWE in the Greys River drainage is 106% of median. Salt River Basin SWE is 124% of median.

See Appendix at the end of this report for a detailed listing of snow course information.





Precipitation

Last month's precipitation for the Snake River Basin was 76% of median. Water-year-to-date precipitation is 96% of median.

Reservoirs

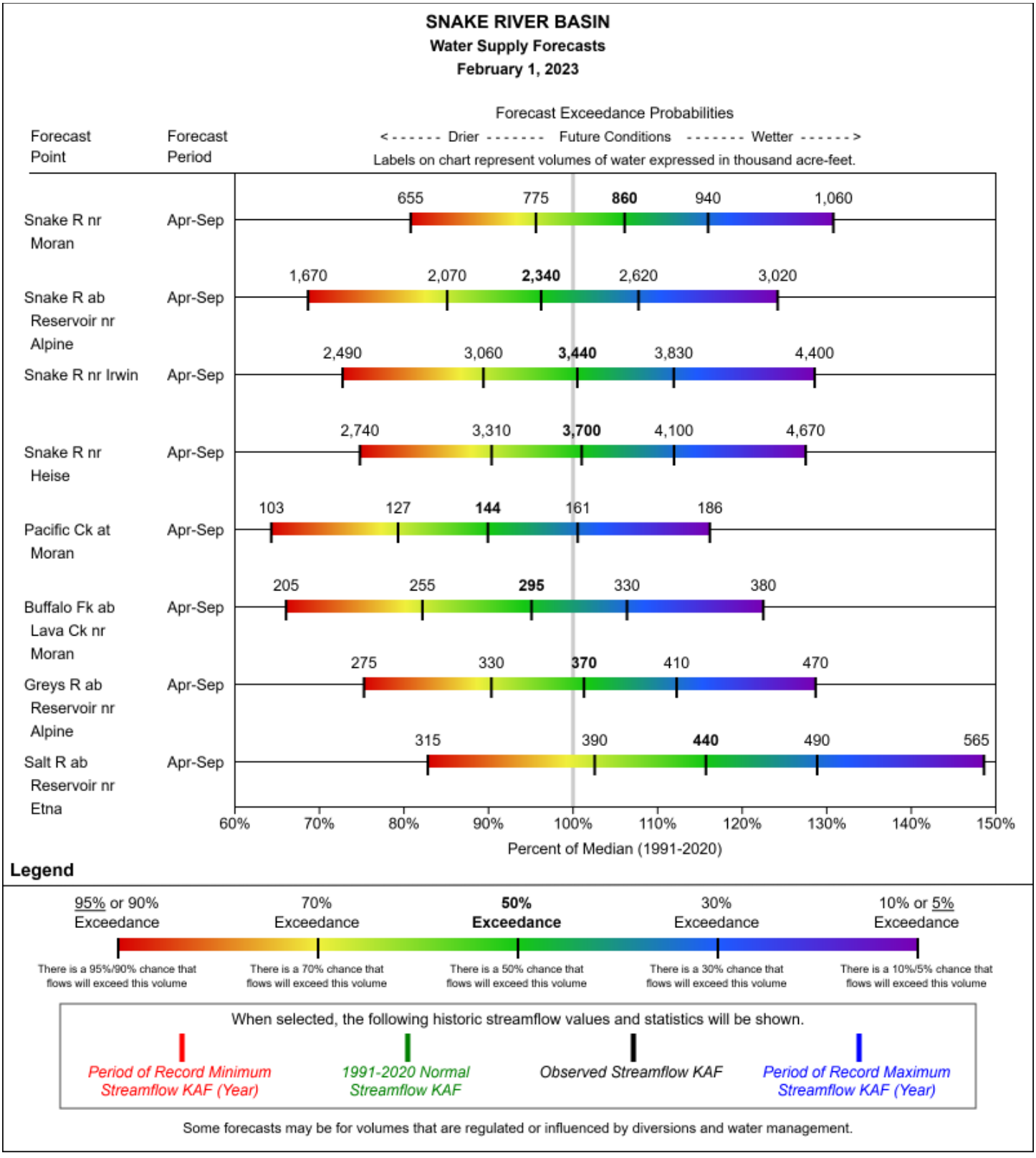
Current reservoir storage is 30% of median for the two storage reservoirs in the basin.

Snake	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Grassy Lake	11.2	10.3	12.7	15.2	74%	68%	84%	88%	81%
Jackson Lake	178.0	169.8	620.4	847.0	21%	20%	73%	29%	27%
Basin Index					**22%**	**21%**	**73%**	**30%**	**28%**
# of reservoirs					2	2	2	2	2

Streamflow

The 50% exceedance forecasts for April through September are near median for this basin. The Snake near Moran yield should be 106% of median. Snake River above reservoir near Alpine will yield about 96%. Pacific Creek near Moran yield will be around 90%. Buffalo Fork above Lava near Moran will be around 95% of median. Greys River above reservoir near Alpine should yield about 101%. Salt River near Etna yield will be about 116%.

See the following graph for further information.



Legend

95% or 90% Exceedance — There is a 95%/90% chance that flows will exceed this volume

70% Exceedance — There is a 70% chance that flows will exceed this volume

50% Exceedance — There is a 50% chance that flows will exceed this volume

30% Exceedance — There is a 30% chance that flows will exceed this volume

10% or 5% Exceedance — There is a 10%/5% chance that flows will exceed this volume

When selected, the following historic streamflow values and statistics will be shown.

Period of Record Minimum Streamflow KAF (Year)

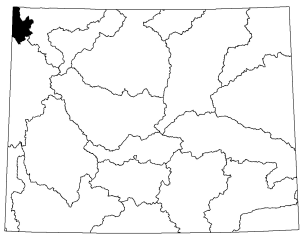
1991-2020 Normal Streamflow KAF

Observed Streamflow KAF

Period of Record Maximum Streamflow KAF (Year)

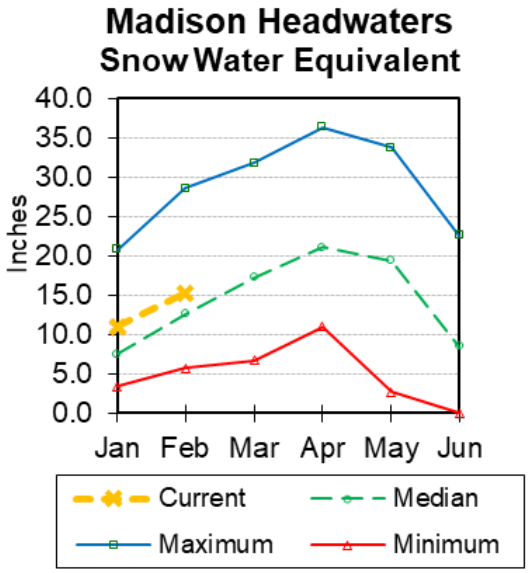
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

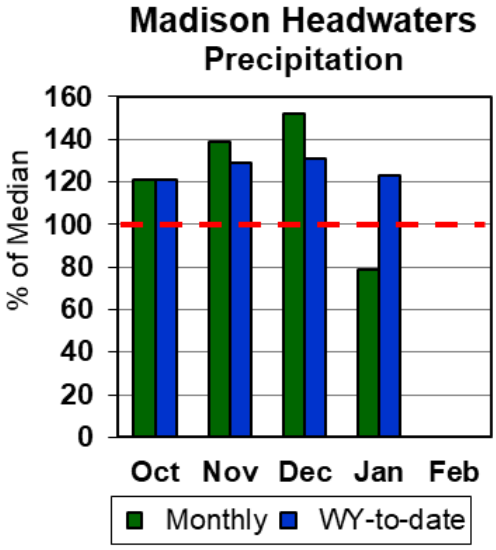
Madison Headwaters in Wyoming



Snow

SWE is 122% of median in the Madison Headwaters in Wyoming drainage. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Last month precipitation in the Madison Headwaters drainage was 79% of median. Water-year-to-date precipitation is at 123% of median.

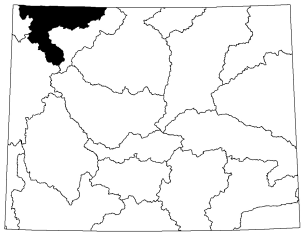
Reservoirs

No reservoir data.

Streamflow

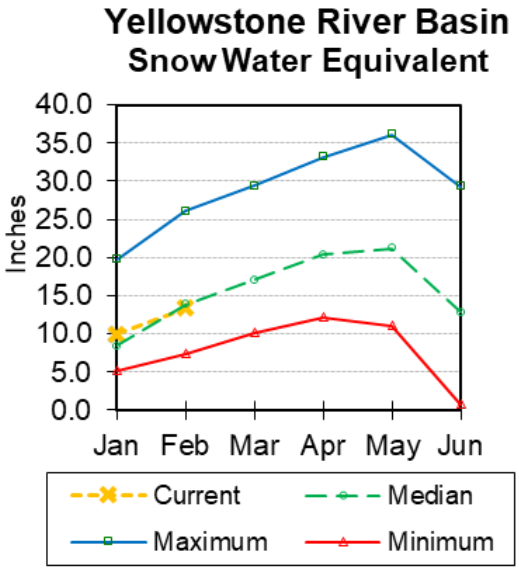
There are no streamflow forecast points for the basin.

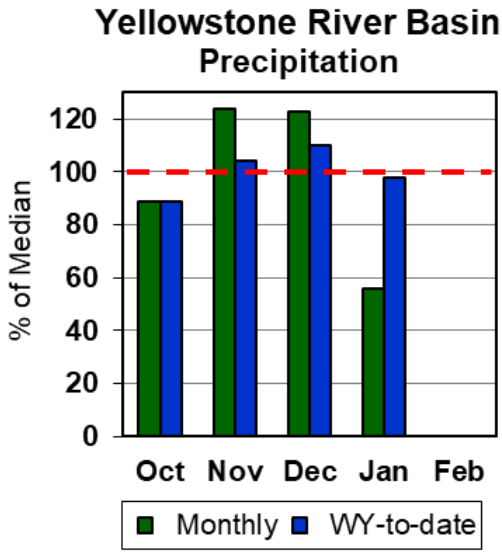
Yellowstone River Basin



Snow

SWE in the Yellowstone River Basin is 100% of median. SWE in the Clarks Fork Drainage of the Yellowstone River basin in Wyoming is 92% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Last month's precipitation in the Yellowstone River Basin was 56% of median. Water-year-to-date precipitation is 98% of median.

Reservoirs

No reservoir data.

Streamflow

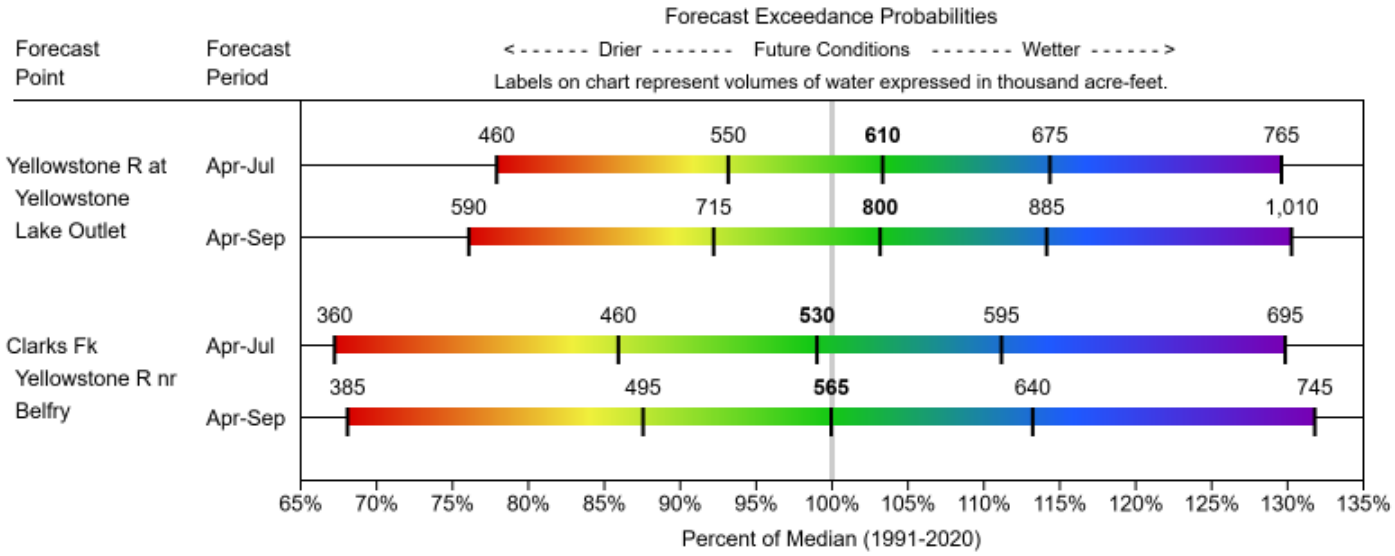
The 50% exceedance forecasts for April through September are near normal for the basin. Yellowstone at Lake Outlet will yield around 103% of median. Clarks Fork of the Yellowstone near Belfry will yield around 100%.

See the following graph for detailed information.

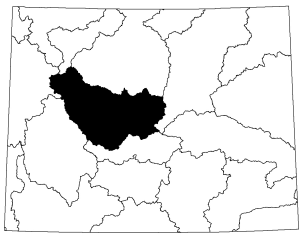
YELLOWSTONE RIVER BASIN

Water Supply Forecasts

February 1, 2023

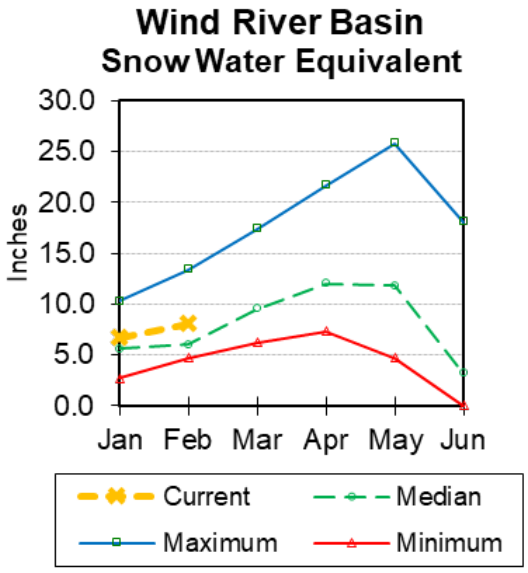


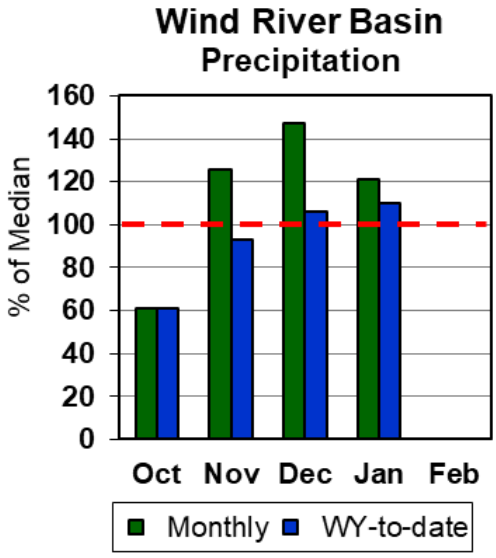
Wind River Basin



Snow

Wind River basin SWE (above Boysen Reservoir) is 135% of median. SWE in the Wind River above Dubois is 115% of median. Little Wind SWE is 129% of median, and Popo Agie drainage SWE is 165% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

January precipitation for the basin was 121% of median. Water year-to-date precipitation is 110% of median.

Reservoirs

Current storage is 100% of median in the basin.

Wind	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Pilot Butte	24.6	21.2	25.2	31.6	78%	67%	80%	98%	84%
Boysen	560.6	586.7	551.9	596.0	94%	98%	93%	102%	106%
Bull Lake	73.8	87.8	80.9	151.8	49%	58%	53%	91%	109%
Basin Index					**85%**	**89%**	**84%**	**100%**	**106%**
# of reservoirs					3	3	3	3	3

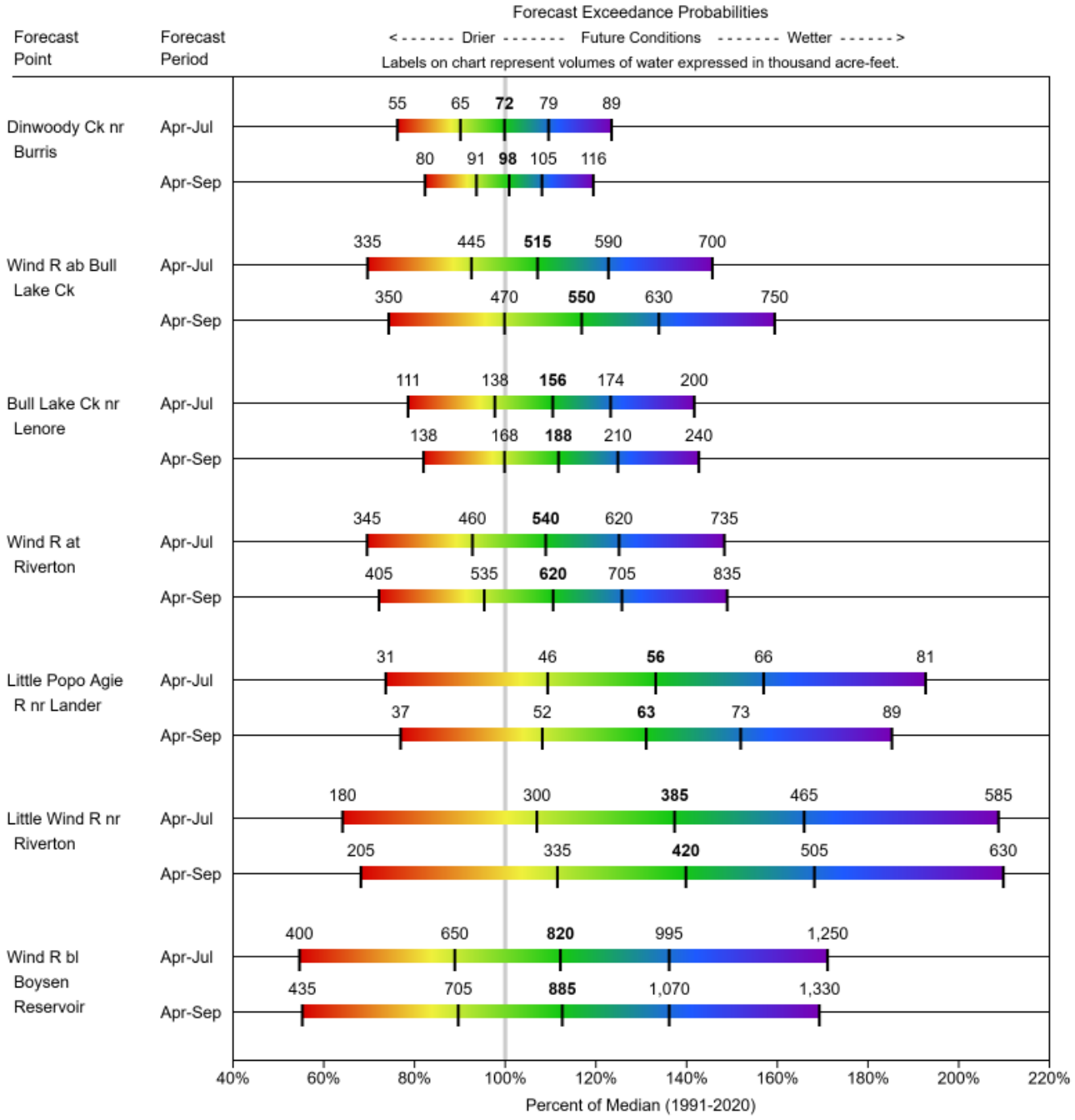
Streamflow

The 50% exceedance forecasts for the April through September runoff period are well above normal for the Wind River. The Wind River above Bull Lake Creek will yield about 117% of median. Little Popo Agie River near Lander should yield around 131% of median. Little Wind River near Riverton will yield around 140% of median. Boysen Reservoir inflow will yield about 113% of median. *See the following graph for detailed runoff volumes.*

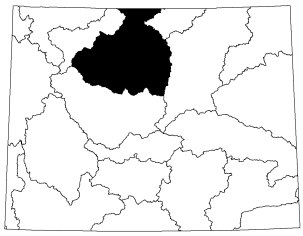
WIND RIVER BASIN

Water Supply Forecasts

February 1, 2023

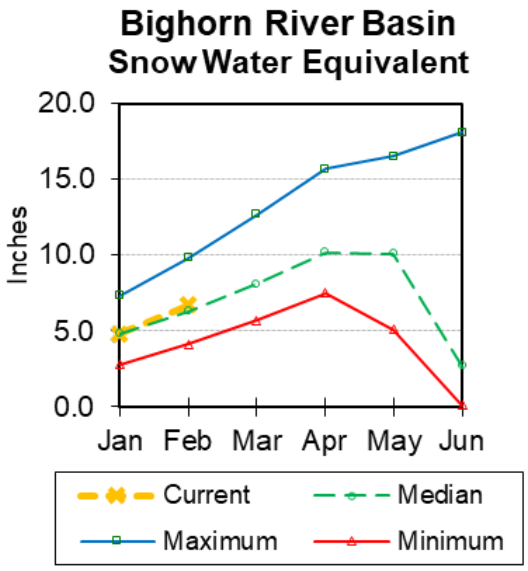


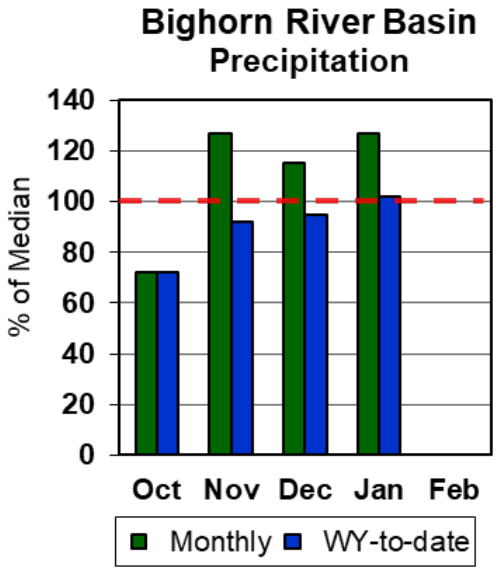
Bighorn River Basin



Snow

The Bighorn River Basin SWE (above Bighorn Reservoir) is 108% of median. The Greybull River SWE is at 105% of median. Shell Creek SWE is at 94% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Last month's precipitation was 127% of median. Year-to-date precipitation is 102% of median.

Reservoirs

Current reservoir storage in the basin is 96% of median.

Bighorn	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Bighorn Lake	817.5	820.7	854.2	1356.0	60%	61%	63%	96%	96%
Basin Index					**60%**	**61%**	**63%**	**96%**	**96%**
# of reservoirs					1	1	1	1	1

Streamflow

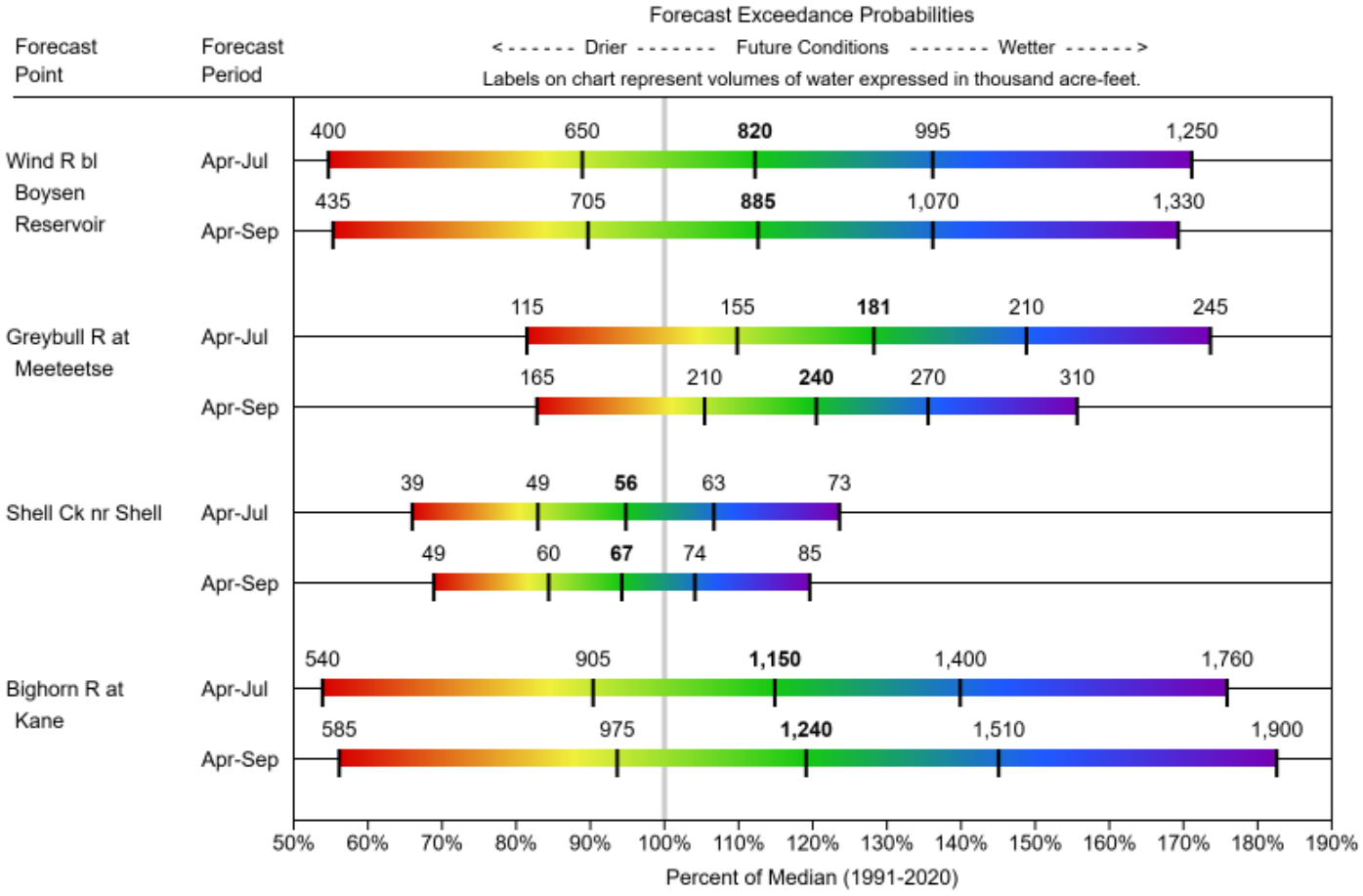
The 50% exceedance forecasts for the April through September runoffs are above normal. The Greybull River near Meeteetse should yield 121% of median. Shell Creek near Shell should also yield around 94% of median. The Bighorn River at Kane should yield around 119% of median.

See the following graph for detailed runoff volumes.

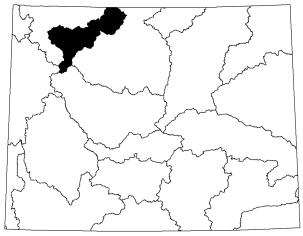
BIGHORN RIVER BASIN

Water Supply Forecasts

February 1, 2023

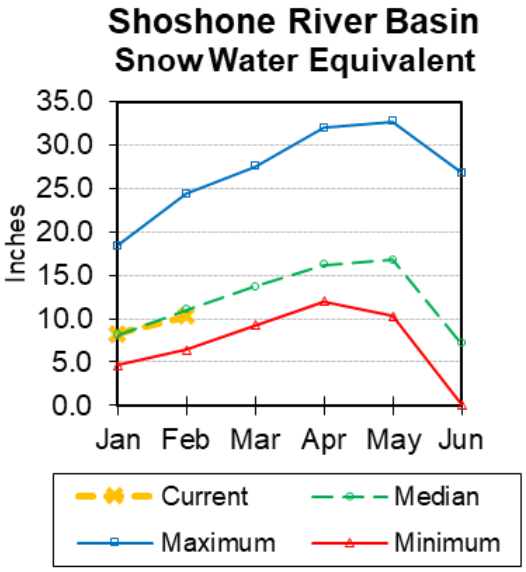


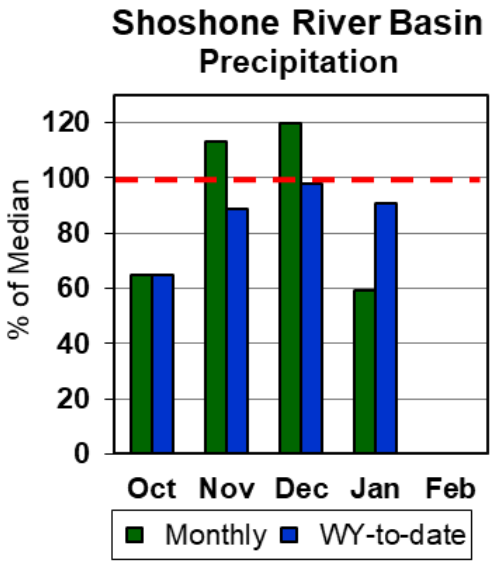
Shoshone River Basin



Snow

Snow Water Equivalent (SWE) is 94% of median in this basin. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Precipitation for last month was 59% of median. The basin year-to-date precipitation is now 91% of median.

Reservoirs

Current storage in Buffalo Bill Reservoir is about 104% of median.

Shoshone	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Buffalo Bill	465.2	387.6	446.7	646.6	72%	60%	69%	104%	87%
Basin Index					**72%**	**60%**	**69%**	**104%**	**87%**
# of reservoirs					1	1	1	1	1

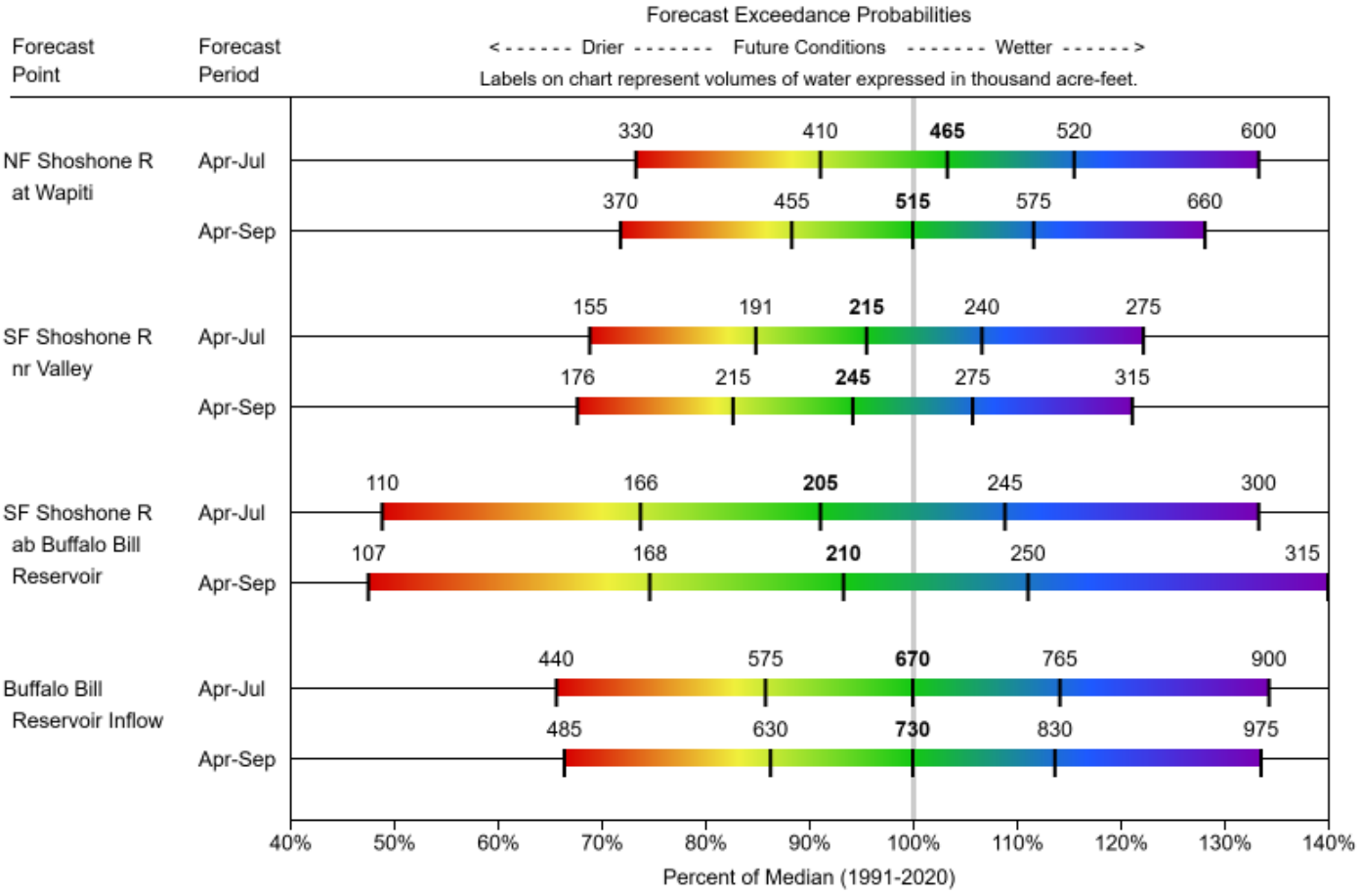
Streamflow

The 50% exceedance forecasts for the April through September period are near normal for the basin. The North Fork Shoshone River at Wapiti should yield 100% of median. The South Fork of the Shoshone River near Valley should yield 94% of median. The Buffalo Bill Reservoir inflow should yield 100% of median. *See the following graph for detailed runoff volumes.*

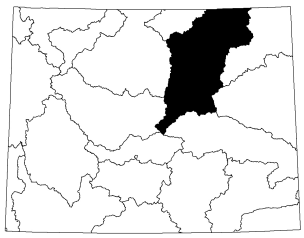
SHOSHONE RIVER BASIN

Water Supply Forecasts

February 1, 2023

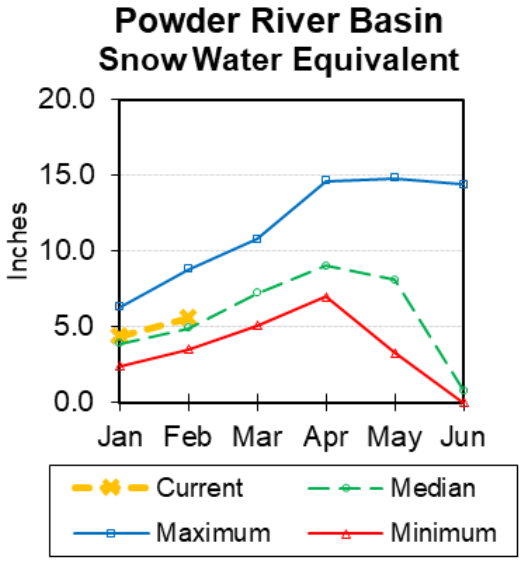


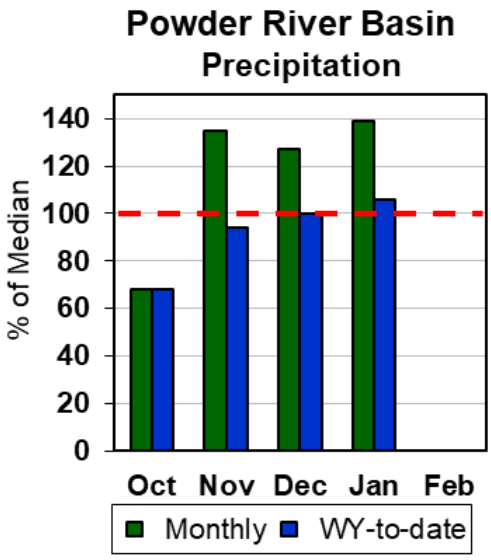
Powder River Basin



Snow

Powder River Basin SWE is at 114% of median. SWE in the Clear Creek drainage is 107% of median. *See appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Last month's precipitation was 139% of median in the basin. Year-to-date precipitation is 106% of median.

Reservoirs

No reservoir data for this basin.

Streamflow

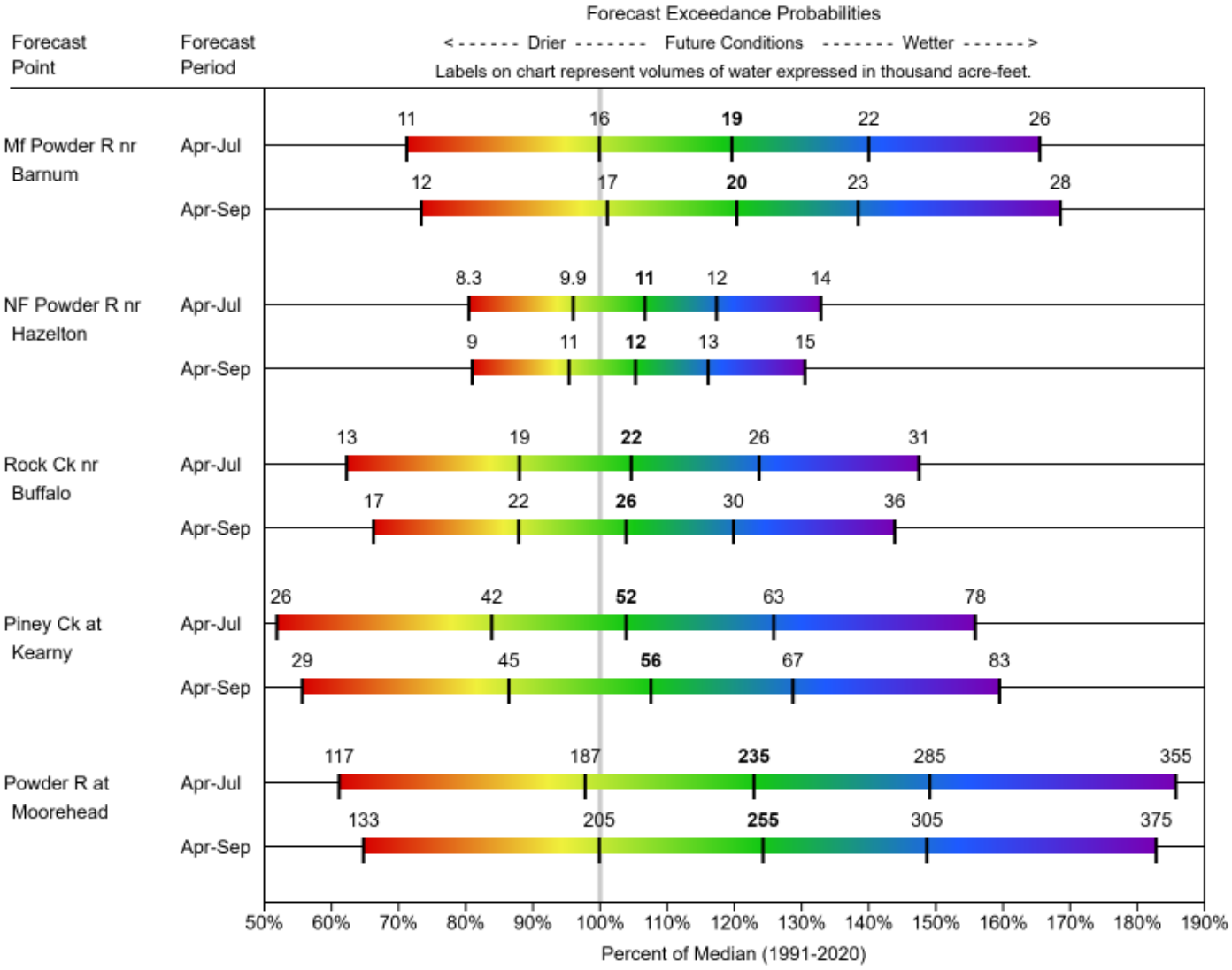
The 50% exceedance forecasts for the April through September period are slightly above normal for the basin. The Middle Fork of the Powder River near Barnum should yield around 120% of median. The North Fork of the Powder River near Hazelton to yield around 105% of median.

See the following graph for detailed runoff volumes.

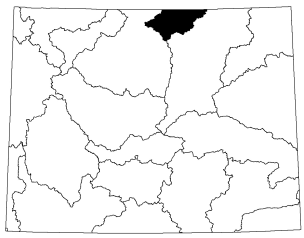
POWDER RIVER BASIN

Water Supply Forecasts

February 1, 2023

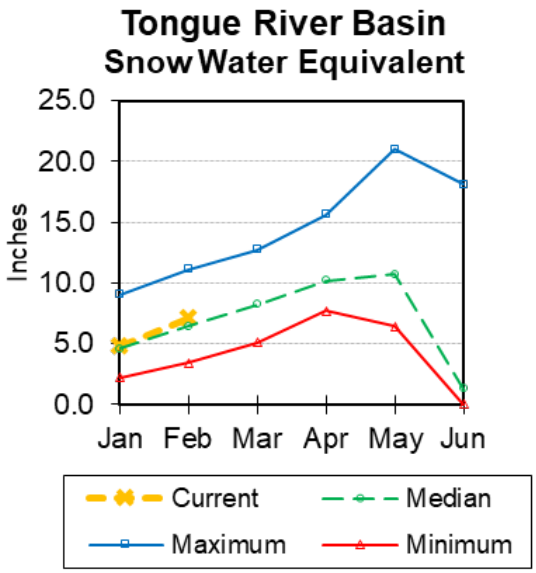


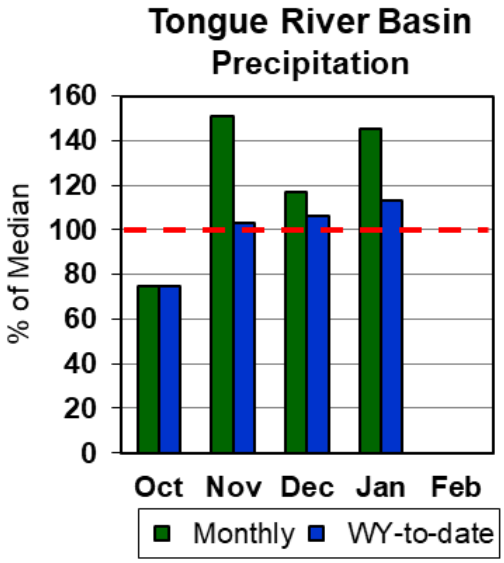
Tongue River Basin



Snow

Upper Tongue River drainage SWE is at 108% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Last month's precipitation was 145% of median. Year-to-date precipitation is 113% of median in the basin.

Reservoirs

The Tongue River Reservoir is at 111% of median.

Tongue	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Tongue River Res	47.9	44.4	43.0	79.1	61%	56%	54%	111%	103%
Basin Index					**61%**	**56%**	**54%**	**111%**	**103%**
# of reservoirs					1	1	1	1	1

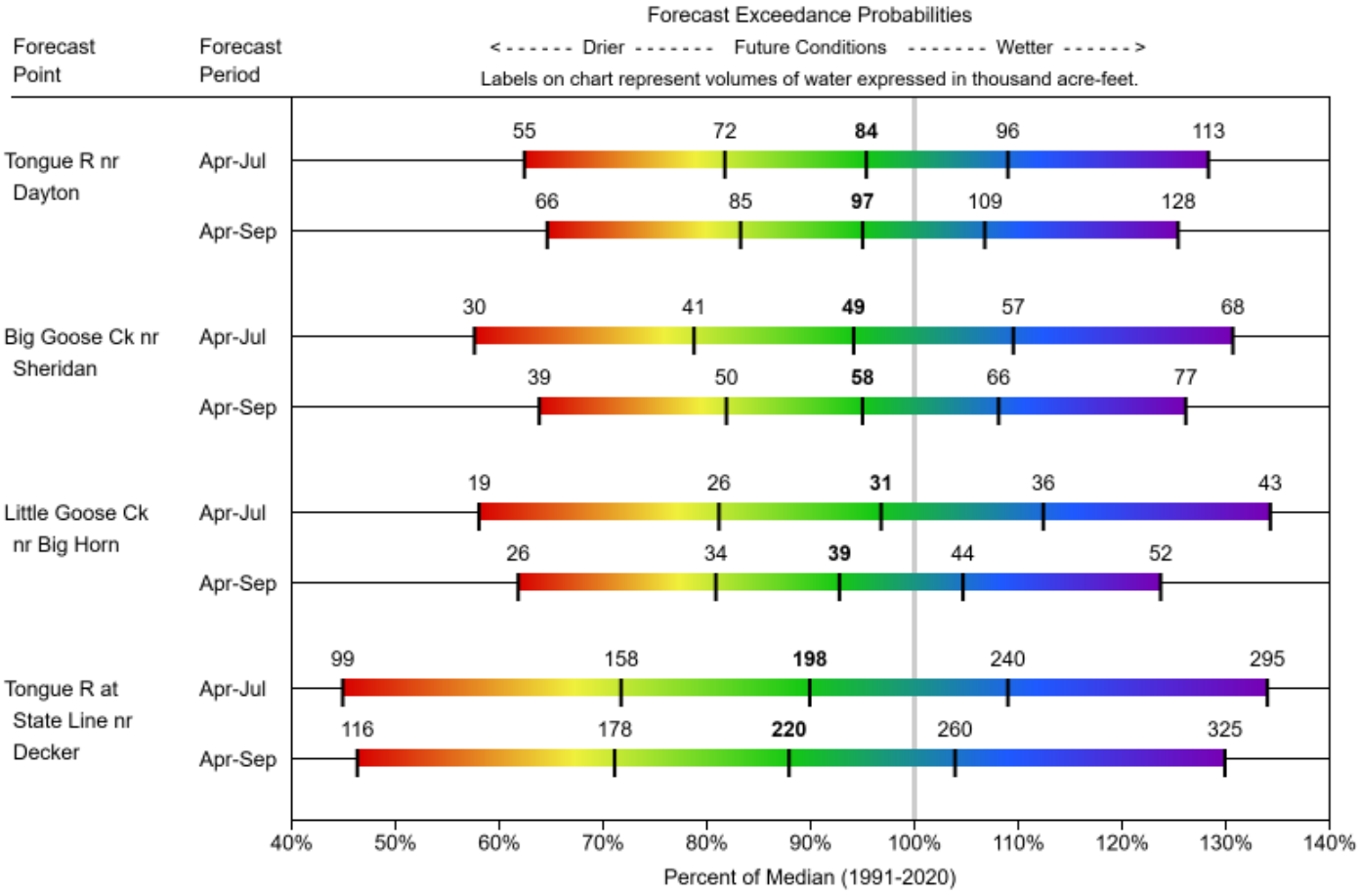
Streamflow

The 50% exceedance forecasts for the April through September period are slightly below normal for the basin. The yield for Tongue River near Dayton is forecasted to be 95% of median. Big Goose Creek near Sheridan should yield around 95%. Little Goose Creek near Bighorn should yield 93% of median. The Tongue River Reservoir Inflow should yield 95% of median. *See below for detailed runoff volumes.*

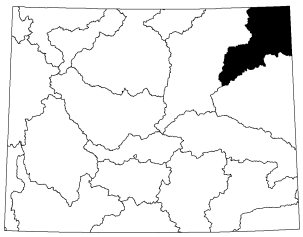
TONGUE RIVER BASIN

Water Supply Forecasts

February 1, 2023

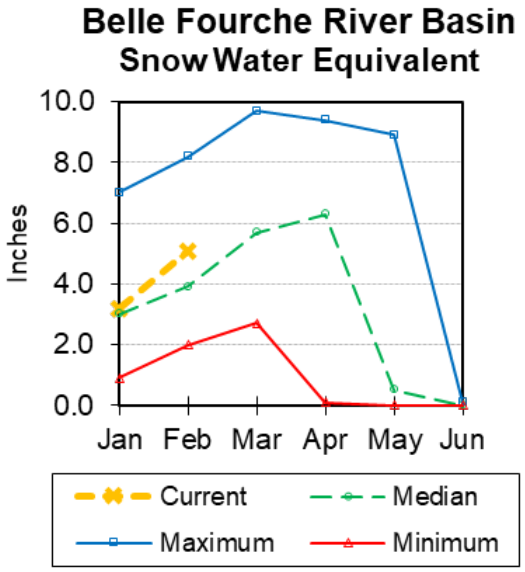


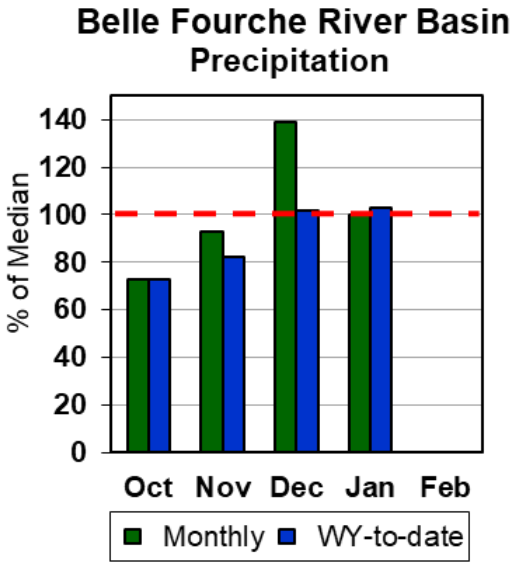
Belle Fourche River Basin



Snow

Currently the Belle Fourche River Basin SWE is at 130% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Precipitation for last month was 100% of median in the Belle Fourche basin. Year-to-date precipitation is 103% of median.

Reservoirs

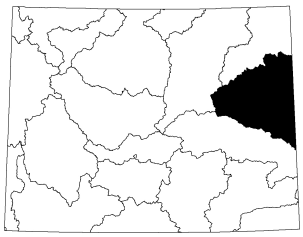
Combined storage for the 2 reservoirs in the basin is at 97% of median.

Belle Fourche	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Belle Fourche	123.9	107.3	132.1	178.4	69%	60%	74%	94%	81%
Keyhole	117.9	127.9	117.2	193.8	61%	66%	60%	101%	109%
Basin Index					**65%**	**63%**	**67%**	**97%**	**94%**
# of reservoirs					2	2	2	2	2

Streamflow

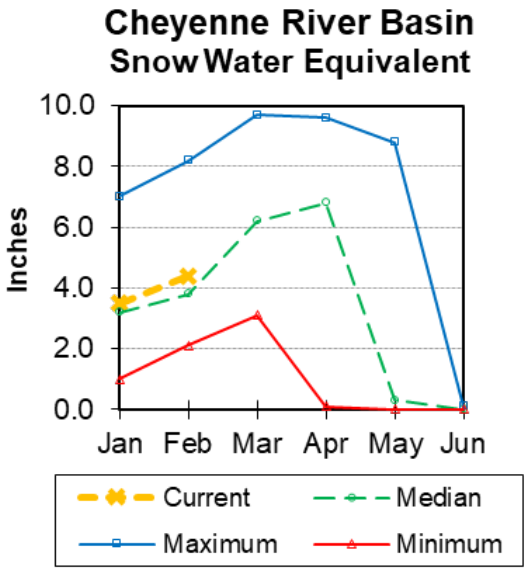
There are no streamflow forecast points for the basin.

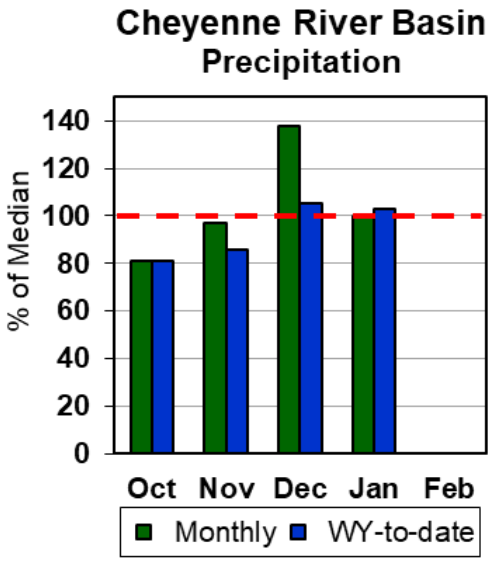
Cheyenne River Basin



Snow

Currently SWE for sites in the Cheyenne River Basin are at 117% of median. *See Appendix at the end of this report for a detailed listing.*





Precipitation

Precipitation for last month was 100% of median. Year-to-date precipitation is 103% of median.

Reservoirs

Combined storage for the 3 reservoirs in the basin is at 80% of median.

Cheyenne	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Deerfield	14.6	14.8	14.8	15.2	96%	98%	97%	99%	100%
Pactola	50.1	52.1	52.4	55.0	91%	95%	95%	96%	99%
Angostura	63.3	79.2	93.3	122.1	52%	65%	76%	68%	85%
Basin Index					**67%**	**76%**	**83%**	**80%**	**91%**
# of reservoirs					3	3	3	3	3

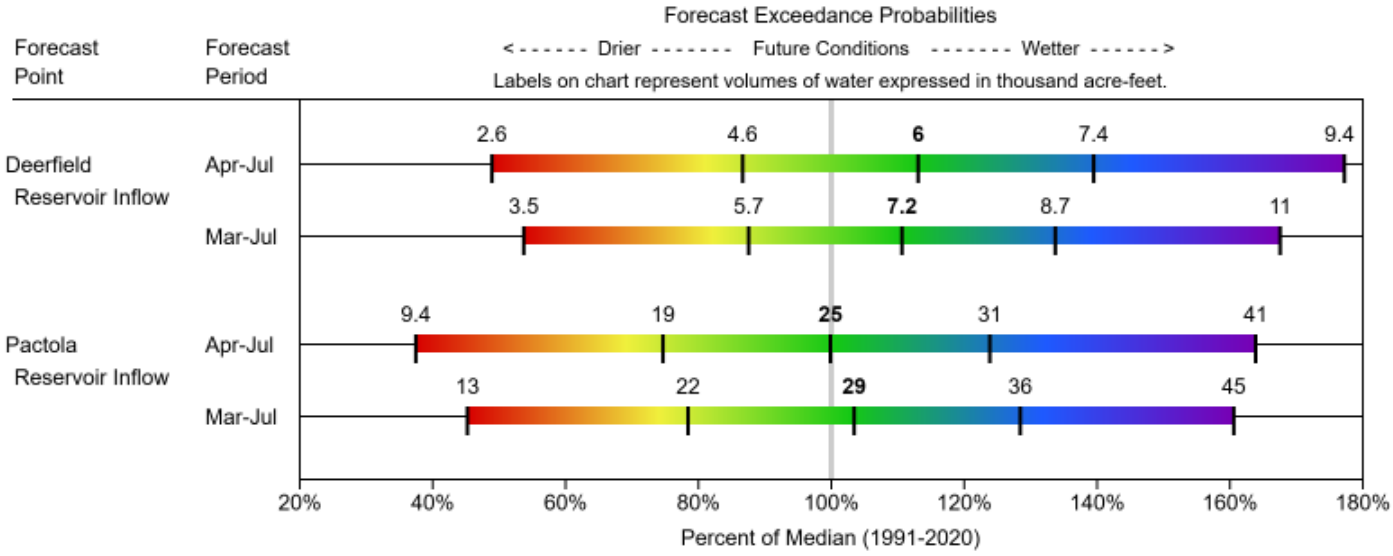
Streamflow

The 50% exceedance forecasts for the April through July period are near normal. The Deerfield Reservoir Inflow yield is forecasted at 113% of median. Pactola Reservoir Inflow yield should be 100% of median. *See the following graph for detailed runoff volumes.*

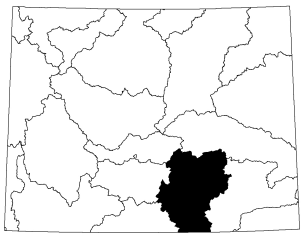
CHEYENNE RIVER BASIN

Water Supply Forecasts

February 1, 2023



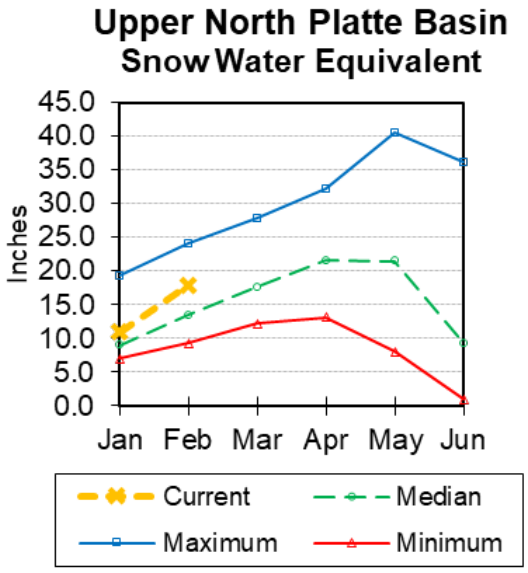
Upper North Platte River Basin

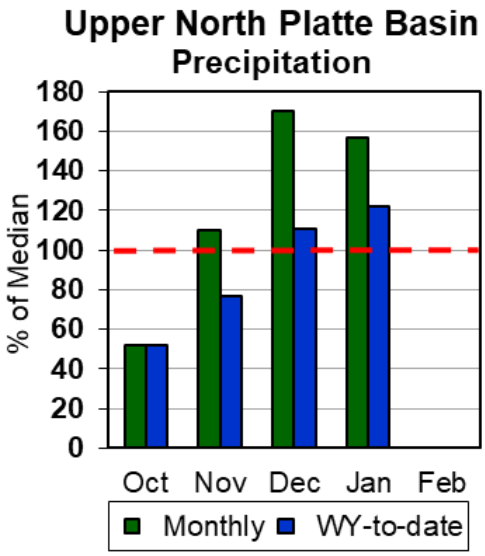


Snow

The Upper North Platte River basin SWE is 133% of median. North Platte above Northgate SWE is 135% of median. Encampment River SWE is 141% of median. Medicine Bow and Rock Creek SWE are 116% of median.

See Appendix at the end of this report for a detailed listing of snow course information.





Precipitation

Last month's precipitation was 157% of median. Total water-year-to-date precipitation is 122% of median.

Reservoirs

Seminoe Reservoir storage is at 75% of median.

	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Seminoe	446.9	287.3	595.8	1016.7	44%	28%	59%	75%	48%
Pathfinder	350.3	648.8	565.6	1016.5	34%	64%	56%	62%	115%
Basin Index					**39%**	**46%**	**57%**	**69%**	**81%**
# of reservoirs					2	2	2	2	2

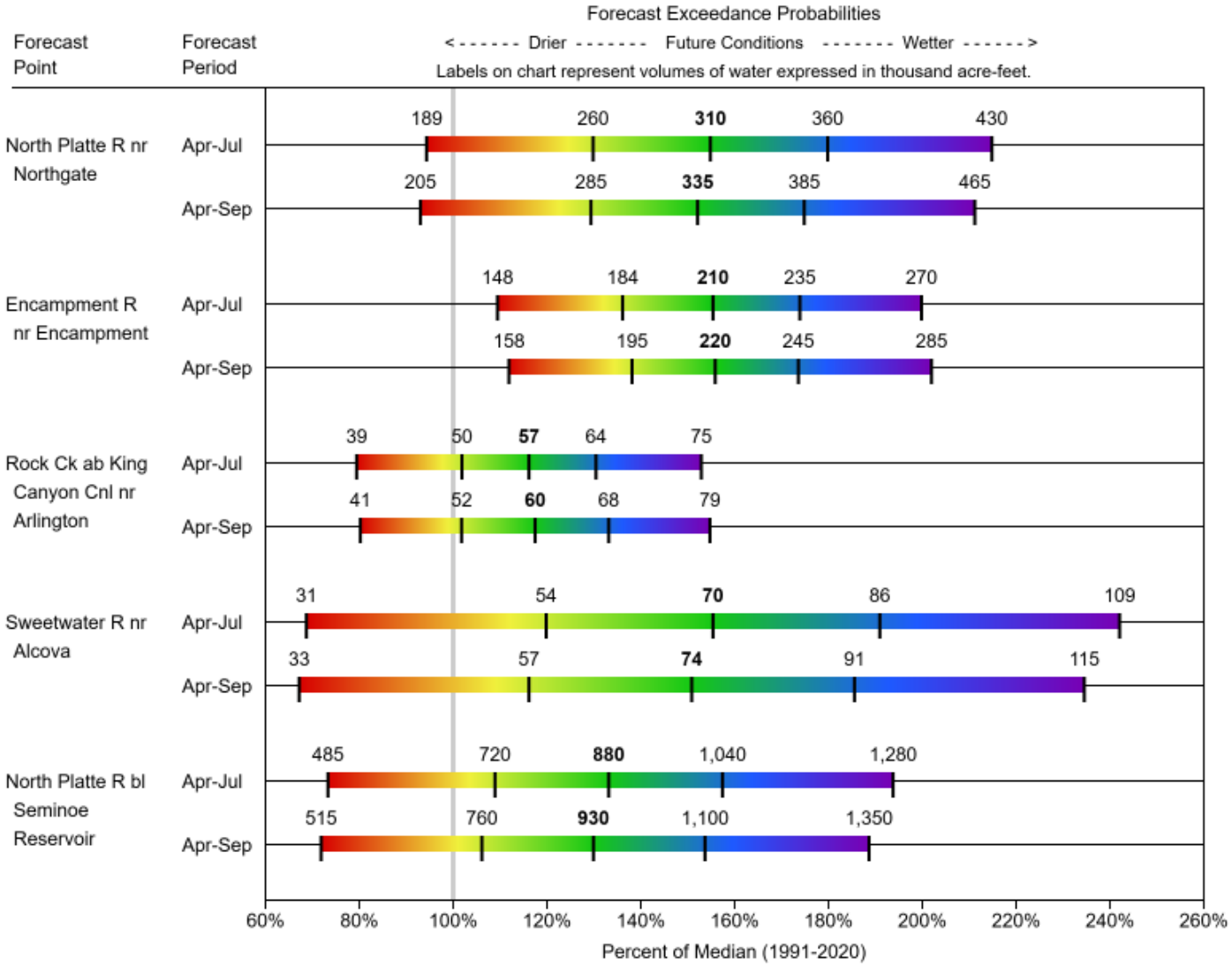
Streamflow

The 50% exceedance forecasts for the April through September period are well above normal for the Upper North Platte River Basin. The yield for the North Platte River near Northgate will be around 152% of median. The Encampment River near Encampment yield will be about 156%. Rock Creek near Arlington yield will be around 118%. Seminoe Reservoir inflow should be about 130% of median. *See the following page for more detailed information on projected runoff.*

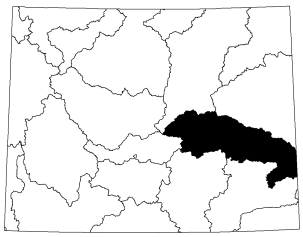
UPPER NORTH PLATTE RIVER BASIN

Water Supply Forecasts

February 1, 2023

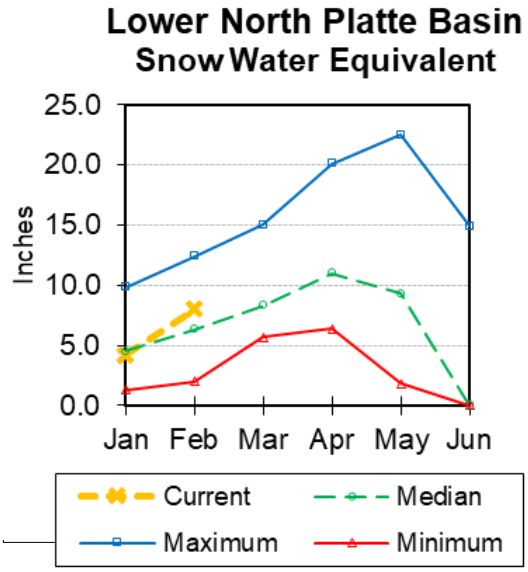


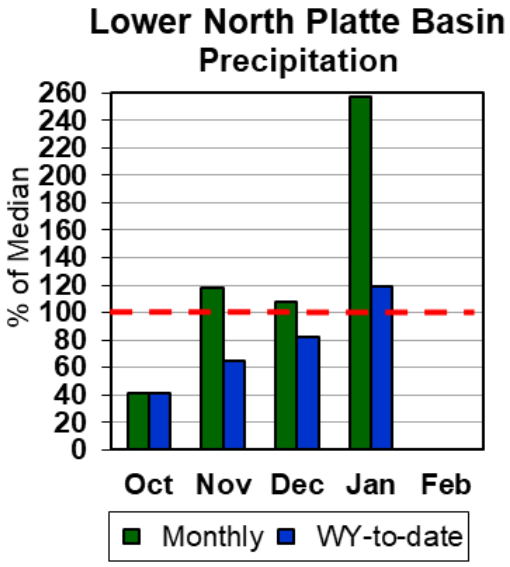
Lower North Platte River Basin



Snow

Currently, SWE in the Lower North Platte River Basin is 127% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Last month's precipitation was 257% of median. The water year-to-date precipitation for the basin is currently 119% of median.

Reservoirs

Combined storage for the 3 reservoirs in the basin is at 95% of median.

	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Guernsey	13.7	0.0	13.9	45.6	30%	0%	30%	98%	0%
Glendo	257.5	287.0	281.5	506.4	51%	57%	56%	91%	102%
Alcova	157.6	157.4	156.4	184.3	86%	85%	85%	101%	101%
Basin Index					**58%**	**60%**	**61%**	**95%**	**98%**
# of reservoirs					3	3	3	3	3

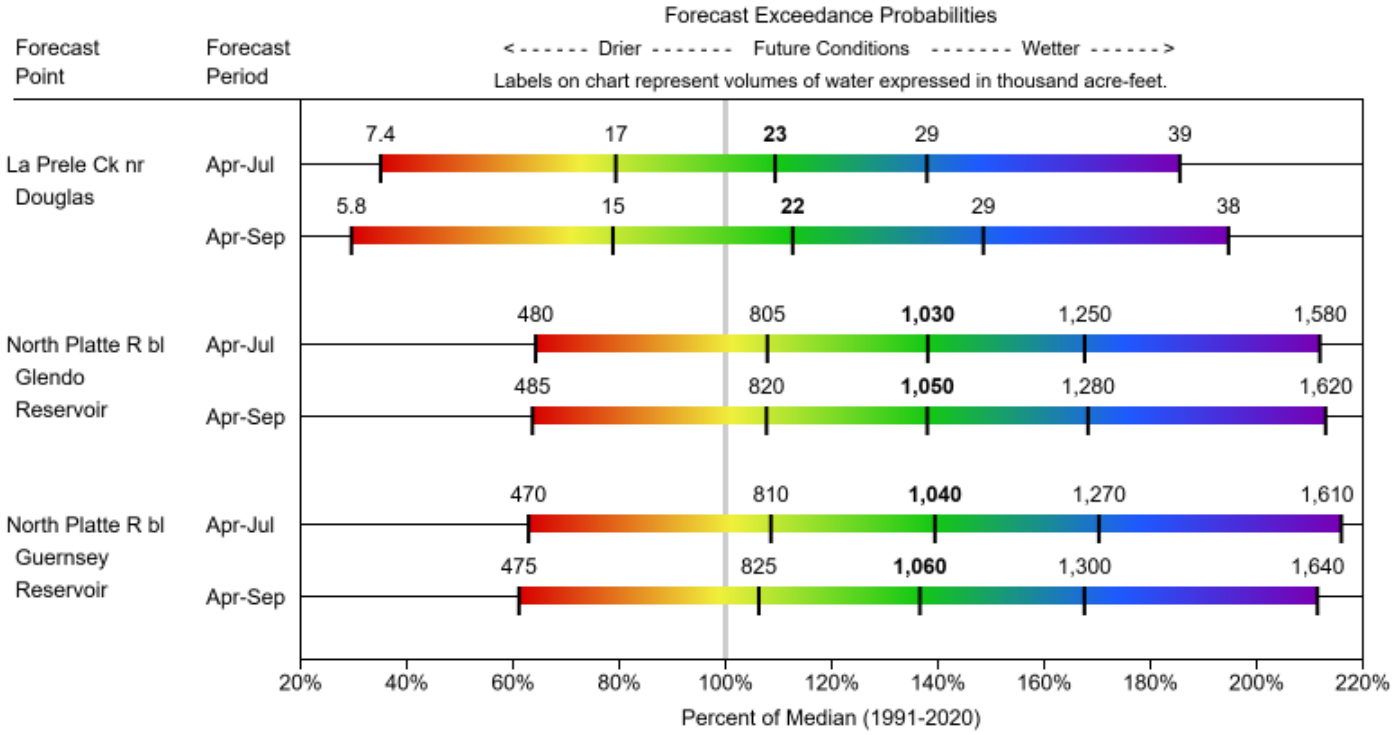
Streamflow

The 50% exceedance forecasts for the April through September period should be well above normal. LaPrele Creek near Douglas is forecasted to yield 113% of median. North Platte River below Guernsey Reservoir should yield around 137% of median. *See the following for more detailed information on projected runoff.*

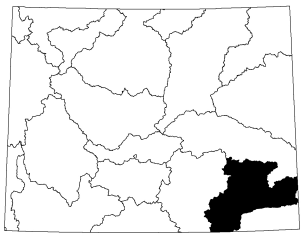
LOWER NORTH PLATTE RIVER BASIN

Water Supply Forecasts

February 1, 2023

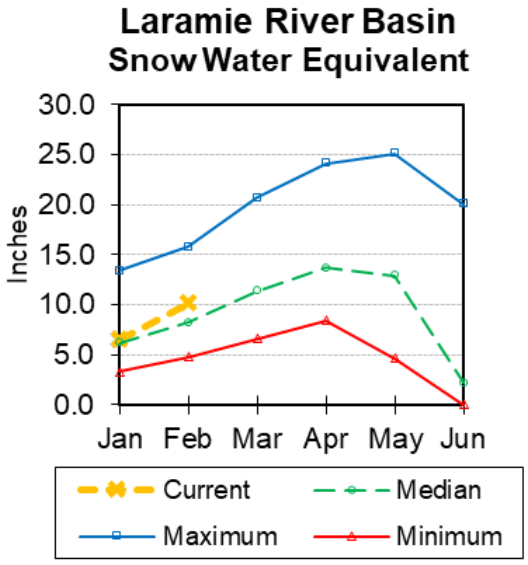


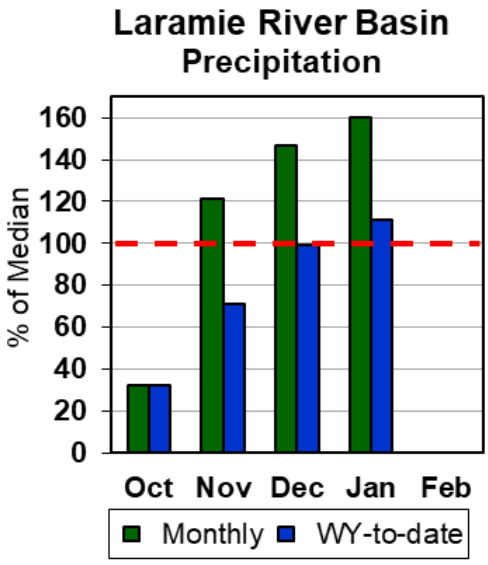
Laramie River Basin



Snow

SWE for the entire Laramie River Basin (above mouth entering North Platte) is 125% of median. SWE for the Laramie River above Laramie is 124% of median. SWE for the Little Laramie River is 129% of median. ***See Appendix at the end of this report for a detailed listing of snow course information.***





Precipitation

Last month's precipitation was 160% of median. The water year-to-date precipitation for the basin is currently 111% of median.

Reservoirs

No reservoir data for this basin.

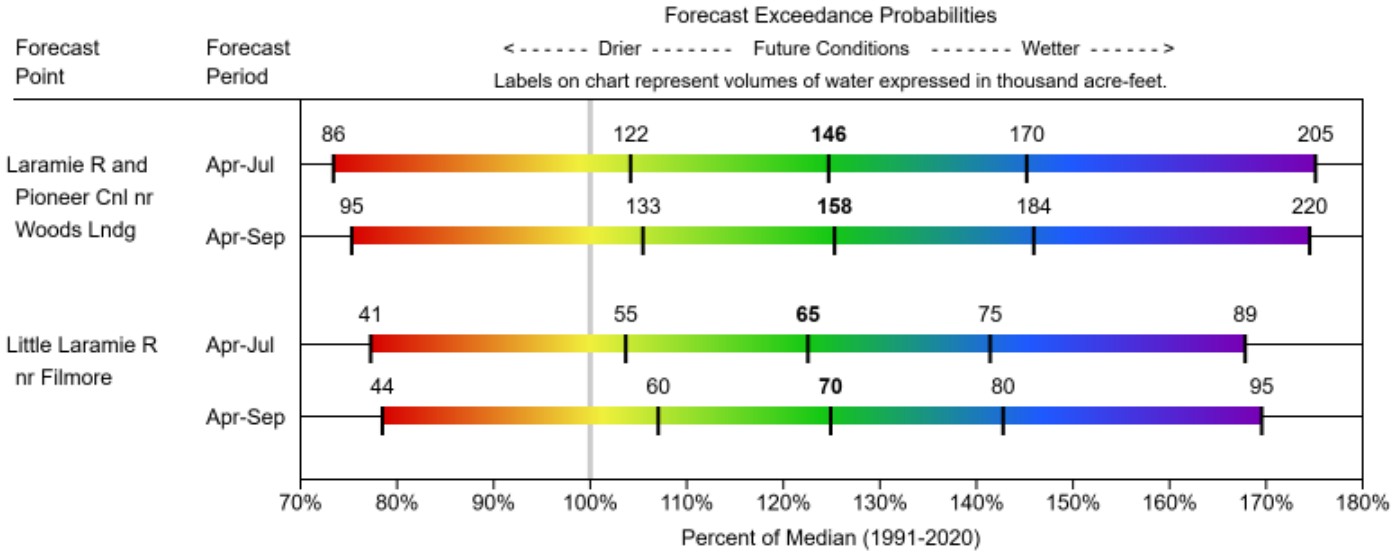
Streamflow

The 50% exceedance forecasts for the April through September period at Laramie River near Woods Landing should yield around 125% of median. The Little Laramie near Filmore should produce about 125% of median. ***See the following graph for detailed runoff volumes.***

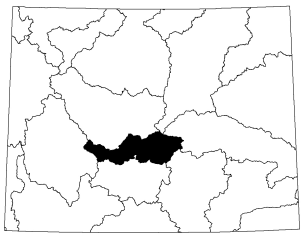
LARAMIE RIVER BASIN

Water Supply Forecasts

February 1, 2023

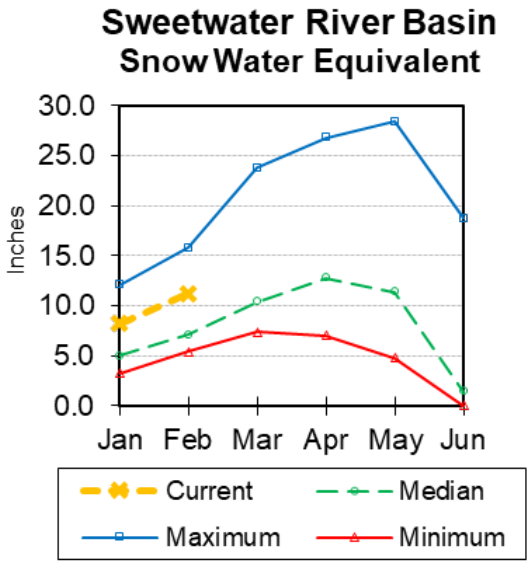


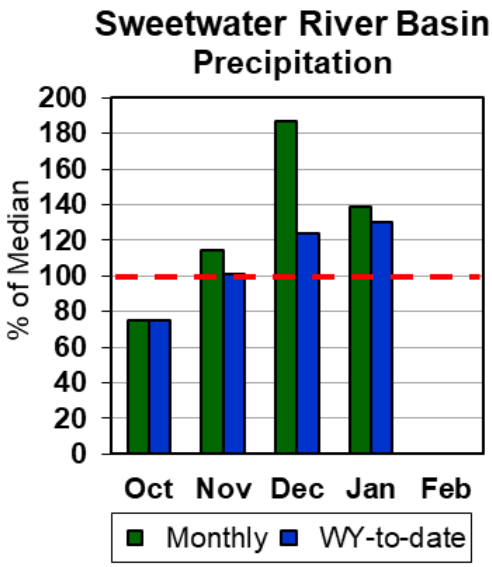
Sweetwater River Basin



Snow

Sweetwater River Basin SWE is at 157% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

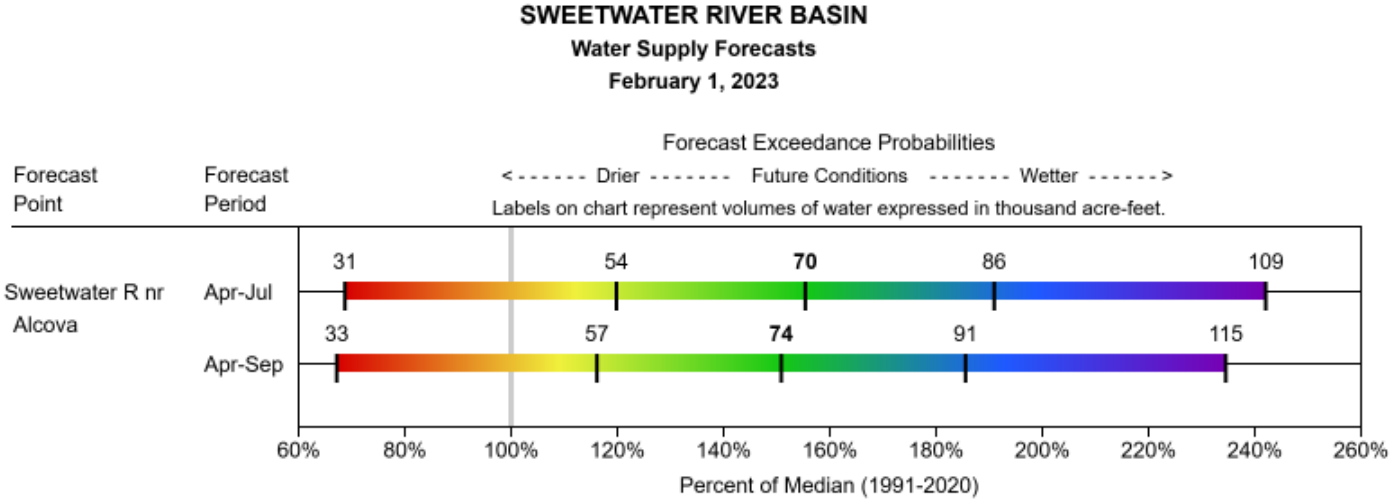
Last month's precipitation was 139% of median. The water year-to-date precipitation for the basin is currently 130% of median.

Reservoirs

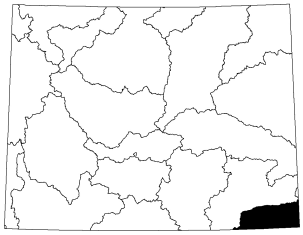
No reservoir data for the basin.

Streamflow

The 50% exceedance forecasts for the April through September period in the Sweetwater Basin is well above normal. The Sweetwater River near Alcova will yield about 151% of median. *See below for detailed information on projected runoff.*

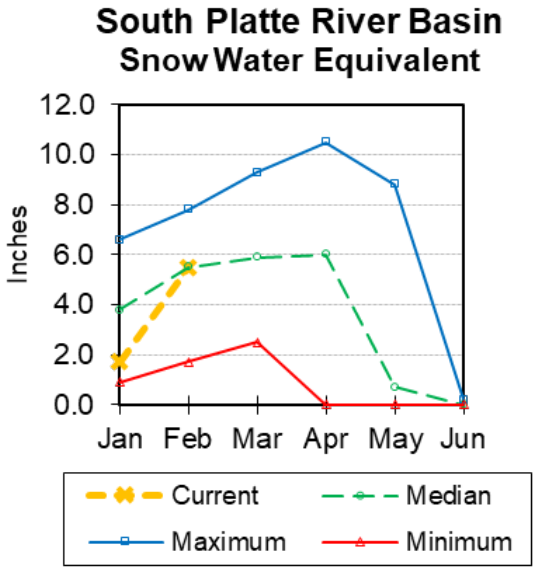


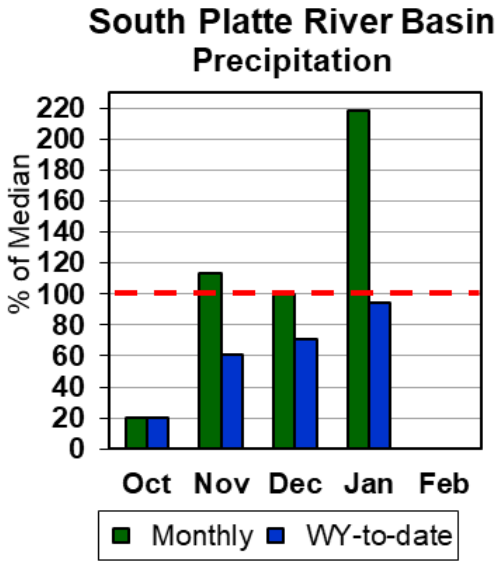
South Platte River Basin (WY)



Snow

The median SWE for sites in the South Platte River Basin is 101% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Last month's precipitation was 218% of median. The water year-to-date precipitation for the basin is currently 94% of median.

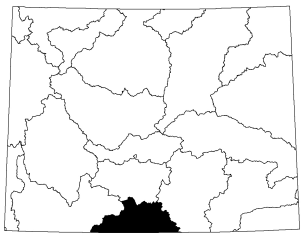
Reservoirs

No reservoir data for the basin.

Streamflow

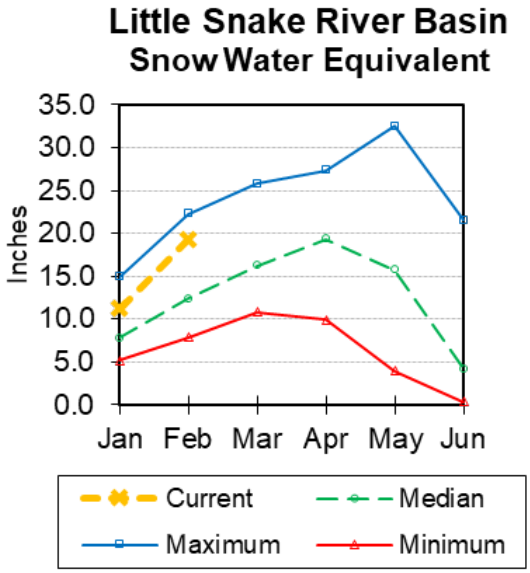
There are no streamflow forecast points for the basin.

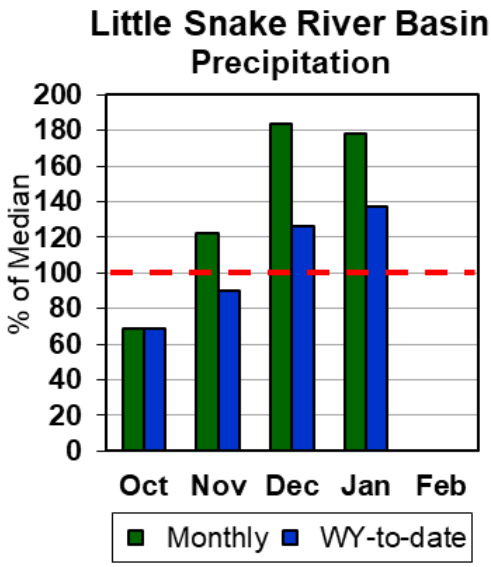
Little Snake River Basin



Snow

Little Snake River drainage SWE is 154% of median. See *Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Precipitation across the basin was 178% of median. The Little Snake River Basin water-year-to-date precipitation is currently 137% of median.

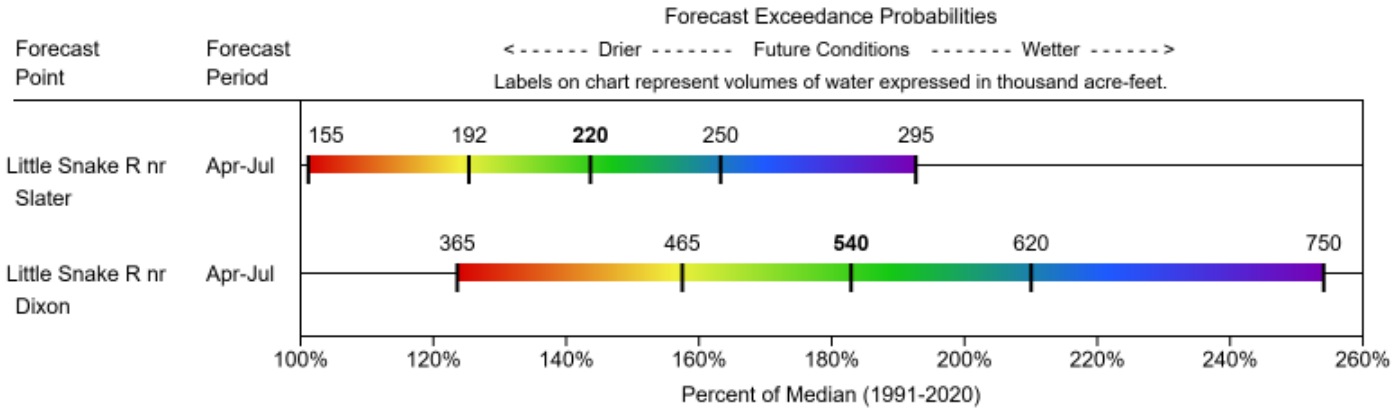
Reservoirs

No reservoir data for the basin.

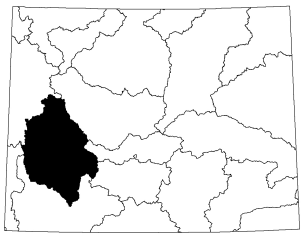
Streamflow

The 50% exceedance forecasts for the April through July period will be well above normal. The Little Snake River near Slater is forecasted to yield around 144% of median. *See below for detailed information on projected runoff.*

LITTLE SNAKE RIVER BASIN
Water Supply Forecasts
February 1, 2023

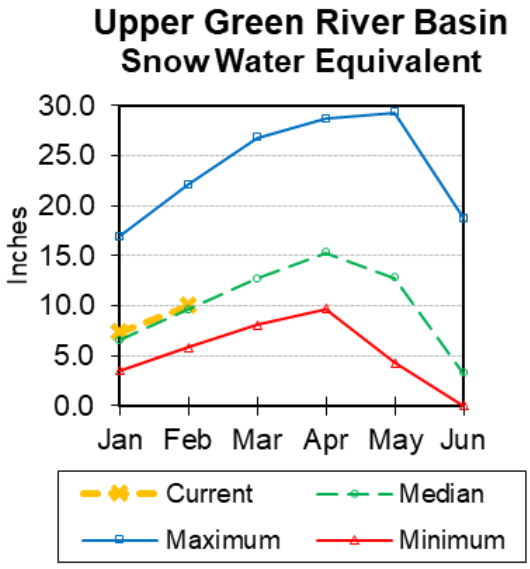


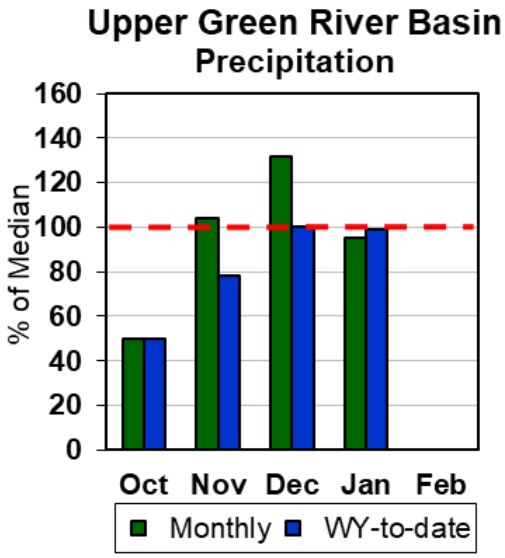
Upper Green River Basin



Snow

The Upper Green River Basin SWE (above Fontenelle Reservoir) is 106% of median. Green River Basin above Warren Bridge SWE is 98% of median. West Side of Upper Green River Basin SWE is 99% of median. *See Appendix at the end of this report for a detailed listing of snow course information.*





Precipitation

Precipitation for sites in the basin was 95% of median last month. Water year-to-date precipitation is 99% of median.

Reservoir

Combined water storage in the basin was at 95% of median for the 2 reservoirs.

Upper Green	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Big Sandy	7.5	6.5	18.2	38.3	20%	17%	48%	41%	36%
Fontenelle	166.8	180.2	165.4	344.8	48%	52%	48%	101%	109%
Basin Index					**45%**	**49%**	**48%**	**95%**	**102%**
# of reservoirs					2	2	2	2	2

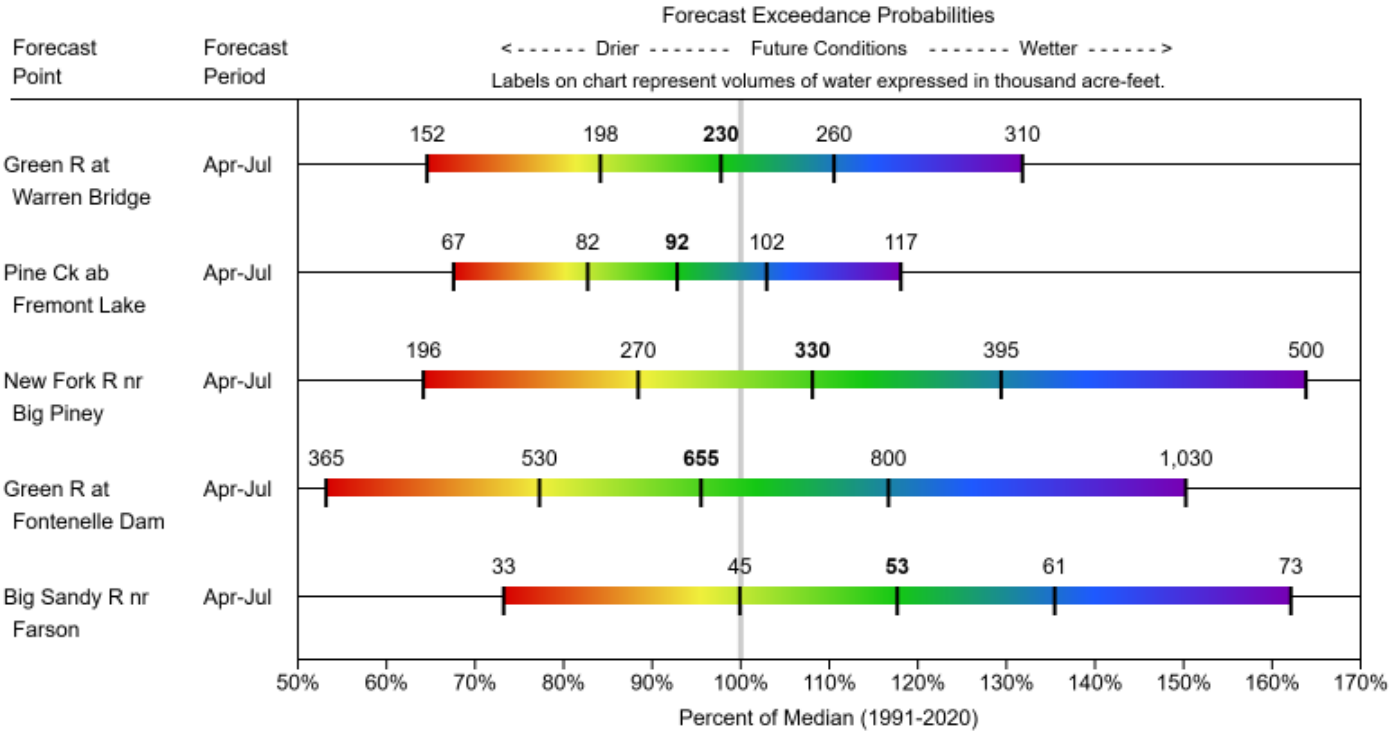
Streamflow

The 50% exceedance forecasts for the April through July period will be near normal. The yield on the Green River at Warren Bridge is about 98% of median. New Fork River near Big Piney yield will be around 108% of median. Green River at Fontenelle Dam is estimated to be about 96% of median. *See the following for a more detailed forecast.*

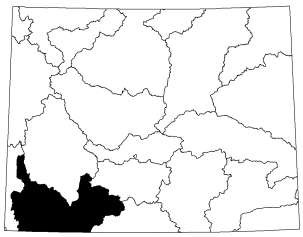
UPPER GREEN RIVER BASIN

Water Supply Forecasts

February 1, 2023



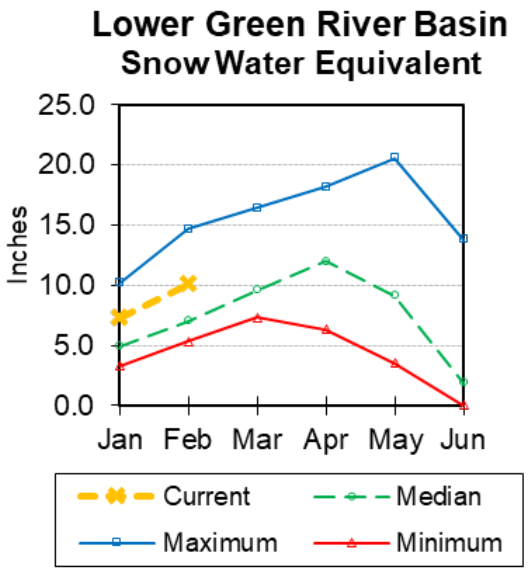
Lower Green River Basin

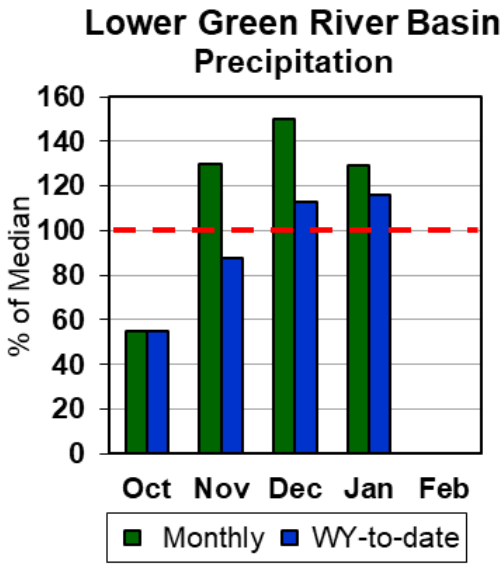


Snow

Lower Green River Basin SWE is at 143% of median. Hams Fork drainage SWE is 131% of median. Blacks Fork drainage SWE is 150% of median.

See Appendix at the end of this report for a detailed listing of snow course information.





Precipitation

Precipitation for the basin last month was 129% of median. The basin year-to-date precipitation is currently 116% of median.

Reservoirs

Combined storage for the 4 reservoirs in the basin was at 81% of median at the end of last month.

Lower Green	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Viva Naughton Res	30.7	27.1	30.2	42.4	69%	64%	71%	101%	90%
Stateline Reservoir	6.1	5.5	5.7	12.0	50%	46%	48%	106%	96%
Flaming Gorge Res	2496.9	2900.9	3111.0	3749.0	67%	77%	83%	80%	93%
Meeks Cabin Res	9.5	10.5	9.8	32.5	29%	32%	30%	97%	107%
Basin Index					**66%**	**77%**	**82%**	**81%**	**93%**
# of reservoirs					4	4	4	4	4

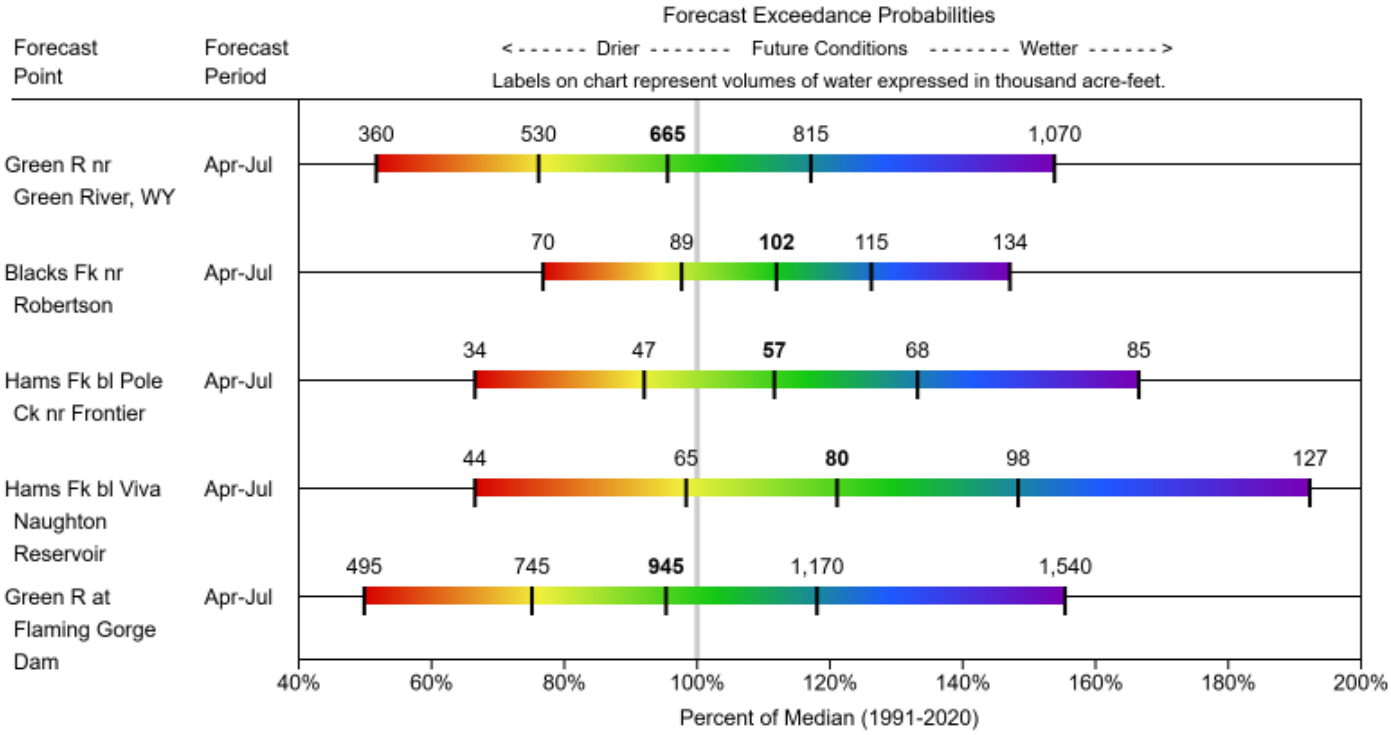
Streamflow

The following are the 50% exceedance forecasts for the April through July period. The Green River near Green River will yield about 96% of median. The Flaming Gorge Reservoir inflow will be about 95% of median. *See the following page for more detailed information on projected runoff.*

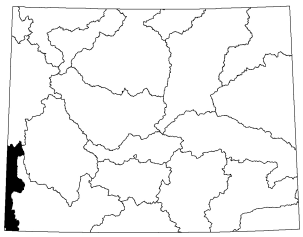
LOWER GREEN RIVER BASIN

Water Supply Forecasts

February 1, 2023



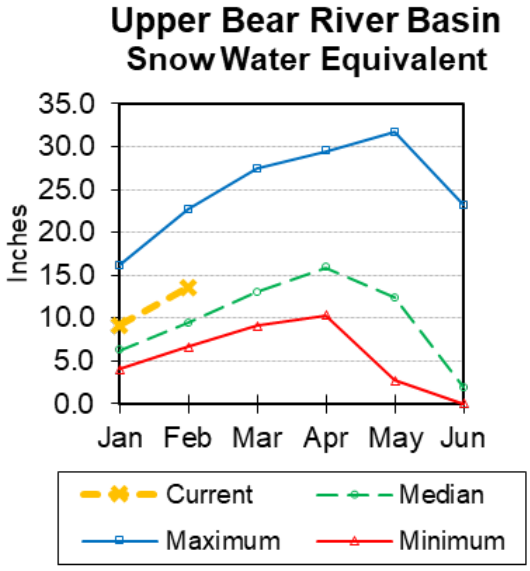
Upper Bear River Basin

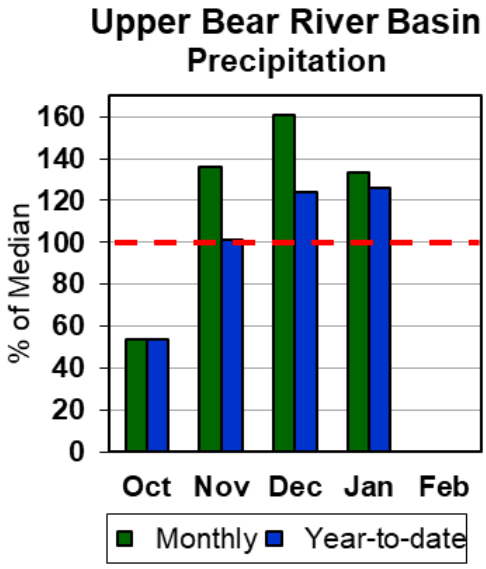


Snow

SWE in the Upper Bear River Basin of Utah is 144% of median. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is 125% of median.

See Appendix at the end of this report for a detailed listing of snow course information.





Precipitation

Precipitation for last month was 133% of median in the basin. The year-to-date precipitation for the basin is 126% of median.

Reservoirs

No reservoir data for the basin.

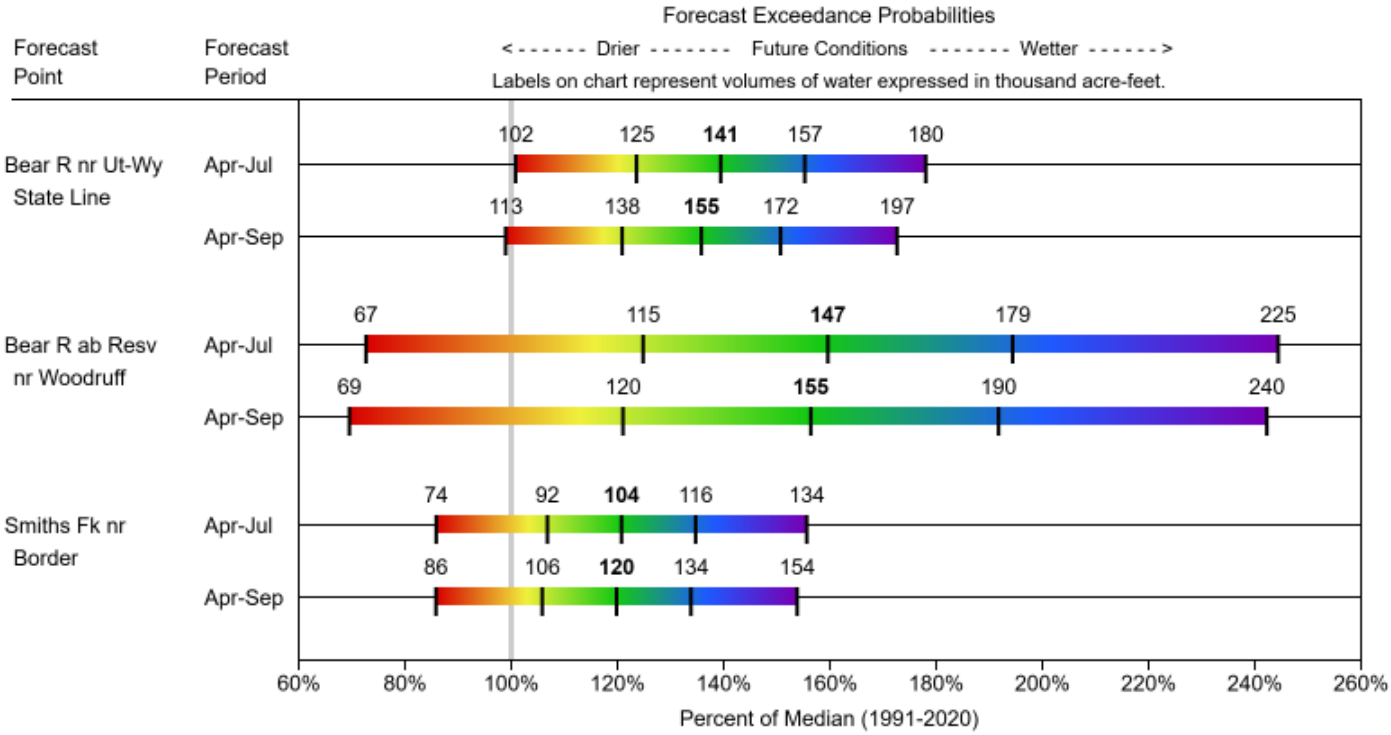
Streamflow

The 50% exceedance forecasts for the April through September period are well above normal. The Bear River above Reservoir near Woodruff should yield around 157% of median. The Smiths Fork River near Border Jct. will yield around 120%. *See the following page for more detailed information on projected runoff.*

UPPER BEAR RIVER BASIN

Water Supply Forecasts

February 1, 2023



Appendix

MEDIAN INFORMATION

Transitioning from 1981 – 2010 Averages to 1991 – 2020 Medians

Starting January 2022, the NRCS will use the 30-year **median** as the official normal for snowpack (SWE), precipitation, reservoir storage, and streamflow calculations. The National Water and Climate Center (NWCC) will continue to publish and distribute 30-year averages for alternate normal calculations.

The 30-yr reference period for median and normal calculations has also been recently updated from 1981-2010 to 1991-2020.

Please refer to this NWCC website or more information about the significant changes in data and forecast computations:

https://www.nrcs.usda.gov/wps/portal/wcc/home/snowClimateMonitoring/30YearNormals/

Topics include:

- **1991 – 2020 Median/Averages Overview**
- **Calculation Methods**
- **Differences Between 1991-2020 and Previous Normals**
- **Median vs. Average**
- **Retrieving 1991-2020 Normals**

For specific seasonal streamflow normal comparisons for NRCS forecasted stations, please refer to:

https://www.wcc.nrcs.usda.gov/ftpref/support/srvo_norms_comps/

LINKS (for more information/graphics)

National Water Climate Center (NWCC)

- Interactive maps featuring current conditions of snow, precipitation, reservoir storages:

  https://www.nrcs.usda.gov/wps/portal/wcc/home/quicklinks/predefinedMaps/

Water Resources Data System and State Climate Office (WRDS)

- Clearinghouse of hydrological and climatological data for the State of Wyoming:

  http://www.wrds.uwyo.edu/

USGS WaterWatch

- Tools and products to monitor streamflow, runoff, drought, and floods:

  https://waterwatch.usgs.gov/index.php

Appendix - Snowpack Data

In Word double click the object below to view entire document

BSnow_2_2023.pdf

Appendix - Precipitation Data

In Word double click the object below to view entire document

BPrecip_2_2023.pdf

Wyoming Basin Outlook Report
Natural Resources Conservation Service
Casper, Wyoming

Issued by:

Terry Cosby (Chief)
U.S.D.A.
Natural Resources Conservation Service
Washington D.C.

Released by:

Andi Neugebauer
Acting State Conservationist
N R C S
Casper, Wyoming

The Following Agencies and Organizations Cooperate with the Natural Resources Conservation Service with Snow Surveys and/or with Data:

FEDERAL:

United States Department of the Interior (National Park Service)

United States Department of the Interior (Bureau of Reclamation)

United States Department of Agriculture (Forest Service)

United States Department of Commerce NOAA (National Weather Service)

STATE:

The Wyoming State Engineer's Office

The University of Wyoming

LOCAL:

The City of Cheyenne