Wyoming Water Supply Outlook Report

May 1, 2018

Kirwin SNOTEL

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

For more water supply and resource management information, contact:

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307-233-6784

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.

documents. Individuals who are deaf, hard of hearing, or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer, and lender. Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

STATE OF WYOMING GENERAL OUTLOOK
May 1, 2018

SUMMARY

The snow water equivalent (SWE) across Wyoming is above normal at 110%. Monthly precipitation for the basins ranged from a high of 165% of average in the Shoshone River Basin to a low of 56% of average in the Lower North Platte River Basin, for an overall average of 105%. The year-to-date precipitation average for Wyoming basins is now at 102% varying from a high of 145% in the Shoshone River Basin to a low of 65% of average in the Lower North Platte River Basin. Forecasted runoff varies from 54% to 178% of average across the Wyoming basins. Basin reservoir levels for Wyoming vary from 43-100% of average for an overall average of 79%.

SNOWPACK

The SWE across Wyoming is above median for May 1st at 110%, compared to 157% last year. The SWE was the lowest in the Lower Snake River Basin at 70%, while SWE in the Upper Yellowstone in WY Basin is the highest at 152% of median. The Wolverine SNOTEL had the highest SWE at 224% of median, while the St. Lawrence Alt SNOTEL had the lowest SWE at 44% of median.

PRECIPITATION

Year to date precipitation is at 102% of average, compared to 148% last year. The Shoshone River Basin had the highest precipitation amount at 165% of average and the Lower North Platte River Basin had the lowest precipitation amount at 56% of average. The Beartooth Lake SNOTEL had the highest precipitation at 179% of average, while the Timber Creek SNOTEL had the lowest precipitation at 45% of average.

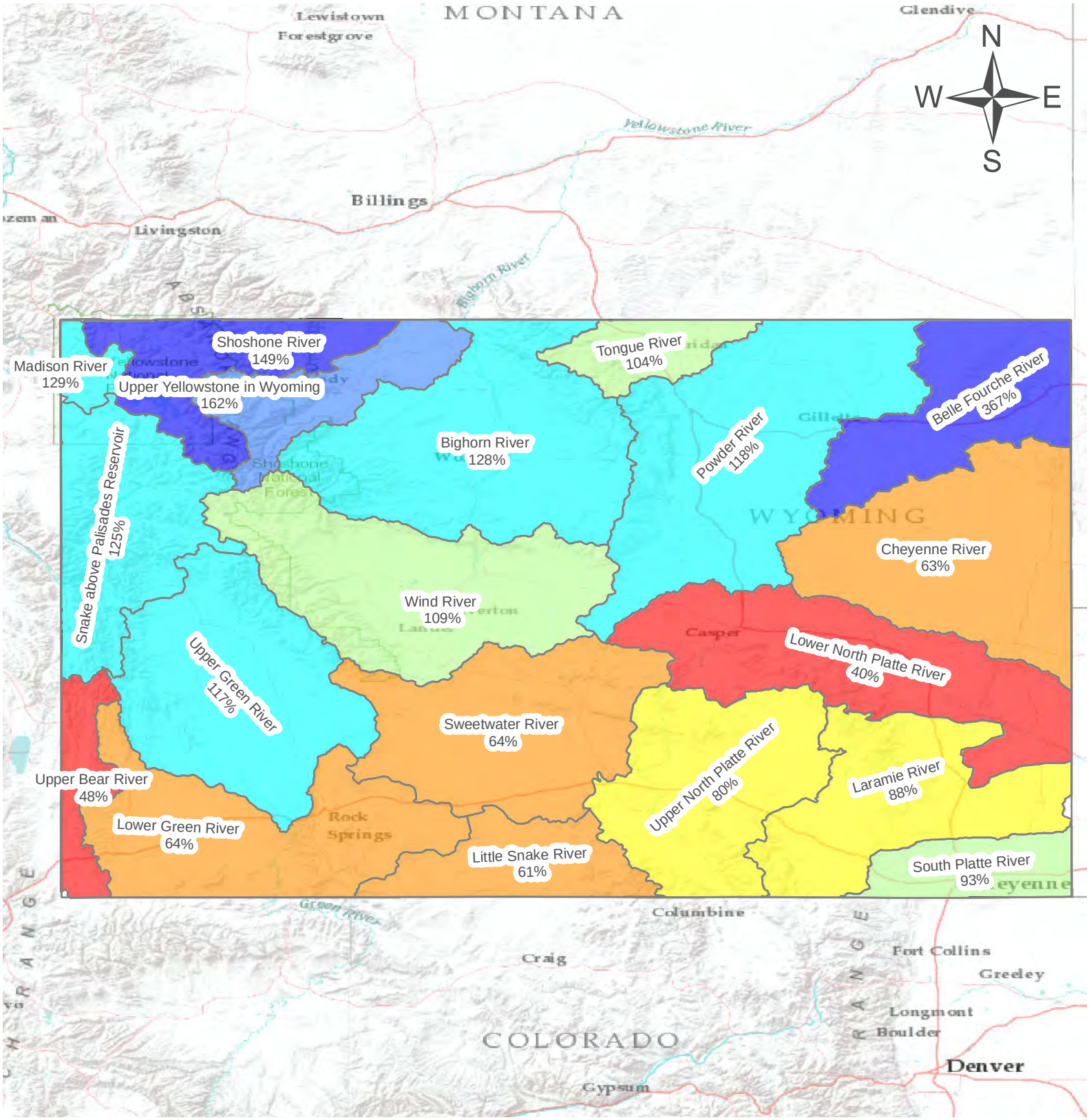
RESERVOIRS

Reservoir storage is above average at 109% for the entire state. Reservoirs in the Snake above Palisade Basin are near average at 102% with a current capacity at 62%. Reservoirs in the Madison abv Hebgen Lake Basin are just below average at 99% with a current capacity at 72%. Reservoirs in the Wind River Basin are below average at 95% with a current capacity at 70%. Reservoirs on the Big Horn River Basin are below average at 91% with a current capacity at 58%. The Buffalo Bill Reservoir on the Shoshone River Basin is above average at 104% with a current capacity at 54%. The Tongue River Basin Reservoir is above average at 179% with a current capacity at 79%. Reservoirs in the Belle Fourche and Cheyenne River Basins are above average in storage at 129% and 115% respectively with current capacities at 87% and 95% respectively. Reservoirs on the Upper and Lower North Platte River are above average at 145% and 121% respectively with current capacities at 70% and 87% respectively. Pathfinder Reservoir on the Sweetwater River Basin is above average at 149% with a current capacity at 90%. Reservoirs on the Laramie and Little Snake River basins are at 132% and 90% respectively with current capacities at 74% and 61% respectively. Reservoirs on the Upper Green River are above average at 112% with a current capacity at 43%. Reservoirs on the Lower Green River Basin are slightly above average at 105% with a current capacity at 81%. Woodruff Narrows Reservoir on the Upper Bear River Basin is above average at 130% with a current capacity at 103%.

STREAMFLOW

The Snake above Palisades, Madison abv Hebgen Lake, and Upper Yellowstone in WY Basins should yield about 112%, 115% and 145% of average, respectively. Yields from the Wind and Bighorn River Basins should be about 136% and 113% of average, respectively. Yields from the Shoshone River Basin should be about

165% of average. Yields from the Powder and Tongue River Basins should be about 126% and 83% of average, respectively. Yield for the Cheyenne River Basin should be about 98% of average. Yields for the Upper North Platte, Sweetwater, Lower North Platte, and Laramie Rivers of Wyoming should be about 72%, 40%, 62%, and 80% of average, respectively. Yields for the Little Snake, Upper Green River, Lower Green River, and Smith's Fork of Wyoming should be 44%, 114%, 116%, and 90% of average respectively.



Statewide Snow Water Equivalent

As of May 1, 2018:

110% of Normal Snow Water Equivalent

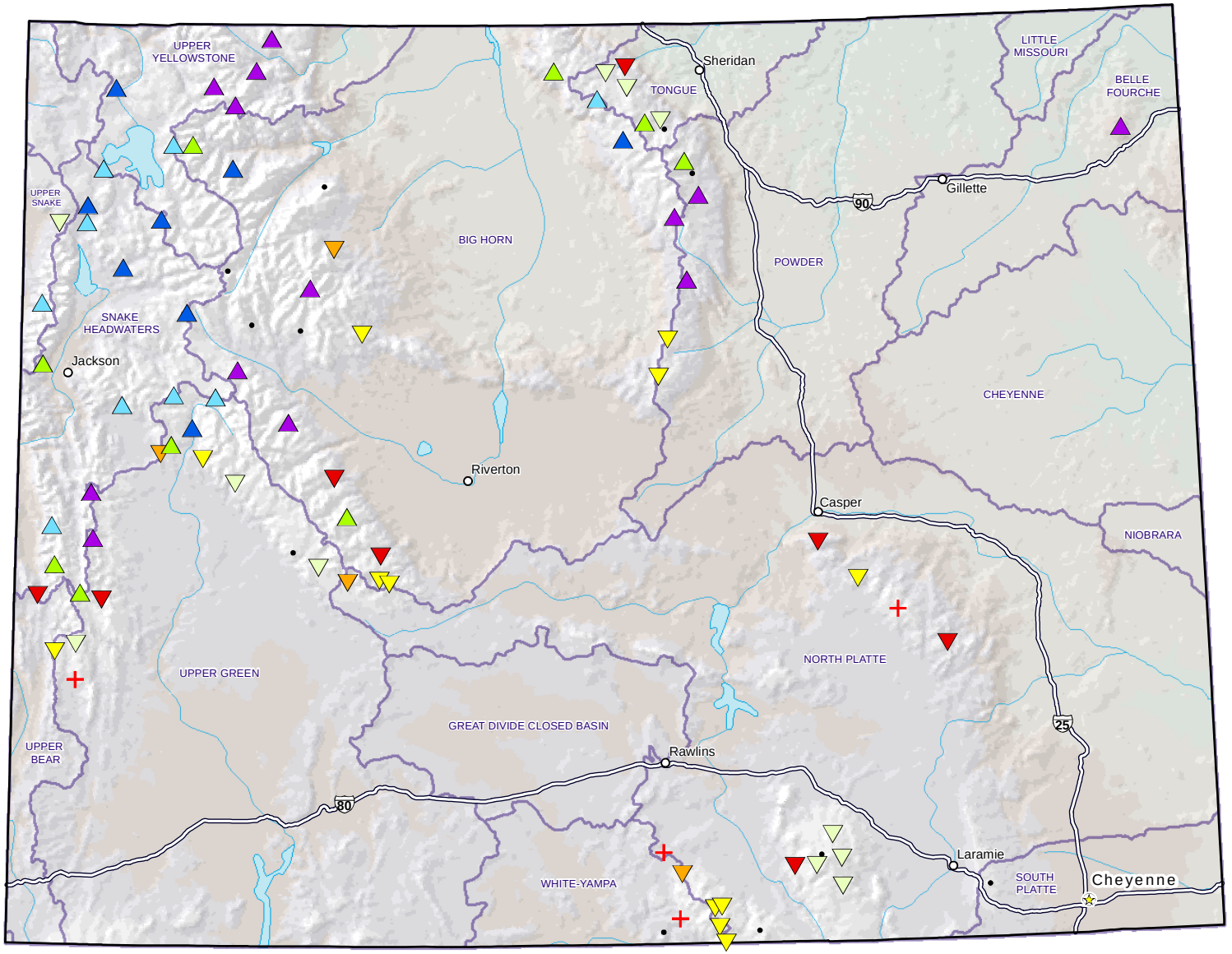
0 1020 40 60 80 100 Miles

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

Wyoming
SNOTEL Snow Water Equivalent (SWE)
% of Normal

May 01, 2018



Current SWE % of 1981-2010 Median

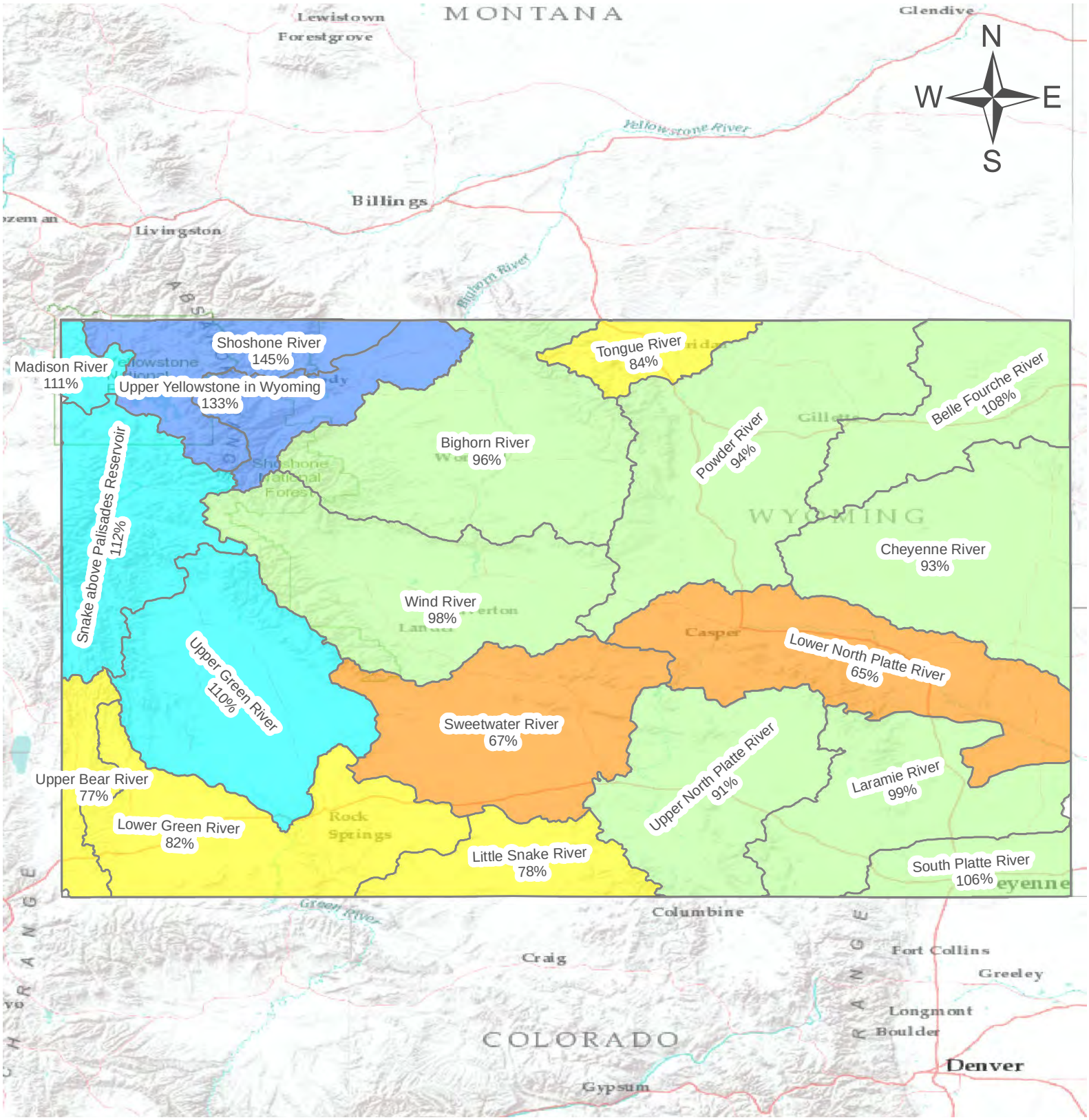
- ▲ > 160%
- ▲ 140-160%
- ▲ 120-139%
- ▲ 100-119%
- ▽ 80-99%
- ▽ 60-79%
- ▽ 40-59%
- ▽ 1-39%
- \+ 0%
- • Unavailable*

Provisional Data Subject to Revision

USDA NRCS

Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
http://www.wcc.nrcs.usda.gov

** Data unavailable at time of posting or unavailable long-term normal.*



Statewide Precipitation

As of May 1, 2018:

102% of Normal Precipitation

0 10 20 40 60 80 100 Miles

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

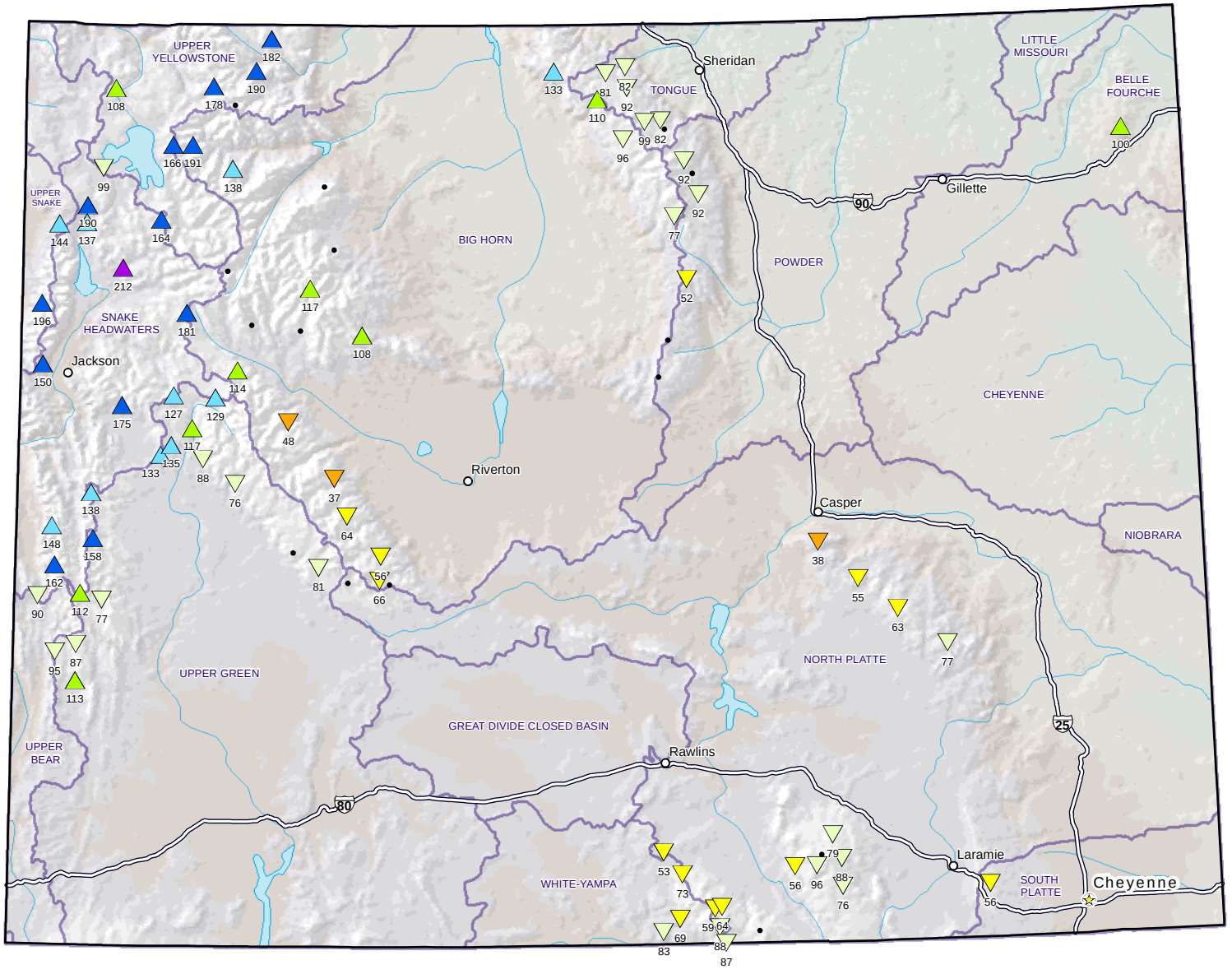
Wyoming
SNOTEL Month to Date (MTD) Precipitation
% of Normal

May 01, 2018

Current MTD Precipitation % of 1981-2010 Average

- > 200%
- 150-200%
- 125-149%
- 100-124%
- 75-99%
- 50-74%
- 25-49%
- 1-24%
- 0%
- Unavailable*

Provisional Data Subject to Revision



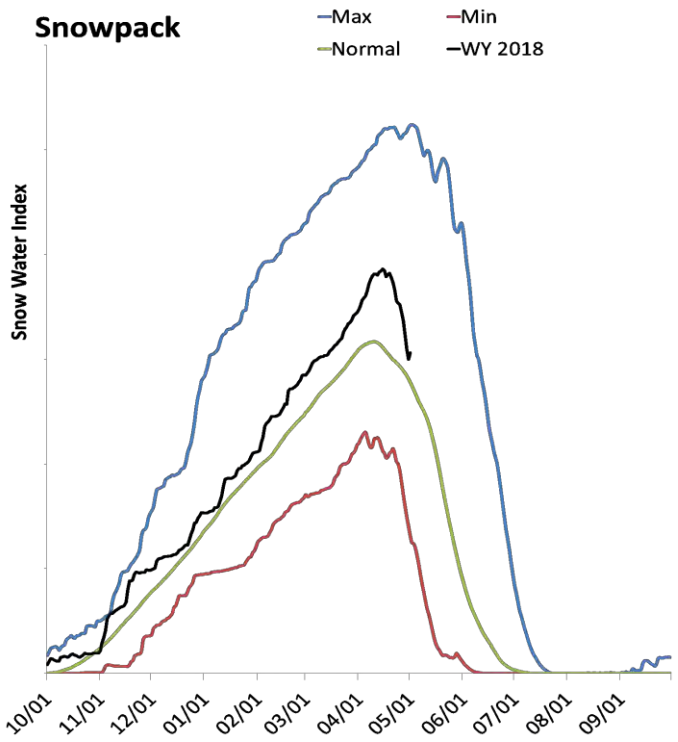
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
http://www.wcc.nrcs.usda.gov

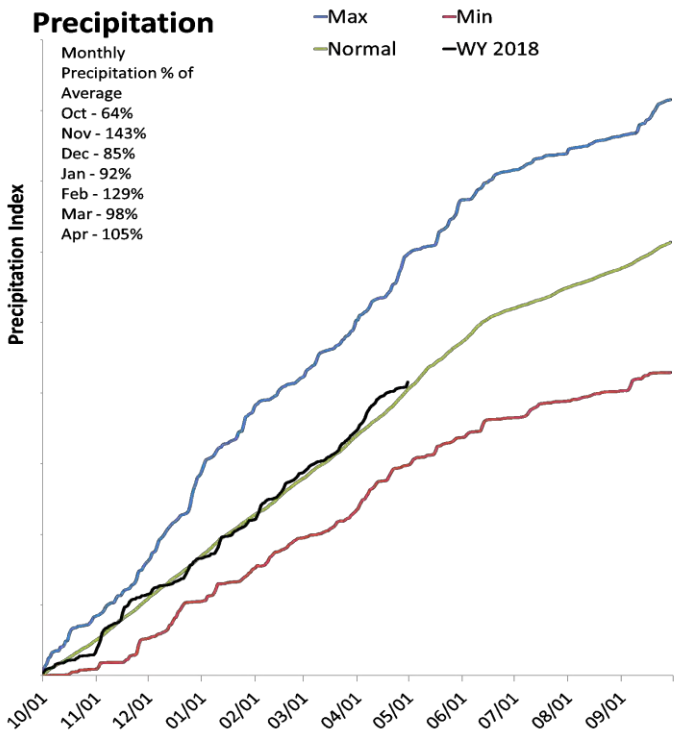
** Data unavailable at time of posting or unavailable long-term normal.*

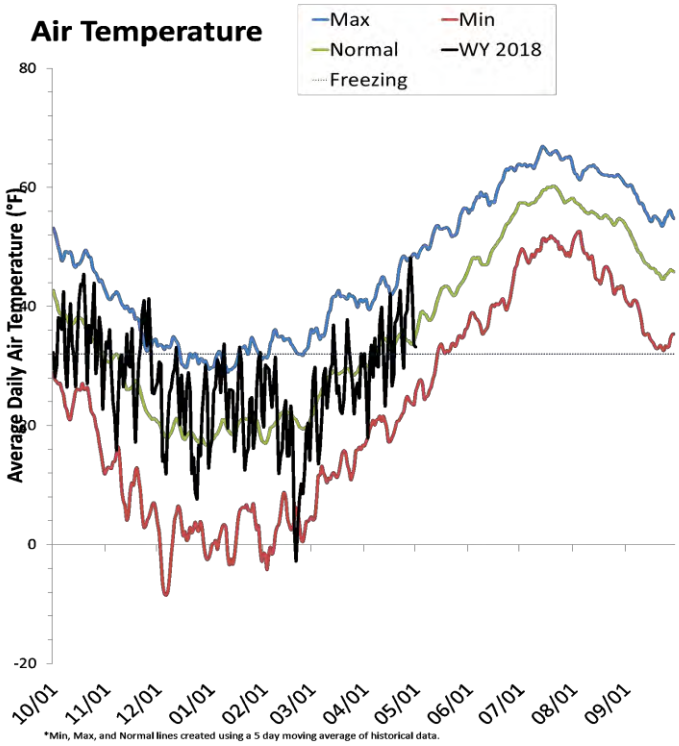
Wyoming Statewide

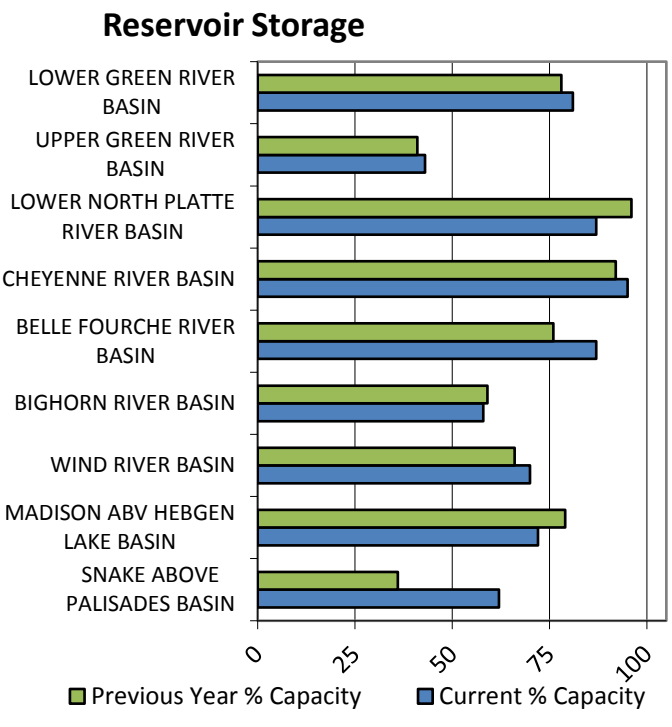
May 1, 2018

Snowpack in Wyoming is above normal at 110% of normal, compared to 157% last year. Precipitation in April was near average at 105%, which brings the seasonal accumulation (Oct-Apr) to 102% of average. Soil moisture at sites with sensors is at 67% of saturation. Reservoir storage is at 73% of capacity, compared to 69% last year. Forecast streamflow volumes range from 14% to 182% of average.









SNOTEL Data

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Statewide - April 1, 2018

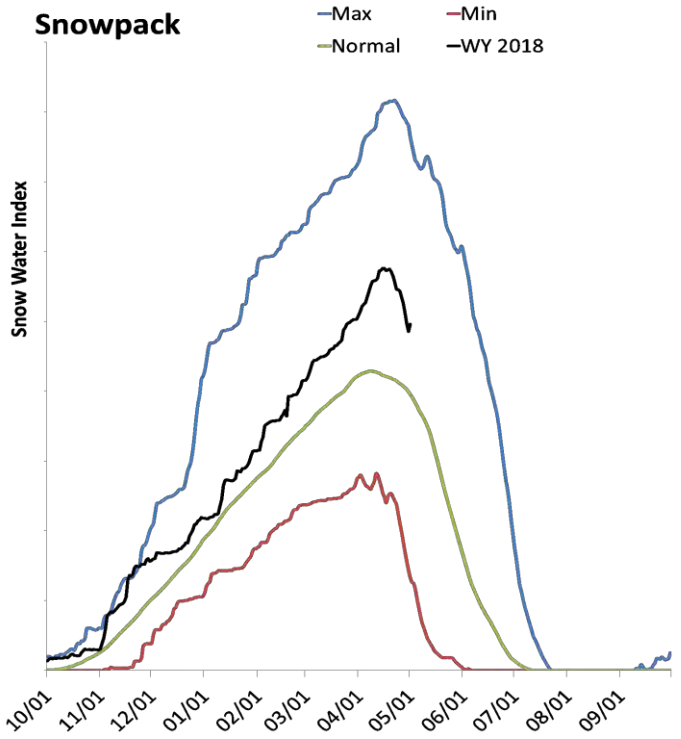
Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Hebgen Lake	287.9	294.0	270.4	378.8
Pilot Butte	24.1	25.7	24.8	31.6
Bull Lake	103.7	51.7	75.4	151.8
Boysen	531.3	578.2	489.0	596.0
Buffalo Bill	423.4	457.1	348.9	646.6
Bighorn Lake	755.5	751.5	787.5	1356.0
Tongue River Res	62.4	64.7	32.3	79.1
Shadehill	56.4	45.4	59.0	81.4
Angostura	112.5	102.9	94.3	122.1
Deerfield	14.7	15.1	14.1	15.2
Pactola	53.7	54.2	46.4	55.0
Keyhole	157.1	147.1	96.8	193.8
Belle Fourche	132.6	126.2	133.5	178.4
Seminoe	798.1	772.3	481.2	1016.7
Pathfinder	845.3	967.3	604.6	1016.5
Alcova	157.9	158.3	158.5	184.3
Glendo	357.4	432.5	389.4	506.4
Guernsey	24.8	0.0	20.0	45.6
Wheatland #2	69.8	65.5	51.0	98.9
Fontenelle	117.4	206.8	121.7	344.8
Big Sandy	33.4	30.5	19.9	38.3
Meeks Cabin Reservoir	12.2	15.8	13.4	32.5
Viva Naughton Res		21.6	27.2	42.4
Flaming Gorge Reservoir	3184.3	3169.4	3020.0	3749.0
High Savery Reservoir	11.7	15.5	13.1	22.4
Woodruff Narrows Reservoir	57.9	48.7	38.4	57.3
Jackson Lake	655.7	536.6	430.7	847.0
Palisades Reservoir	1109.4	461.9	902.8	1400.0
Grassy Lake	13.8	13.5	12.3	15.2
Basin-wide Total	10164.6	9608.6	8749.4	13260.7
# of reservoirs	28	28	28	28

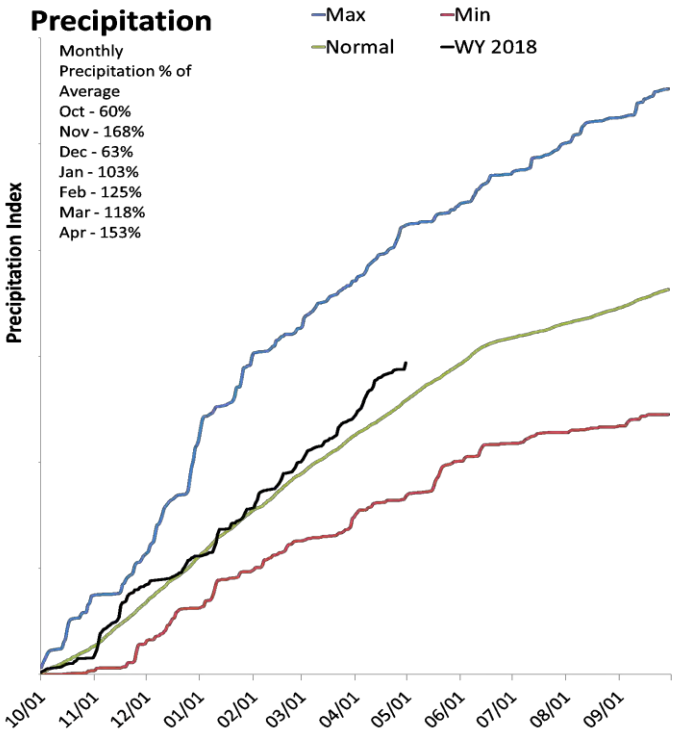
Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
SNAKE ABOVE PALISADES BASIN	20	120%	148%
MADISON ABV HEBGEN LAKE BASIN	4	119%	112%
UPPER YELLOWSTONE IN WY BASIN	8	152%	152%
WIND RIVER BASIN	9	111%	189%
BIGHORN RIVER BASIN	10	125%	115%
SHOSHONE RIVER BASIN	4	144%	141%
POWDER RIVER BASIN	6	123%	94%
TONGUE RIVER BASIN	6	105%	114%
BELLE FOURCHE RIVER BASIN	1	131%	0%
CHEYENNE RIVER BASIN	2	108%	4%
UPPER NORTH PLATTE RIVER BASIN	17	90%	98%
SWEETWATER RIVER BASIN	3	85%	193%
LOWER NORTH PLATTE RIVER BASIN	4	70%	95%
LARAMIE RIVER BASIN	7	105%	97%
SOUTH PLATTE RIVER BASIN	4	97%	91%
LITTLE SNAKE RIVER BASIN	8	80%	87%
UPPER GREEN RIVER BASIN	12	121%	169%
LOWER GREEN RIVER BASIN	7	87%	138%
UPPER BEAR RIVER BASIN	7	79%	146%
Statewide	80	112%	133%

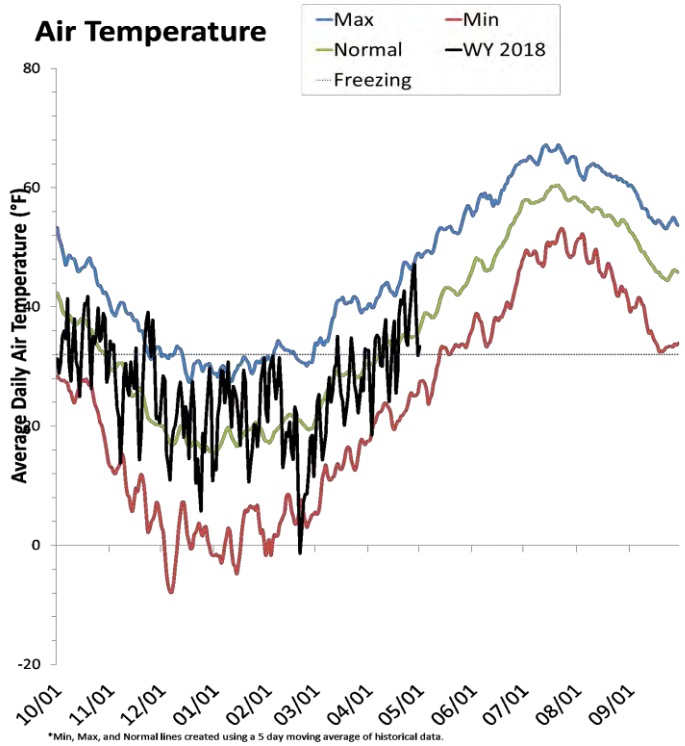
Snake above Palisades Reservoir

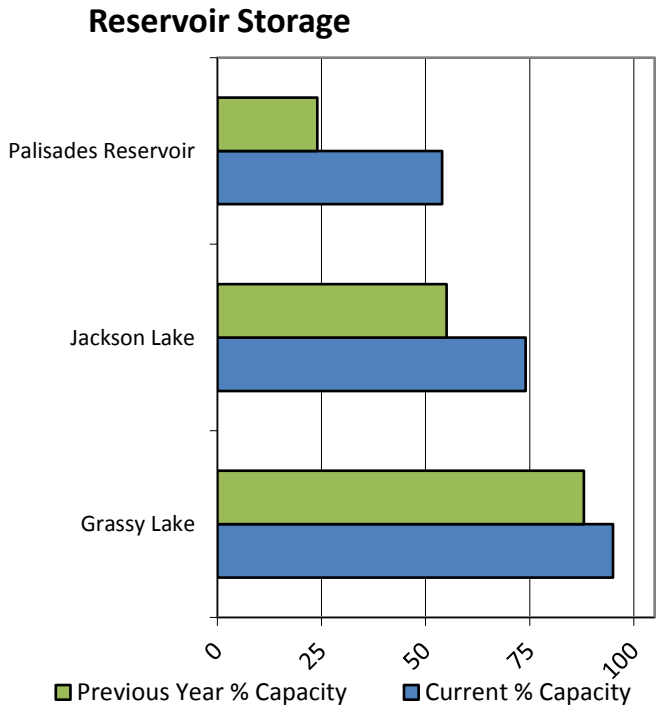
May 1, 2018

Snowpack in the Snake above Palisades Reservoir is above normal at 125% of normal, compared to 172% last year. Precipitation in April was much above average at 151%, which brings the seasonal accumulation (Oct-Apr) to 112% of average. Soil moisture at sites with sensors is at 69% of saturation. Reservoir storage is at 62% of capacity, compared to 36% last year. Forecast streamflow volumes range from 94% to 138% of average.









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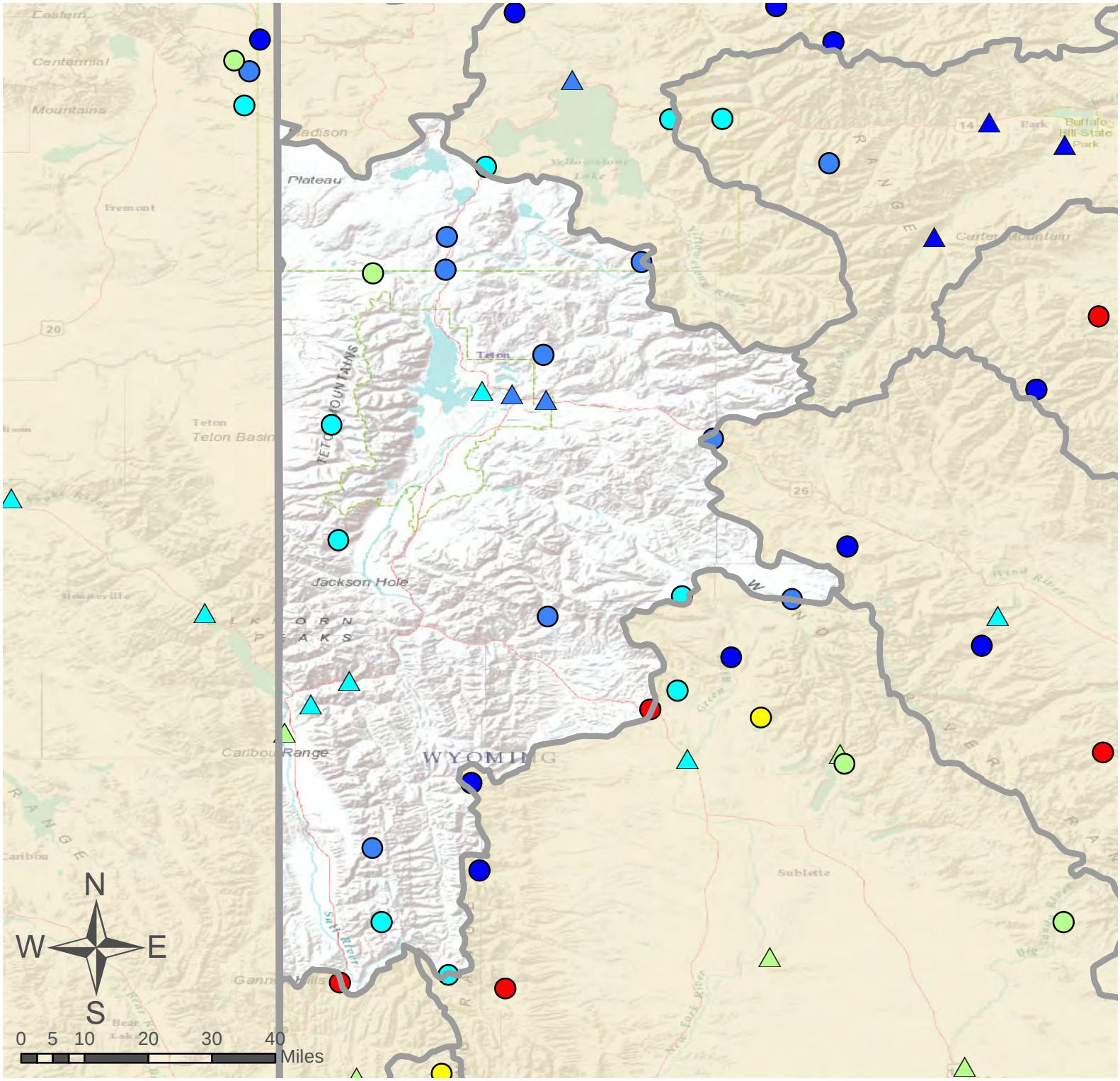
Snake Above Palisades Basin
Streamflow Forecasts - April 1, 2018

SNAKE ABOVE PALISADES BASIN	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment: Chance that actual volume will exceed forecast — 90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Snake R nr Moran[,2]								
	APR-JUL	730	810	860	112%	915	990	765
	APR-SEP	805	895	955	113%	1020	1110	845
Snake R ab Reservoir nr Alpine[,2]								
	APR-JUL	2300	2480	2610	120%	2730	2920	2170
	APR-SEP	2610	2840	2990	120%	3140	3360	2500
Snake R nr Irwin [,2]								
	APR-JUL	2730	3060	3280	109%	3510	3840	3010
	APR-SEP	3190	3560	3820	109%	4070	4440	3500
Snake R nr Heise[2]								
	APR-JUL	2940	3290	3530	109%	3760	4120	3240
	APR-SEP	3470	3860	4130	109%	4400	4790	3780
Pacific Ck at Moran								
	APR-JUL	158	184	200	122%	220	245	164
	APR-SEP	166	193	210	121%	230	255	173
Buffalo Fk ab Lava Ck nr Moran								
	APR-JUL	280	315	335	120%	360	390	280
	APR-SEP	315	355	380	119%	410	450	320
Greys R ab Reservoir nr Alpine								
	APR-JUL	265	295	315	103%	340	370	305
	APR-SEP	305	345	370	103%	395	435	360
Salt R ab Reservoir nr Etna								
	APR-JUL	181	240	280	93%	315	375	300
	APR-SEP	230	300	345	93%	390	455	370

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Grassy Lake	13.8	13.5	12.3	15.2
Jackson Lake	655.7	536.6	430.7	847.0
Palisades Reservoir	1109.4	461.9	902.8	1400.0
Basin-wide Total	1778.8	1012.0	1345.8	2262.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
SNAKE above Jackson Lake	13	116%	135%
PACIFIC CREEK	4	121%	166%
BUFFALO FORK	4	137%	137%
GROS VENTRE RIVER	4	134%	145%
HOBACK RIVER	6	126%	179%
GREYS RIVER	4	119%	154%
SALT RIVER	5	104%	129%
SNAKE AB PALISADES RESV	34	117%	144%



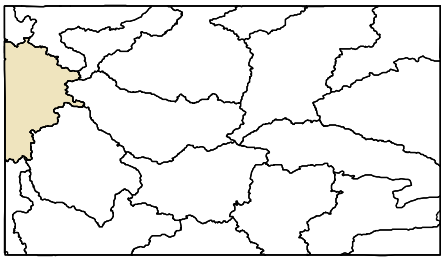
Snake above Palisades Reservoir

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

125% of Normal SWE

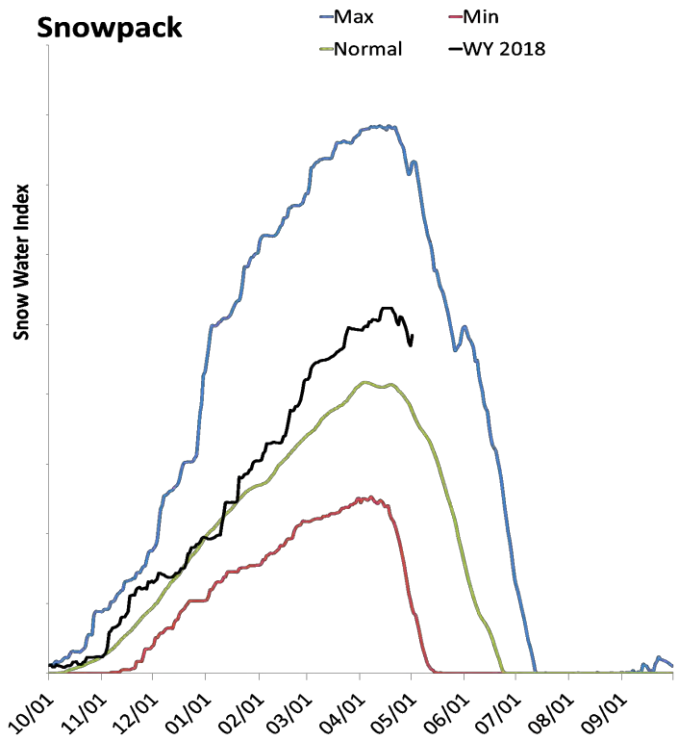
112% of Normal Precipitation

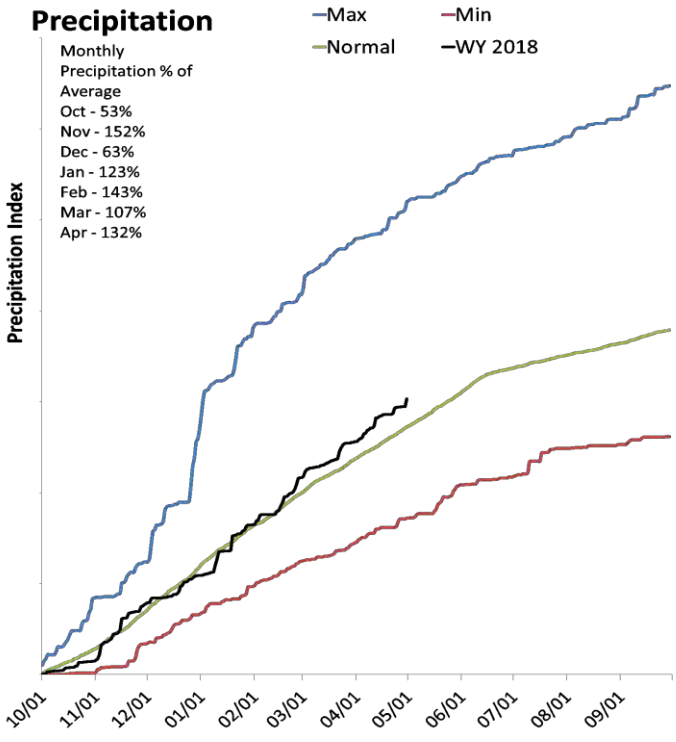
151% of Normal Precipitation Last Month

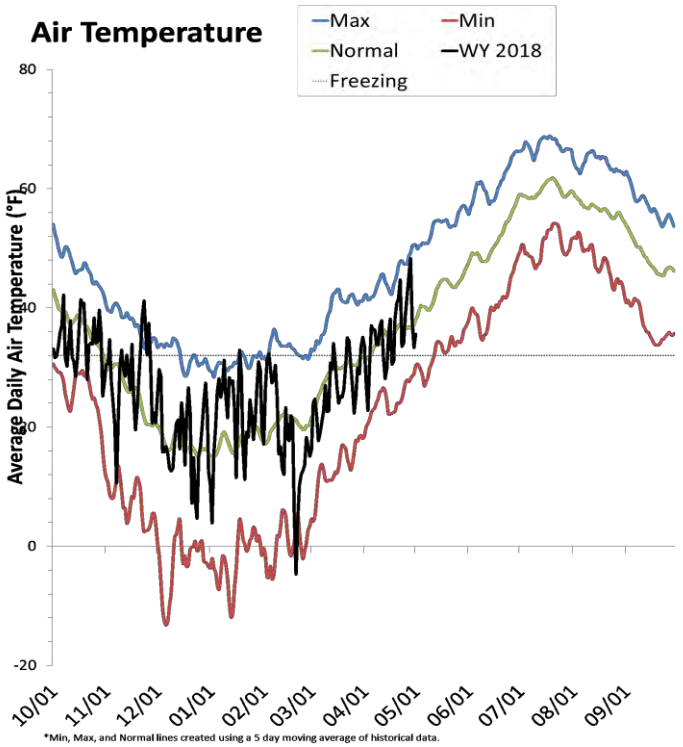
Madison River above Hebgen Lake

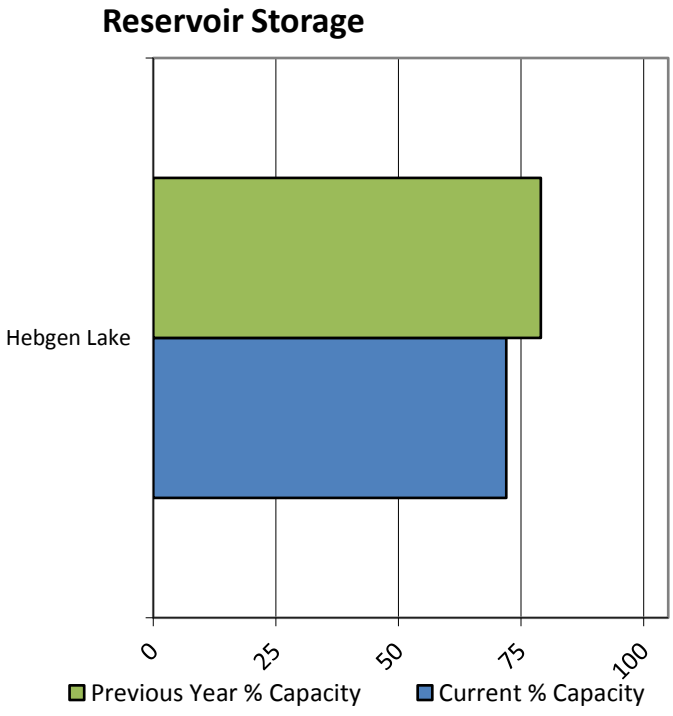
May 1, 2018

Snowpack in the Madison River above Hebgen Lake is above normal at 129% of normal, compared to 125% last year. Precipitation in April was much above average at 132%, which brings the seasonal accumulation (Oct-Apr) to 111% of average. Reservoir storage is at 72% of capacity, compared to 79% last year. Forecast streamflow volumes range from 116% to 116% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:29:32 AM

Madison Abv Hebgen Lake Basin
Streamflow Forecasts - April 1, 2018

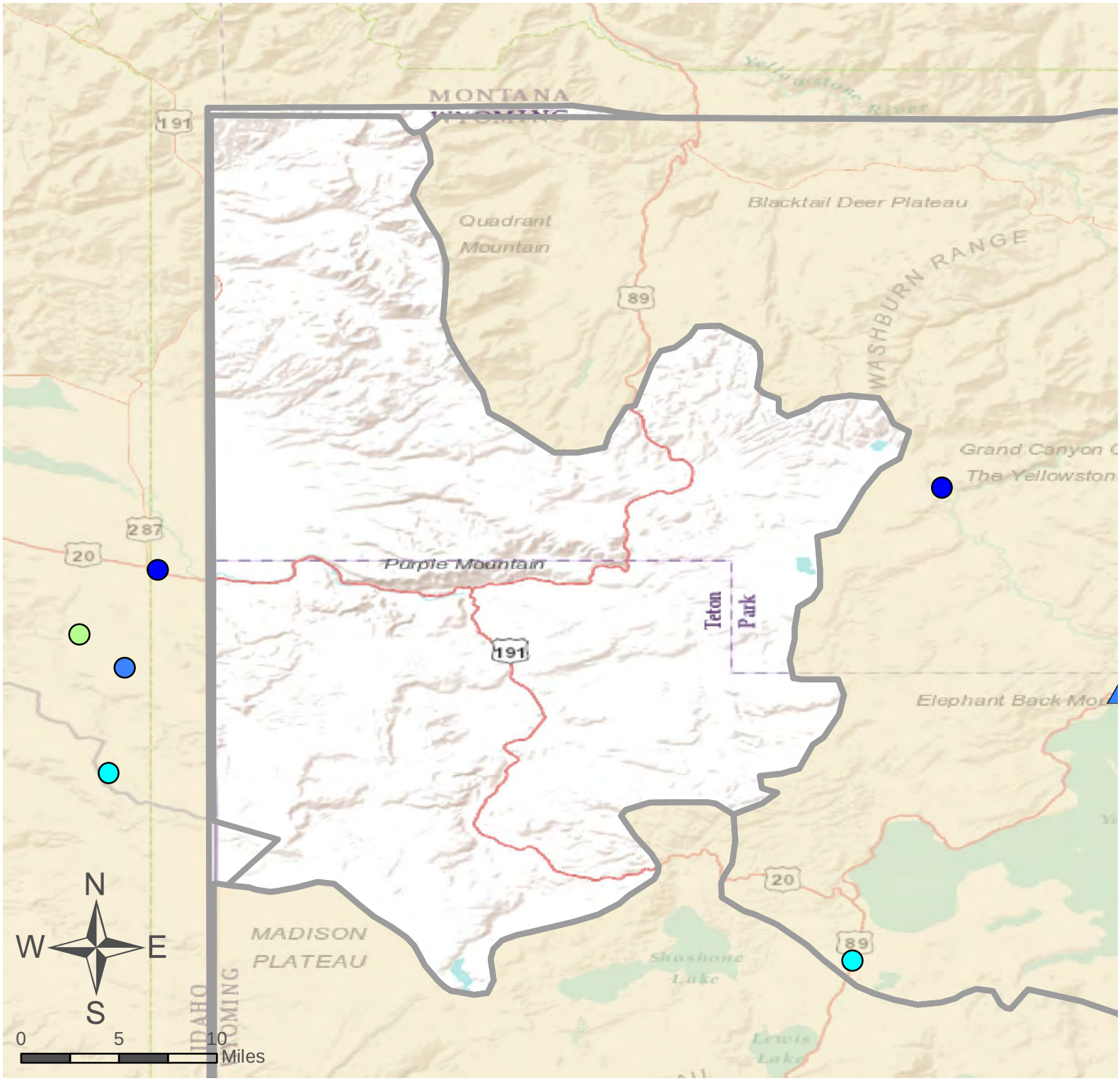
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

MADISON ABV HEBGEN LAKE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Hebgen Lake Inflow								
	APR-JUL	340	380	410	111%	440	480	370
	APR-SEP	430	480	515	110%	550	600	470

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Hebgen Lake	287.9	294.0	270.4	378.8
Basin-wide Total	287.9	294.0	270.4	378.8
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
MADISON ABV HEBGEN LAKE	5	121%	115%



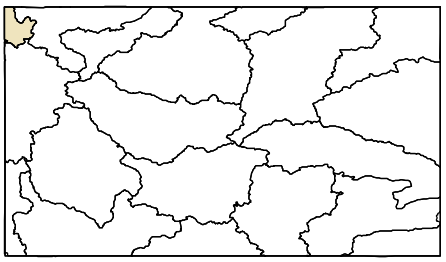
Madison River above Hebgen Lake

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

129% of Normal SWE

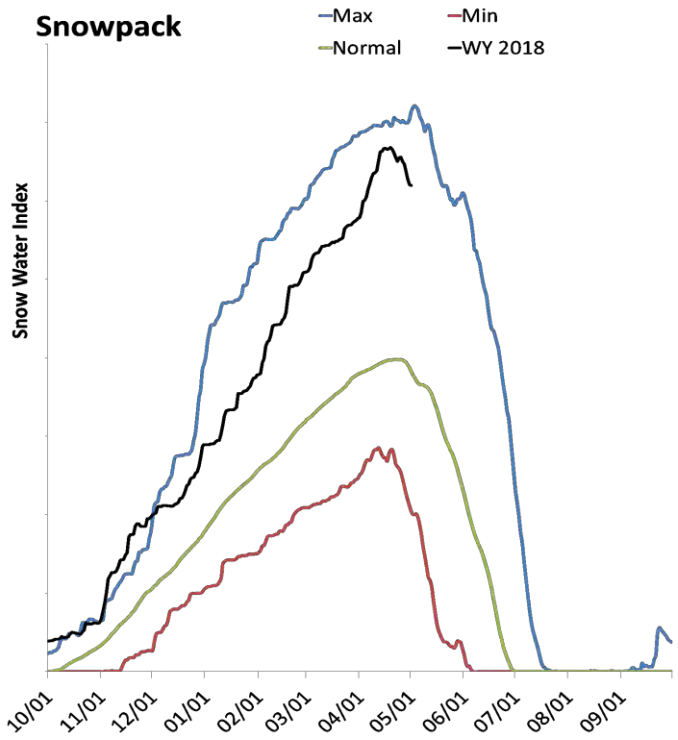
111% of Normal Precipitation

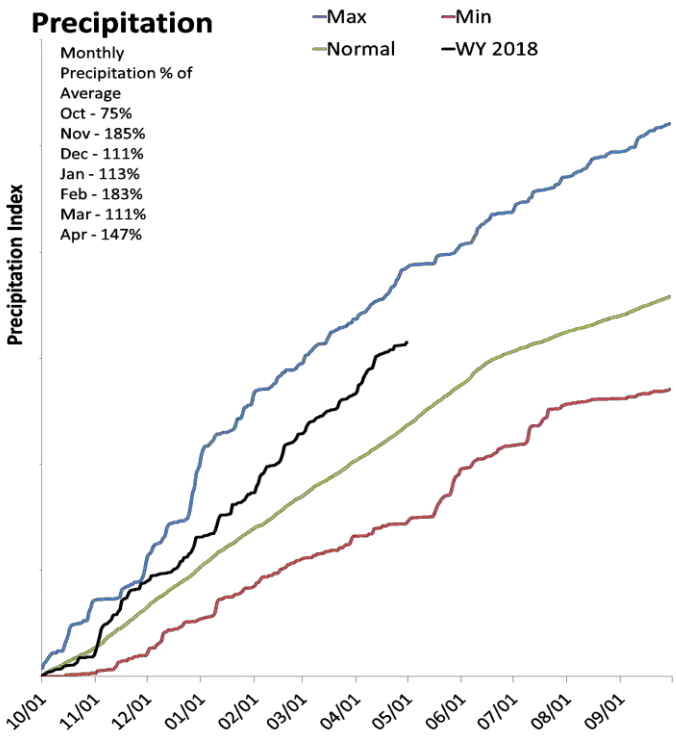
132% of Normal Precipitation Last Month

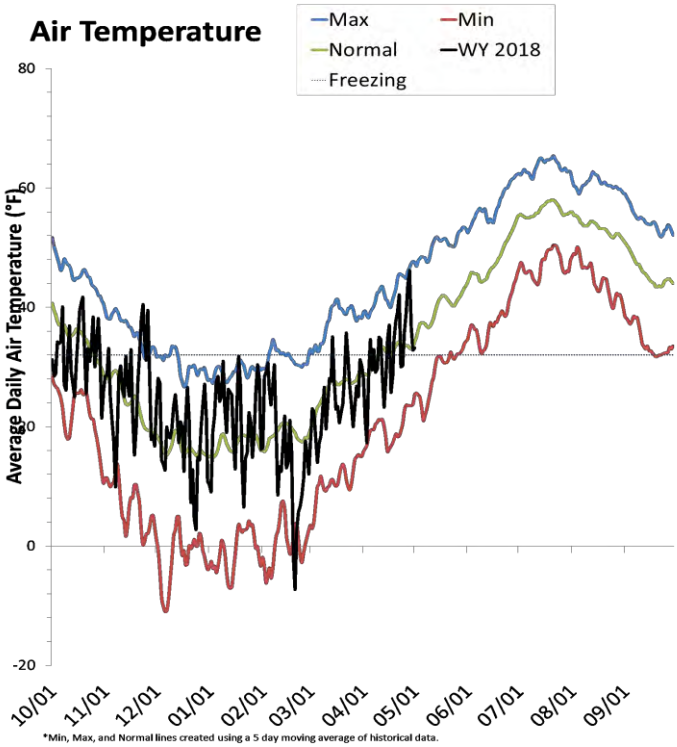
Upper Yellowstone in Wyoming

May 1, 2018

Snowpack in the Upper Yellowstone in Wyoming is much above normal at 162% of normal, compared to 166% last year. Precipitation in April was much above average at 147%, which brings the seasonal accumulation (Oct-Apr) to 133% of average. Soil moisture at sites with sensors is at 84% of saturation. Forecast streamflow volumes range from 145% to 145% of average.







SNOTEL Data

Data Current as of: 4/5/2018 11:29:37 AM

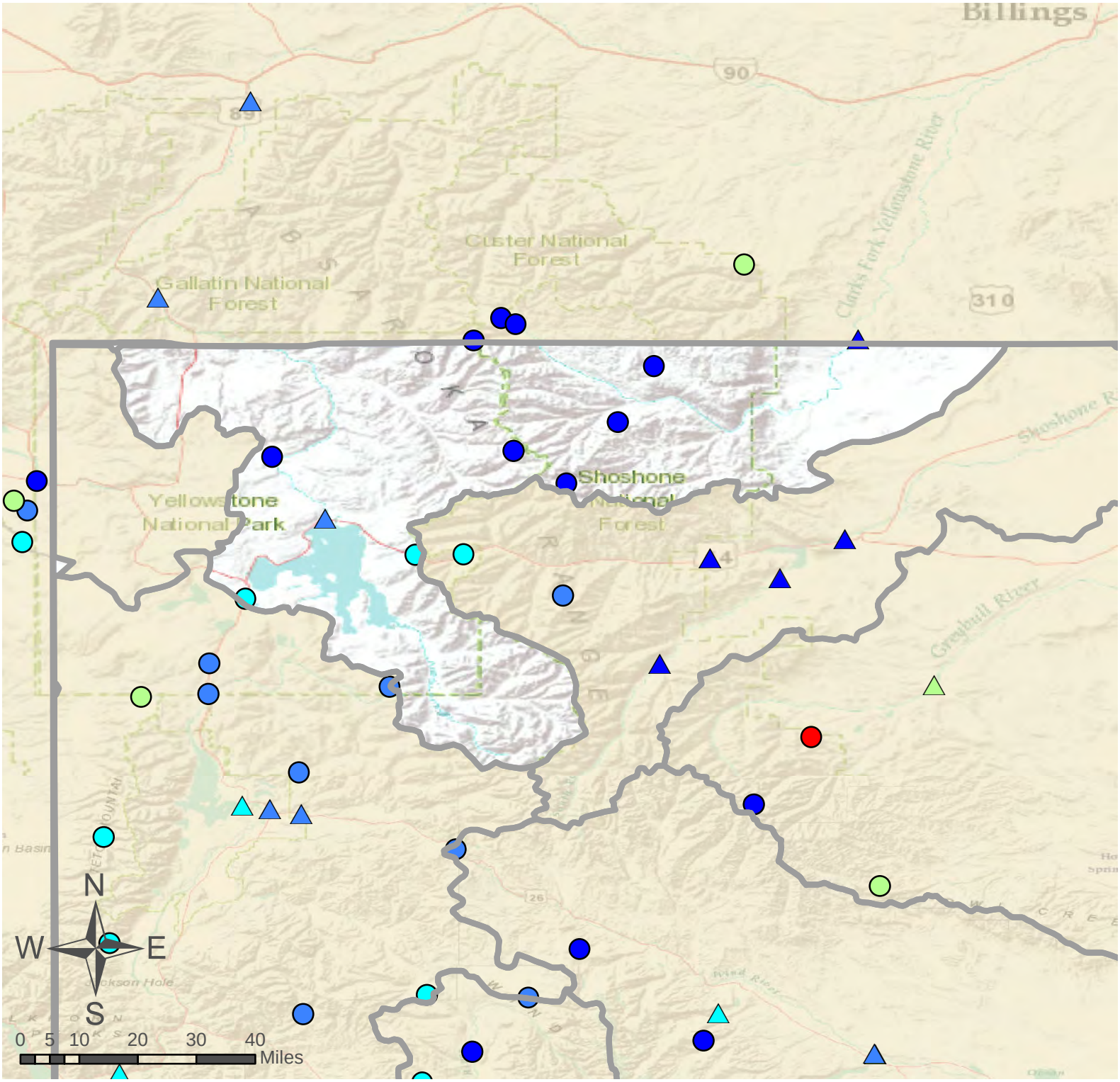
Upper Yellowstone In Wy Basin
Streamflow Forecasts - April 1, 2018

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

UPPER YELLOWSTONE IN WY BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Yellowstone R at Yellowstone Lake Outlet								
	APR-JUL	685	750	790	137%	835	900	575
	APR-SEP	915	1000	1060	138%	1120	1210	770
Yellowstone R at Corwin Springs								
	APR-JUL	1940	2110	2220	140%	2340	2510	1590
	APR-SEP	2300	2500	2640	140%	2770	2970	1880
Clarks Fk Yellowstone R nr Belfry[2]								
	APR-JUL	750	805	845	166%	885	940	510
	APR-SEP	825	885	930	169%	970	1040	550

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
UPPER YELLOWSTONE IN WY	11	151%	144%
CLARKS FORK in WY	7	173%	148%



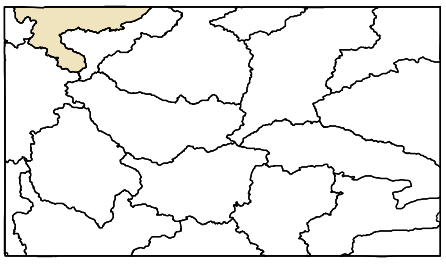
Upper Yellowstone in Wyoming

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

162% of Normal SWE

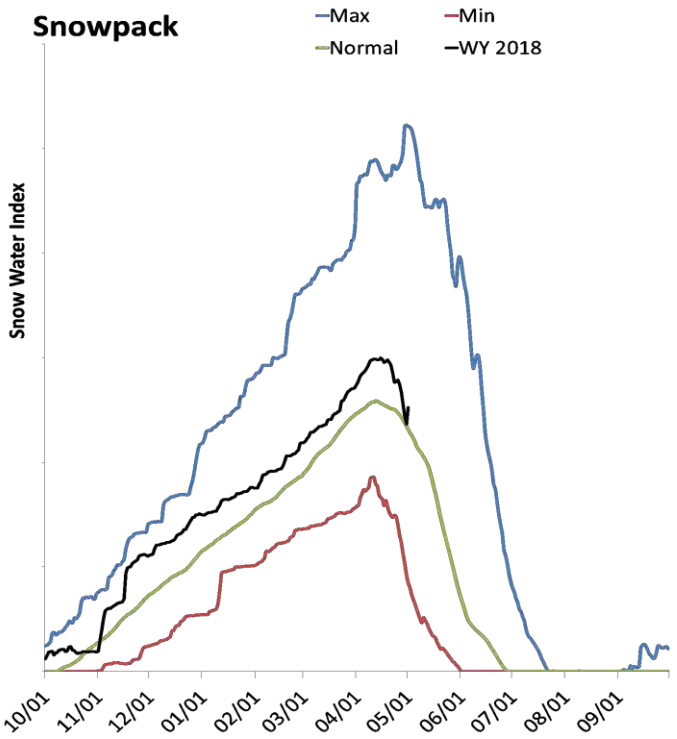
133% of Normal Precipitation

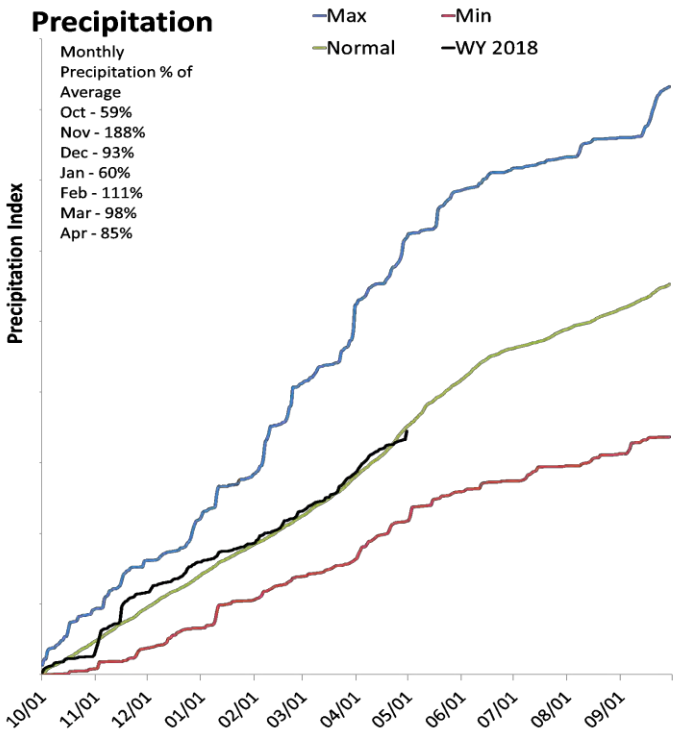
147% of Normal Precipitation Last Month

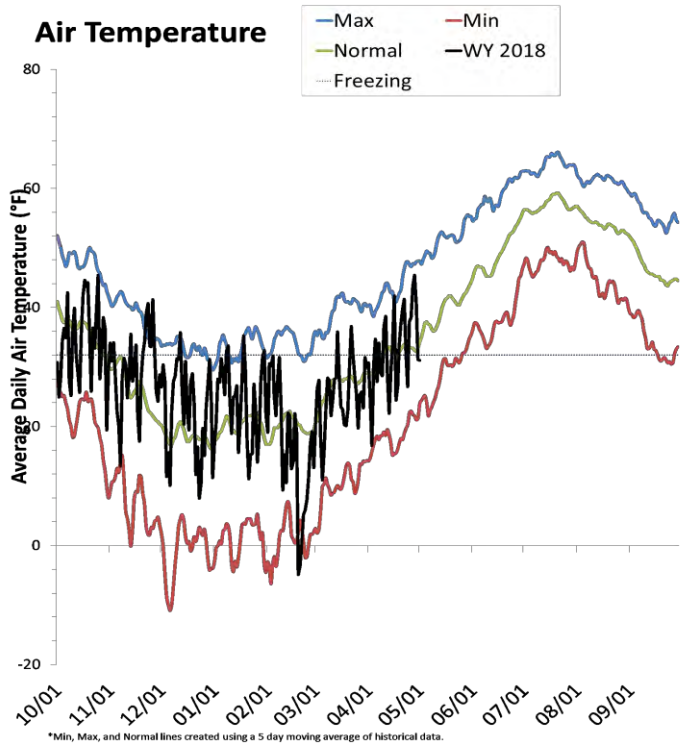
Wind River Basin

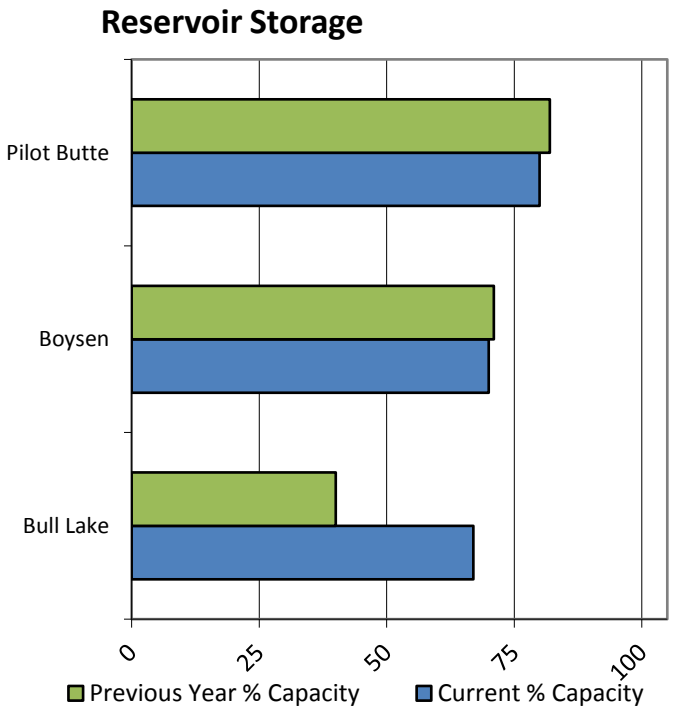
May 1, 2018

Snowpack in the Wind River Basin is near normal at 109% of normal, compared to 225% last year. Precipitation in April was below average at 85%, which brings the seasonal accumulation (Oct-Apr) to 98% of average. Reservoir storage is at 70% of capacity, compared to 66% last year. Forecast streamflow volumes range from 62% to 138% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:29:41 AM

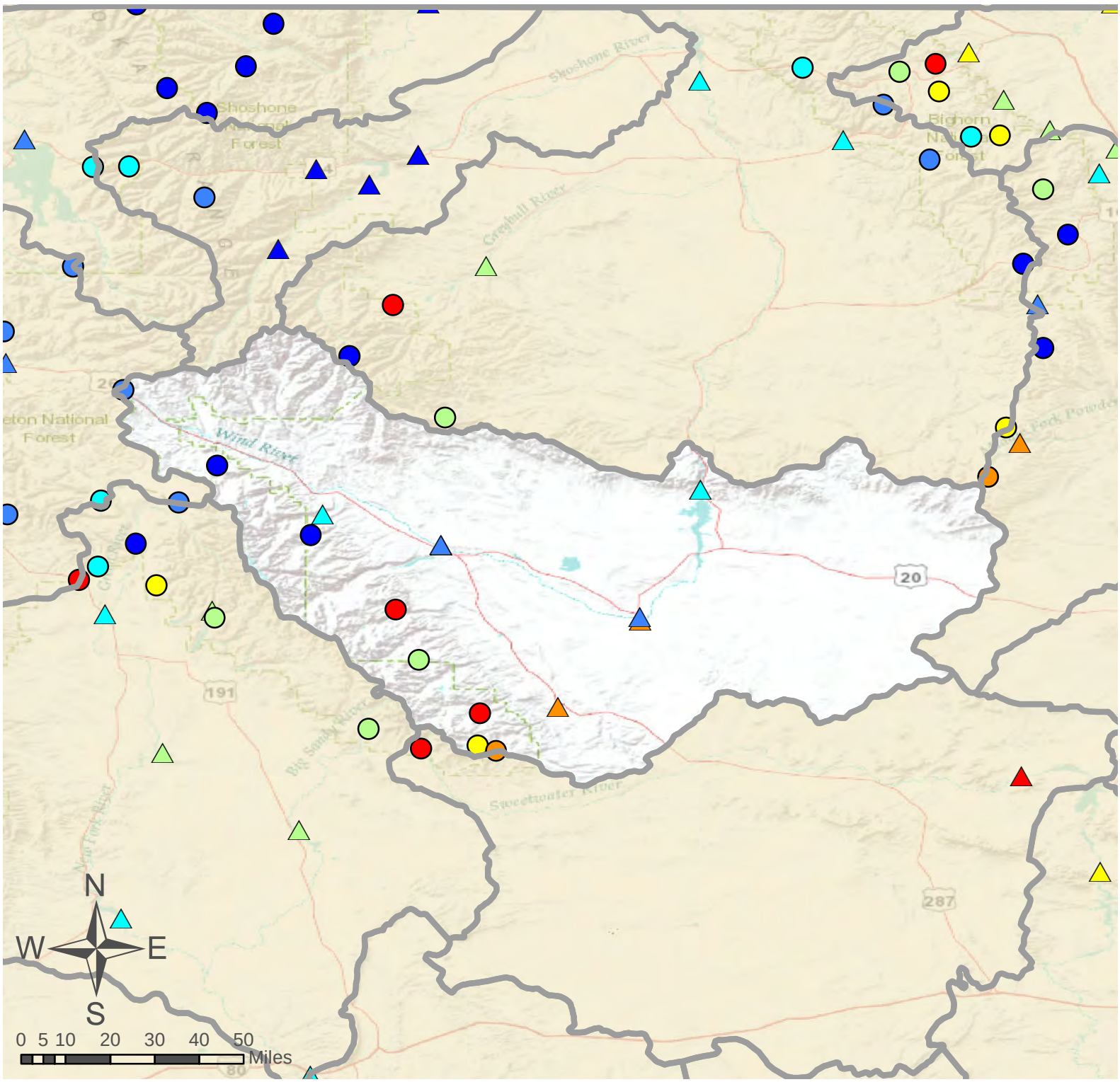
Wind River Basin
Streamflow Forecasts - April 1, 2018

WIND RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
Dinwoody Ck nr Burris								
	APR-JUL	66	74	79	120%	84	92	66
	APR-SEP	93	102	108	117%	114	123	92
Wind R Ab Bull Lake Ck								
	APR-JUL	540	625	685	151%	740	825	455
	APR-SEP	590	680	745	152%	810	900	490
Bull Lake Ck nr Lenore								
	APR-JUL	117	137	150	108%	163	183	139
	APR-SEP	140	164	180	107%	196	220	169
Wind R at Riverton								
	APR-JUL	570	665	725	153%	790	880	475
	APR-SEP	665	770	840	153%	910	1020	550
Little Popo Agie R nr Lander								
	APR-JUL	11.8	23	31	74%	39	50	42
	APR-SEP	16.7	29	37	76%	45	57	49
Little Wind R nr Riverton								
	APR-JUL	48	151	220	81%	290	395	270
	APR-SEP	60	168	240	81%	315	425	295
Boysen Reservoir Inflow								
	APR-JUL	435	645	790	130%	935	1150	610
	APR-SEP	475	700	855	129%	1010	1230	665

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bull Lake	103.7	51.7	75.4	151.8
Boysen	531.3	578.2	489.0	596.0
Pilot Butte	24.1	25.7	24.8	31.6
Basin-wide Total	659.2	655.6	589.2	779.4
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
WIND above Dubois	6	151%	187%
LITTLE WIND	2	99%	195%
POPO AGIE	7	86%	209%
WIND RIVER	16	112%	197%



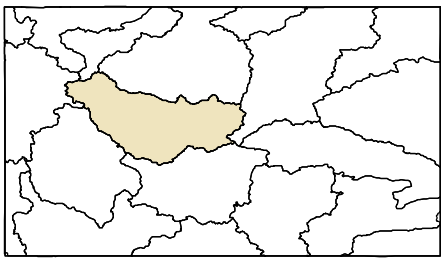
Wind River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

109% of Normal SWE

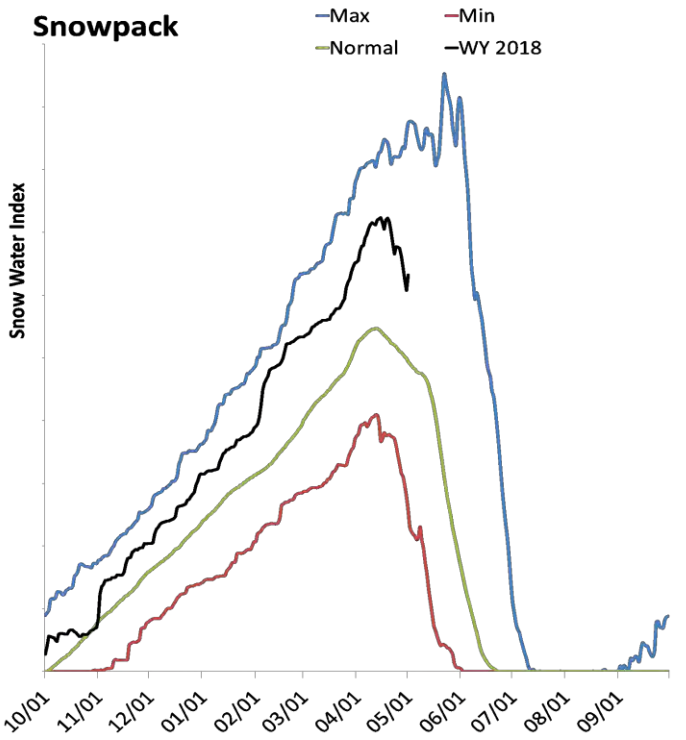
98% of Normal Precipitation

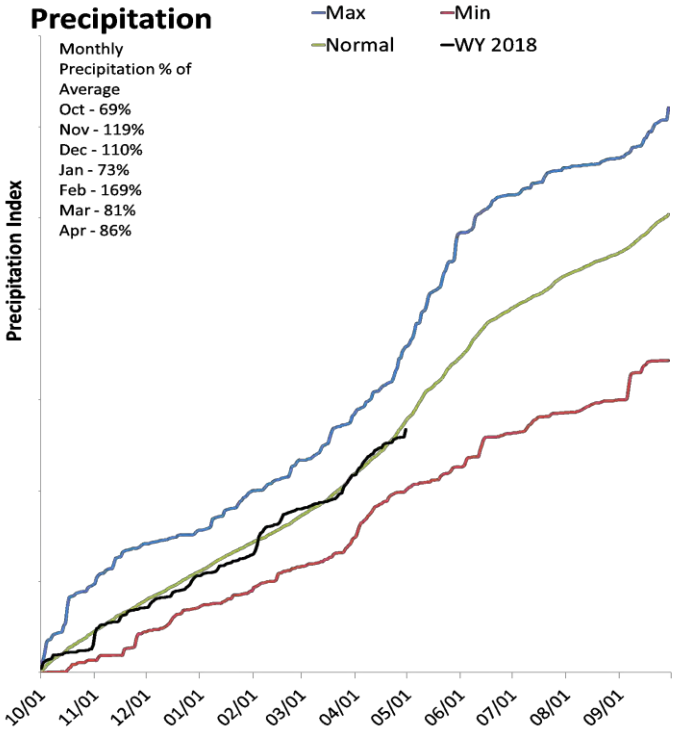
85% of Normal Precipitation Last Month

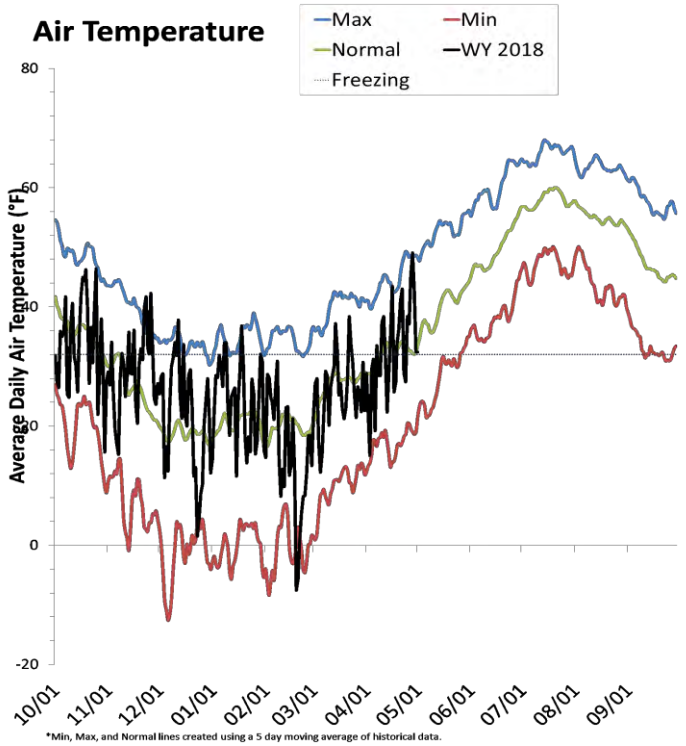
Bighorn River Basin

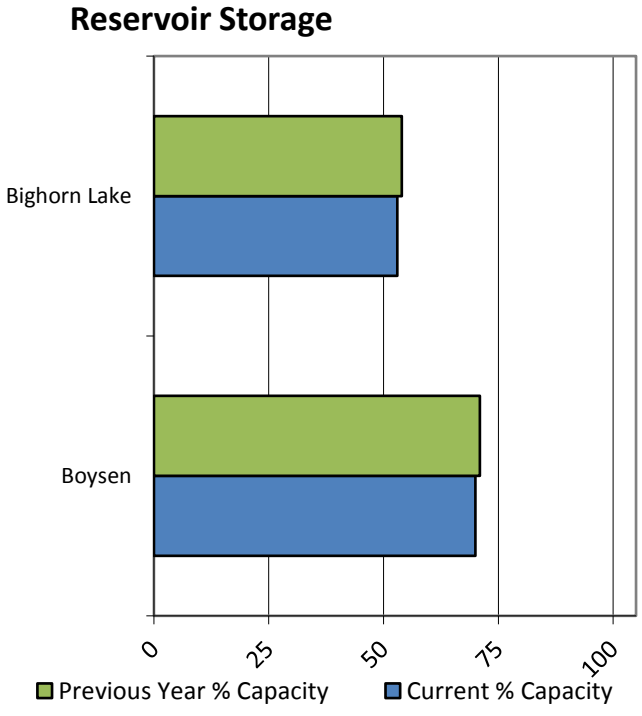
May 1, 2018

Snowpack in the Bighorn River Basin is above normal at 128% of normal, compared to 156% last year. Precipitation in April was below average at 86%, which brings the seasonal accumulation (Oct-Apr) to 96% of average. Reservoir storage is at 58% of capacity, compared to 59% last year. Forecast streamflow volumes range from 103% to 121% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:29:44 AM

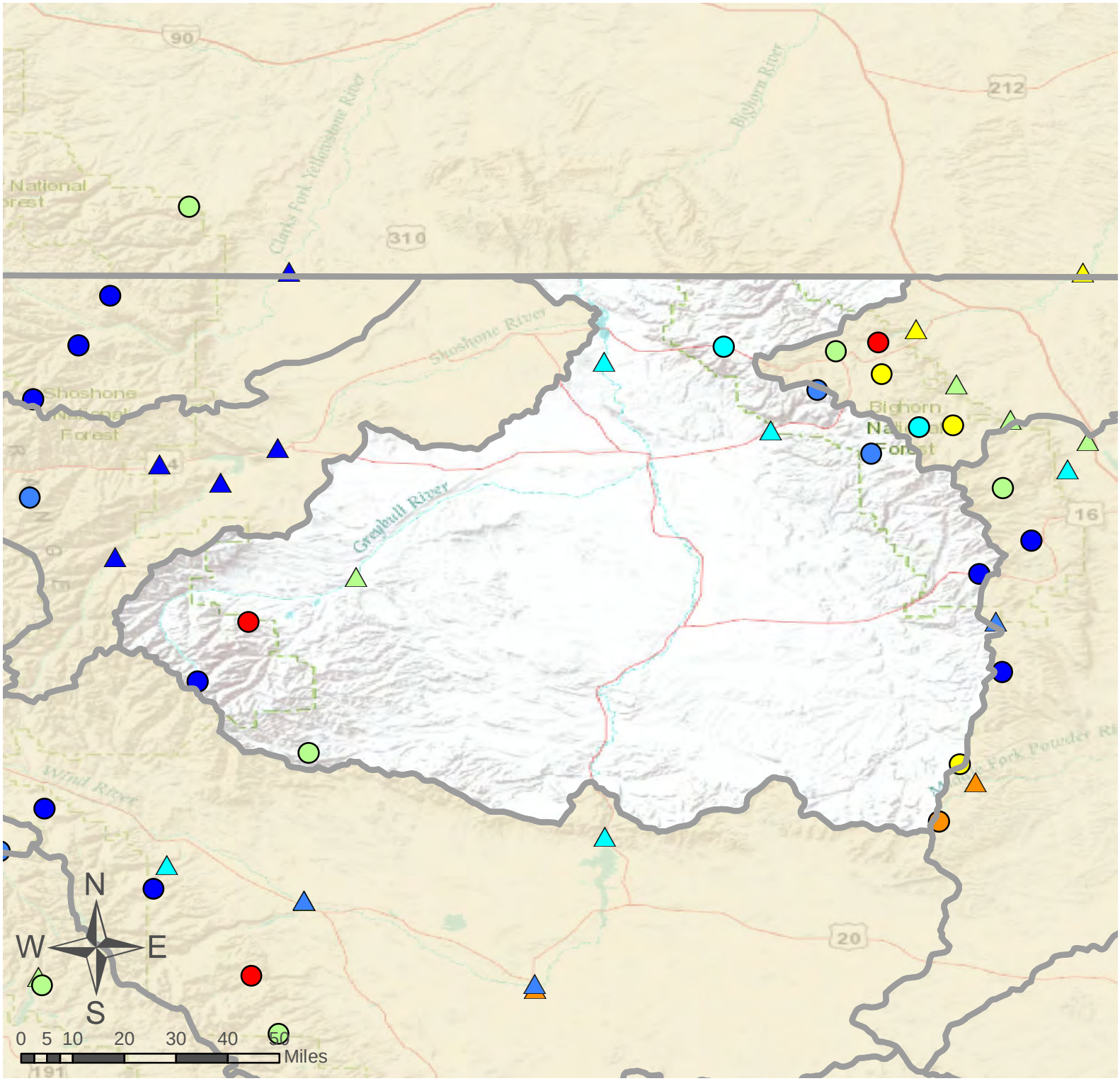
Bighorn River Basin
Streamflow Forecasts - April 1, 2018

BIGHORN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
Boysen Reservoir Inflow								
	APR-JUL	435	645	790	130%	935	1150	610
	APR-SEP	475	700	855	129%	1010	1230	665
Greybull R at Meeteetse								
	APR-JUL	75	112	137	105%	162	198	131
	APR-SEP	111	155	185	105%	215	260	177
Shell Ck nr Shell								
	APR-JUL	52	61	67	122%	73	82	55
	APR-SEP	61	71	78	118%	85	95	66
Bighorn R at Kane								
	APR-JUL	560	880	1100	131%	1310	1630	840
	APR-SEP	605	945	1170	129%	1400	1740	905

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Boysen	531.3	578.2	489.0	596.0
Bighorn Lake	755.5	751.5	787.5	1356.0
Basin-wide Total	1286.8	1329.7	1276.5	1952.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
NOWOOD RIVER	7	134%	83%
GREYBULL RIVER	2	158%	207%
SHELL CREEK	4	124%	108%
BIGHORN RIVER	14	130%	110%



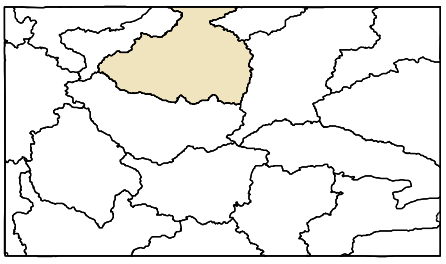
Bighorn River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

128% of Normal SWE

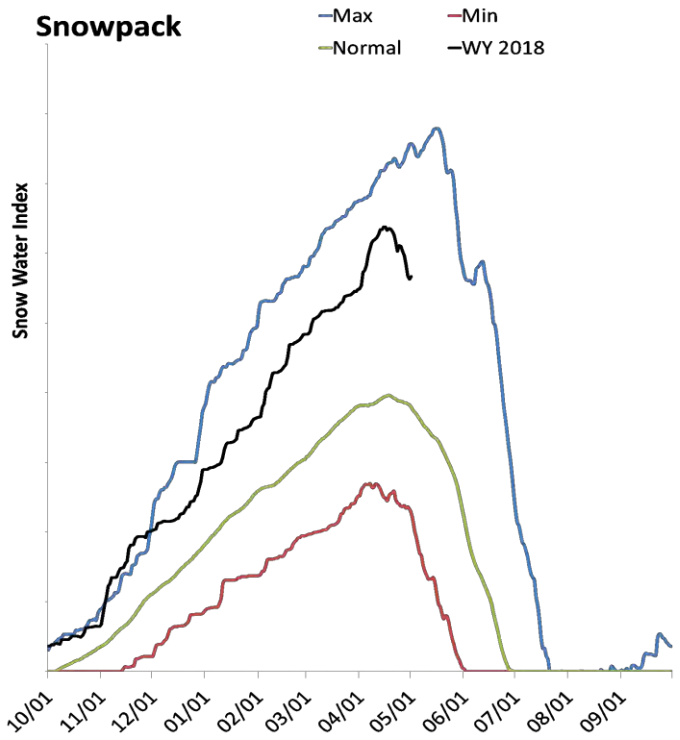
96% of Normal Precipitation

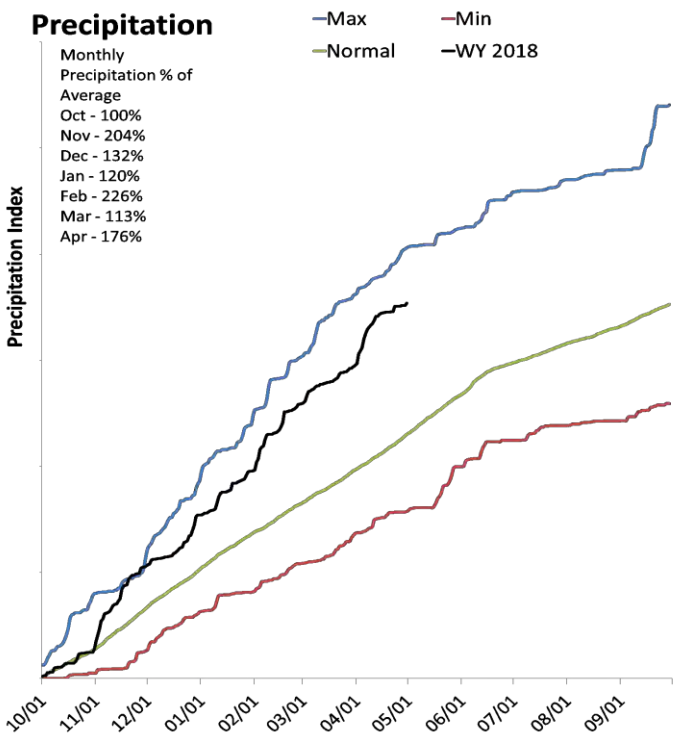
86% of Normal Precipitation Last Month

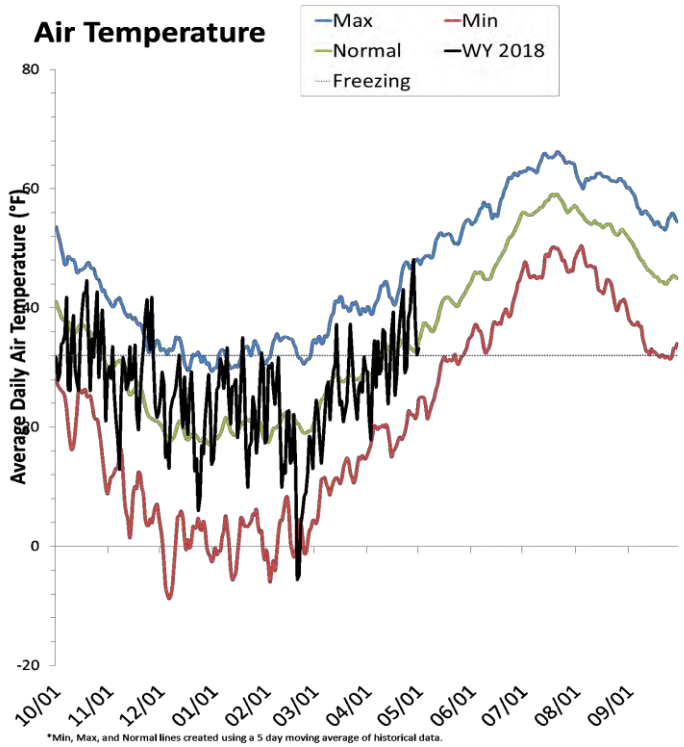
Shoshone River Basin

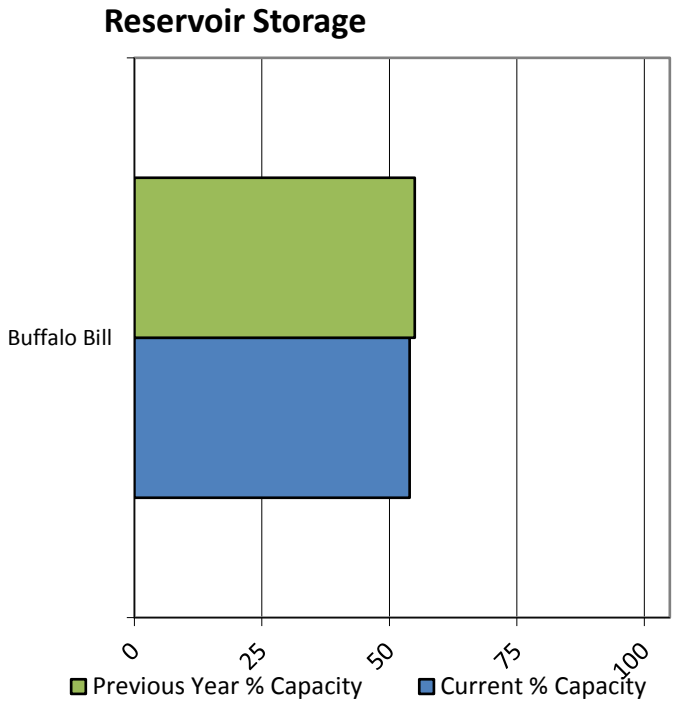
May 1, 2018

Snowpack in the Shoshone River Basin is much above average at 149% of normal, compared to 147% last year. Precipitation in April was much above average at 165%, which brings the seasonal accumulation (Oct-Apr) to 145% of average. Reservoir storage is at 54% of capacity, compared to 55% last year. Forecast streamflow volumes range from 159% to 182% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:29:49 AM

Shoshone River Basin
Streamflow Forecasts - April 1, 2018

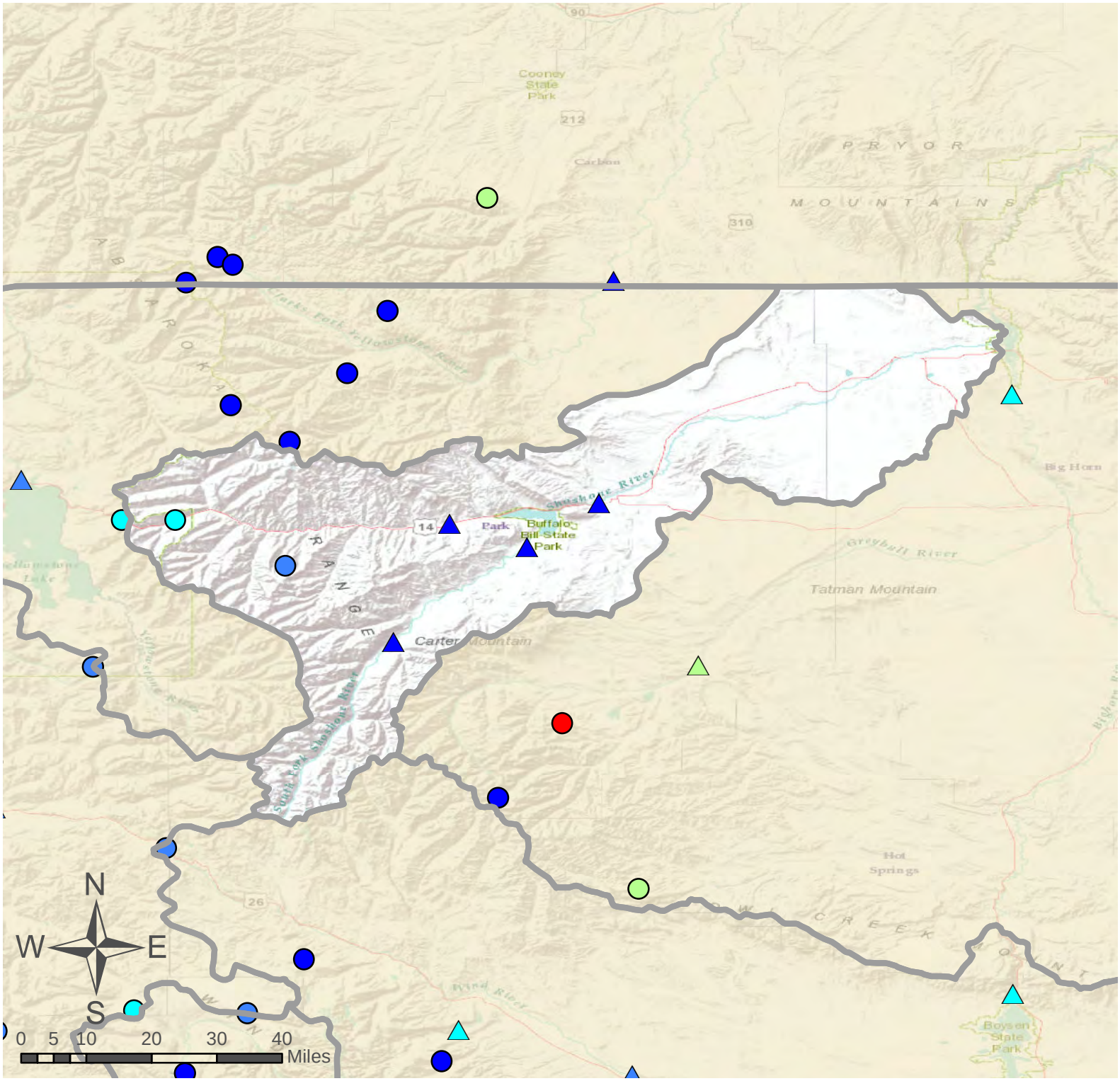
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

SHOSHONE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
NF Shoshone R at Wapiti								
	APR-JUL	625	675	710	154%	745	795	460
	APR-SEP	690	750	790	153%	830	885	515
SF Shoshone R nr Valley								
	APR-JUL	275	300	320	149%	340	365	215
	APR-SEP	315	350	370	151%	390	425	245
SF Shoshone R ab Buffalo Bill Reservoir								
	APR-JUL	260	305	330	171%	360	405	193
	APR-SEP	275	325	355	178%	385	435	200
Buffalo Bill Reservoir Inflow[2]								
	APR-JUL	900	995	1060	157%	1120	1220	675
	APR-SEP	995	1100	1170	157%	1240	1350	745

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Buffalo Bill	423.4	457.1	348.9	646.6
Basin-wide Total	423.4	457.1	348.9	646.6
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
SHOSHONE RIVER	4	144%	141%



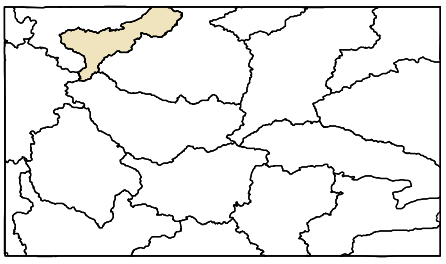
Shoshone River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

149% of Normal SWE

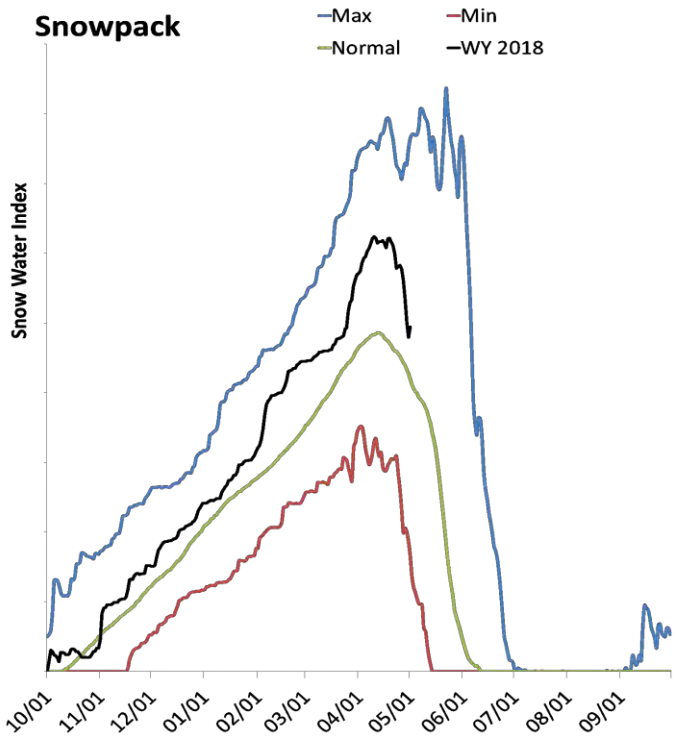
145% of Normal Precipitation

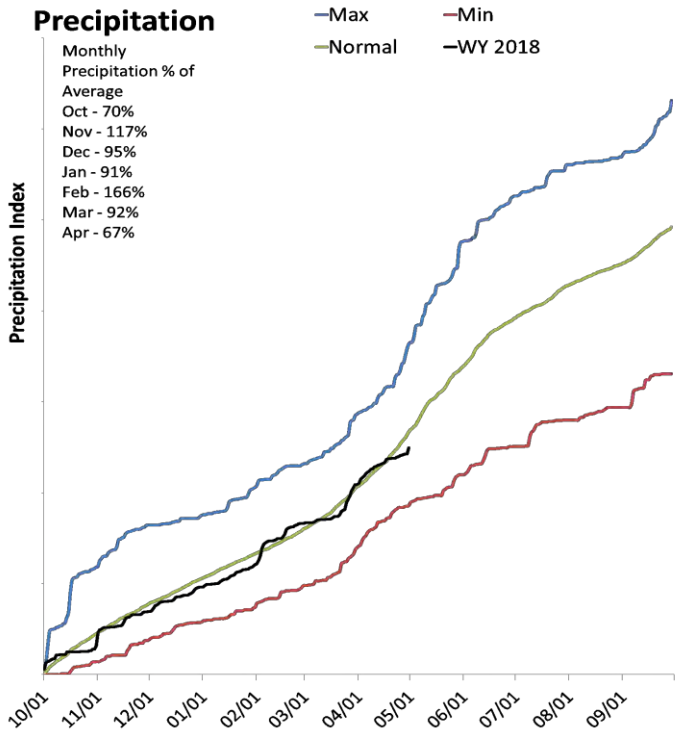
165% of Normal Precipitation Last Month

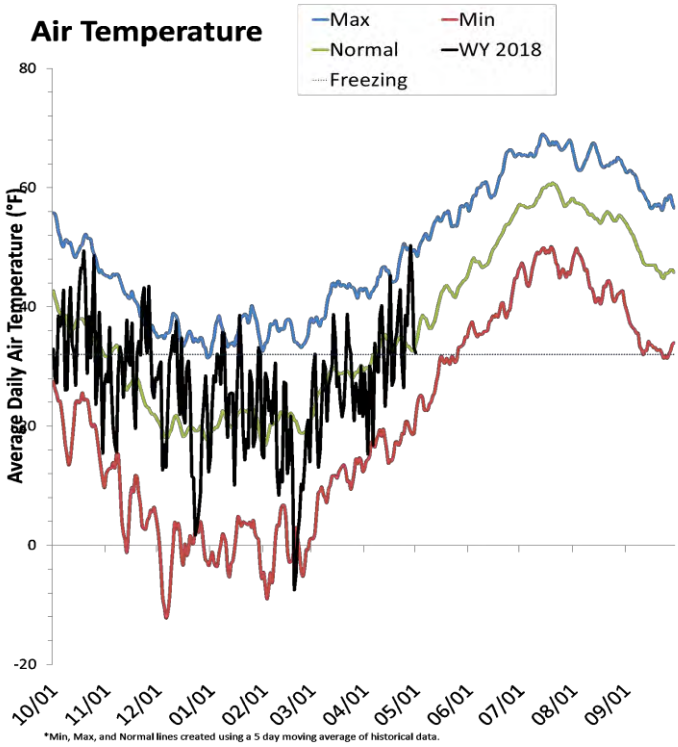
Powder River Basin

May 1, 2018

Snowpack in the Powder River Basin is above normal at 118% of normal, compared to 160% last year. Precipitation in April was much below average at 67%, which brings the seasonal accumulation (Oct-Apr) to 94% of average. Forecast streamflow volumes range from 61% to 139% of average.







SNOTEL Data

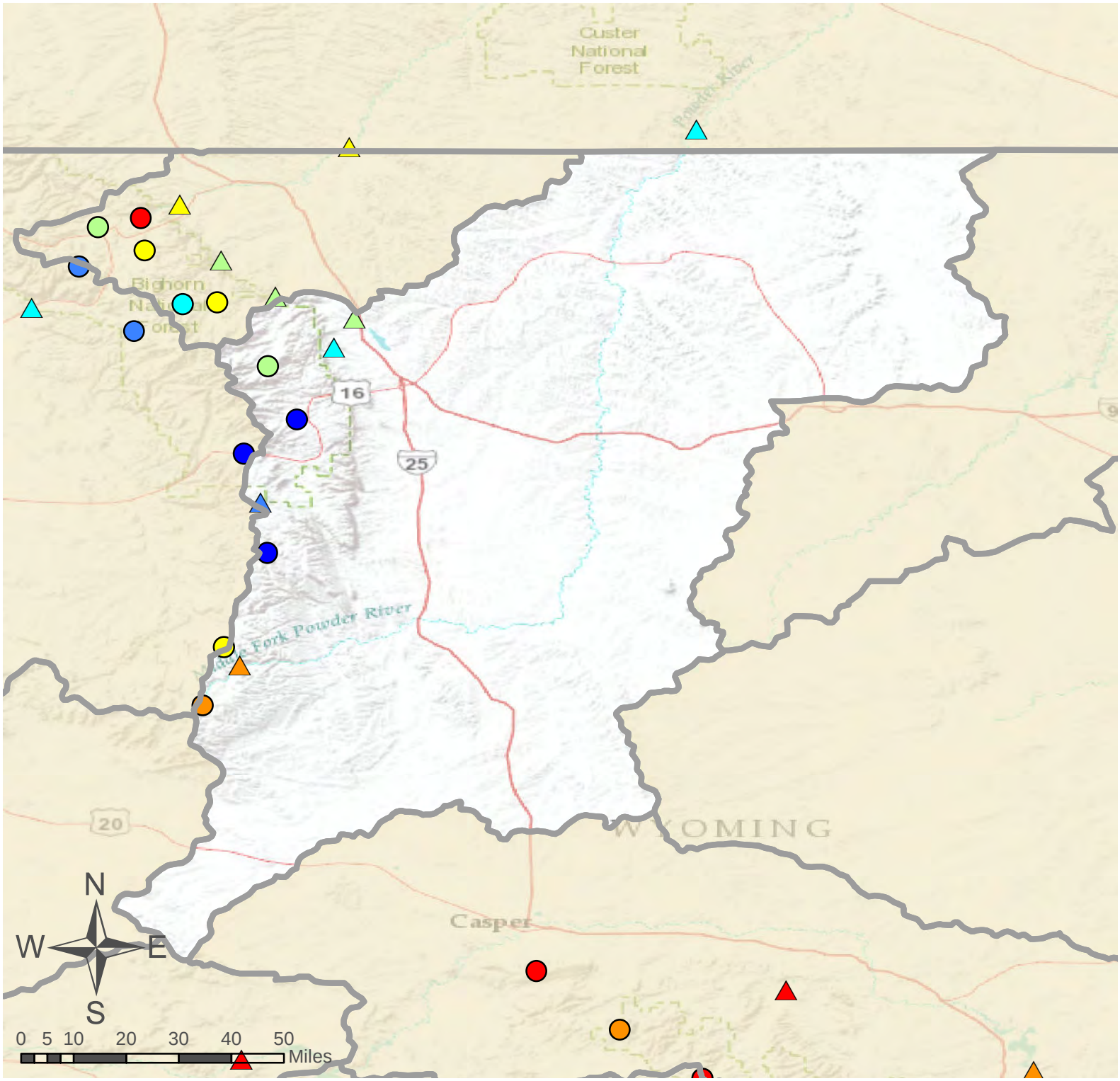
Data Current as of: 4/5/2018 11:29:52 AM

Powder River Basin
Streamflow Forecasts - April 1, 2018

POWDER RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
MF Powder R nr Barnum								
	APR-JUL	4.8	8.7	11.3	70%	13.9	17.8	16.1
	APR-SEP	5.3	9.3	12	71%	14.7	18.7	17
NF Powder R nr Hazelton								
	APR-JUL	10.8	12.9	14.3	157%	15.7	17.8	9.1
	APR-SEP	11.6	13.7	15.2	154%	16.7	18.9	9.9
Rock Ck nr Buffalo								
	APR-JUL	14.4	20	24	129%	28	34	18.6
	APR-SEP	18.8	25	29	132%	33	39	22
Piney Ck at Kearny								
	APR-JUL	22	39	50	114%	61	78	44
	APR-SEP	25	42	54	115%	66	83	47
Powder R at Moorehead								
	APR-JUL	108	193	250	141%	305	390	177
	APR-SEP	132	215	275	140%	335	420	196

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
UPPER POWDER RIVER	5	129%	79%
CLEAR CREEK	3	117%	138%
CRAZY WOMAN CREEK	2	160%	90%
POWDER RIVER	8	125%	101%



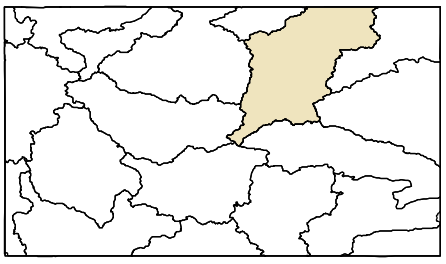
Powder River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

118% of Normal SWE

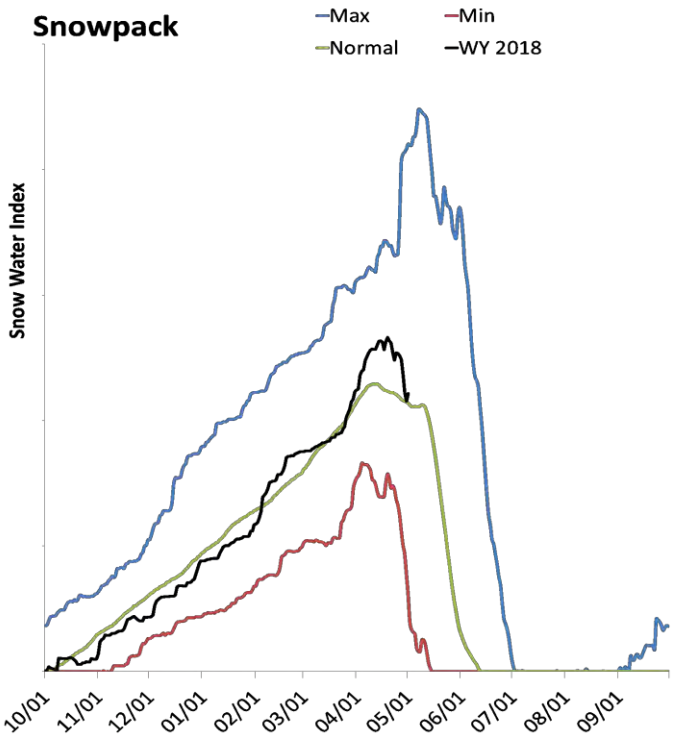
94% of Normal Precipitation

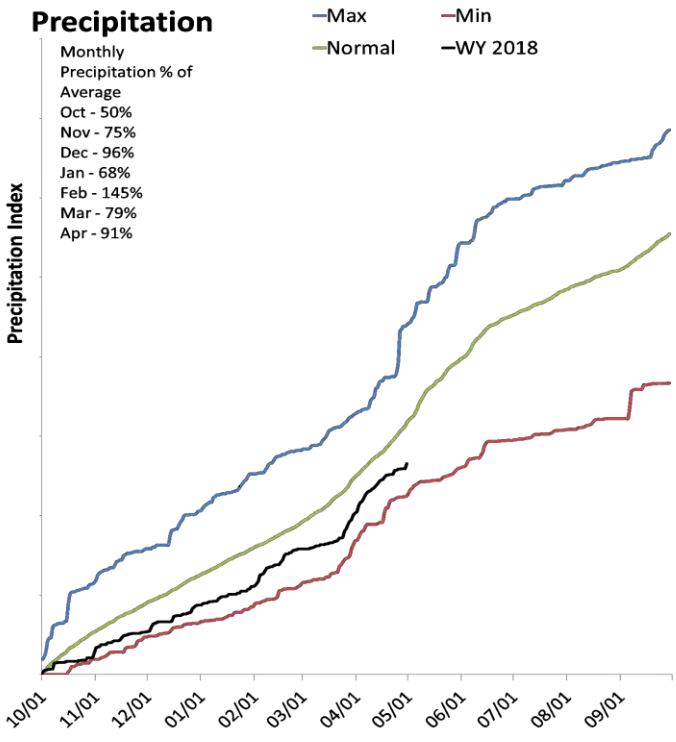
67% of Normal Precipitation Last Month

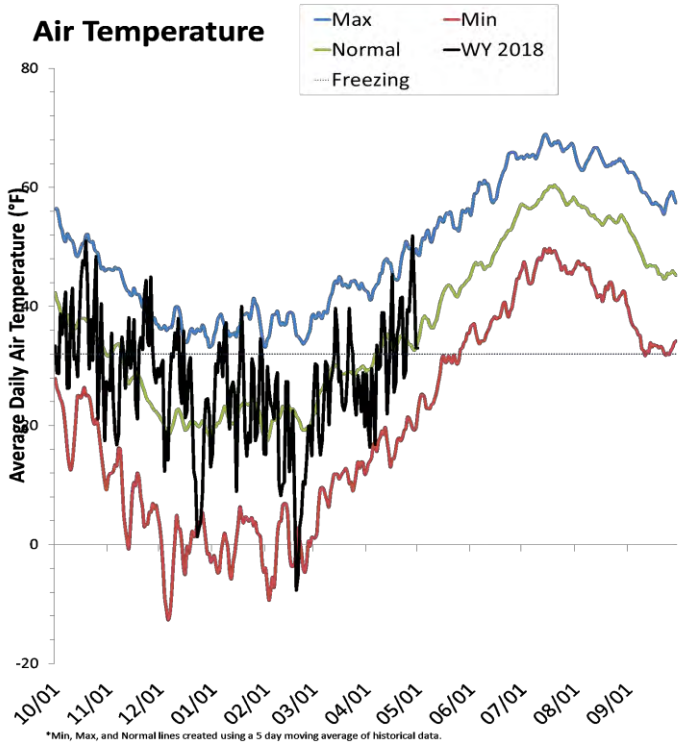
Tongue River Basin

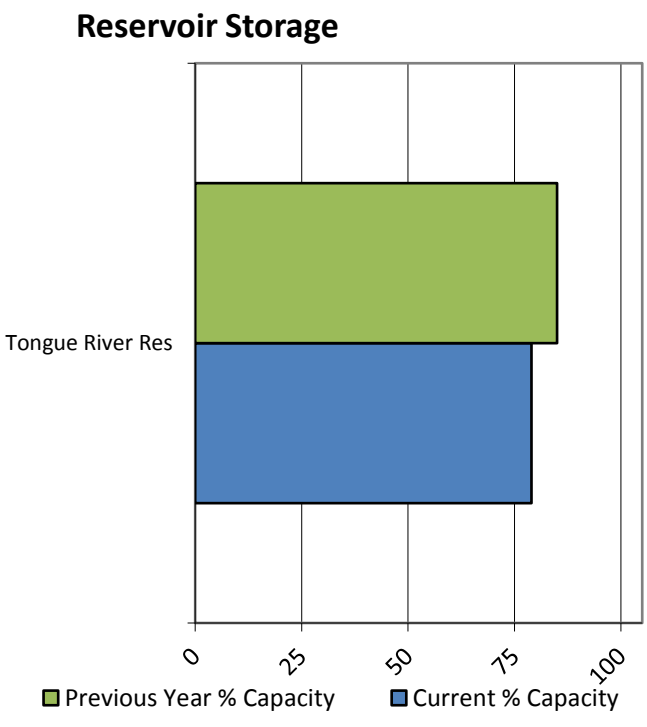
May 1, 2018

Snowpack in the Tongue River Basin is near normal at 104% of normal, compared to 144% last year. Precipitation in April was near average at 91%, which brings the seasonal accumulation (Oct-Apr) to 84% of average. Reservoir storage is at 79% of capacity, compared to 85% last year. Forecast streamflow volumes range from 81% to 91% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:29:56 AM

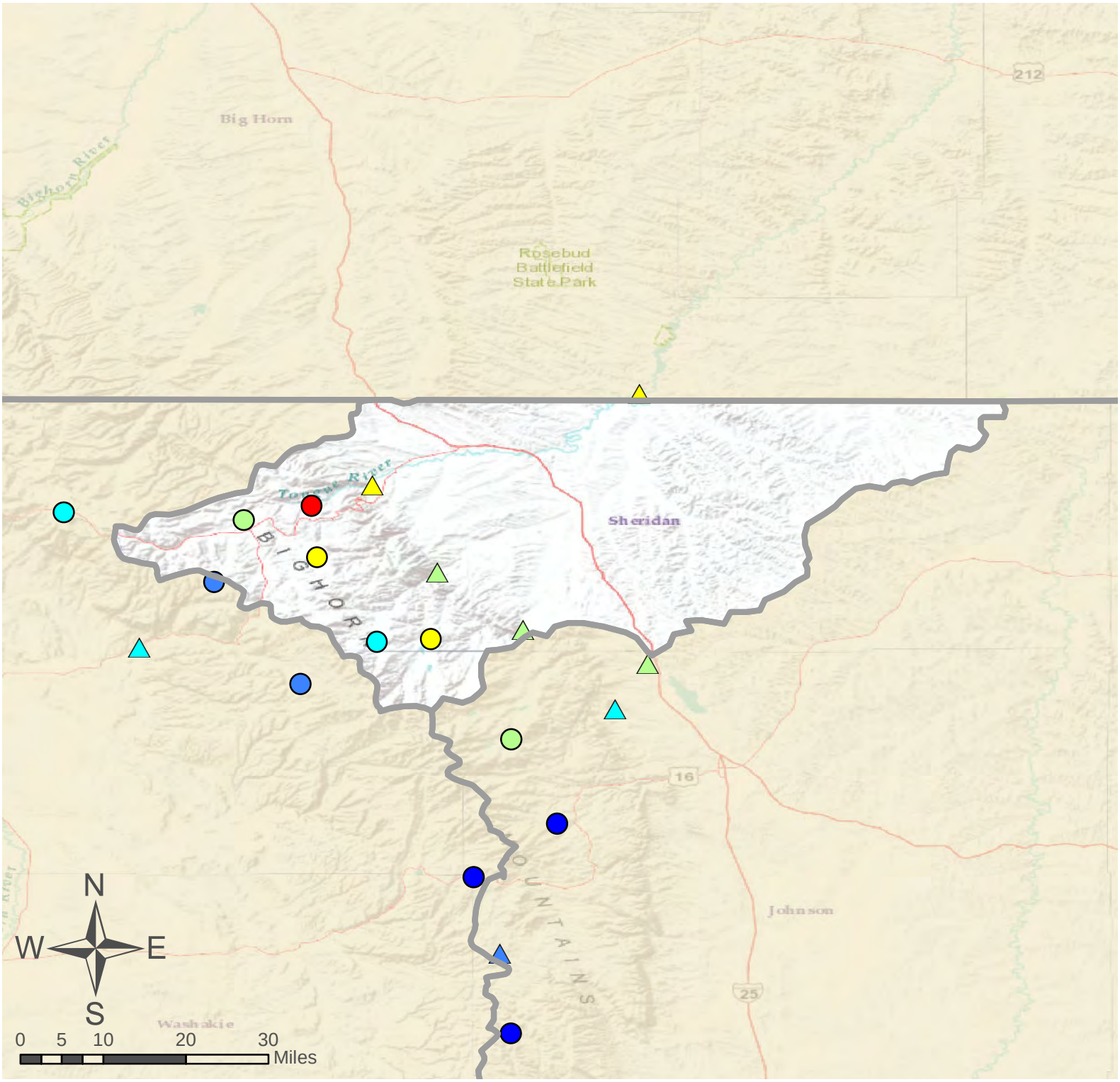
Tongue River Basin
Streamflow Forecasts - April 1, 2018

TONGUE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
Tongue R nr Dayton								
	APR-JUL	44	60	71	83%	82	98	86
	APR-SEP	52	70	82	84%	94	112	98
Big Goose Ck nr Sheridan								
	APR-JUL	24	36	44	96%	52	63	46
	APR-SEP	32	44	52	96%	60	72	54
Little Goose Ck nr Big Horn								
	APR-JUL	18.2	25	30	97%	35	42	31
	APR-SEP	25	33	38	97%	44	52	39
Tongue River Reservoir Inflow								
	APR-JUL	63	123	163	84%	205	265	193
	APR-SEP	78	141	184	86%	225	290	215

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Tongue River Res	62.4	64.7	32.3	79.1
Basin-wide Total	62.4	64.7	32.3	79.1
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
GOOSE CREEK	3	114%	126%
TONGUE RIVER	9	102%	111%



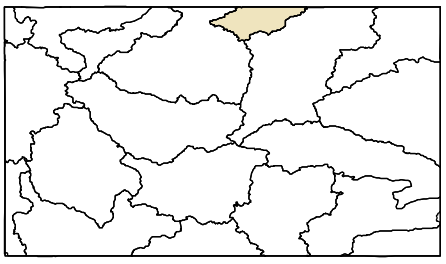
Tongue River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

104% of Normal SWE

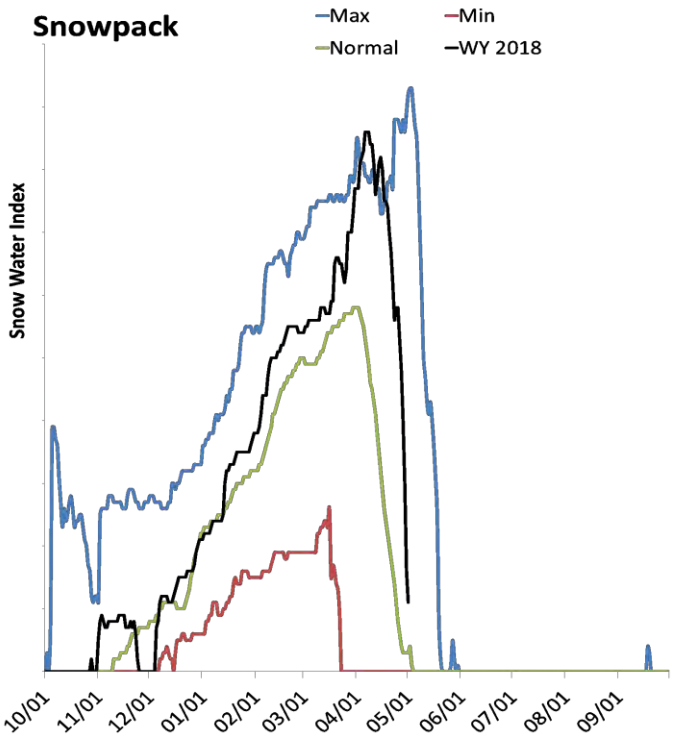
84% of Normal Precipitation

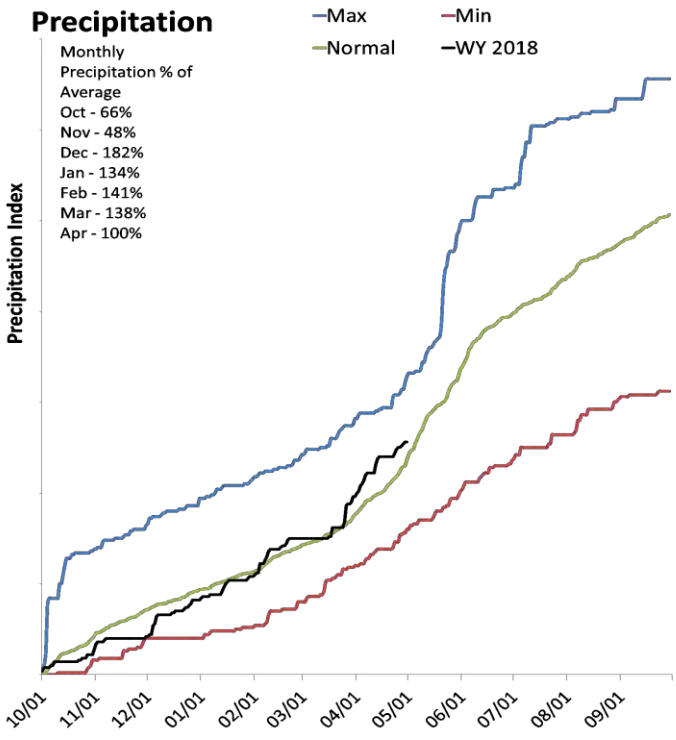
91% of Normal Precipitation Last Month

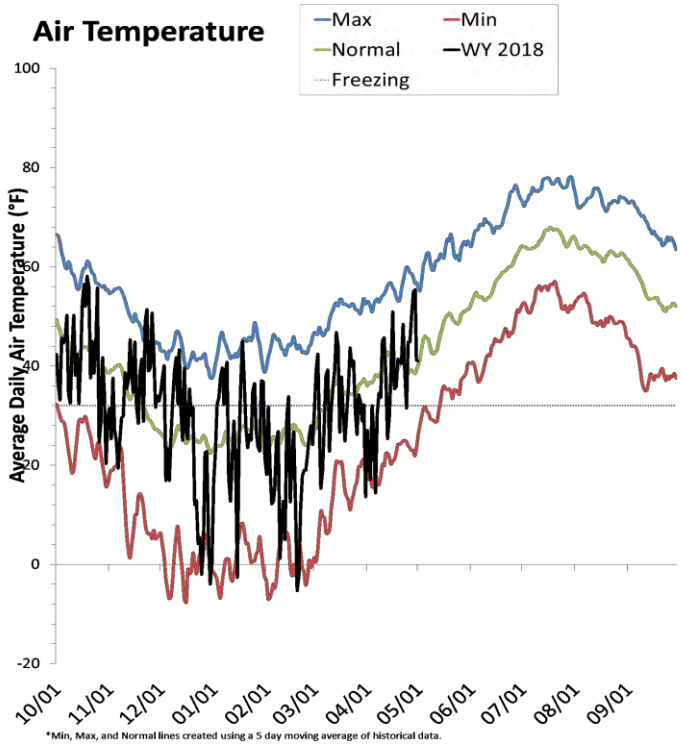
Belle Fourche River Basin

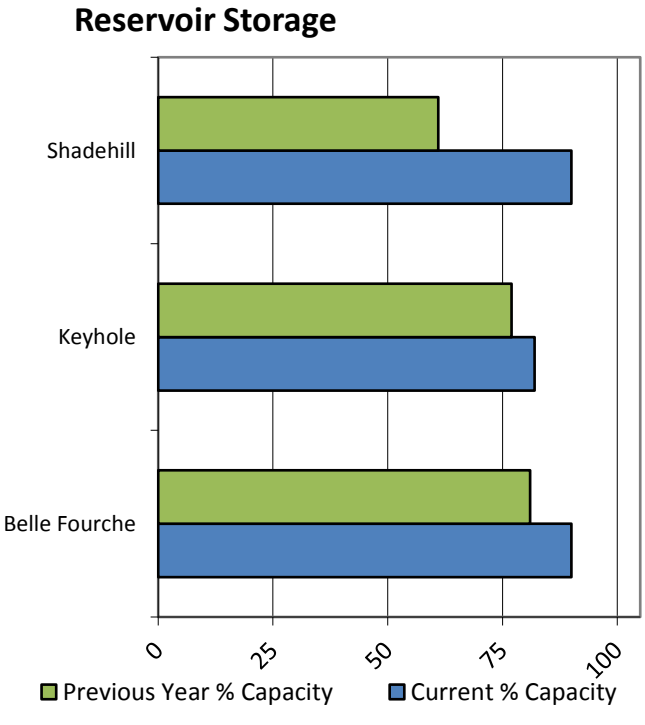
May 1, 2018

Snowpack in the Belle Fourche River Basin is much above normal at 367% of normal, compared to 533% last year. Precipitation in April was near average at 100%, which brings the seasonal accumulation (Oct-Apr) to 108% of average. Reservoir storage is at 87% of capacity, compared to 76% last year. Forecast streamflow volumes range from 0% to 0% of average.









SNOTEL Data

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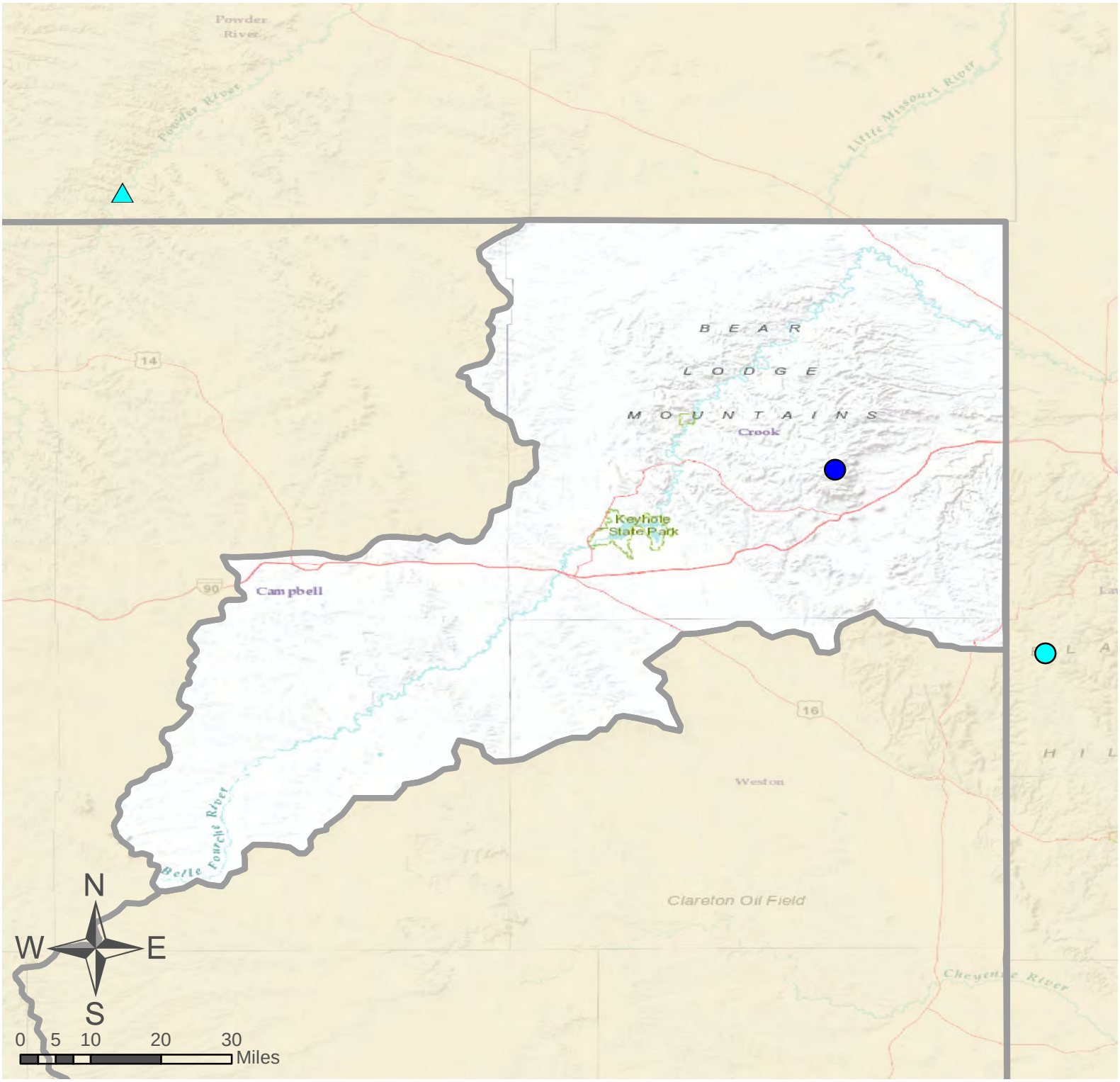
Belle Fourche River Basin - April 1, 2018

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Belle Fourche	132.6	126.2	133.5	178.4
Keyhole	157.1	147.1	96.8	193.8
Shadehill	56.4	45.4	59.0	81.4
Basin-wide Total	346.1	318.7	289.3	453.6
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
BELLE FOURCHE RIVER	6	122%	0%



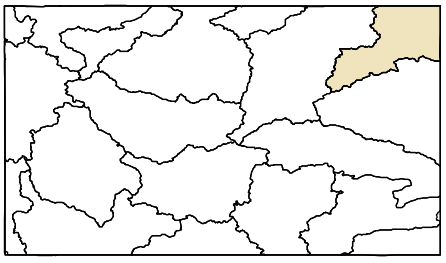
Belle Fourche River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

367% of Normal SWE

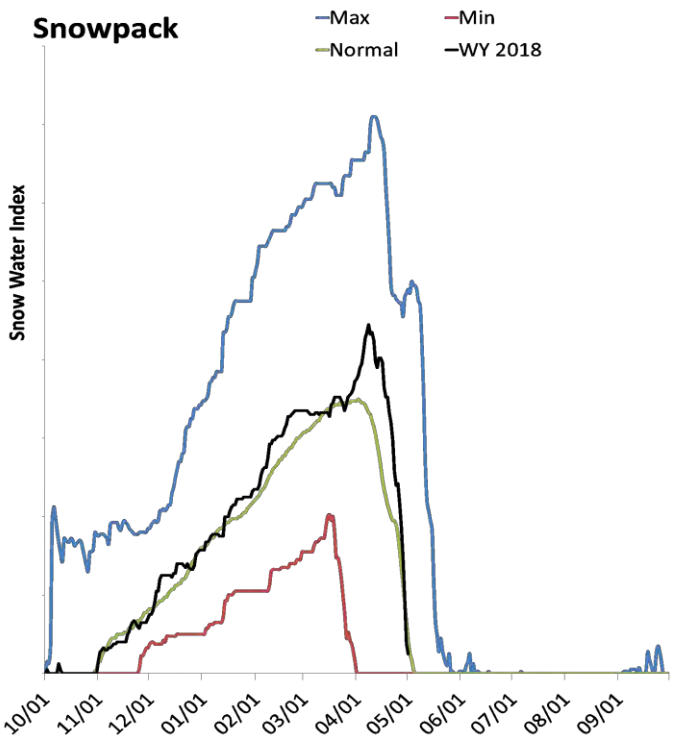
108% of Normal Precipitation

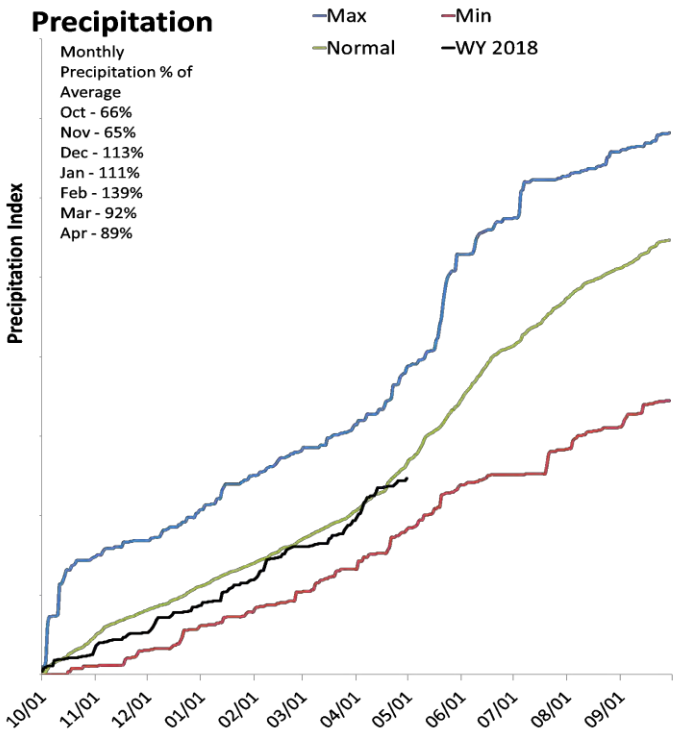
100% of Normal Precipitation Last Month

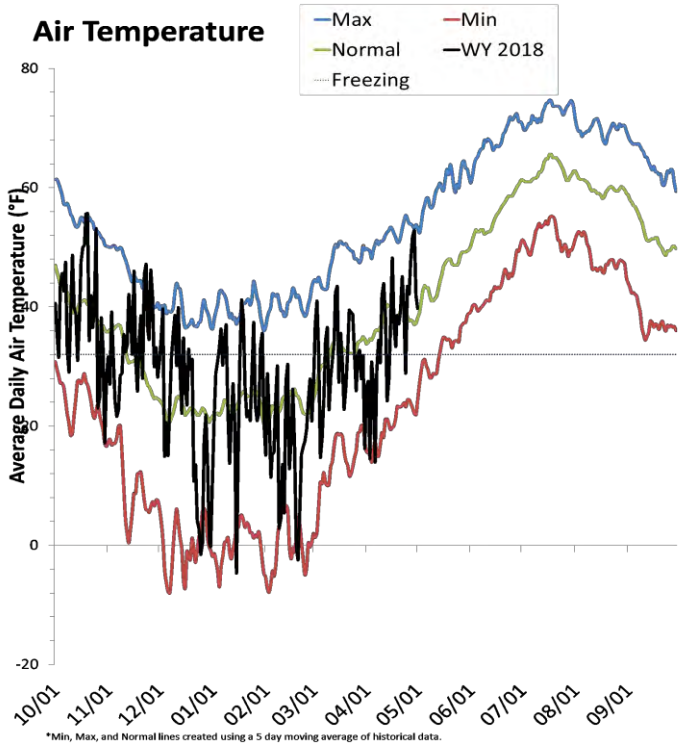
Cheyenne River Basin

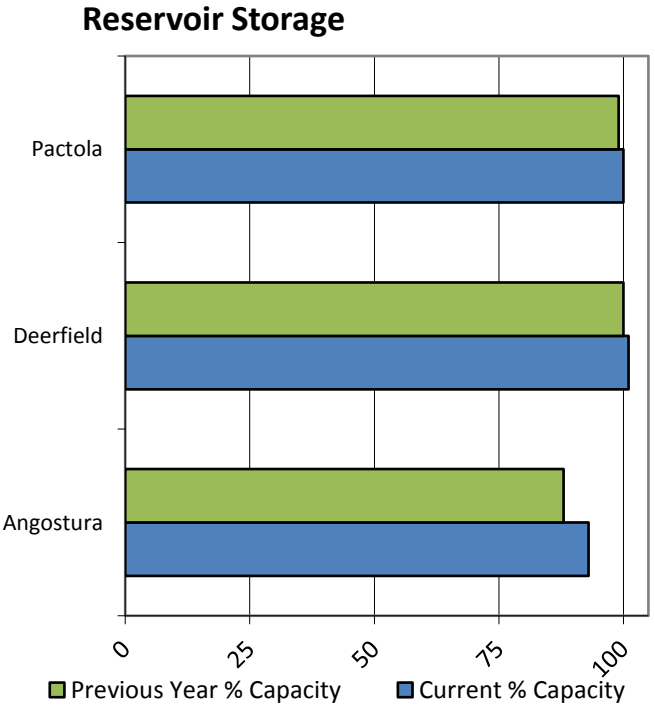
May 1, 2018

Snowpack in the Cheyenne River Basin is much below normal at 63% of normal, compared to 0% last year. Precipitation in April was near average at 90%, which brings the seasonal accumulation (Oct-Apr) to 93% of average. Reservoir storage is at 95% of capacity, compared to 92% last year. Forecast streamflow volumes range from 97% to 98% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:30:06 AM

Cheyenne River Basin
Streamflow Forecasts - April 1, 2018

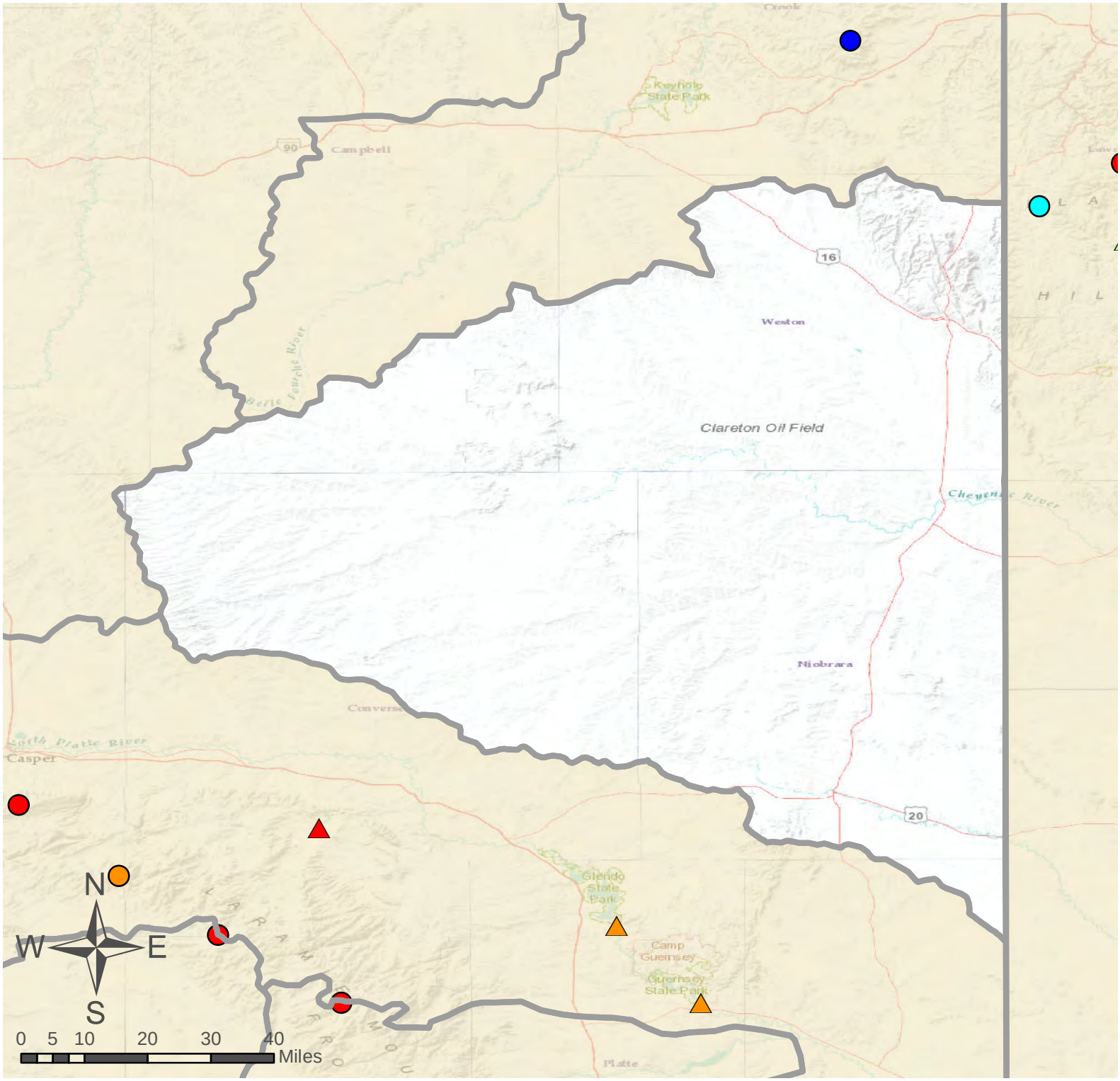
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

CHEYENNE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Deerfield Reservoir Inflow								
	APR-JUL	3.1	4.9	6.1	117%	7.3	9.1	5.2
Pactola Reservoir Inflow								
	APR-JUL	12.1	19.7	25	114%	30	37	22

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Angostura	112.5	102.9	94.3	122.1
Deerfield	14.7	15.1	14.1	15.2
Pactola	53.7	54.2	46.4	55.0
Basin-wide Total	181.0	172.2	154.8	192.3
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
CHEYENNE RIVER	7	120%	1%



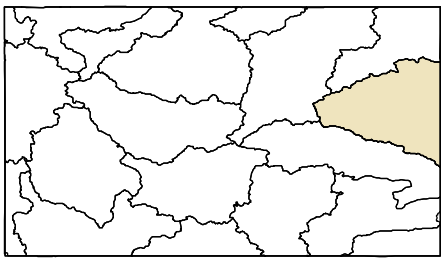
Cheyenne River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

63% of Normal SWE

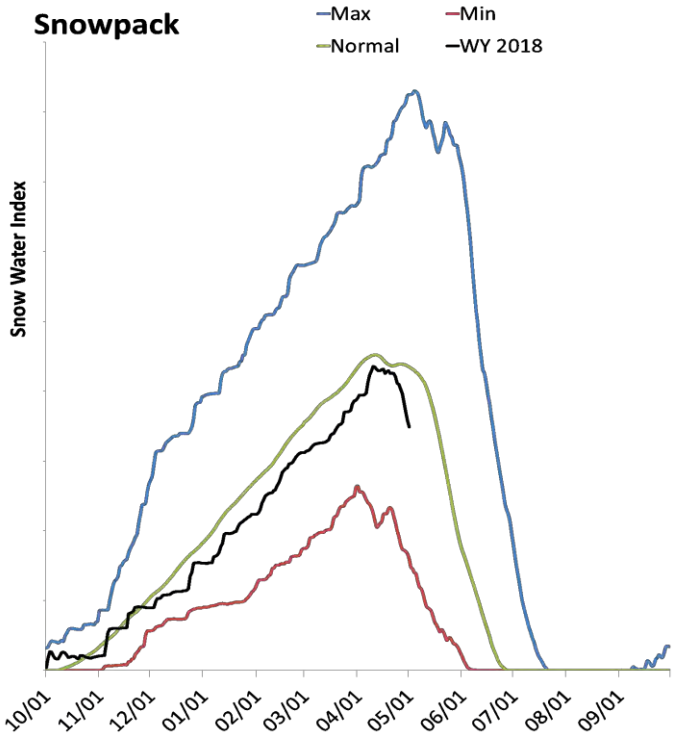
93% of Normal Precipitation

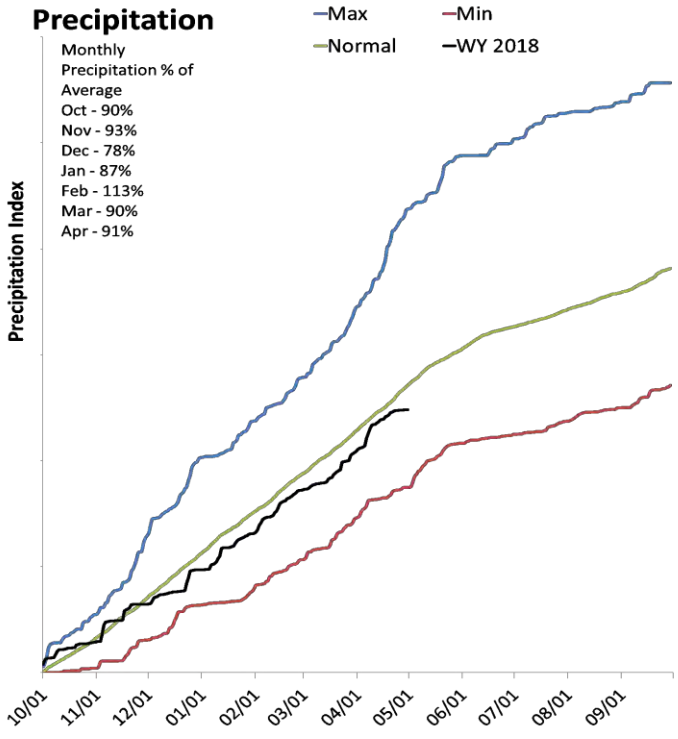
90% of Normal Precipitation Last Month

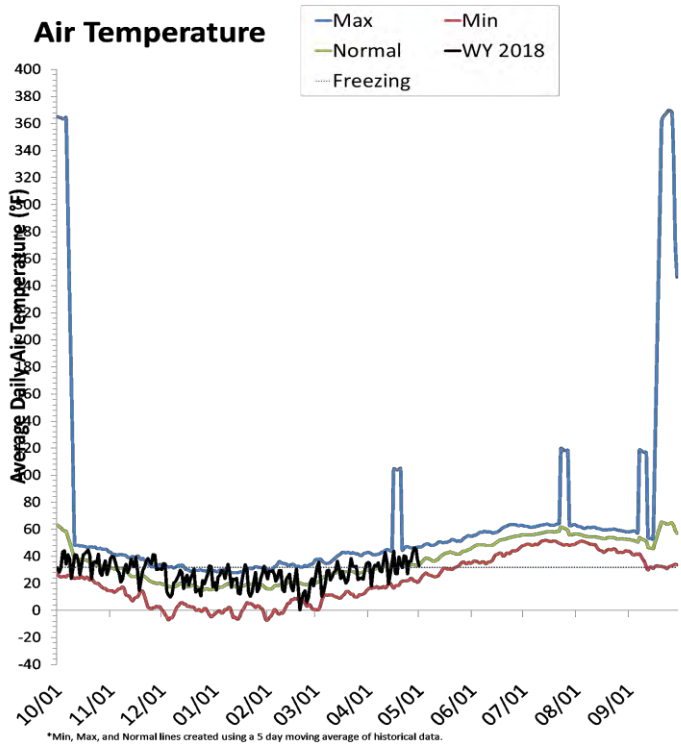
Upper North Platte River Basin

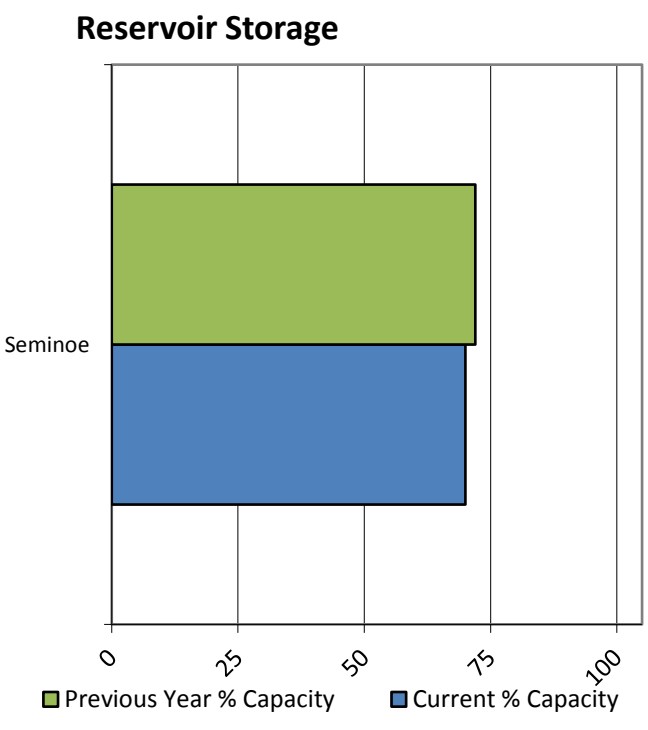
May 1, 2018

Snowpack in the Upper North Platte River Basin is below normal at 80% of normal, compared to 96% last year. Precipitation in April was near average at 91%, which brings the seasonal accumulation (Oct-Apr) to 91% of average. Soil moisture at sites with sensors is at 62% of saturation. Reservoir storage is at 70% of capacity, compared to 72% last year. The forecast streamflow volume for Manti Creek is 83% of average.









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Upper North Platte River Basin
Streamflow Forecasts - April 1, 2018

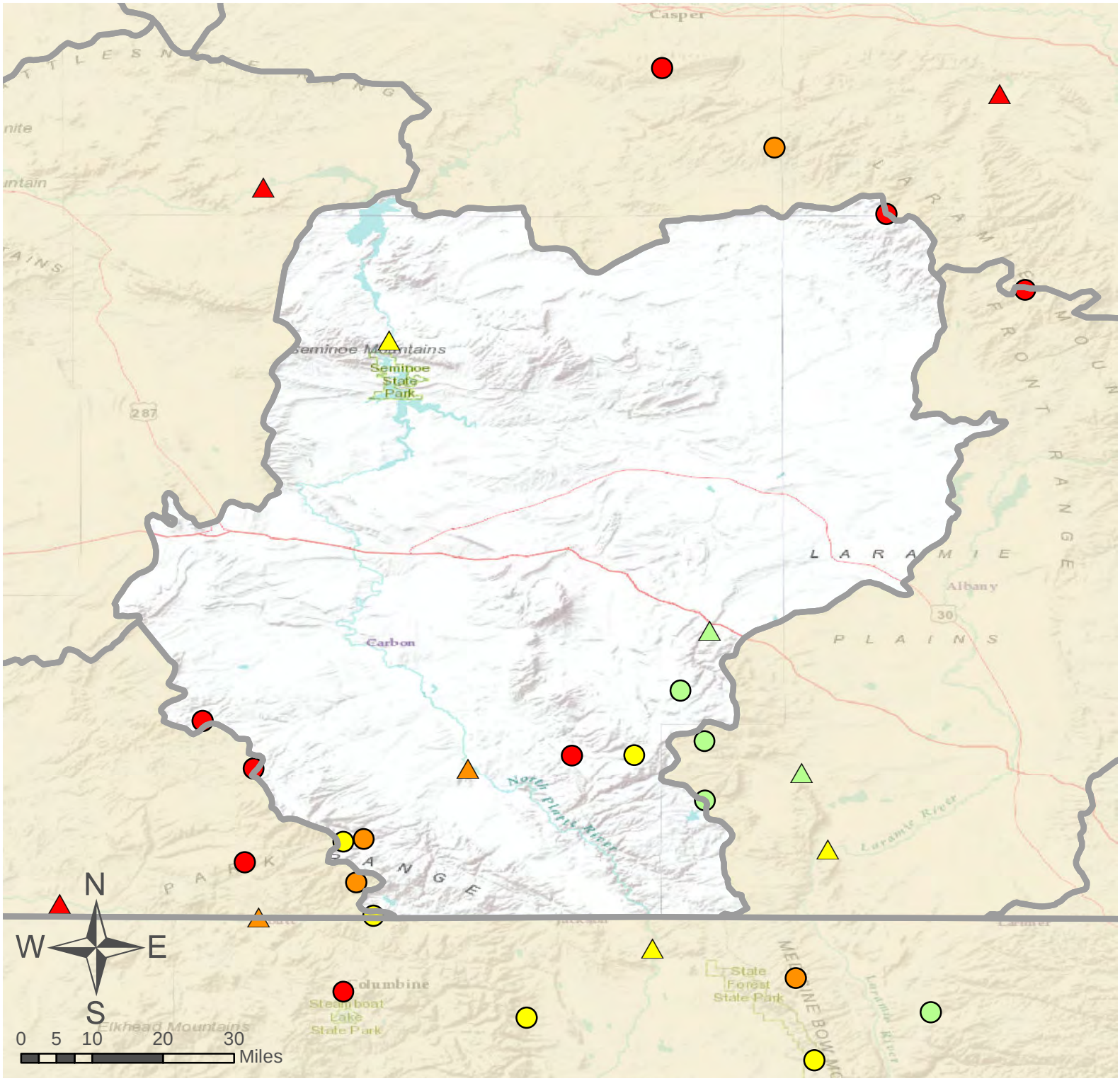
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

UPPER NORTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
North Platte R nr Northgate								
	APR-JUL	77	147	194	86%	240	310	225
	APR-SEP	83	160	215	86%	265	345	250
Encampment R nr Encampment[2]								
	APR-JUL	29	59	81	63%	102	132	129
	APR-SEP	32	65	86	62%	108	141	138
Rock Ck ab King Canyon Cnl nr Arlington								
	APR-JUL	36	45	50	102%	56	64	49
	APR-SEP	38	47	53	102%	59	68	52
Sweetwater R nr Alcova								
	APR-JUL	0.49	19.3	32	54%	45	64	59
	APR-SEP	1.16	21	35	55%	49	69	64
Seminoe Reservoir Inflow								
	APR-JUL	245	440	575	80%	705	900	715
	APR-SEP	275	480	620	81%	760	965	770

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Seminoe	798.1	772.3	481.2	1016.7
Basin-wide Total	798.1	772.3	481.2	1016.7
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
N PLATTE above Northgate	11	93%	103%
ENCAMPMENT RIVER	4	84%	111%
BRUSH CREEK	5	99%	81%
MEDICINE BOW & ROCK CREEKS	3	102%	104%
UPPER NORTH PLATTE RIVER	24	92%	98%



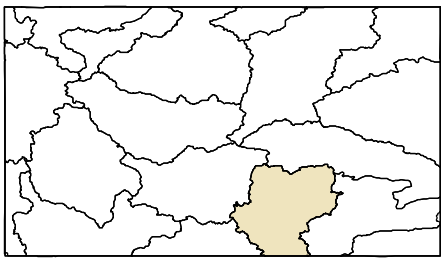
Upper North Platte River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

80% of Normal SWE

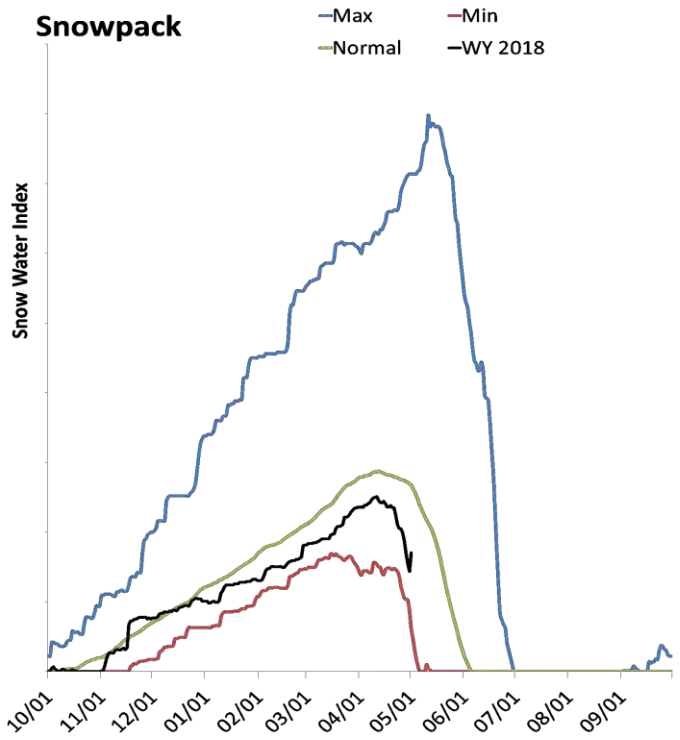
91% of Normal Precipitation

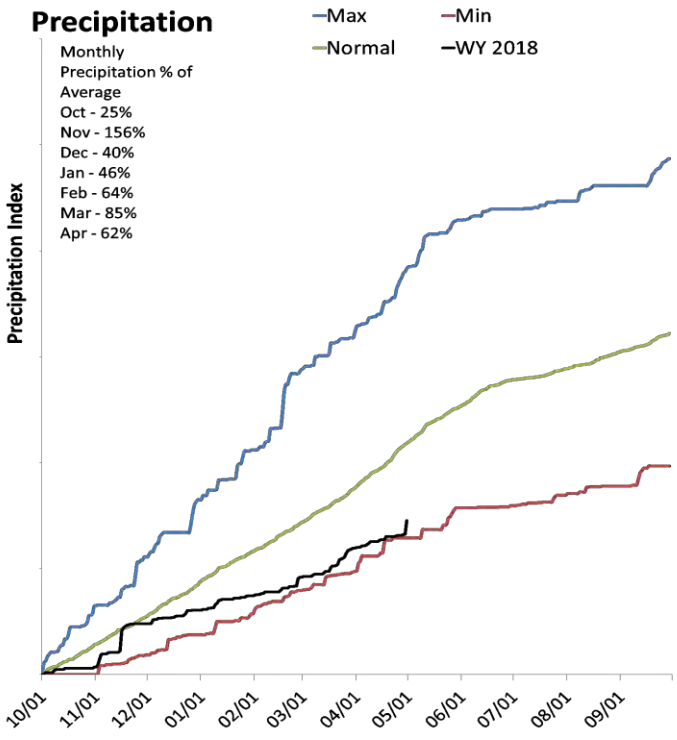
91% of Normal Precipitation Last Month

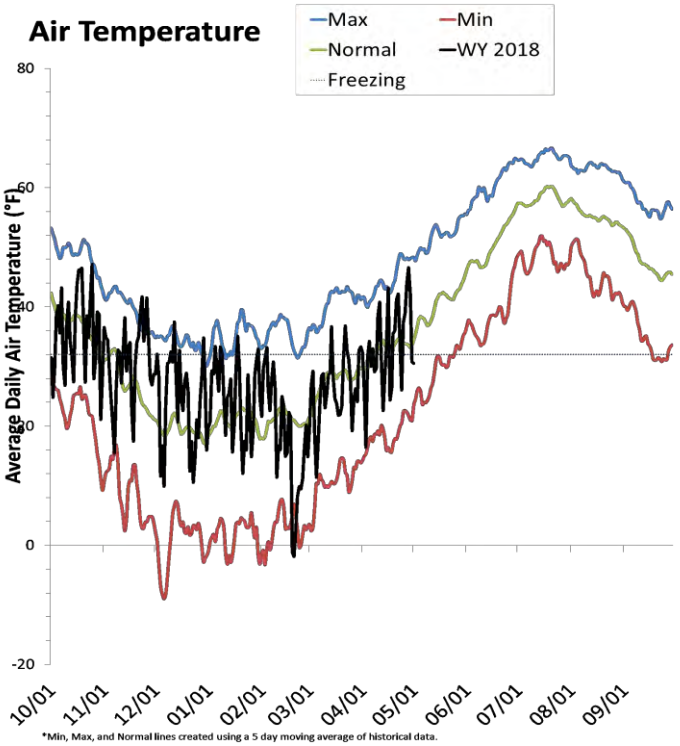
Sweetwater River Basin

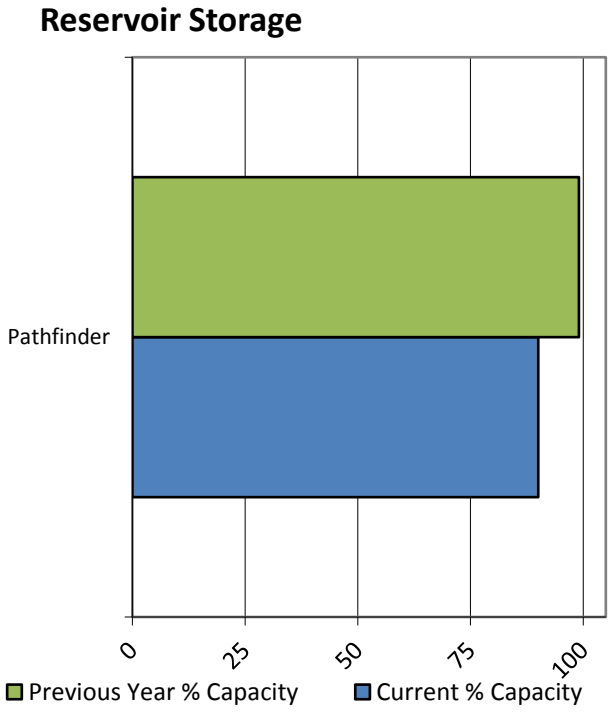
May 1, 2018

Snowpack in the Sweetwater River Basin is much below normal at 64% of normal, compared to 212% last year. Precipitation in April was much below average at 61%, which brings the seasonal accumulation (Oct-Apr) to 67% of average. Soil moisture at sites with sensors is at 43% of saturation. Reservoir storage is at 90% of capacity, compared to 99% last year. Forecast streamflow volumes range from 38% to 38% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:30:26 AM

Sweetwater River Basin
Streamflow Forecasts - April 1, 2018

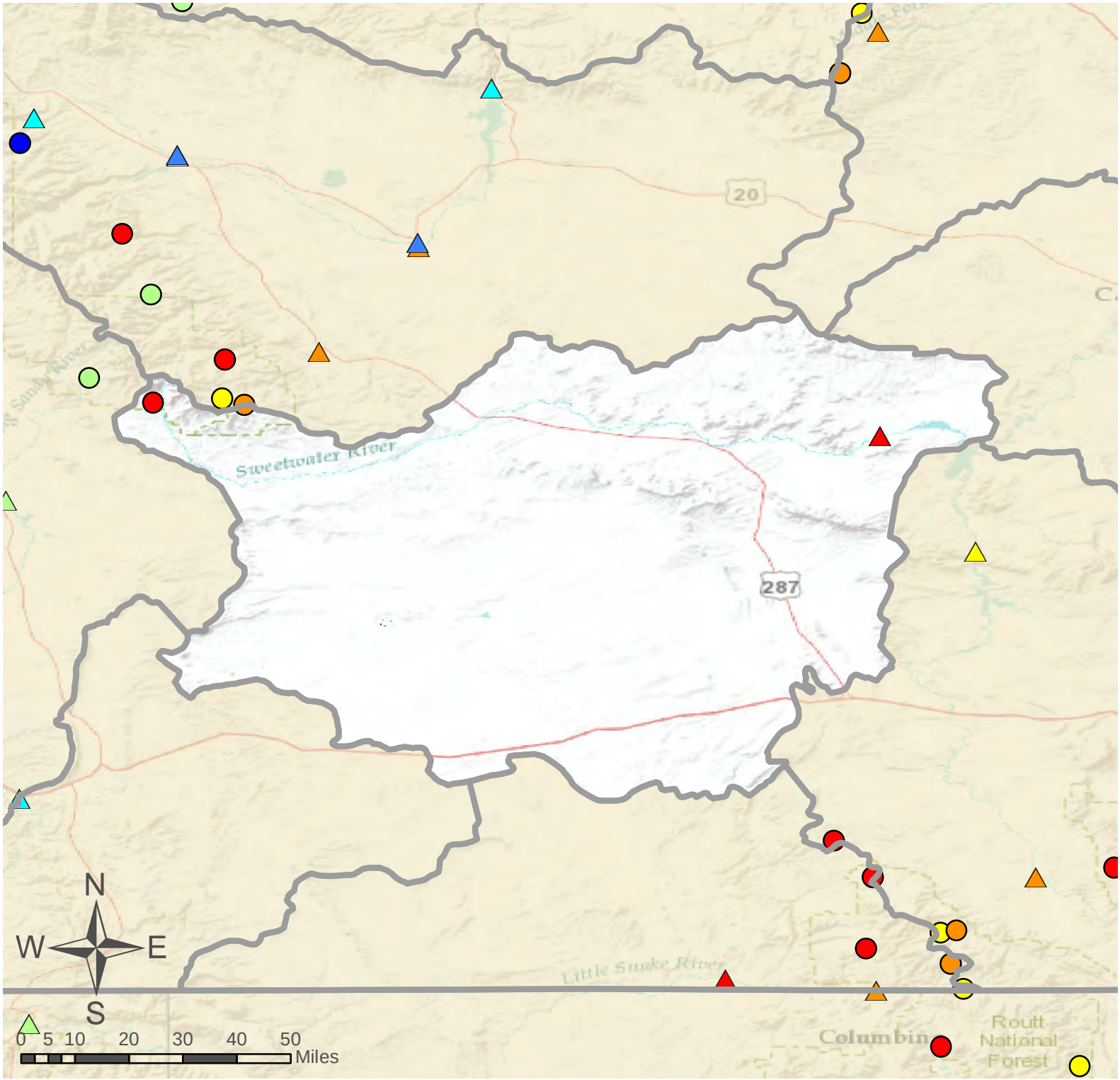
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

SWEETWATER RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Sweetwater R nr Alcova								
	APR-JUL	0.49	19.3	32	54%	45	64	59
	APR-SEP	1.16	21	35	55%	49	69	64

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Pathfinder	845.3	967.3	604.6	1016.5
Basin-wide Total	845.3	967.3	604.6	1016.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
SWEETWATER RIVER	4	83%	196%



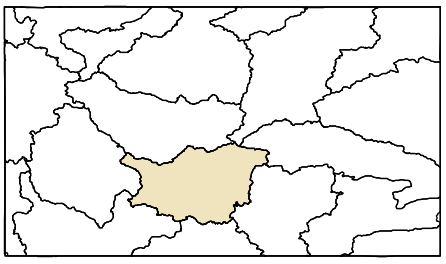
Sweetwater River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

64% of Normal SWE

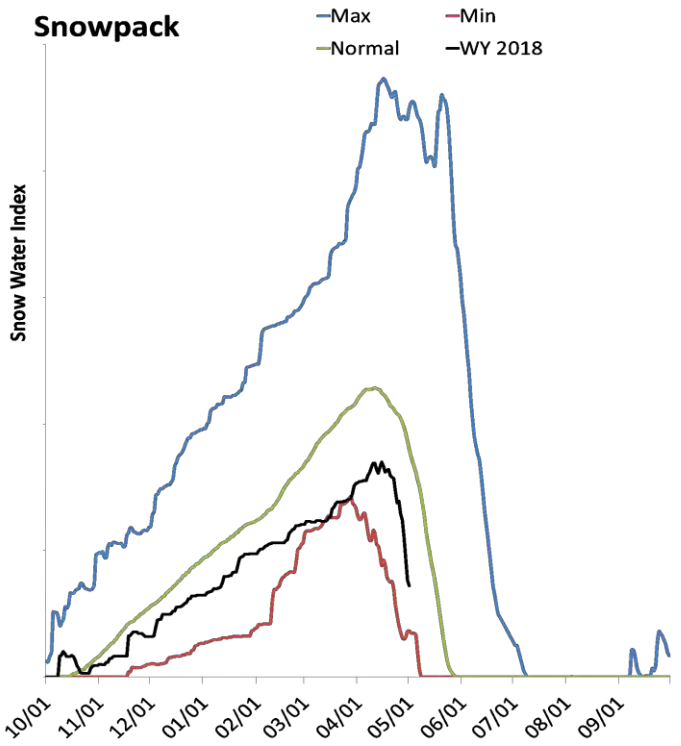
67% of Normal Precipitation

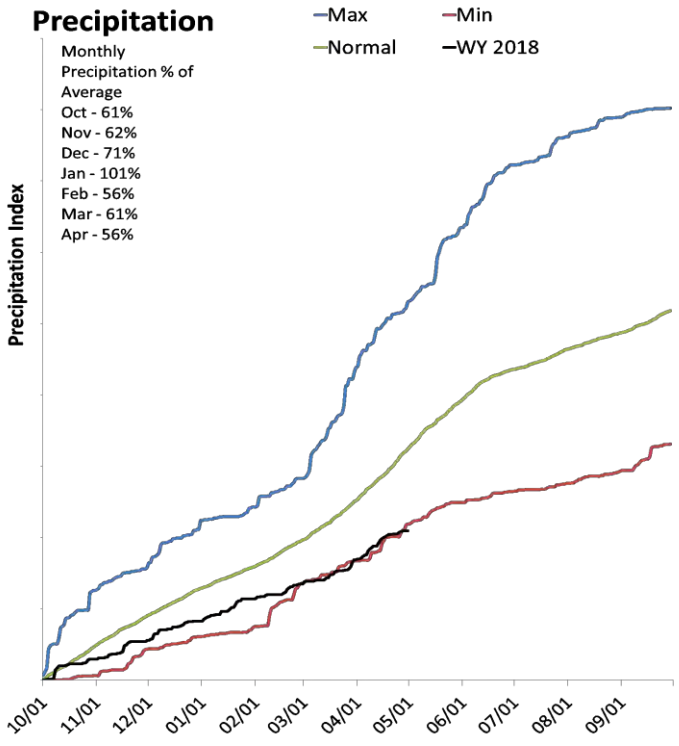
61% of Normal Precipitation Last Month

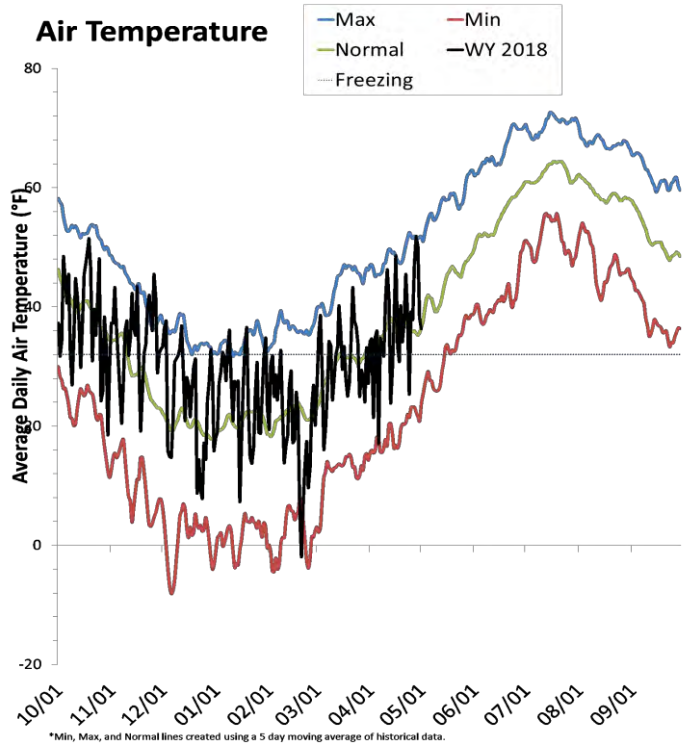
Lower North Platte River Basin

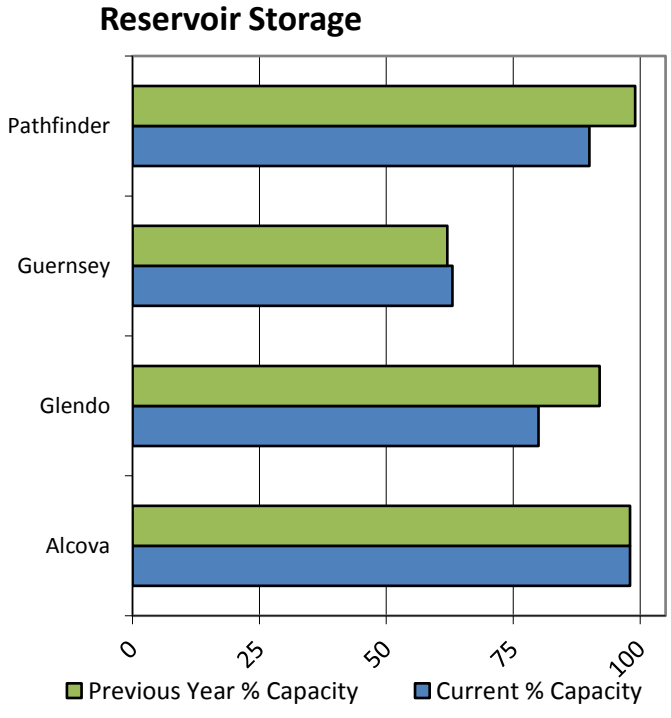
May 1, 2018

Snowpack in the Lower North Platte River Basin is much below normal at 40% of normal, compared to 101% last year. Precipitation in April was much below average at 56%, which brings the seasonal accumulation (Oct-Apr) to 65% of average. Soil moisture at sites with sensors is at 38% of saturation. Reservoir storage is at 87% of capacity, compared to 96% last year. The forecast streamflow volume for the Beaver River is 63% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:30:29 AM

Lower North Platte River Basin
Streamflow Forecasts - April 1, 2018

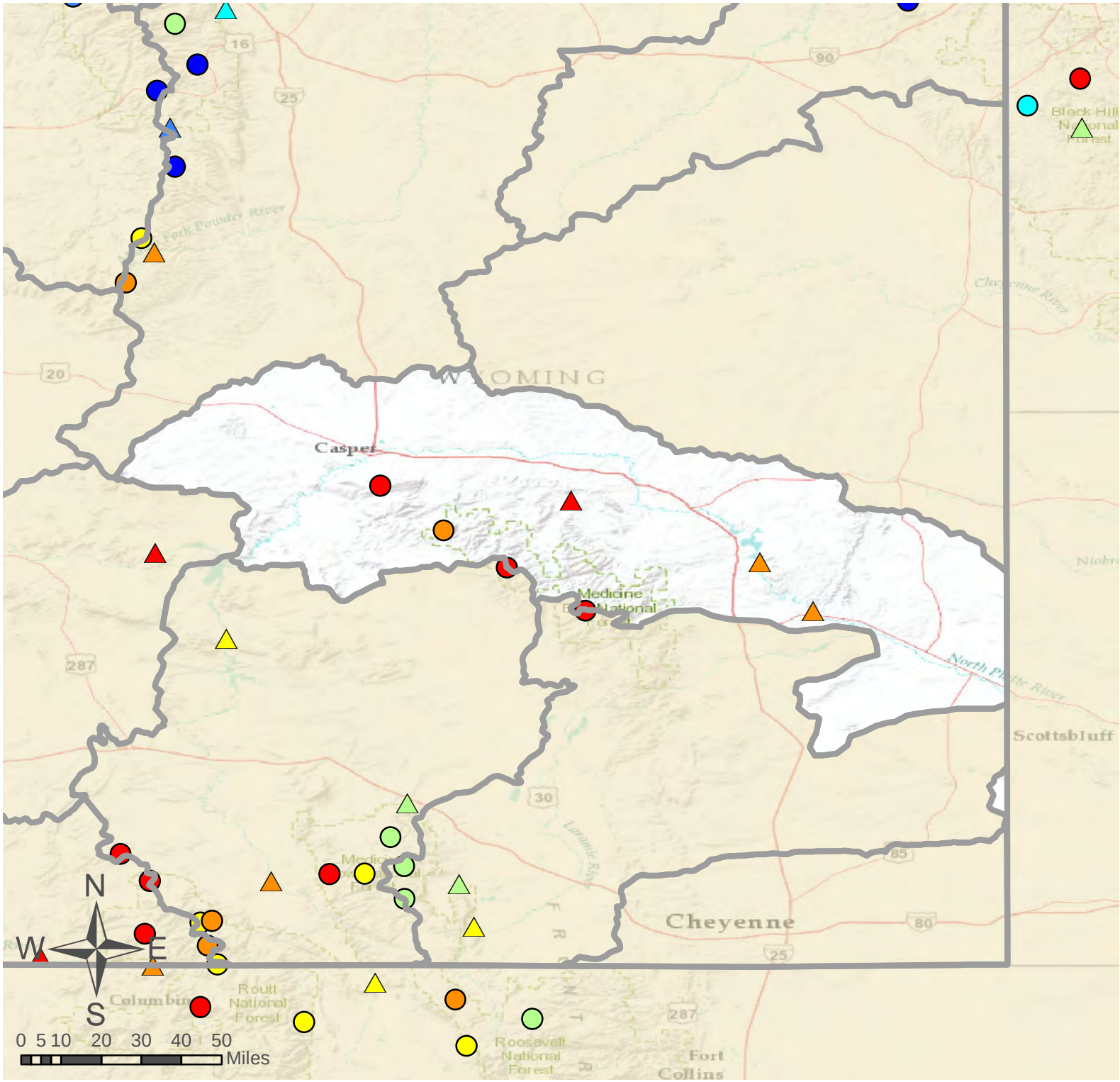
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

LOWER NORTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
La Prele Ck nr Douglas								
	APR-JUL	0.1	1.7	4.2	21%	9.3	16.8	19.9
	APR-SEP	0.1	1.7	4.5	23%	9.8	17.5	19.9
North Platte R bl Glendo Reservoir								
	APR-JUL	139	410	595	73%	780	1050	820
	APR-SEP	142	420	610	72%	800	1080	850
North Platte R bl Guernsey Reservoir								
	APR-JUL	117	395	590	72%	780	1060	820
	APR-SEP	118	405	600	71%	800	1090	850

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Alcova	157.9	158.3	158.5	184.3
Glendo	357.4	432.5	389.4	506.4
Guernsey	24.8	0.0	20.0	45.6
Pathfinder	845.3	967.3	604.6	1016.5
Basin-wide Total	1385.5	1558.2	1172.5	1752.8
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
DEER & LaPRELE CREEKS	2	73%	100%
LOWER NORTH PLATTE RIVER	4	70%	95%



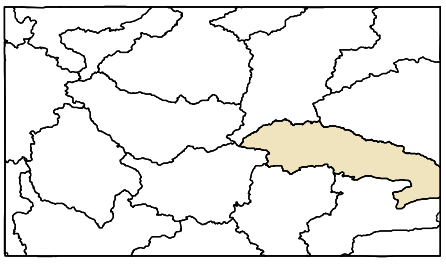
Lower North Platte River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

40% of Normal SWE

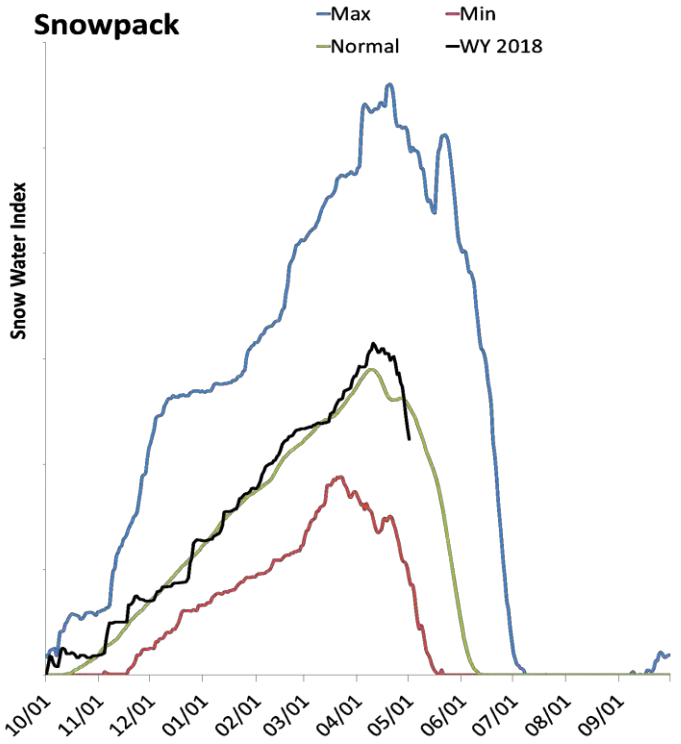
65% of Normal Precipitation

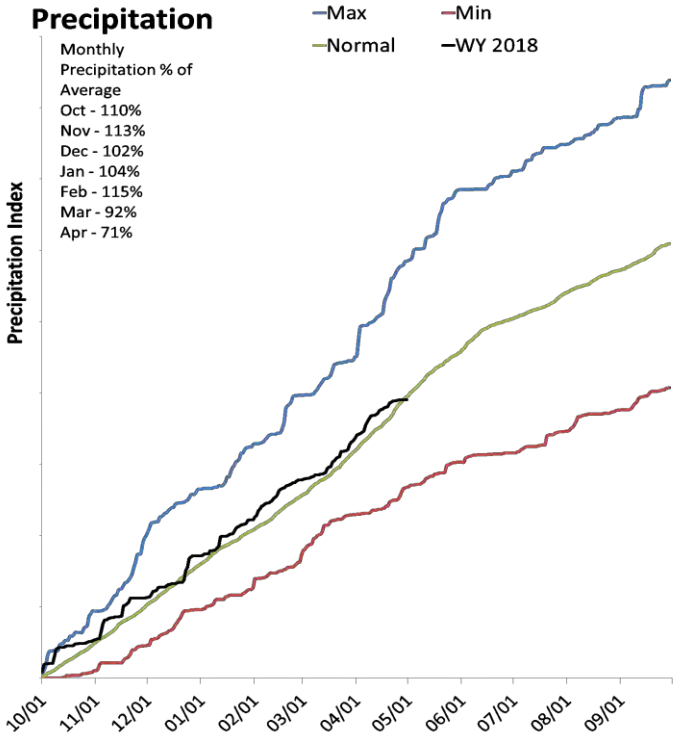
56% of Normal Precipitation Last Month

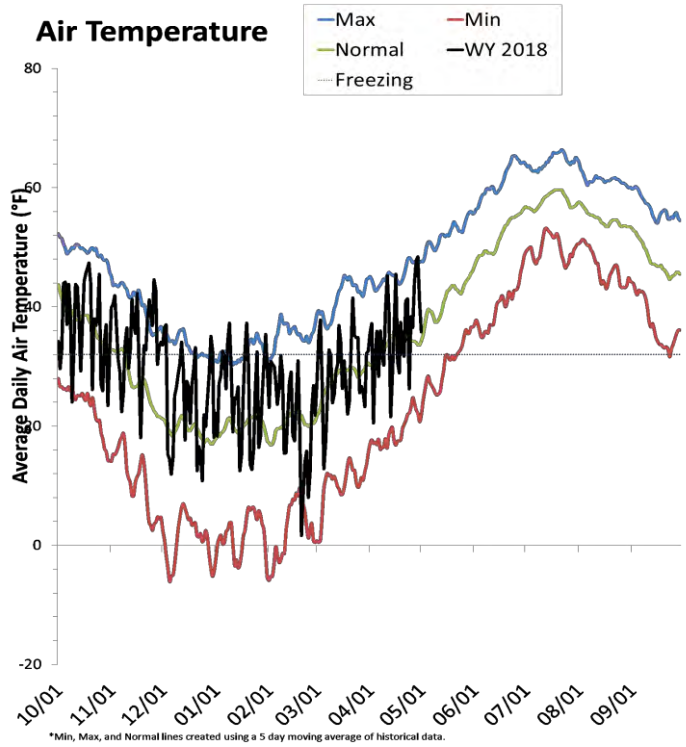
Laramie River Basin

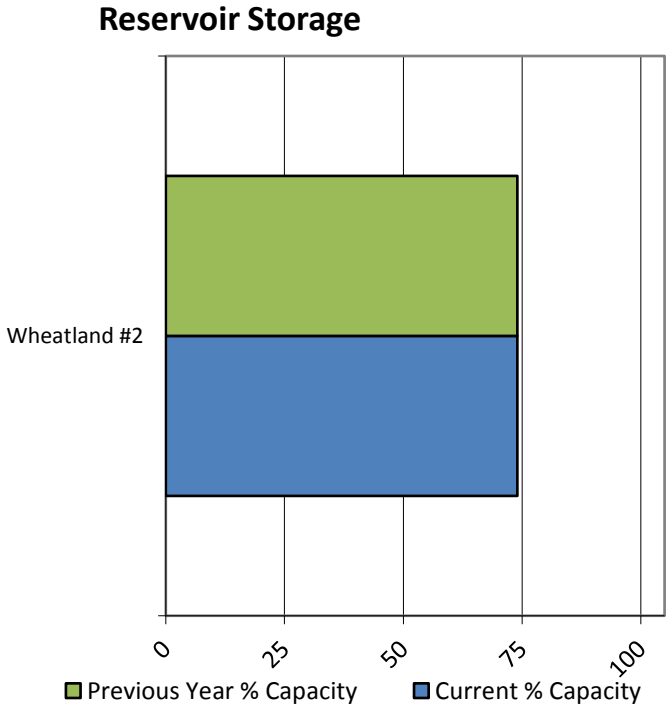
May 1, 2018

Snowpack in the Laramie River Basin is below normal at 88% of normal, compared to 94% last year. Precipitation in April was below average at 72%, which brings the seasonal accumulation (Oct-Apr) to 99% of average. Soil moisture at sites with sensors is at 52% of saturation. Reservoir storage is at 74% of capacity, compared to 74% last year. The forecast streamflow volume for the Beaver River is 104% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:30:34 AM

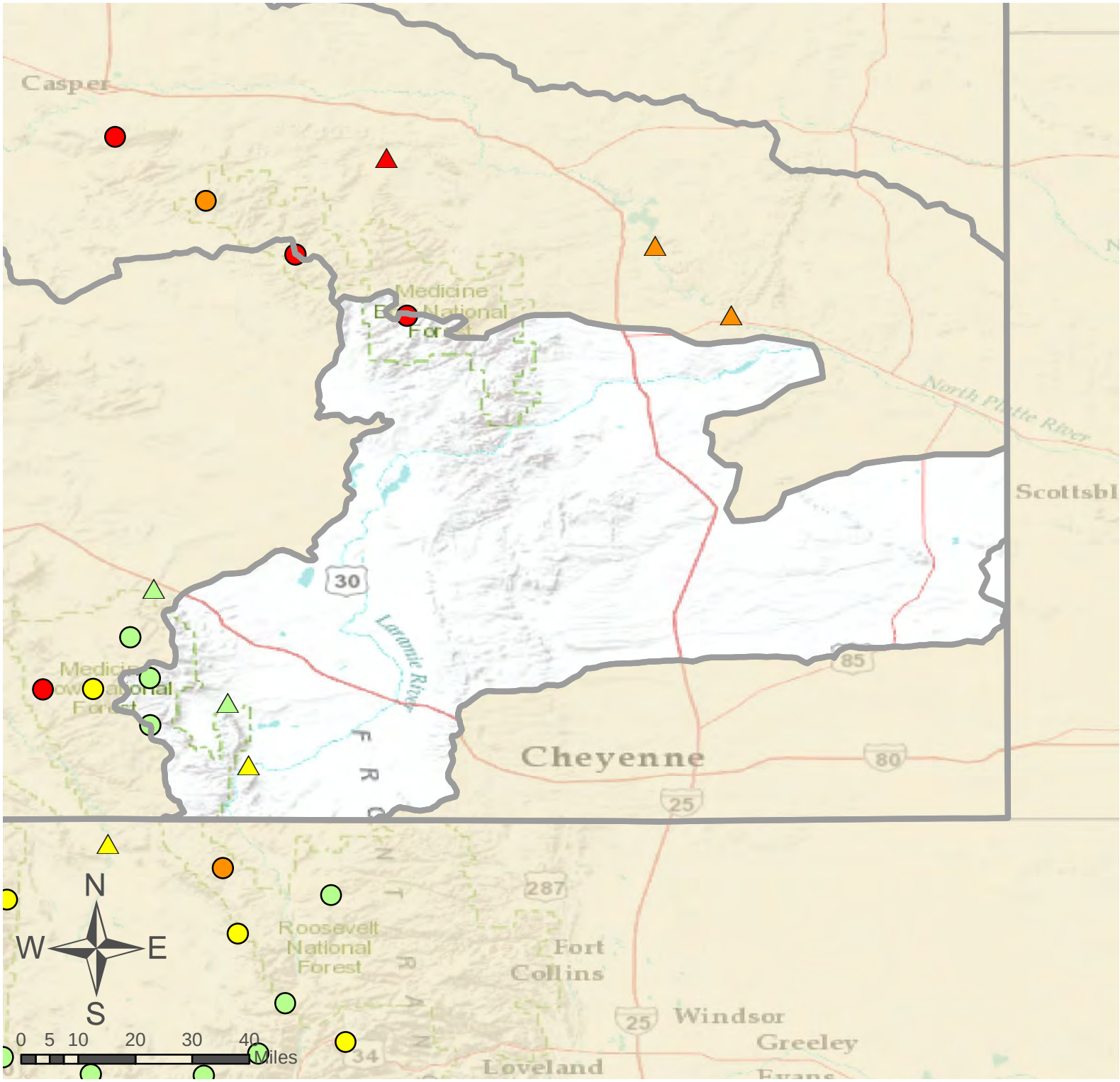
Laramie River Basin
Streamflow Forecasts - April 1, 2018

		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
LARAMIE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Laramie R and Pioneer Cnl nr Woods Lg								
	APR-JUL	57	87	107	93%	127	157	115
	APR-SEP	64	96	118	94%	140	172	126
Little Laramie R nr Filmore								
	APR-JUL	36	47	54	106%	61	72	51
	APR-SEP	38	49	57	104%	65	76	55

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Wheatland #2	69.8	65.5	51.0	98.9
Basin-wide Total	69.8	65.5	51.0	98.9
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
LARAMIE RIVER abv Laramie	7	94%	84%
LITTLE LARAMIE RIVER	5	109%	101%
LARAMIE RIVER	13	100%	93%
NORTH PLATTE TOTAL RIVER	39	91%	105%



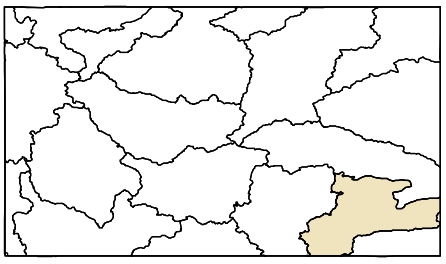
Laramie River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

88% of Normal SWE

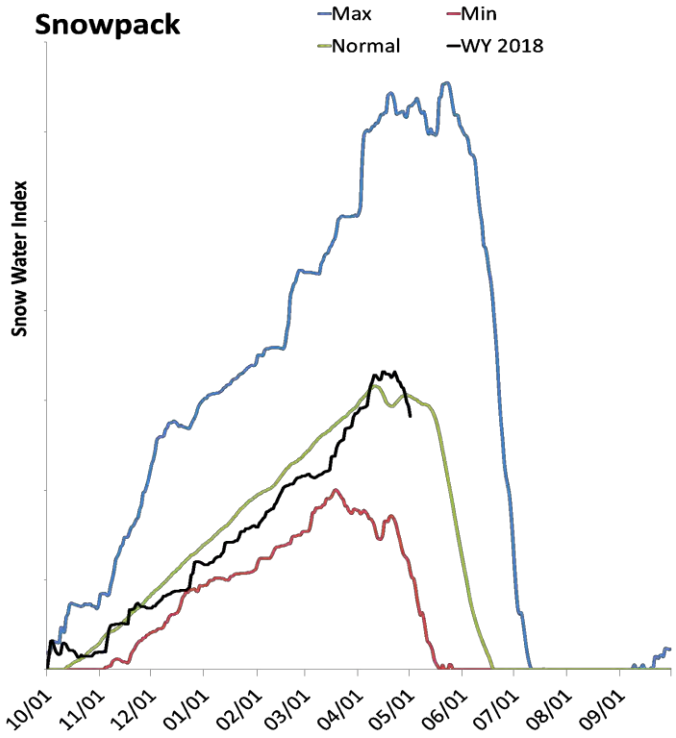
99% of Normal Precipitation

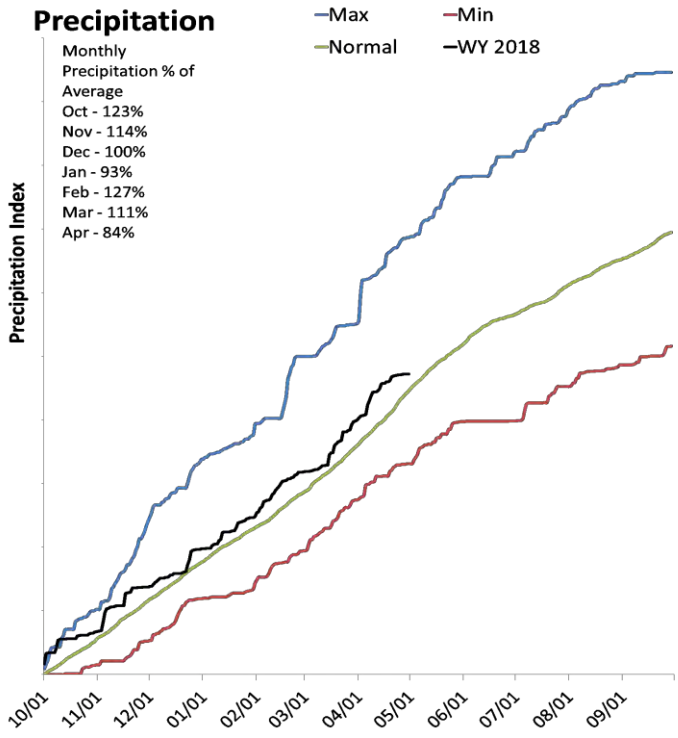
72% of Normal Precipitation Last Month

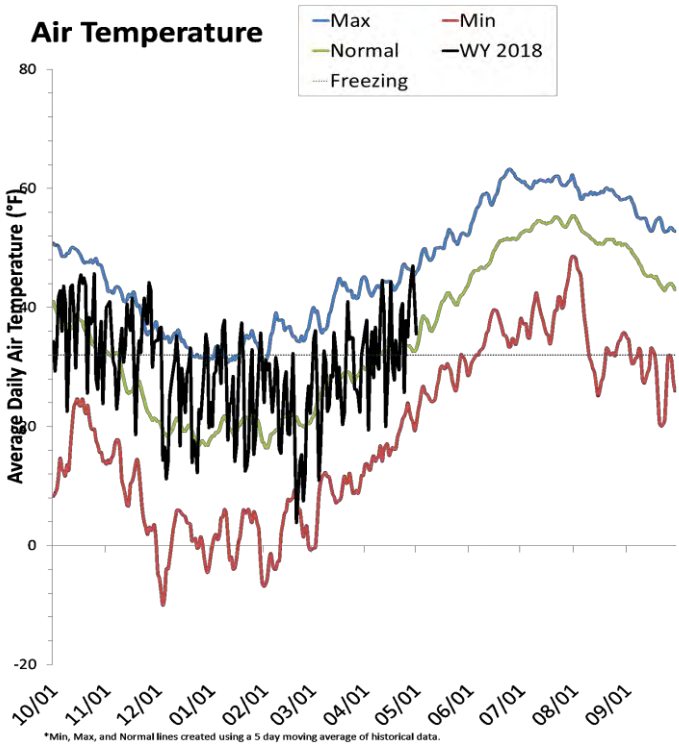
South Platte River Basin

May 1, 2018

Snowpack in the South Platte River Basin is near normal at 93% of normal, compared to 98% last year. Precipitation in April was below average at 84%, which brings the seasonal accumulation (Oct-Apr) to 106% of average. Soil moisture at sites with sensors is at 59% of saturation. Forecast streamflow volumes range from 0% to 0% of average.





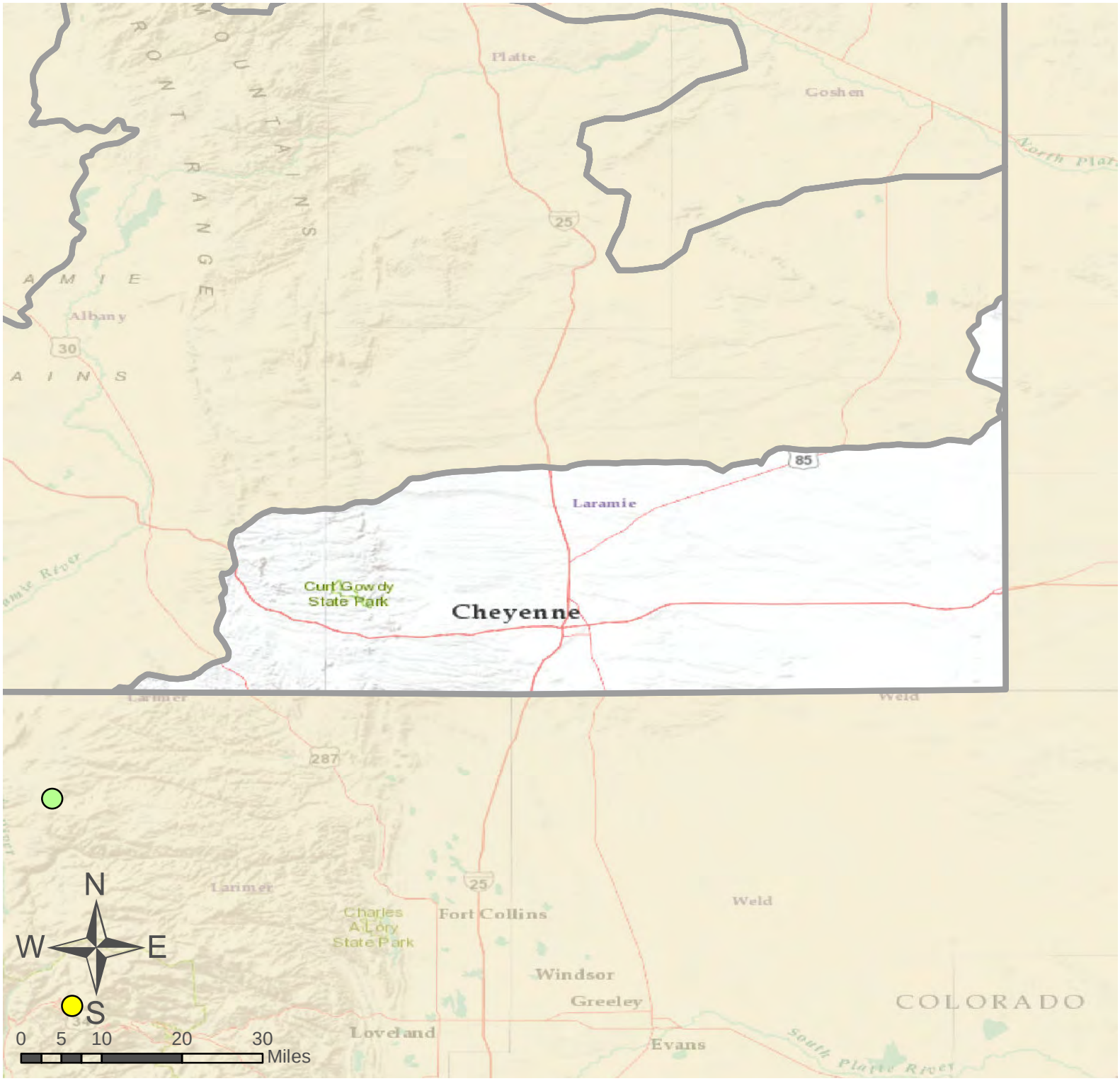


SNOTEL Data

Data Current as of: 4/5/2018 11:30:37 AM

South Platte River Basin - April 1, 2018

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
SOUTH PLATTE RIVER	8	99%	96%



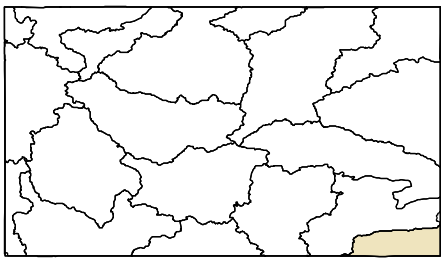
South Platte River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

93% of Normal SWE

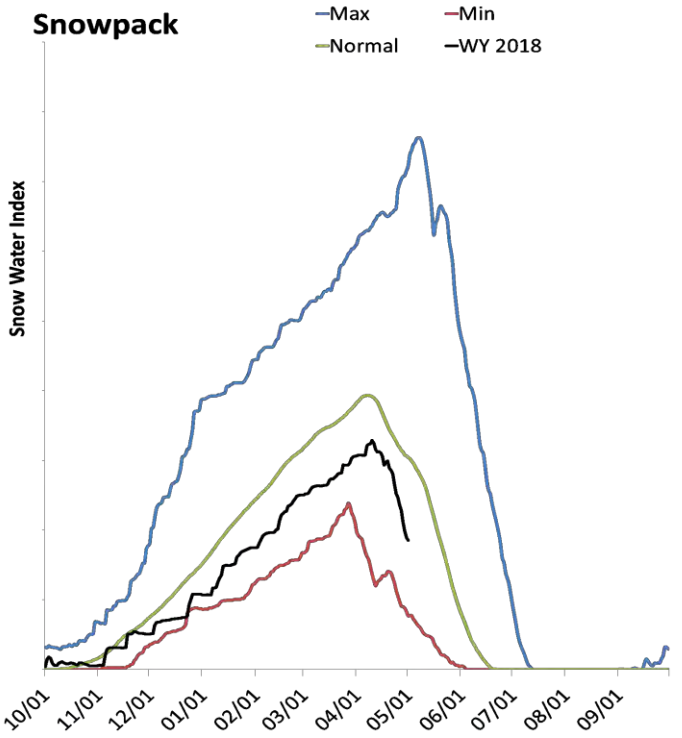
106% of Normal Precipitation

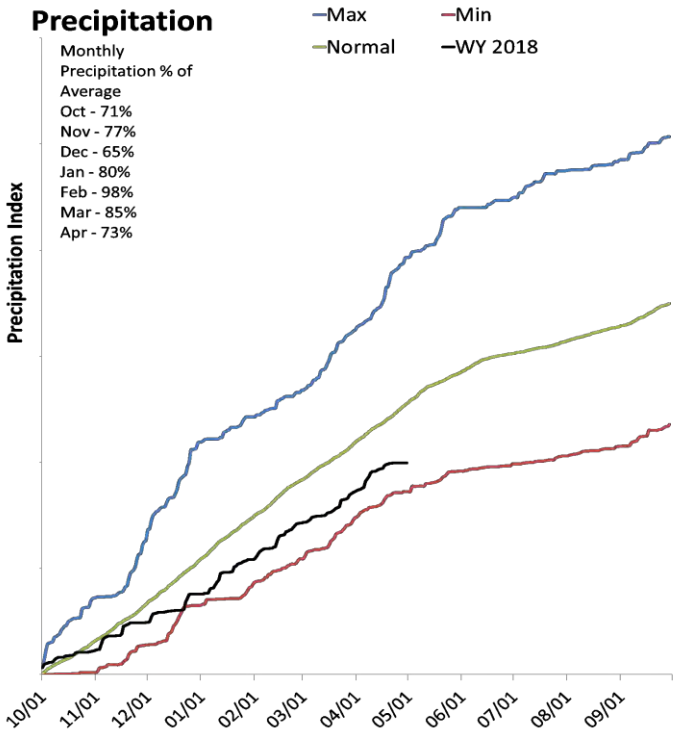
84% of Normal Precipitation Last Month

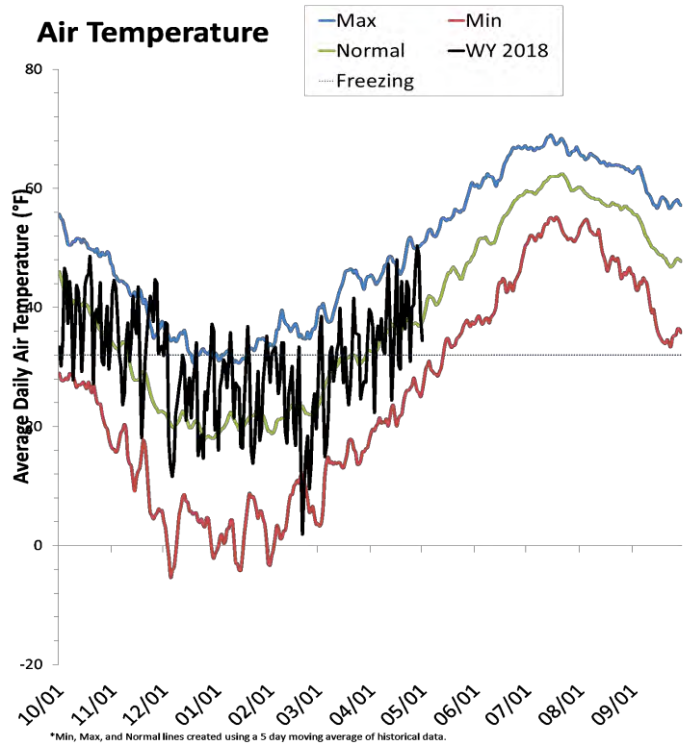
Little Snake River Basin

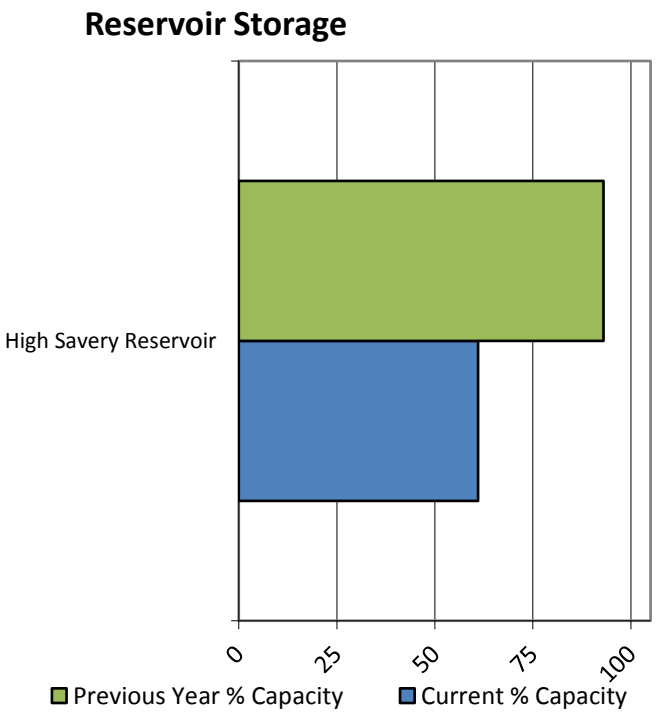
May 1, 2018

Snowpack in the Little Snake River Basin is much below normal at 61% of normal, compared to 88% last year. Precipitation in April was below average at 73%, which brings the seasonal accumulation (Oct-Apr) to 78% of average. Soil moisture at sites with sensors is at 88% of saturation. Reservoir storage is at 61% of capacity, compared to 93% last year. Forecast streamflow volumes range from 47% to 63% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:30:42 AM

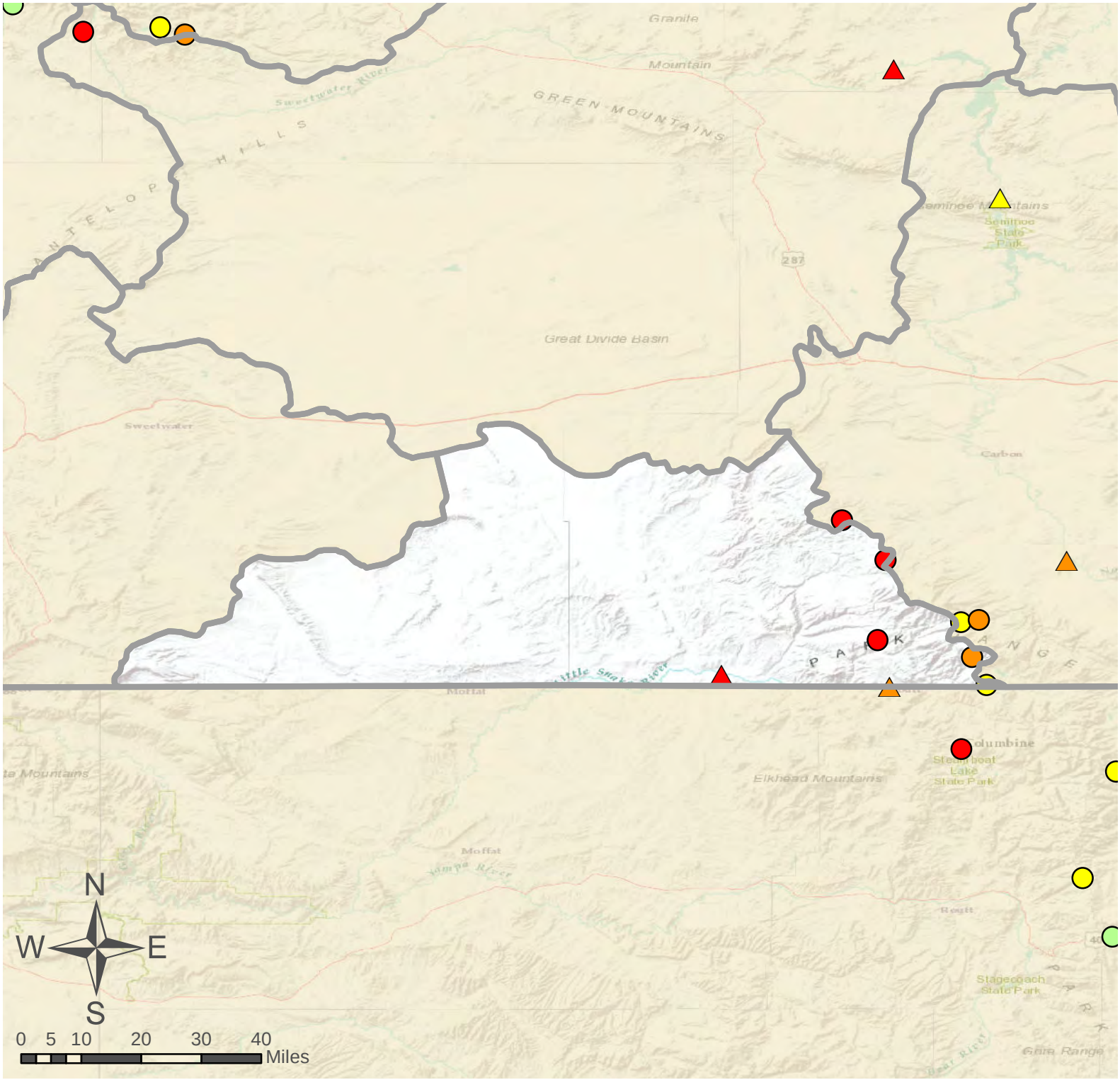
Little Snake River Basin
Streamflow Forecasts - April 1, 2018

		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
LITTLE SNAKE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Little Snake R nr Slater[2]	APR-JUL	77	96	111	71%	127	151	156
Little Snake R nr Dixon[2]	APR-JUL	82	134	176	51%	225	305	345

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
High Savery Reservoir	11.7	15.5	13.1	22.4
Basin-wide Total	11.7	15.5	13.1	22.4
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
LITTLE SNAKE RIVER	10	80%	90%



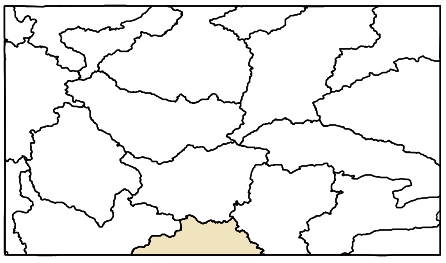
Little Snake River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

61% of Normal SWE

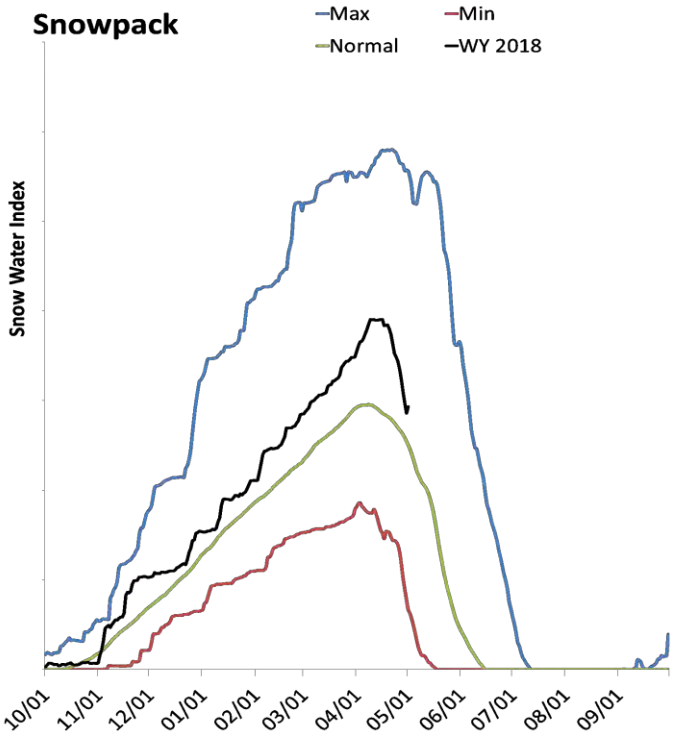
78% of Normal Precipitation

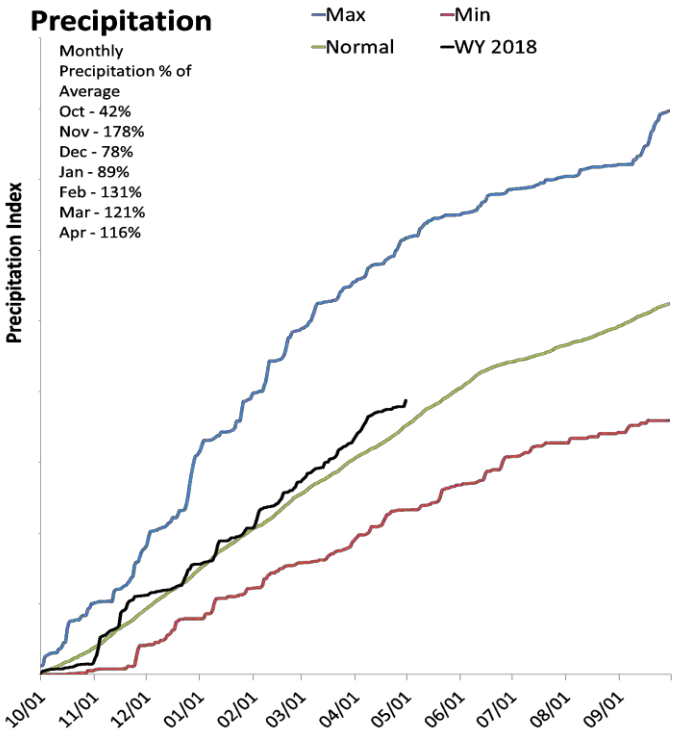
73% of Normal Precipitation Last Month

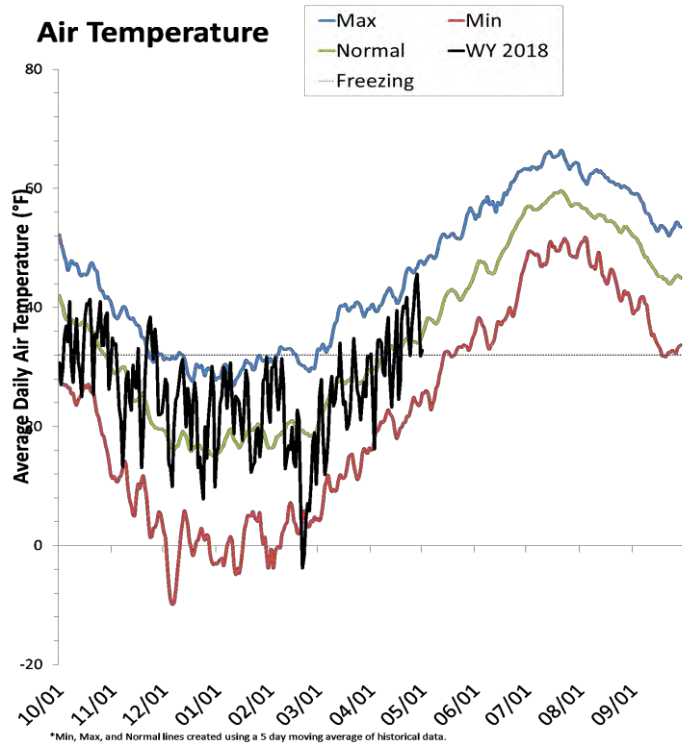
Upper Green River Basin

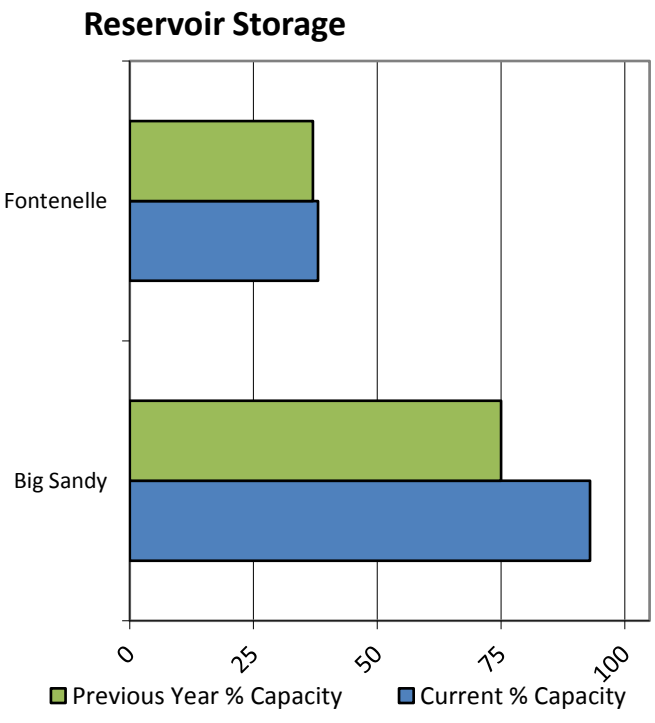
May 1, 2018

Snowpack in the Upper Green River Basin is above normal at 117% of normal, compared to 200% last year. Precipitation in April was above average at 117%, which brings the seasonal accumulation (Oct-Apr) to 110% of average. Soil moisture at sites with sensors is at 62% of saturation. Reservoir storage is at 43% of capacity, compared to 41% last year. Forecast streamflow volumes range from 90% to 122% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:30:47 AM

Upper Green River Basin
Streamflow Forecasts - April 1, 2018

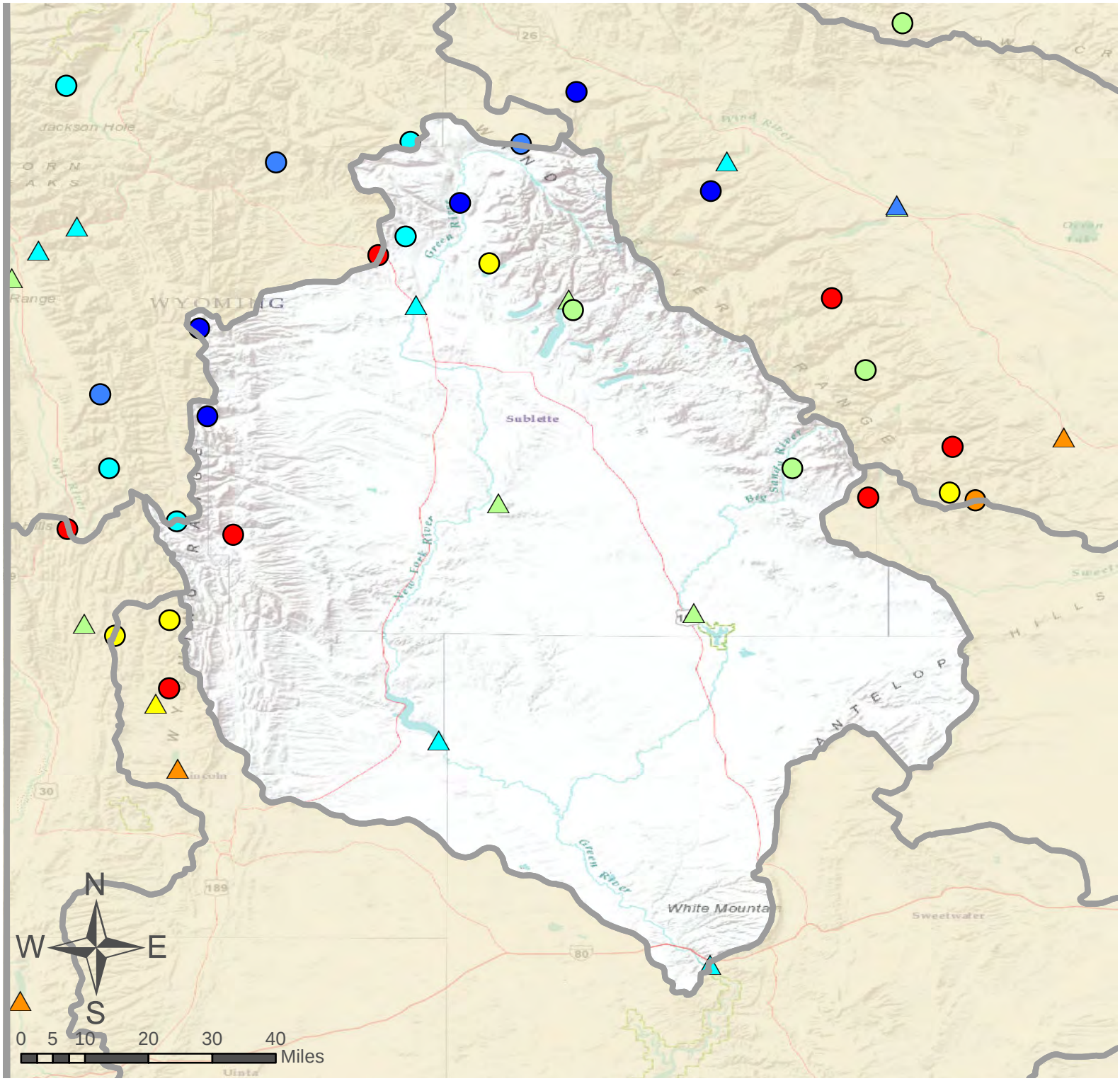
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

UPPER GREEN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Green R at Warren Bridge	APR-JUL	255	280	300	122%	320	345	245
Pine Creek ab Fremont Lake	APR-JUL	90	98	103	105%	109	117	98
New Fork R nr Big Piney	APR-JUL	270	335	380	107%	425	490	355
Fontenelle Reservoir Inflow	APR-JUL	605	760	875	121%	1000	1190	725
Big Sandy R nr Farson	APR-JUL	34	43	50	96%	57	66	52

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Big Sandy	33.4	30.5	19.9	38.3
Fontenelle	117.4	206.8	121.7	344.8
Basin-wide Total	150.8	237.4	141.6	383.1
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
GREEN above Warren Bridge	5	122%	169%
UPPER GREEN - West Side	5	127%	173%
NEWFORK RIVER	2	106%	153%
BIG SANDY-EDEN VALLEY	2	99%	156%
GREEN above Fontenelle	14	121%	168%
UPPER GREEN RIVER	14	121%	168%



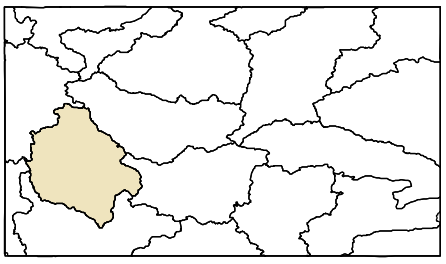
Upper Green River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

117% of Normal SWE

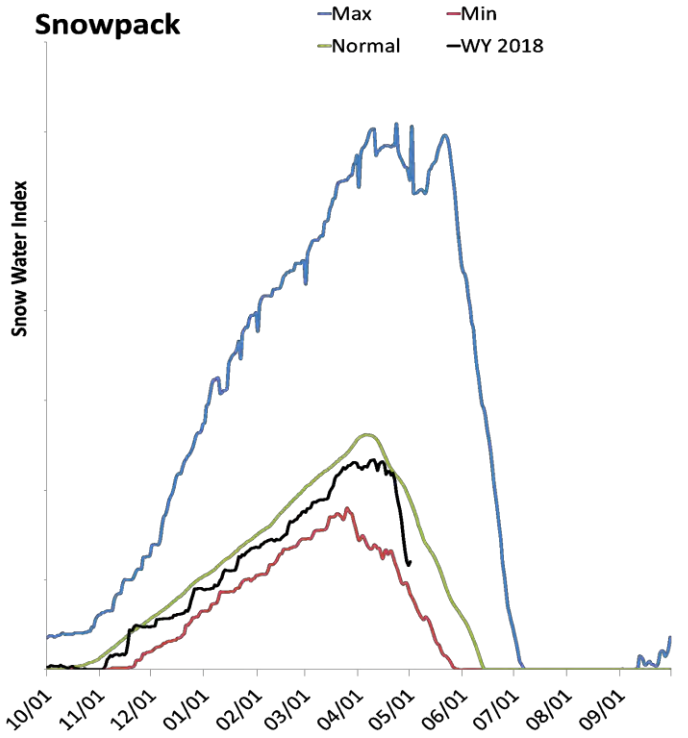
110% of Normal Precipitation

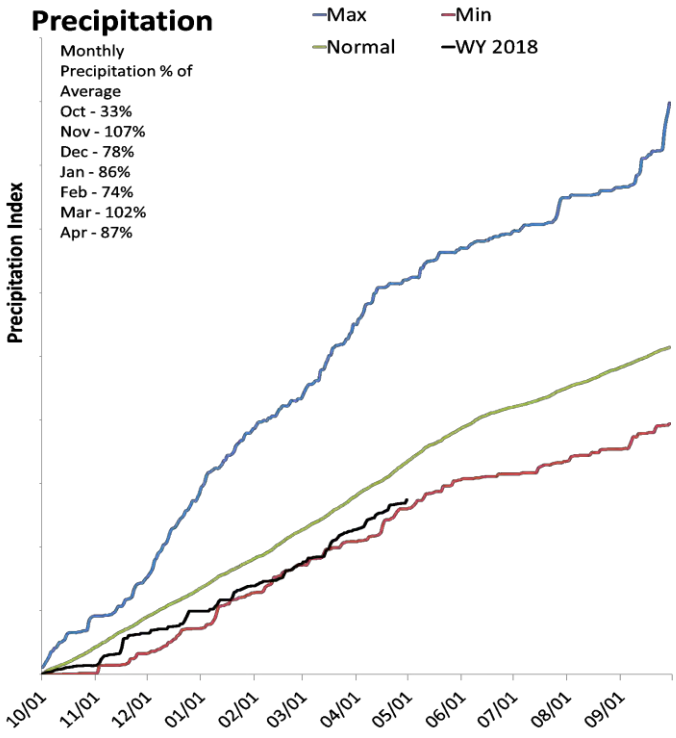
117% of Normal Precipitation Last Month

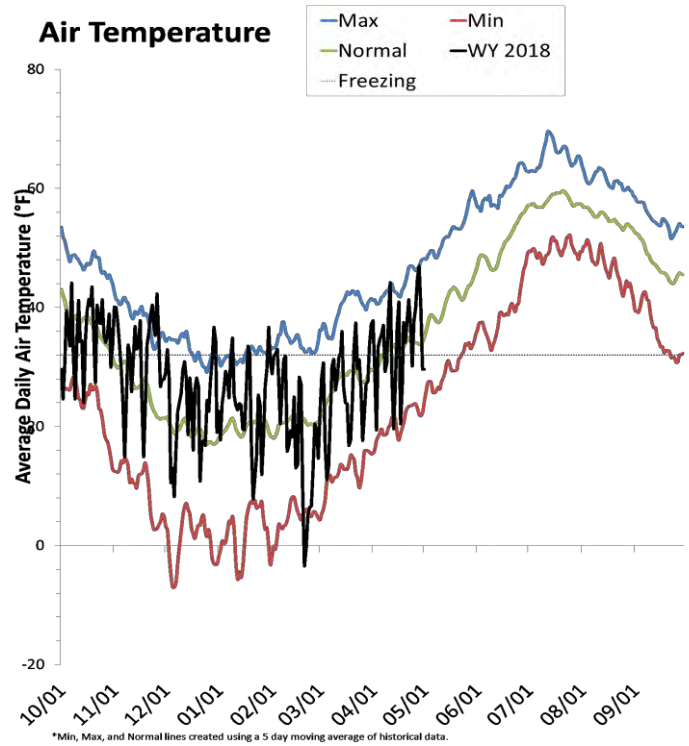
Lower Green River Basin

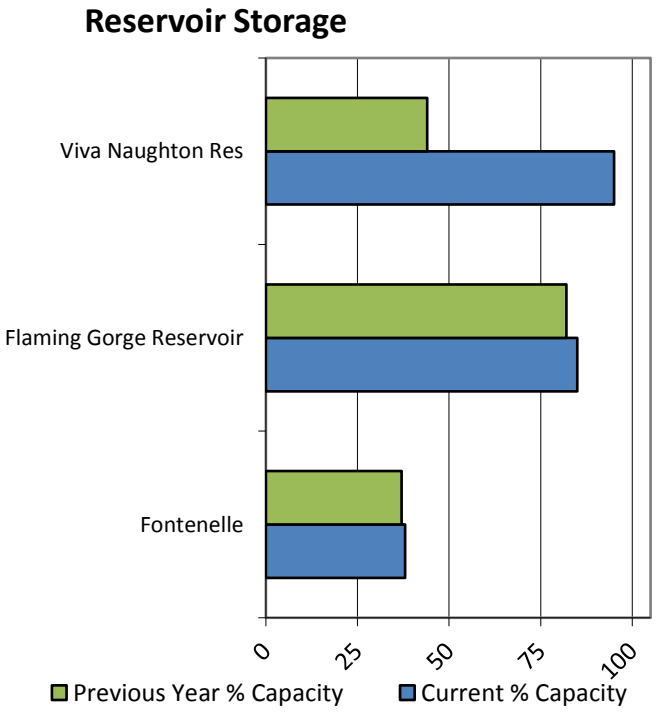
May 1, 2018

Snowpack in the Lower Green River Basin is much below normal at 64% of normal, compared to 182% last year. Precipitation in April was below average at 87%, which brings the seasonal accumulation (Oct-Apr) to 82% of average. Soil moisture at sites with sensors is at 83% of saturation. Reservoir storage is at 81% of capacity, compared to 78% last year. Forecast streamflow volumes range from 66% to 116% of average.









SNOTEL Data

Data Current as of: 4/5/2018 11:30:50 AM

Lower Green River Basin
Streamflow Forecasts - April 1, 2018

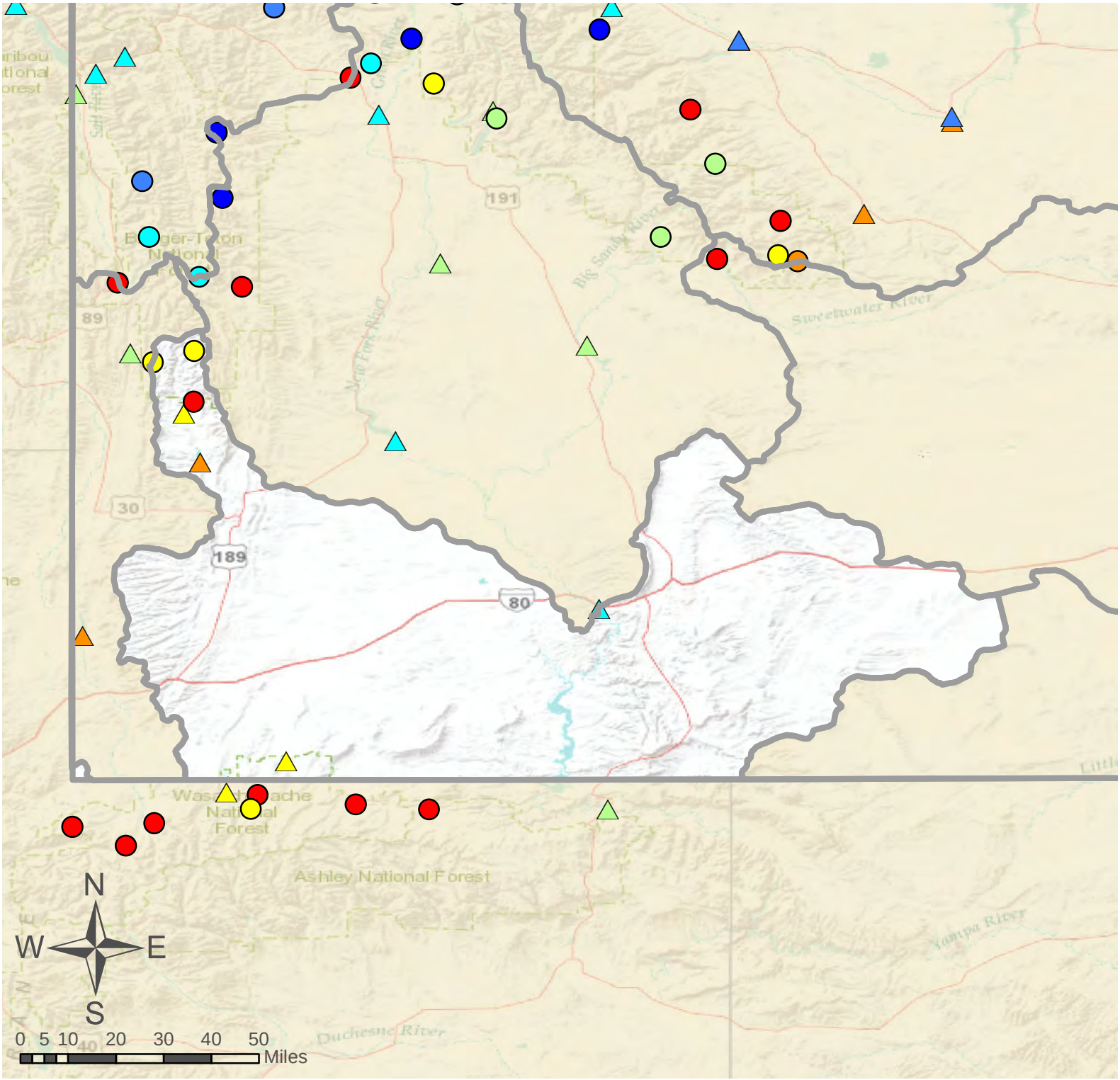
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

LOWER GREEN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Green R nr Green River, WY [2]	APR-JUL	605	770	885	121%	995	1160	730
Blacks Fk nr Robertson	APR-JUL	47	59	68	79%	77	93	86
EF of Smiths Fork nr Robertson [2]	APR-JUL	14.5	18.8	22	81%	25	31	27
Hams Fk bl Pole Ck nr Frontier	APR-JUL	20	28	33	61%	40	50	54
Viva Naughton Reservoir Inflow	APR-JUL	25	36	45	61%	54	70	74
Flaming Gorge Reservoir Inflow [2]	APR-JUL	610	830	1000	102%	1190	1490	980

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Fontenelle	117.4	206.8	121.7	344.8
Flaming Gorge Reservoir	3184.3	3169.4	3020.0	3749.0
Viva Naughton Res		21.6	27.2	42.4
Basin-wide Total	3301.7	3376.3	3141.7	4093.8
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
HAMS FORK RIVER	4	92%	160%
BLACKS FORK	2	81%	106%
HENRYS FORK	2	97%	122%
LOWER GREEN RIVER	8	90%	141%
GREEN above FLAMING GORGE	21	111%	159%



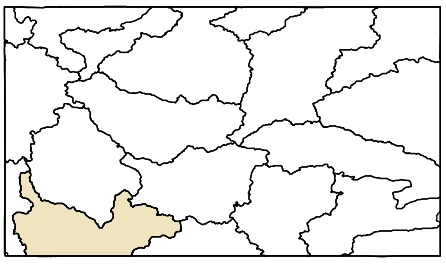
Lower Green River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

64% of Normal SWE

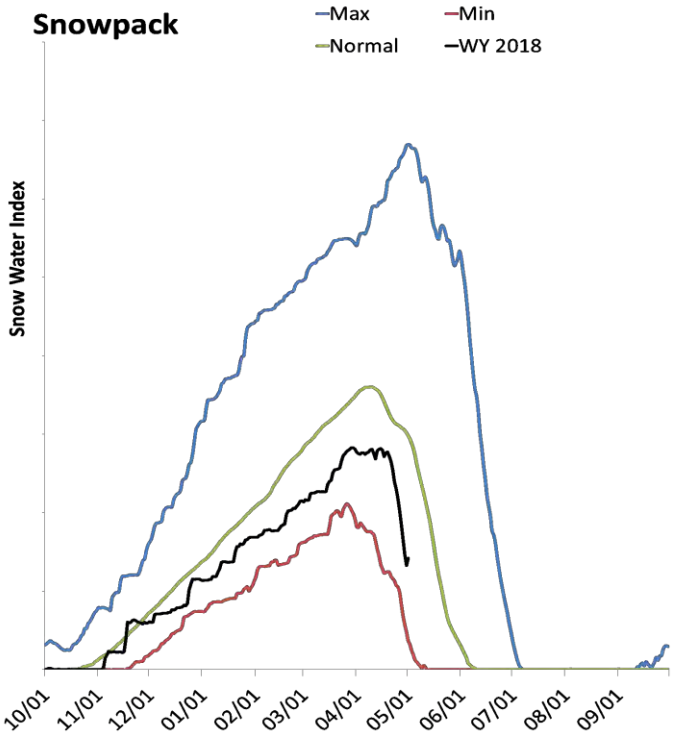
82% of Normal Precipitation

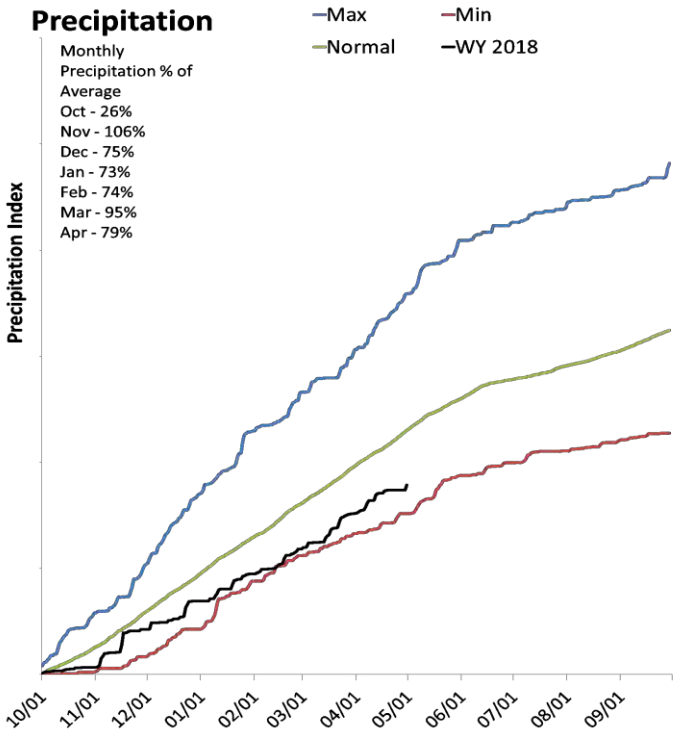
87% of Normal Precipitation Last Month

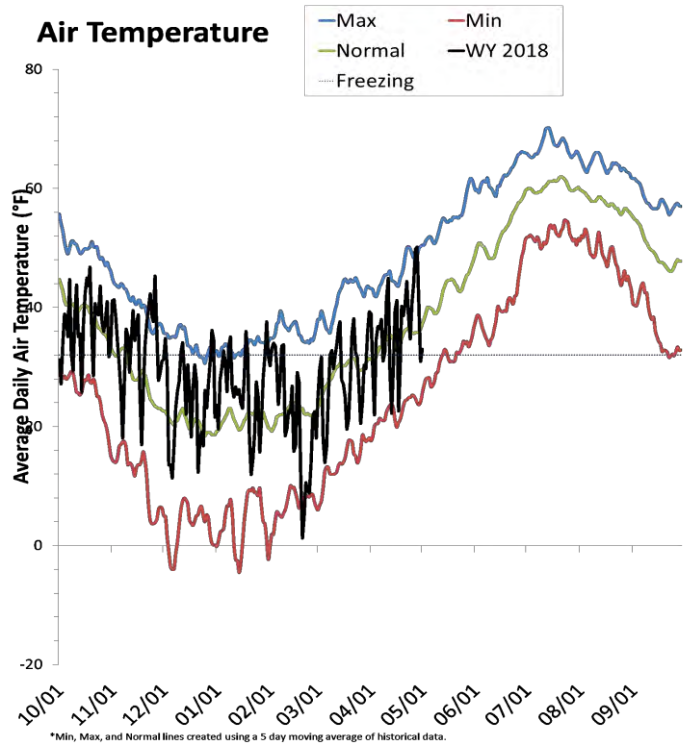
Upper Bear River Basin

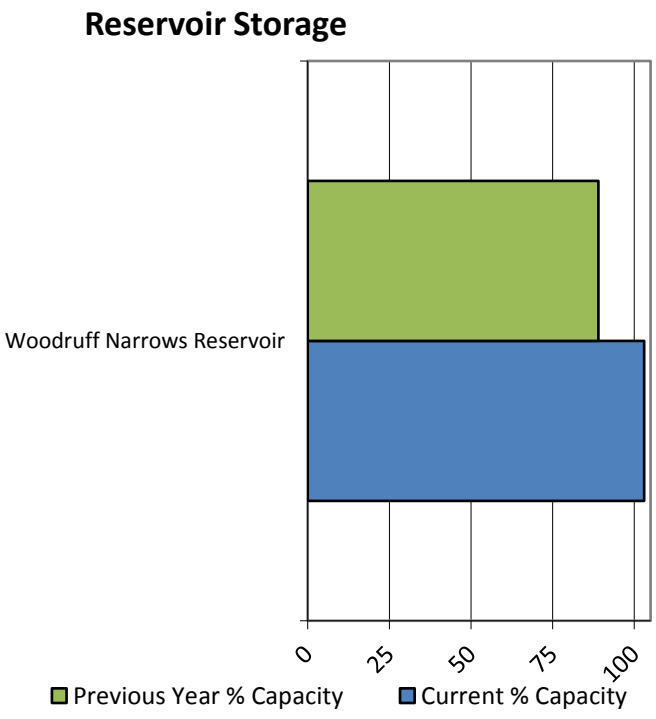
May 1, 2018

Snowpack in the Upper Bear River Basin is much below normal at 48% of normal, compared to 170% last year. Precipitation in April was below average at 78%, which brings the seasonal accumulation (Oct-Apr) to 77% of average. Soil moisture at sites with sensors is at 87% of saturation. Reservoir storage is at 103% of capacity, compared to 89% last year. Forecast streamflow volumes range from 55% to 90% of average.









Data Current as of: 4/5/2018 11:30:54 AM

Upper Bear River Basin
Streamflow Forecasts - April 1, 2018

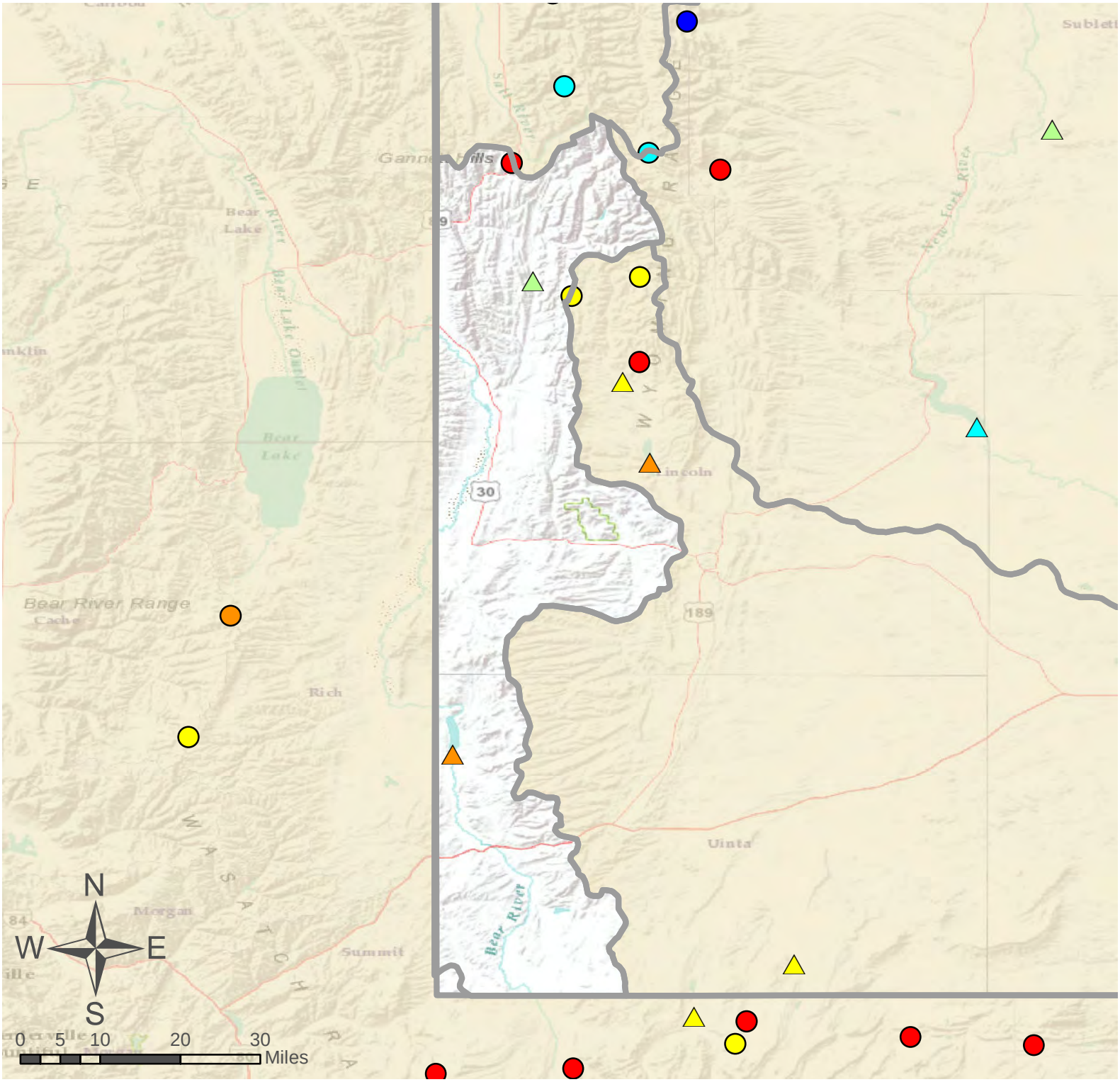
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

UPPER BEAR RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Bear R nr UT-WY State Line								
	APR-JUL	40	59	72	64%	85	104	112
	APR-SEP	44	65	80	65%	94	116	123
Bear R ab Resv nr Woodruff								
	APR-JUL	7.3	39	69	57%	99	144	121
	APR-SEP	6.4	40	73	57%	106	154	128
Smiths Fk nr Border								
	APR-JUL	54	69	79	89%	89	104	89
	APR-SEP	66	83	94	90%	105	122	104

1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of March, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Woodruff Narrows Reservoir	57.9	48.7	38.4	57.3
Basin-wide Total	57.9	48.7	38.4	57.3
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2018	# of Sites	% Median	Last Year % Median
UPPER BEAR RIVER in Utah	3	71%	134%
SMITHS & THOMAS FORKS	4	102%	165%
UPPER BEAR RIVER	8	82%	148%



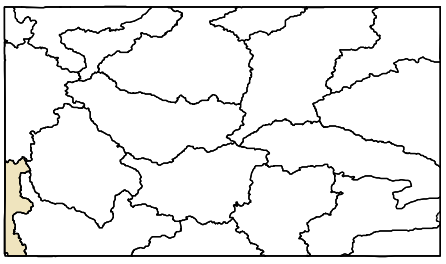
Upper Bear River Basin

SNOTEL Site

Forecast Point

% of Normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%



As of May 1, 2018:

48% of Normal SWE

77% of Normal Precipitation

78% of Normal Precipitation Last Month

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https://www.nrcs.usda.gov/wps/portal/nrcs/main/wy/snow/

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Wyoming Water Supply Outlook Report

Natural Resources Conservation Service
Casper, WY