

# Wyoming Water Supply Outlook Report

June 1, 2018



**Thumb Divide SNOTEL**

**Yellowstone NP**

# STATE OF WYOMING GENERAL OUTLOOK

June 1, 2018

## SUMMARY

The snow water equivalent (SWE) across Wyoming is below normal at 84%. Monthly precipitation for the basins ranged from a high of 137% of average in the Tongue River Basin to a low of 43% of average in the Little Snake River Basin, for an overall average of 103%. The year-to-date precipitation average for Wyoming basins is now at 102% varying from a high of 137% in the Shoshone River Basin to a low of 74% of average in each of the Lower North Platte & Sweetwater River Basins. Forecasted runoff varies from 29% to 146% of average across the Wyoming basins. Basin reservoir levels for Wyoming vary from 74-158% of average for an overall average of 117%.

## SNOWPACK

The SWE across Wyoming is below median for June 1<sup>st</sup> at 84%, compared to 217% last year. The SWE is gone in many basins, while SWE in the Madison-Gallatin Basin was the highest at 129% of median. Grand Targhee SNOTEL had the highest SWE remaining at 35.2 inches.

## PRECIPITATION

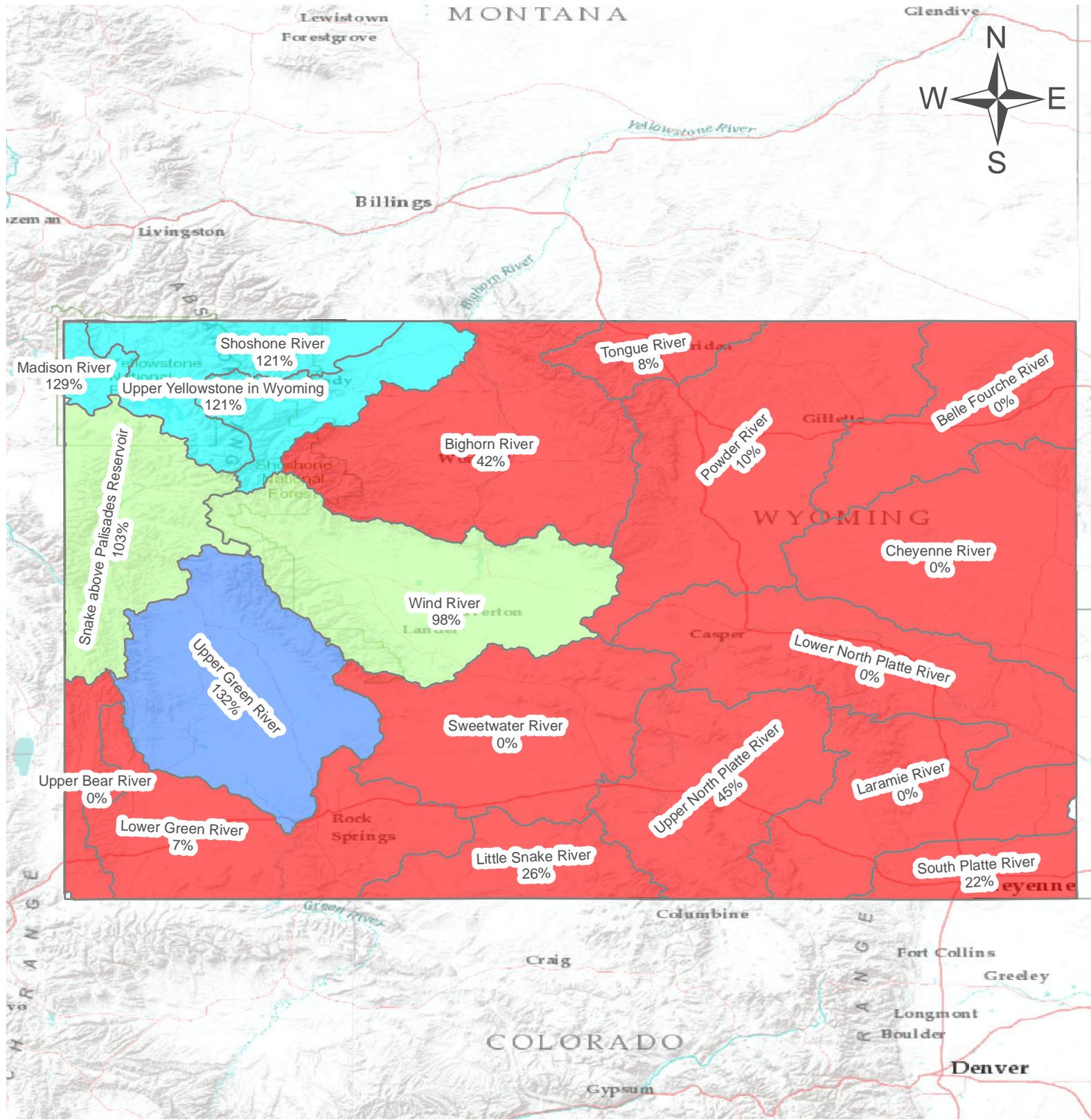
Year to date precipitation is at 102% of average, compared to 130% last year. The Tongue River Basin had the highest precipitation amount at 137% of average and the Little Snake River Basin had the lowest precipitation amount at 43% of average. The Burgess Junction SNOTEL had the highest precipitation at 221% of average, while the Whiskey Park SNOTEL had the lowest precipitation at 29% of average.

## RESERVOIRS

Reservoir storage is above average at 117% for the entire state. Reservoirs in the Snake above Palisade Basin are above average at 123% with a current capacity at 90%. Reservoirs in the Madison abv Hebgen Lake Basin are above average at 106% with a current capacity at 94%. Reservoirs in the Wind River Basin are above average at 124% with a current capacity at 97%. Reservoirs on the Big Horn River Basin are above average at 116% with a current capacity at 80%. The Buffalo Bill Reservoir on the Shoshone River Basin is above average at 139% with a current capacity at 83%. The Tongue River Basin Reservoir is above average at 158% with a current capacity at 105%. Reservoirs in the Belle Fourche and Cheyenne River Basins are above average in storage at 128% and 113% respectively with current capacities at 90% and 96% respectively. Reservoirs on the Upper and Lower North Platte River are above average at 127% and 118% respectively with current capacities at 76% and 89% respectively. Pathfinder Reservoir is above average at 144% with a current capacity at 90%. Reservoirs on the Laramie and Little Snake River basins are at 155% and 74% respectively with current capacities at 88% and 71% respectively. Reservoirs on the Upper Green River are above average at 155% with a current capacity at 78%. Reservoirs on the Lower Green River Basin are above average at 110% with a current capacity at 87%. Woodruff Narrows Reservoir on the Upper Bear River Basin is above average at 119% with a current capacity at 93%.

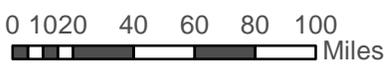
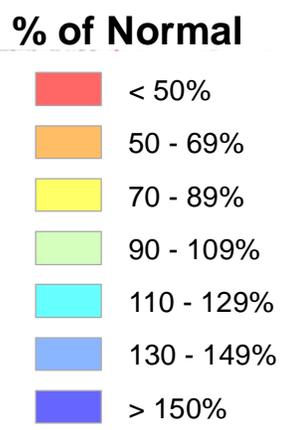
## STREAMFLOW

The Snake above Palisades, Madison abv Hebgen Lake, and Upper Yellowstone in WY Basins should yield about 120%, 102% and 130% of average, respectively. Yields from the Wind and Bighorn River Basins should be about 111% and 112% of average, respectively. Yields from the Shoshone River Basin should be about 146% of average. Yields from the Powder and Tongue River Basins should be about 120% and 78% of average, respectively. Yields for the Upper North Platte, Sweetwater, Lower North Platte, and Laramie Rivers of Wyoming should be about 45%, 43%, 29%, and 67% of average, respectively. Yields for the Little Snake, Upper Green River, Lower Green River, and Smith's Fork of Wyoming should be 16%, 112%, 90%, and 86% of average respectively.



# Statewide Snow Water Equivalent

As of June 1, 2018:  
 84% of Normal Snow Water Equivalent



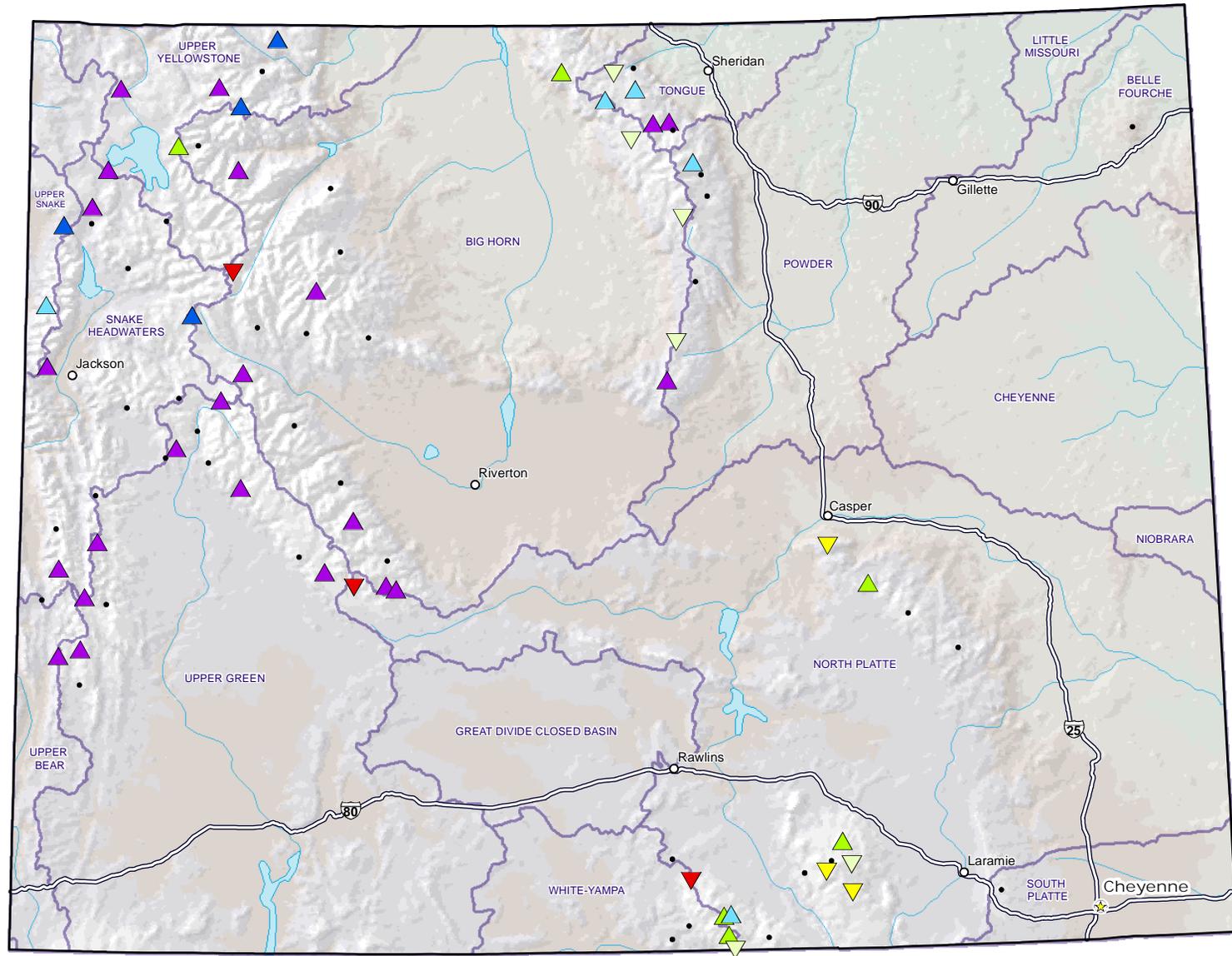
# Wyoming SNOTEL Snow Water Equivalent (SWE) % of Normal

Jun 01, 2017

## Current SWE % of 1981-2010 Median

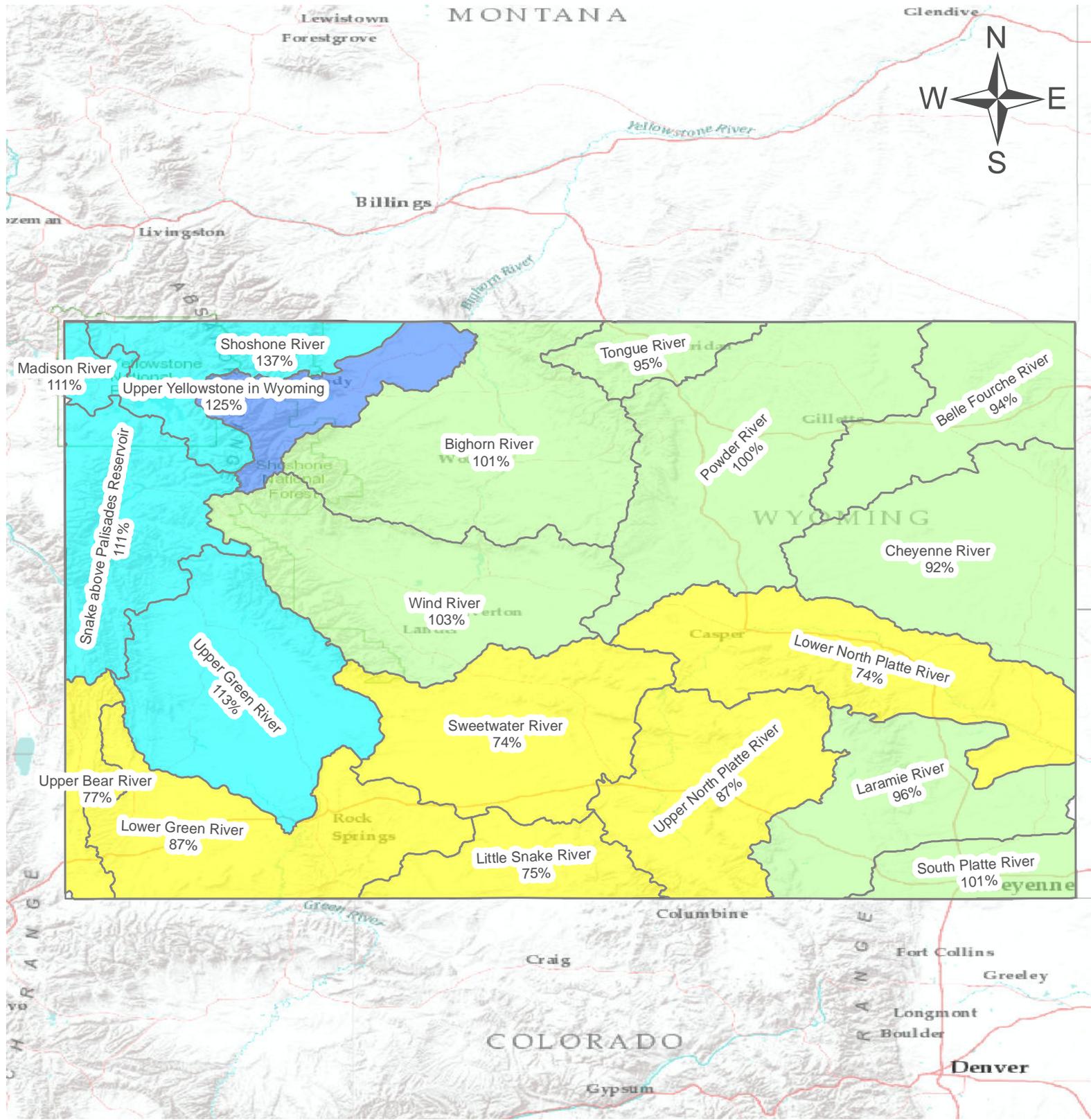
- ▲ > 160%
- ▲ 140-160%
- ▲ 120-139%
- ▲ 100-119%
- ▼ 80-99%
- ▼ 60-79%
- ▼ 40-59%
- ▼ 1-39%
- +
- Unavailable\*

*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.*

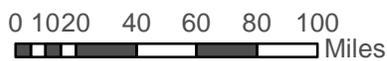
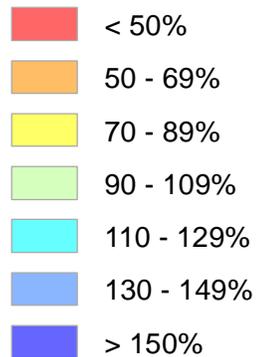


# Statewide Precipitation

As of June 1, 2018:

102% of Normal Precipitation

## % of Normal



# Wyoming

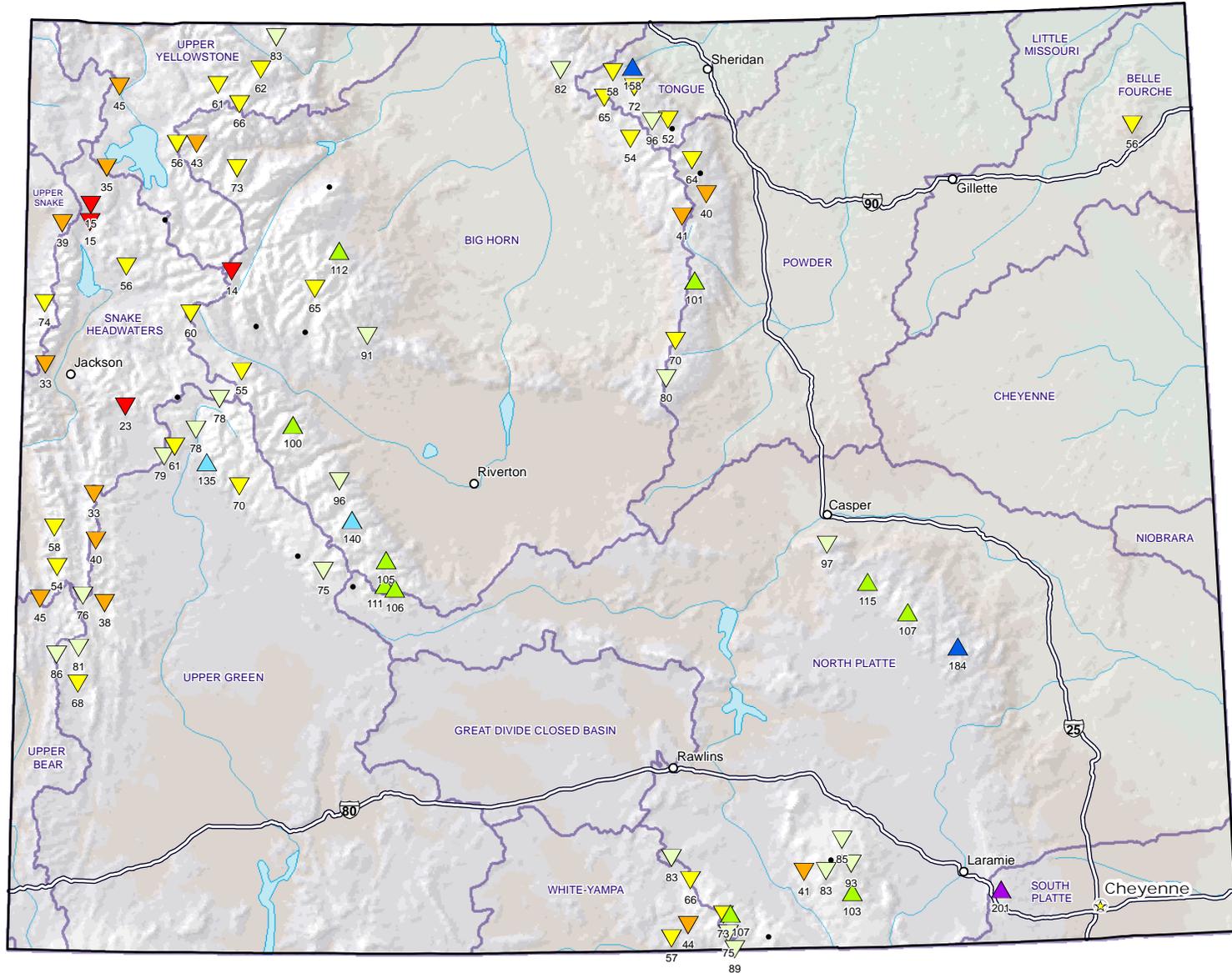
## SNOTEL Month to Date (MTD) Precipitation % of Normal

Jun 01, 2017

### 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*



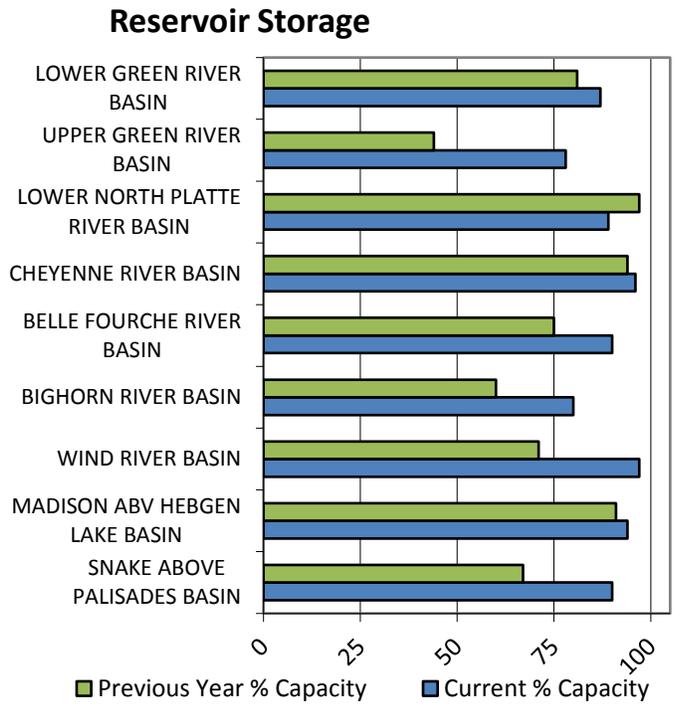
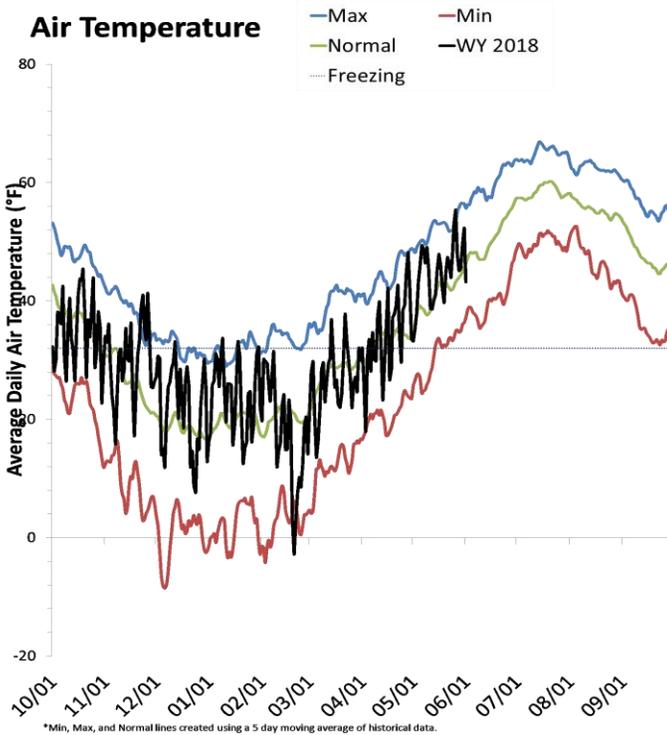
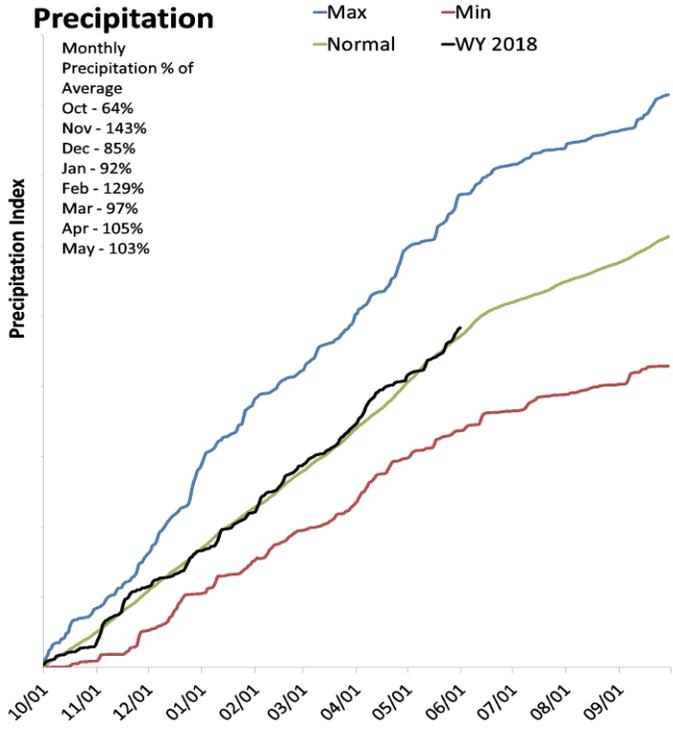
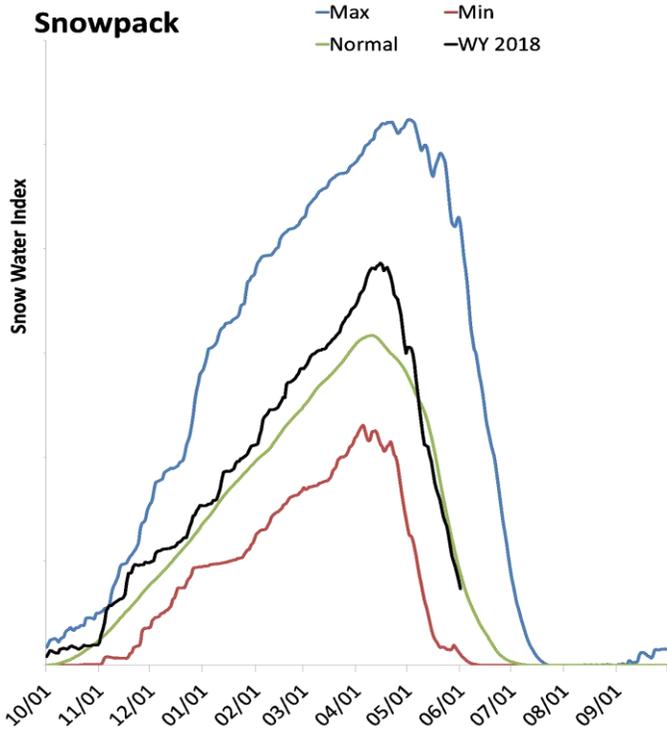
Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

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

# Wyoming Statewide

June 1, 2018

Snowpack in Wyoming is below normal at 84% of normal, compared to 217% last year. Precipitation in May was near average at 103%, which brings the seasonal accumulation (Oct-May) to 102% of average. Soil moisture at sites with sensors is at 74% of saturation. Reservoir storage is at 86% of capacity, compared to 77% last year. Forecast streamflow volumes range from 16% to 160% of average.



**Statewide - June 1, 2018**

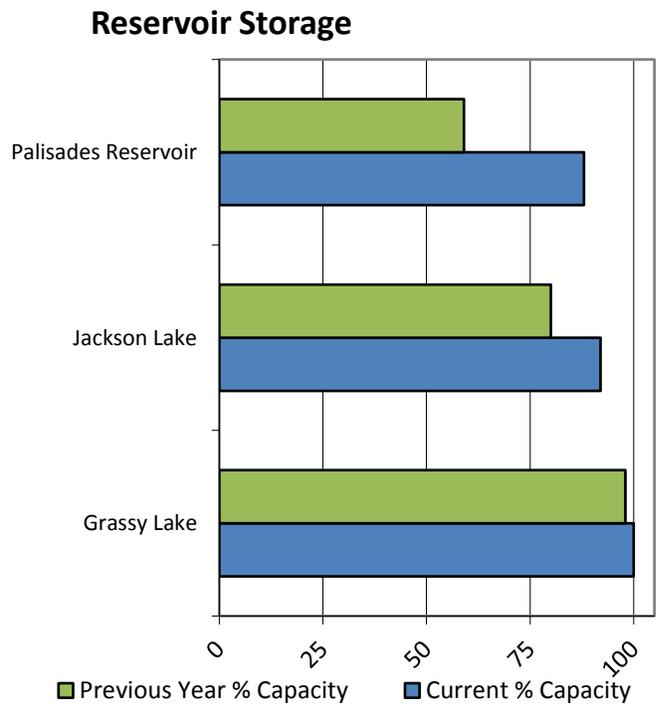
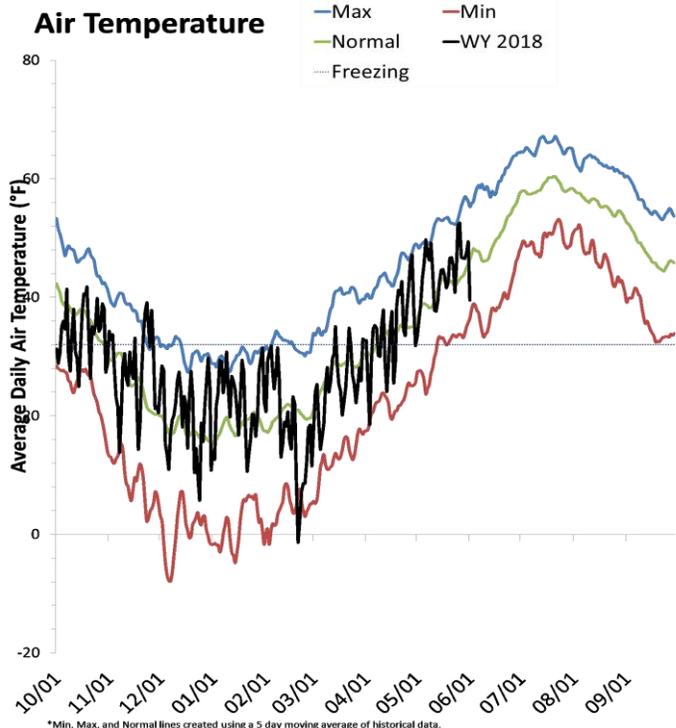
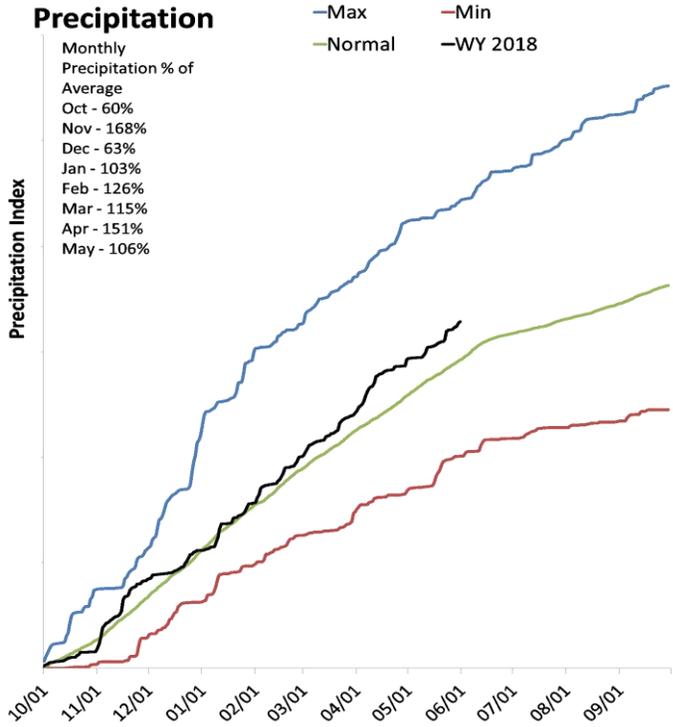
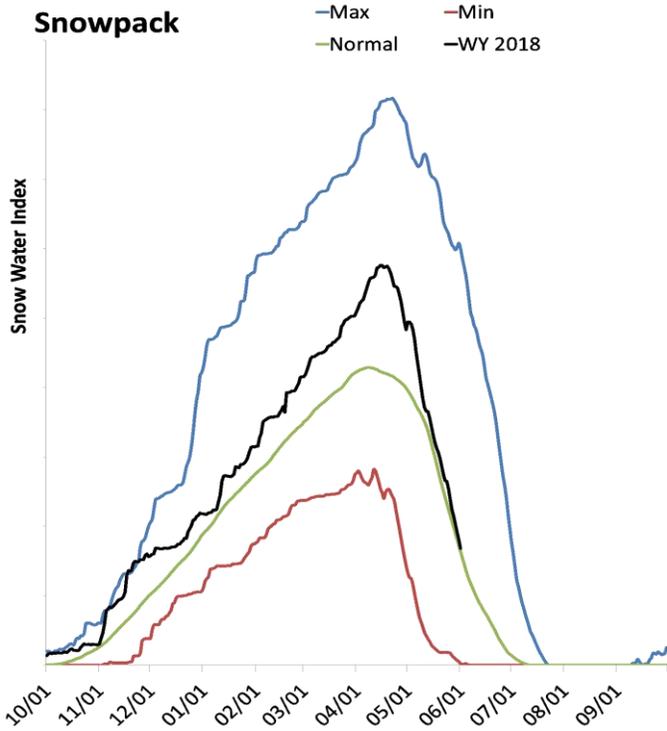
<b>Reservoir Storage End of May, 2018</b>	<b>Current (KAF)</b>	<b>Last Year (KAF)</b>	<b>Average (KAF)</b>	<b>Capacity (KAF)</b>
Hebgen Lake	354.8	343.4	336.2	378.8
Pilot Butte	25.0	25.1	22.3	31.6
Bull Lake	99.5	84.9	88.3	151.8
Boysen	630.3	443.3	498.4	596.0
Buffalo Bill	535.3	331.9	385.4	646.6
Bighorn Lake	932.4	728.7	848.0	1356.0
Tongue River Res	83.3	81.2	52.6	79.1
Shadehill	77.0	48.8	61.4	81.4
Angostura	114.0	111.0	101.3	122.1
Deerfield	15.4	15.1	14.3	15.2
Pactola	55.7	54.8	48.9	55.0
Keyhole	161.6	147.3	100.9	193.8
Belle Fourche	168.6	142.6	155.1	178.4
Seminole	772.6	847.0	607.1	1016.7
Pathfinder	913.0	1010.1	633.8	1016.5
Alcova	180.3	180.5	179.7	184.3
Glendo	439.2	487.1	475.0	506.4
Guernsey	28.5	30.0	34.3	45.6
Wheatland #2	86.8	89.0	55.7	98.9
Fontenelle	260.4	129.5	164.0	344.8
Big Sandy	38.5	38.4	29.1	38.3
Meeks Cabin Reservoir	30.2	28.8	25.2	32.5
Viva Naughton Res	44.7	35.2	41.5	42.4
Flaming Gorge Reservoir	3294.2	3202.9	3070.0	3749.0
High Savery Reservoir	16.0	22.7	21.6	22.4
Woodruff Narrows Reservoir	53.3	56.0	44.8	57.3
Jackson Lake	780.5	675.1	605.7	847.0
Palisades Reservoir	1229.8	820.9	1027.0	1400.0
Grassy Lake	15.3	14.9	14.3	15.2
Basin-wide Total	11436.1	10226.2	9741.9	13303.1
# of reservoirs	29	29	29	29

<b>Watershed Snowpack Analysis June 1, 2018</b>	<b># of Sites</b>	<b>% Median</b>	<b>Last Year % Median</b>
SNAKE ABOVE PALISADES BASIN	20	103%	201%
MADISON ABV HEBGEN LAKE BASIN	4	129%	151%
UPPER YELLOWSTONE IN WY BASIN	8	121%	162%
WIND RIVER BASIN	9	98%	441%
BIGHORN RIVER BASIN	10	42%	170%
SHOSHONE RIVER BASIN	4	121%	167%
POWDER RIVER BASIN	6	10%	300%
TONGUE RIVER BASIN	6	8%	352%
BELLE FOURCHE RIVER BASIN	1		
CHEYENNE RIVER BASIN	2		
UPPER NORTH PLATTE RIVER BASIN	17	45%	137%
SWEETWATER RIVER BASIN	3	0%	1609%
LOWER NORTH PLATTE RIVER BASIN	4		
LARAMIE RIVER BASIN	7	0%	173%
SOUTH PLATTE RIVER BASIN	4	22%	177%
LITTLE SNAKE RIVER BASIN	8	26%	145%
UPPER GREEN RIVER BASIN	12	132%	417%
LOWER GREEN RIVER BASIN	7	7%	183%
UPPER BEAR RIVER BASIN	7	0%	306%
Statewide	80	84%	217%

# Snake above Palisades Reservoir

June 1, 2018

Snowpack in the Snake above Palisades Reservoir is near normal at 103% of normal, compared to 201% last year. Precipitation in May was near average at 106%, which brings the seasonal accumulation (Oct-May) to 111% of average. Soil moisture at sites with sensors is at 74% of saturation. Reservoir storage is at 90% of capacity, compared to 67% last year. Forecast streamflow volumes range from 70% to 122% of average.



### Snake Above Palisades Basin Streamflow Forecasts - June 1, 2018

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

SNAKE ABOVE PALISADES BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Snake R nr Moran <sup>2</sup>	JUN-JUL	355	410	445	105%	485	535	425
	JUN-SEP	425	490	535	106%	575	640	505
Snake R ab Reservoir nr Alpine <sup>2</sup>	JUN-JUL	1370	1480	1560	122%	1630	1750	1280
	JUN-SEP	1710	1840	1930	120%	2020	2150	1610
Snake R nr Irwin <sup>2</sup>	JUN-JUL	1460	1610	1710	101%	1810	1960	1700
	JUN-SEP	1900	2080	2200	100%	2320	2500	2190
Snake R nr Heise <sup>2</sup>	JUN-JUL	1560	1710	1810	101%	1920	2070	1800
	JUN-SEP	2050	2240	2360	100%	2490	2680	2350
Pacific Ck at Moran	JUN-JUL	64	79	90	105%	101	116	86
	JUN-SEP	71	88	99	103%	110	127	96
Buffalo Fk ab Lava Ck nr Moran	JUN-JUL	182	205	220	107%	235	260	205
	JUN-SEP	215	240	260	108%	280	305	240
Greys R ab Reservoir nr Alpine	JUN-JUL	130	145	156	95%	166	181	164
	JUN-SEP	173	192	205	95%	215	235	215
Salt R ab Reservoir nr Etna	JUN-JUL	61	84	100	70%	115	138	143
	JUN-SEP	110	138	158	75%	177	205	210

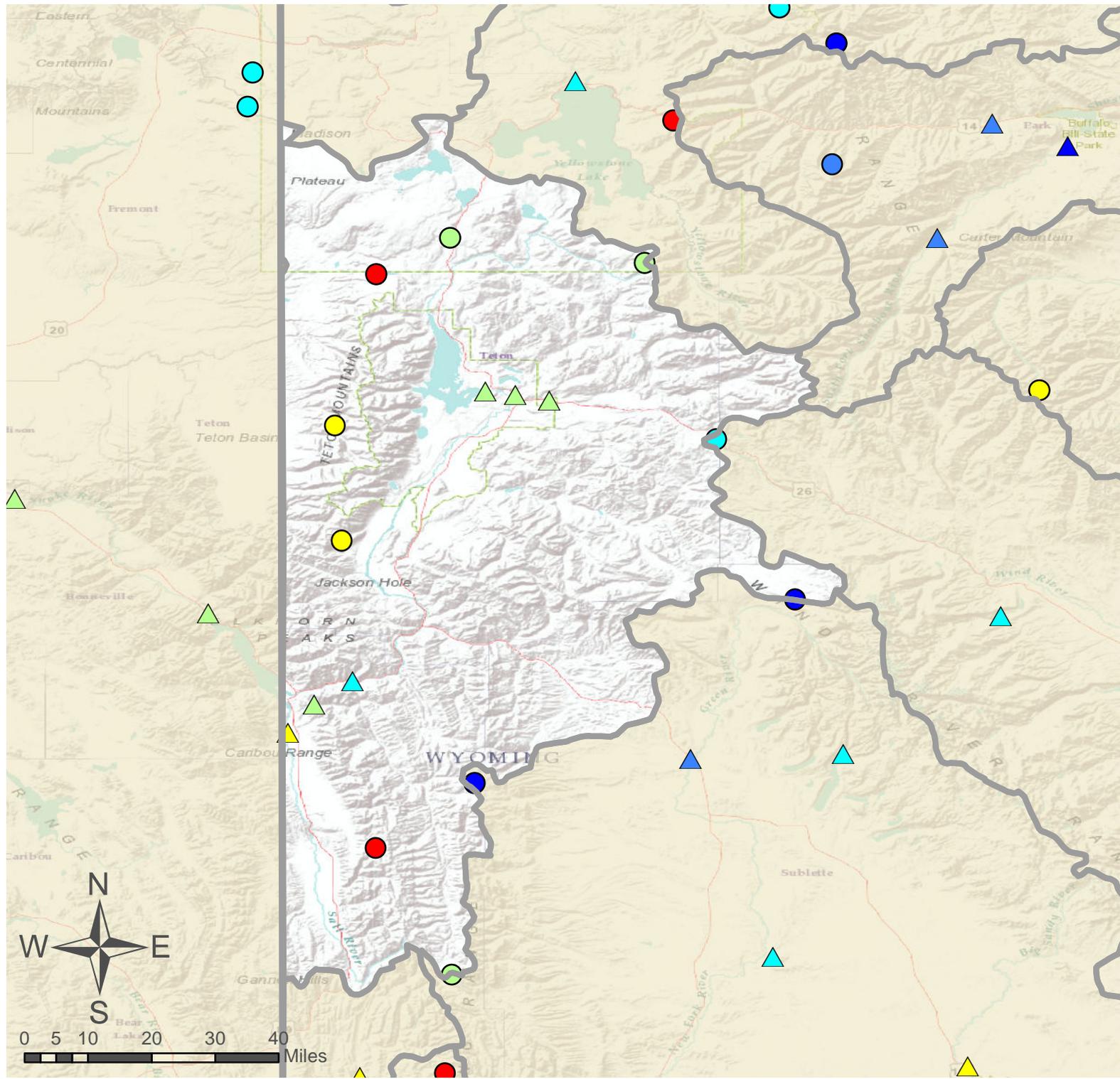
1) 90% and 10% exceedance probabilities are actually 95% and 5%

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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Grassy Lake	15.3	14.9	14.3	15.2
Jackson Lake	780.5	675.1	605.7	847.0
Palisades Reservoir	1229.8	820.9	1027.0	1400.0
Basin-wide Total	2025.5	1510.9	1647.0	2262.2
# of reservoirs	3	3	3	3

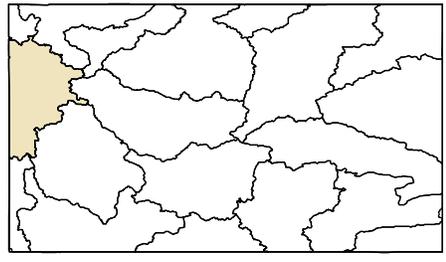
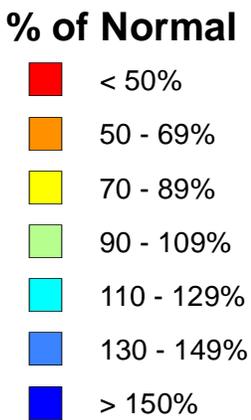
Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
SNAKE above Jackson Lake	5	93%	203%
PACIFIC CREEK	2	104%	191%
BUFFALO FORK	1	116%	147%
GROS VENTRE RIVER	3	125%	227%
HOBACK RIVER	5	153%	373%
GREYS RIVER	4	105%	313%
SALT RIVER	3	0%	613%
SNAKE AB PALISADES RESV	18	102%	245%



# Snake above Palisades Reservoir

○ SNOTEL Site  
 △ Forecast Point

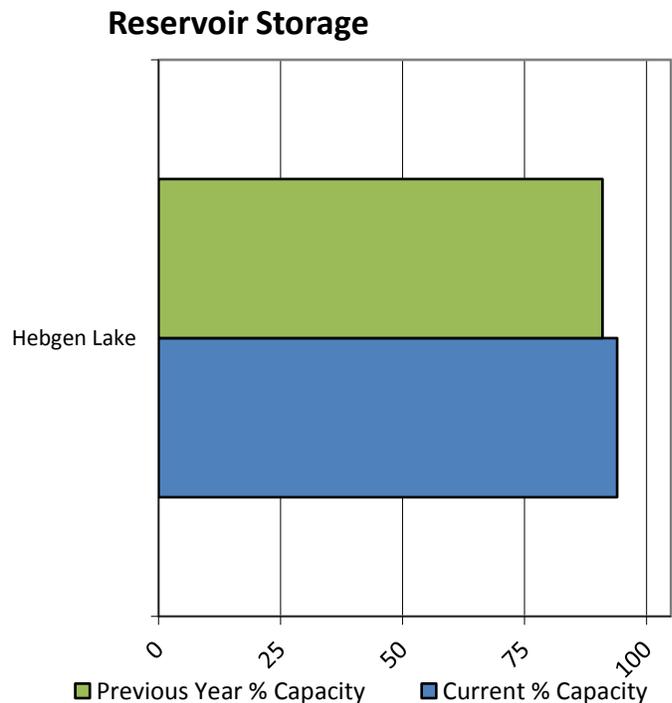
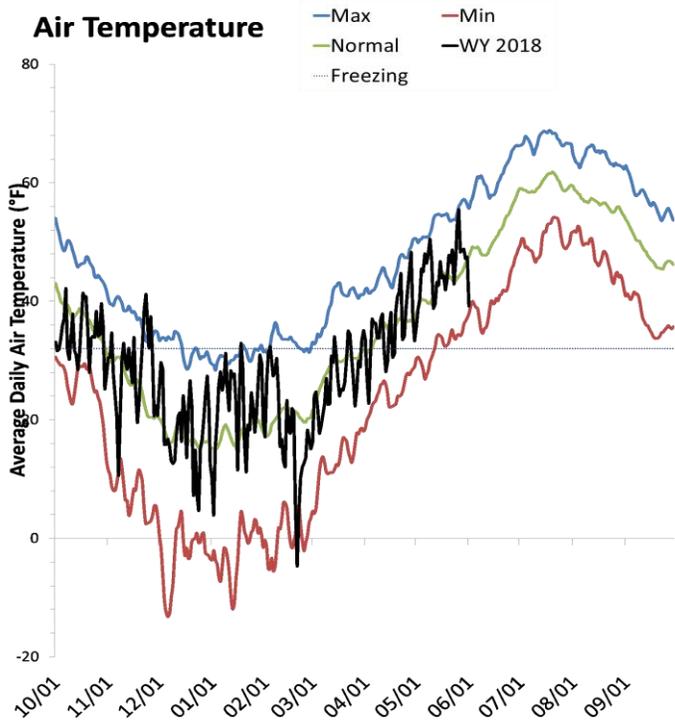
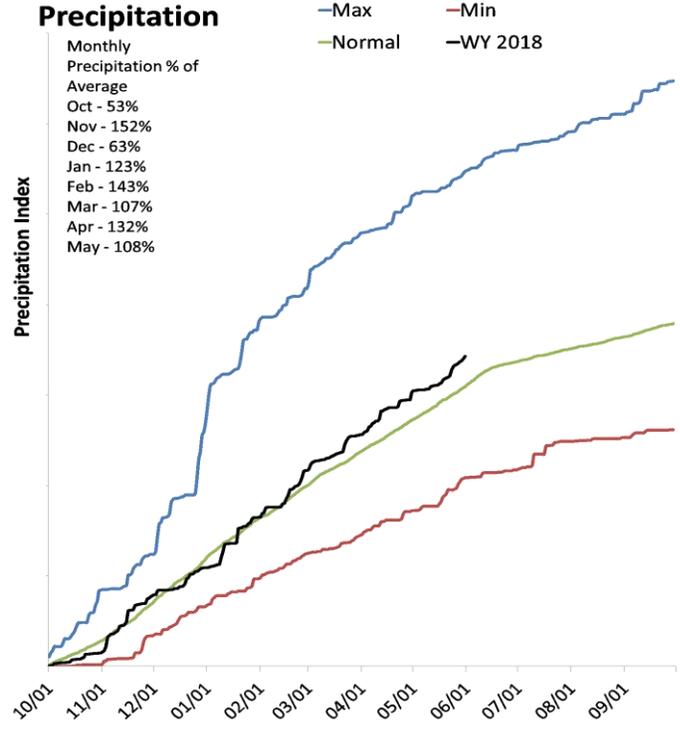
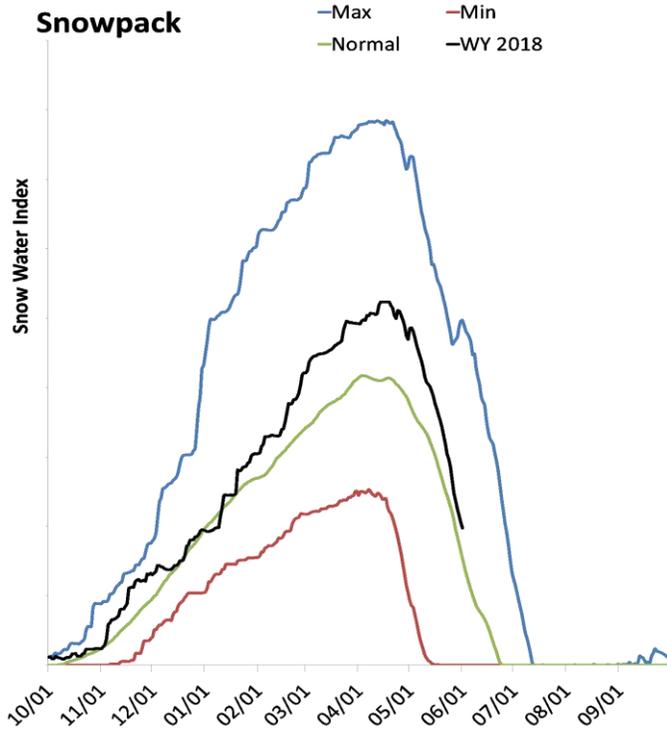
**As of June 1, 2018:**  
 103% of Normal SWE  
 111% of Normal Precipitation  
 106% of Normal Precipitation Last Month



# Madison River above Hebgen Lake

June 1, 2018

Snowpack in the Madison River above Hebgen Lake is above normal at 129% of normal, compared to 151% last year. Precipitation in May was near average at 107%, which brings the seasonal accumulation (Oct-May) to 111% of average. Reservoir storage is at 94% of capacity, compared to 91% last year. Forecast streamflow volumes range from 103% to 103% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

### Madison Abv Hebgen Lake Basin Streamflow Forecasts - June 1, 2018

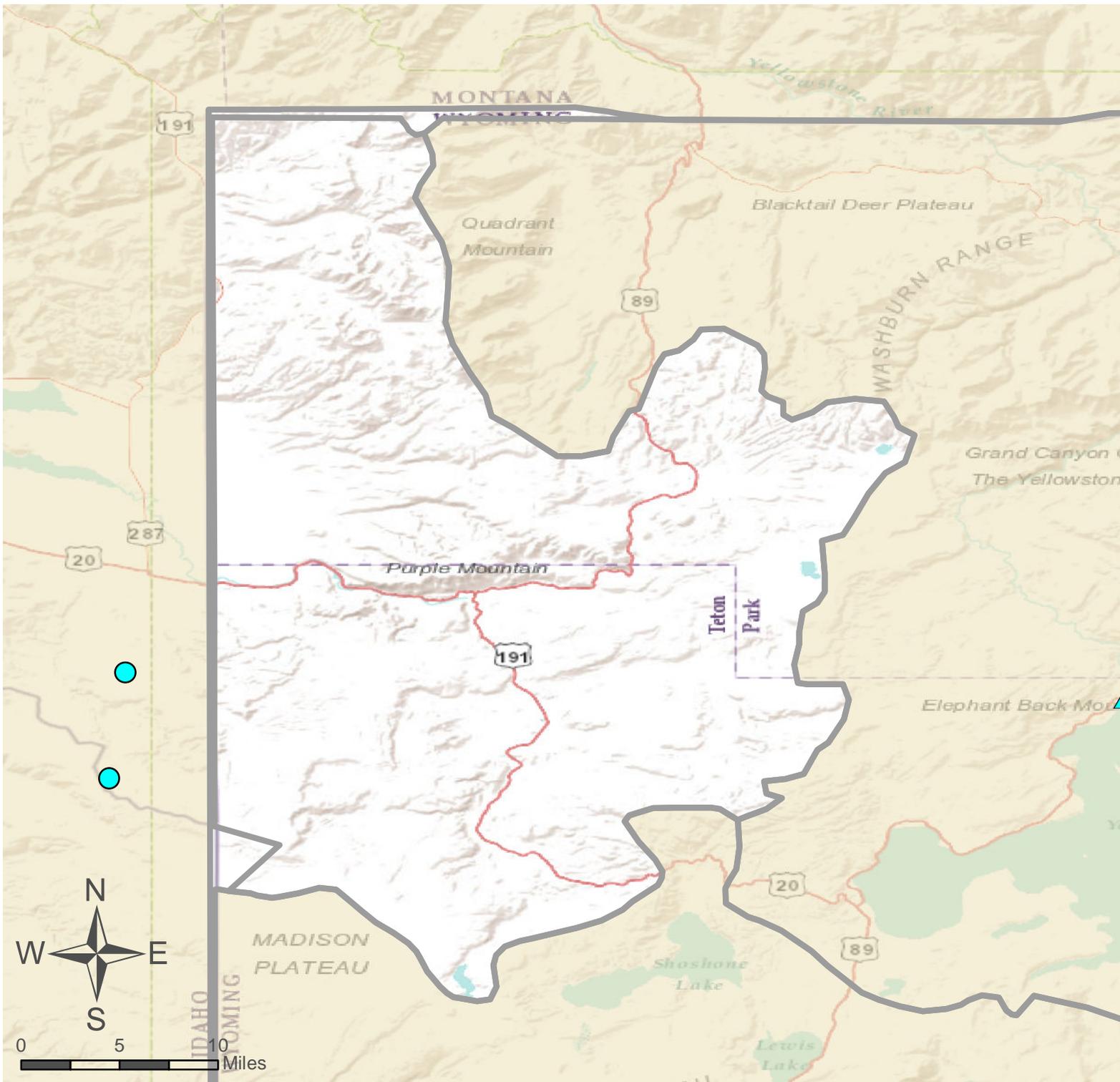
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

<b>MADISON ABV HEBGEN LAKE BASIN</b>	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
<hr/>								
Hebgen Lake Inflow	JUN-JUL	144	168	184	103%	200	225	178
	JUN-SEP	225	260	285	102%	310	345	280

- 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

<b>Reservoir Storage End of May, 2018</b>	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Hebgen Lake	354.8	343.4	336.2	378.8
Basin-wide Total	354.8	343.4	336.2	378.8
# of reservoirs	1	1	1	1

<b>Watershed Snowpack Analysis June 1, 2018</b>	# of Sites	% Median	Last Year % Median
MADISON ABV HEBGEN LAKE	4	129%	151%



# Madison River above Hebgen Lake

- SNOTEL Site
- △ Forecast Point

## % of Normal

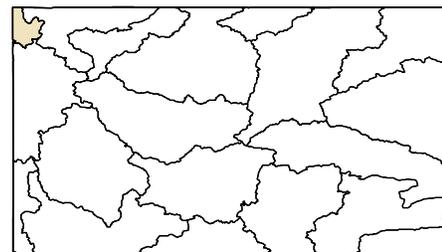
- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

As of June 1, 2018:

129% of Normal SWE

111% of Normal Precipitation

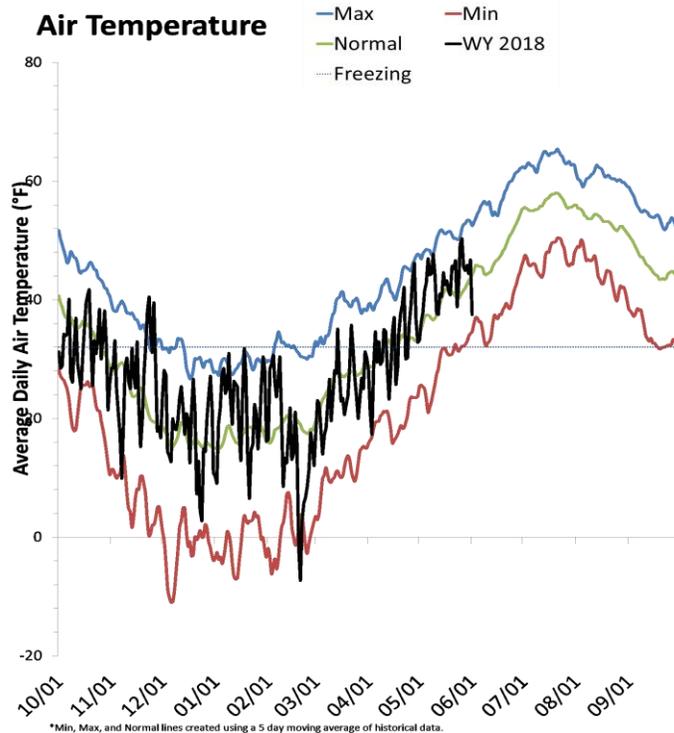
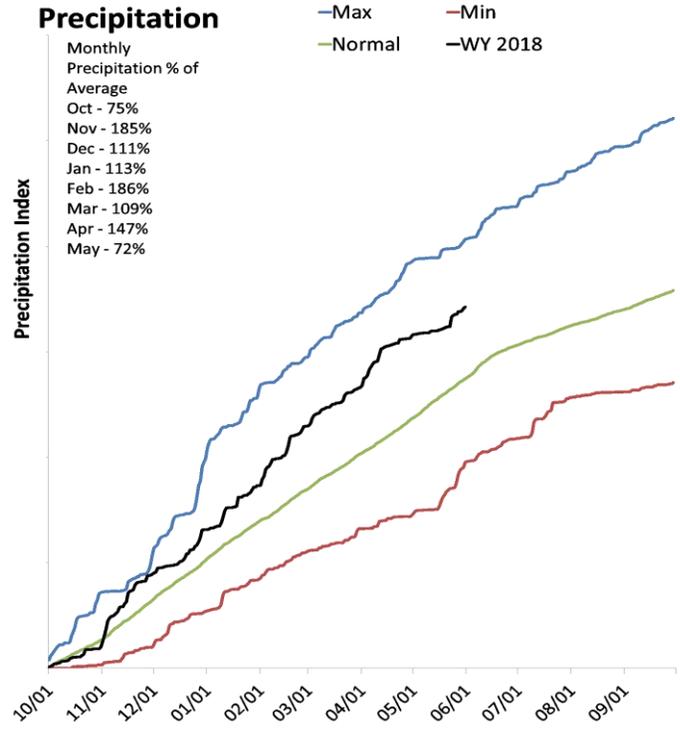
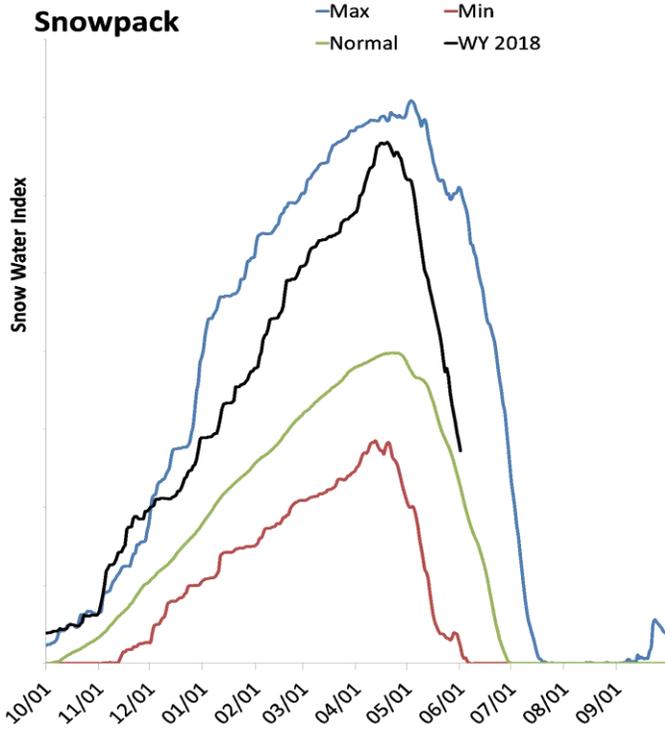
107% of Normal Precipitation Last Month



# Upper Yellowstone in Wyoming

June 1, 2018

Snowpack in the Upper Yellowstone in Wyoming is above normal at 121% of normal, compared to 162% last year. Precipitation in May was below average at 73%, which brings the seasonal accumulation (Oct-May) to 125% of average. Soil moisture at sites with sensors is at 82% of saturation. Forecast streamflow volumes range from 115% to 132% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Upper Yellowstone In Wy Basin Streamflow Forecasts - June 1, 2018

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

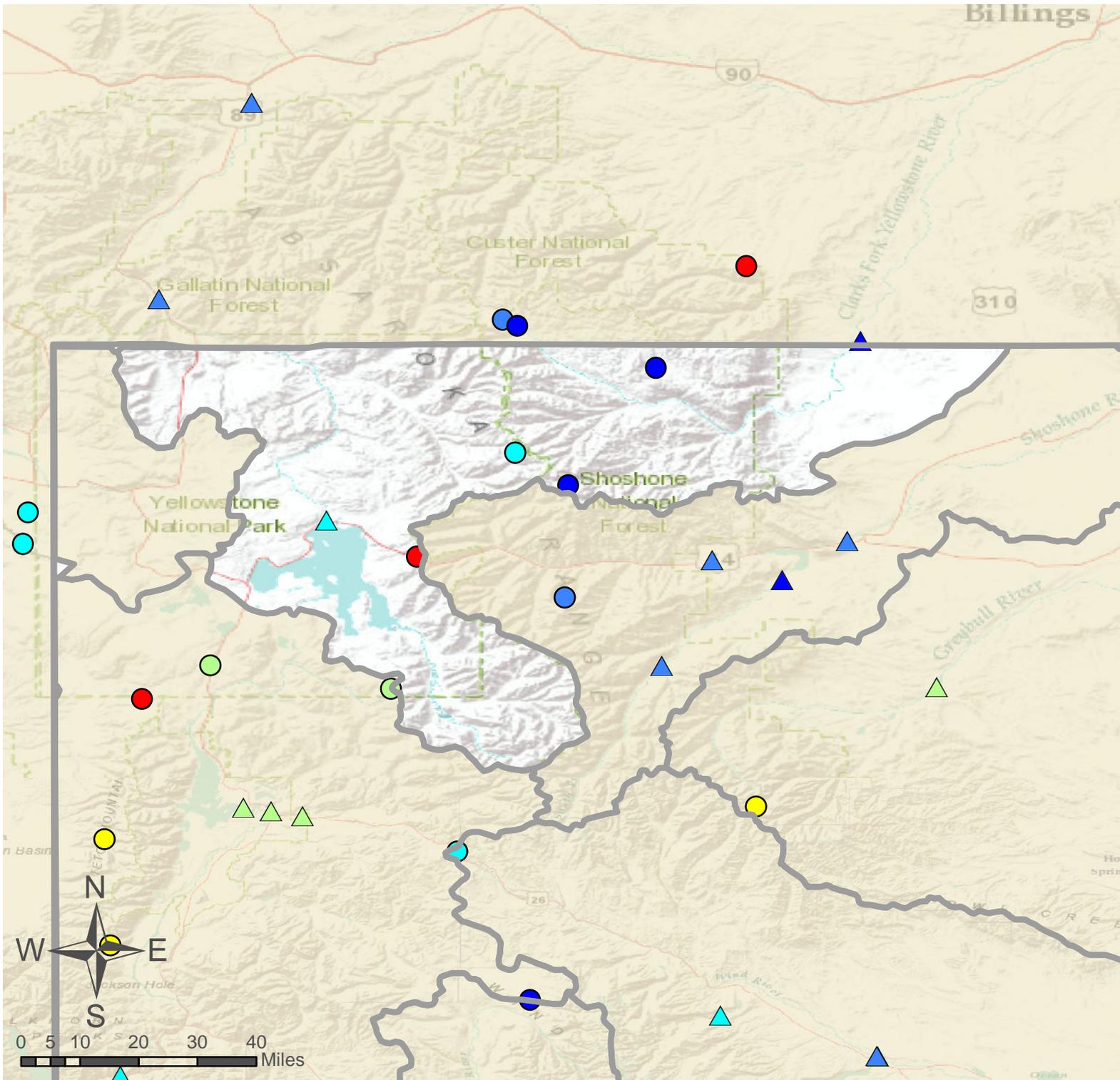
UPPER YELLOWSTONE IN WY BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Yellowstone R at Yellowstone Lake Outlet	JUN-JUL	410	485	535	115%	580	655	465
	JUN-SEP	615	700	755	115%	815	900	655
Yellowstone R at Corwin Springs	JUN-JUL	1160	1280	1370	132%	1450	1570	1040
	JUN-SEP	1470	1620	1730	130%	1830	1980	1330
Clarks Fk Yellowstone R nr Belfry <sup>2</sup>	JUN-JUL	515	560	595	170%	625	670	350
	JUN-SEP	570	625	665	168%	700	755	395

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 June 1, 2018	# of Sites	% Median	Last Year % Median
UPPER YELLOWSTONE IN WY	8	121%	162%
CLARKS FORK in WY	7	155%	160%



# Upper Yellowstone in Wyoming

- SNOTEL Site
- △ Forecast Point

## % of Normal

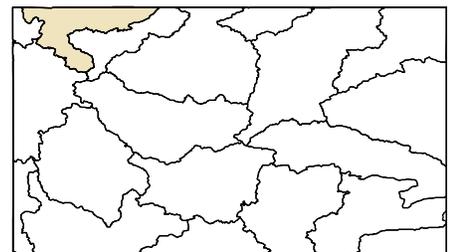
- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

As of June 1, 2018:

121% of Normal SWE

125% of Normal Precipitation

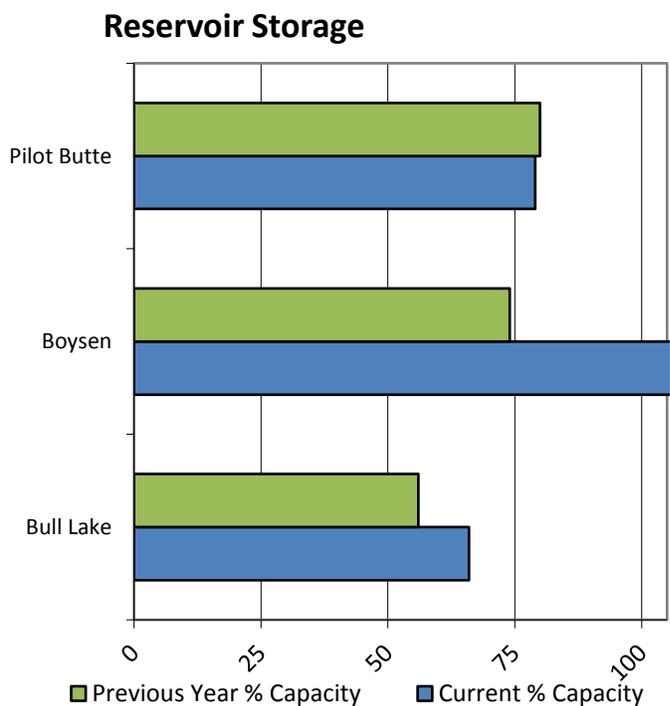
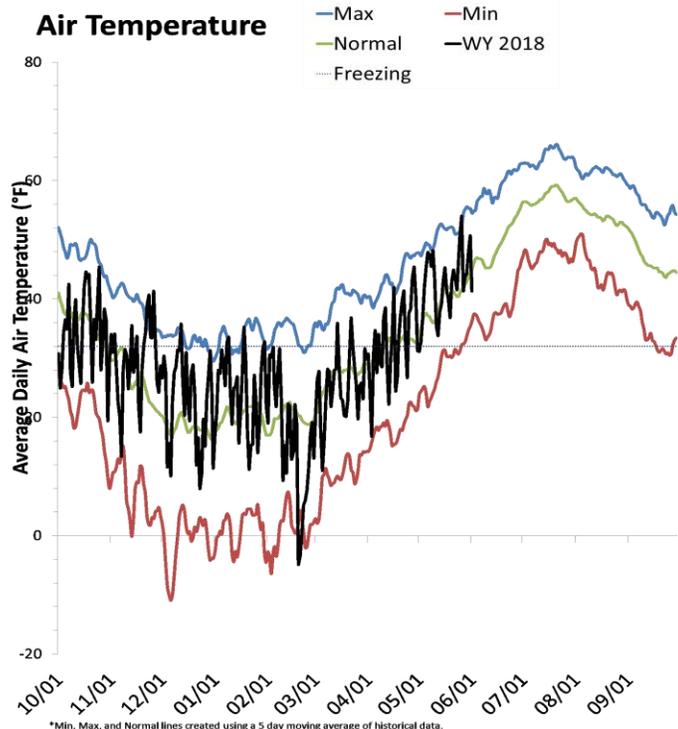
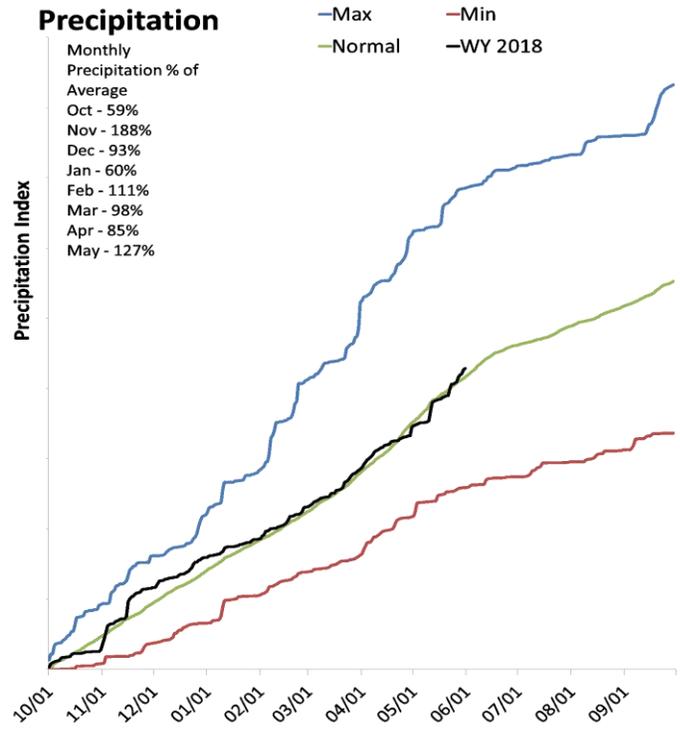
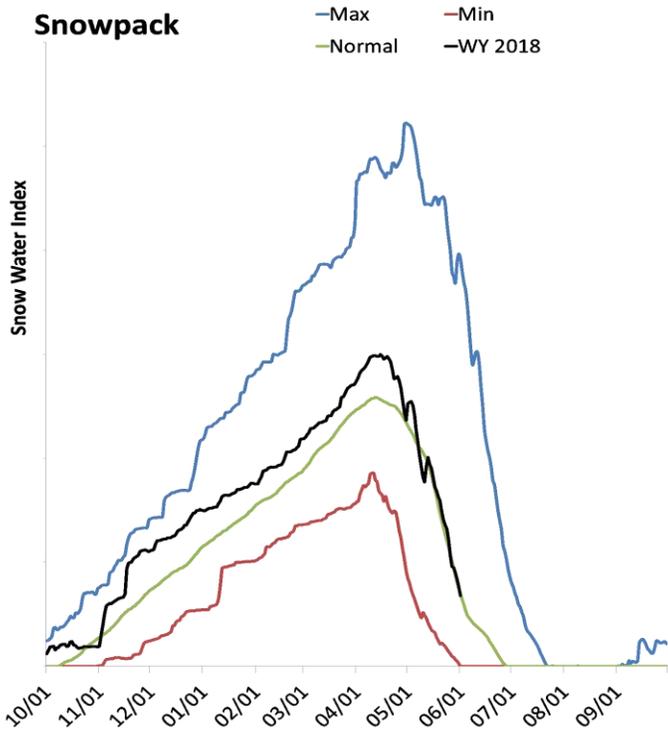
73% of Normal Precipitation Last Month



# Wind River Basin

June 1, 2018

Snowpack in the Wind River Basin is near normal at 98% of normal, compared to 441% last year. Precipitation in May was above average at 127%, which brings the seasonal accumulation (Oct-May) to 103% of average. Reservoir storage is at 97% of capacity, compared to 71% last year. Forecast streamflow volumes range from 71% to 139% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Wind River Basin Streamflow Forecasts - June 1, 2018

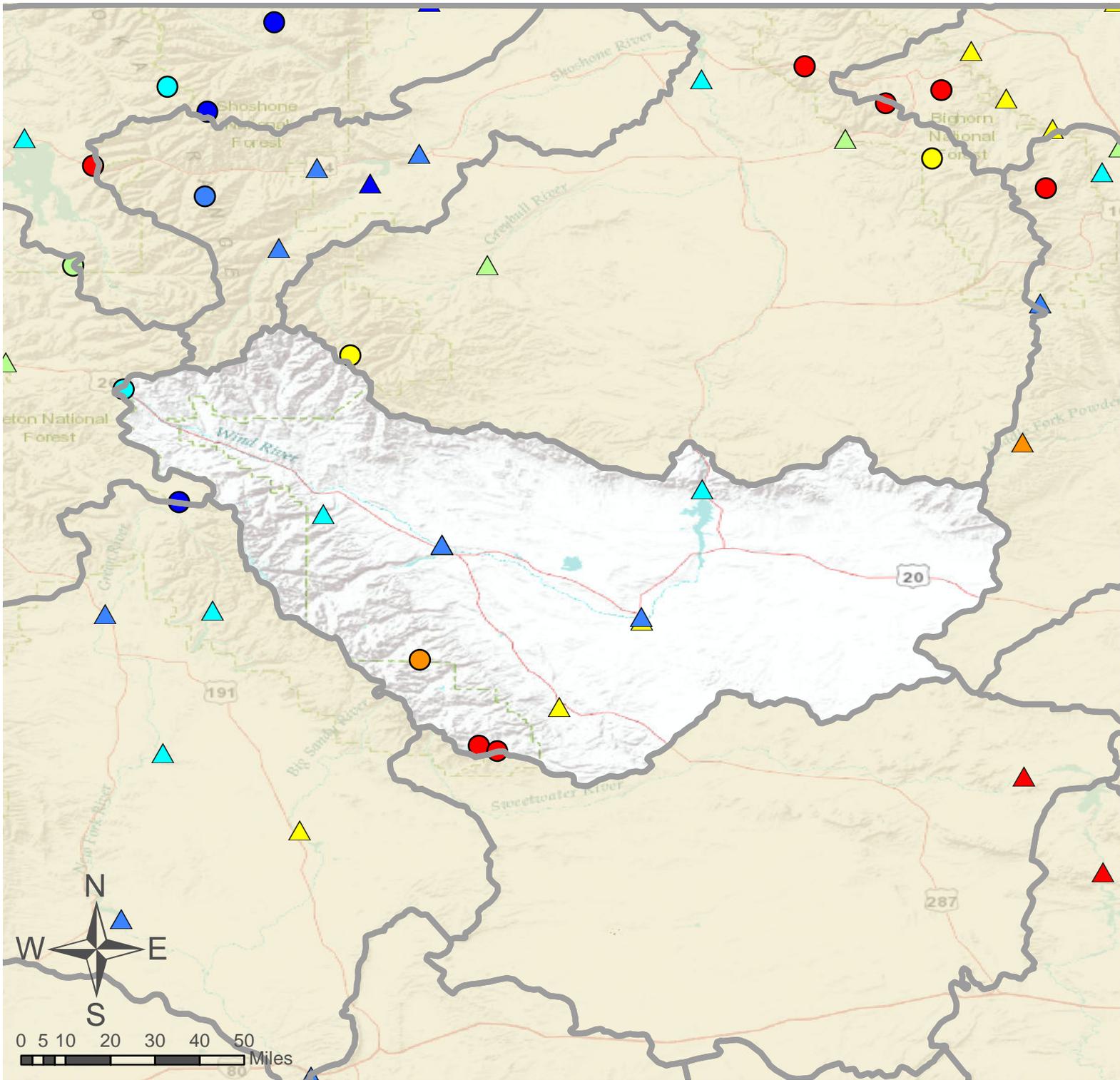
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

WIND RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Dinwoody Ck nr Burris	JUN-JUL	58	63	66	125%	69	74	53
	JUN-SEP	83	89	94	118%	99	105	80
Wind R Ab Bull Lake Ck	JUN-JUL	370	420	455	138%	490	540	330
	JUN-SEP	395	460	505	138%	545	610	365
Bull Lake Ck nr Lenore	JUN-JUL	85	95	102	94%	109	119	108
	JUN-SEP	108	122	131	94%	140	153	139
Wind R at Riverton	JUN-JUL	405	455	485	139%	515	565	350
	JUN-SEP	480	540	585	136%	625	690	430
Little Popo Agie R nr Lander	JUN-JUL	12.6	16.7	19.5	72%	22	26	27
	JUN-SEP	17	22	25	76%	28	33	33
Little Wind R nr Riverton	JUN-JUL	67	104	130	71%	155	192	183
	JUN-SEP	79	122	151	72%	180	225	210
Boysen Reservoir Inflow	JUN-JUL	345	430	485	114%	540	625	425
	JUN-SEP	365	470	540	111%	610	715	485

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bull Lake	99.5	84.9	88.3	151.8
Boysen	630.3	443.3	498.4	596.0
Pilot Butte	25.0	25.1	22.3	31.6
Basin-wide Total	754.9	553.3	609.0	779.4
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
WIND above Dubois	2	116%	177%
LITTLE WIND	2	52%	469%
POPO AGIE	4	34%	940%
WIND RIVER	9	98%	441%



# Wind River Basin

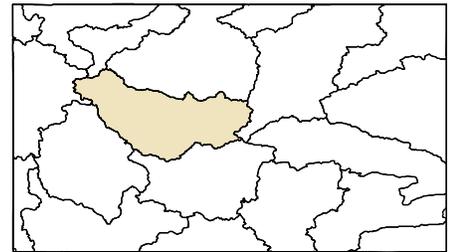
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

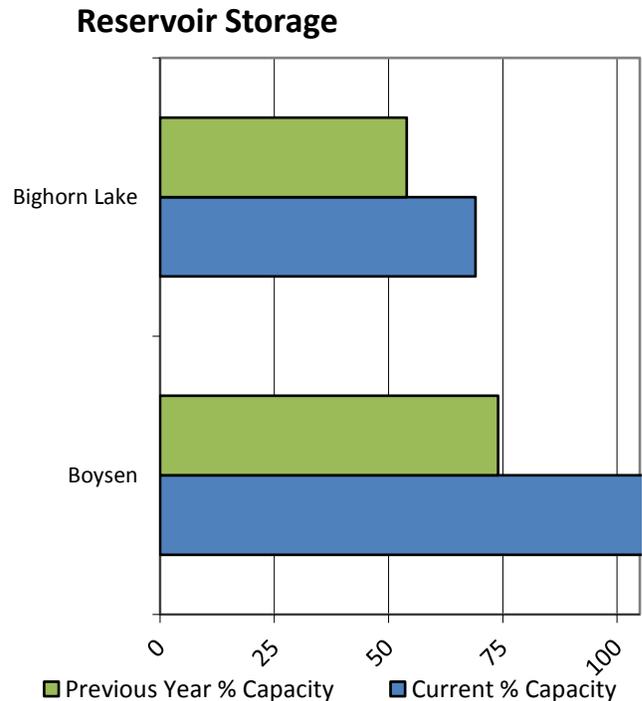
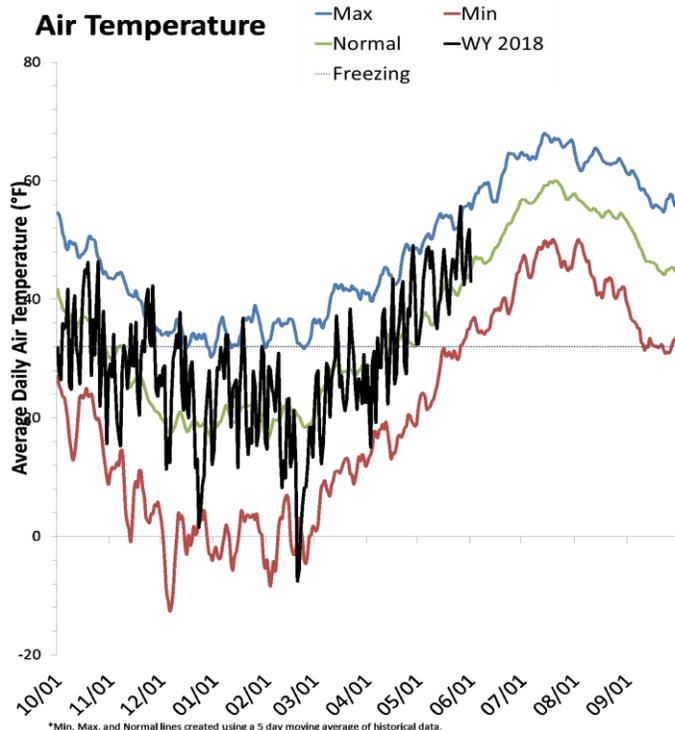
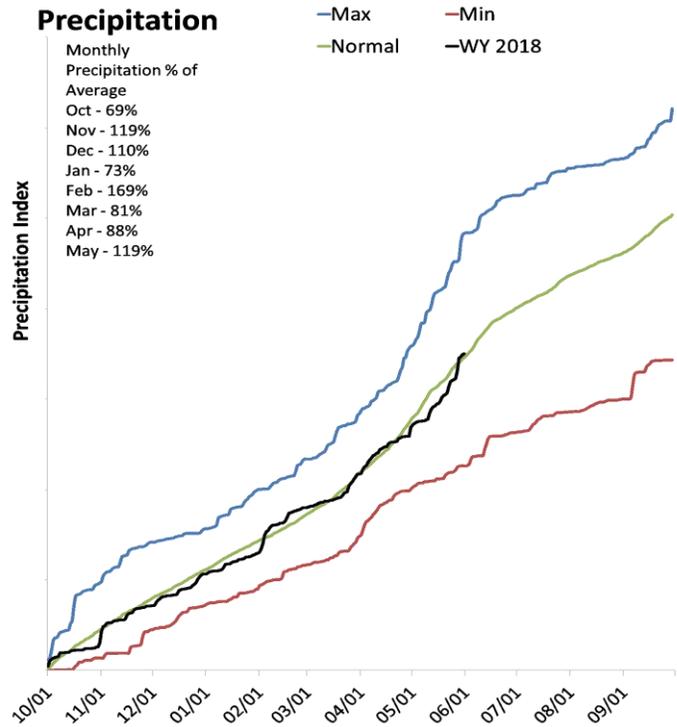
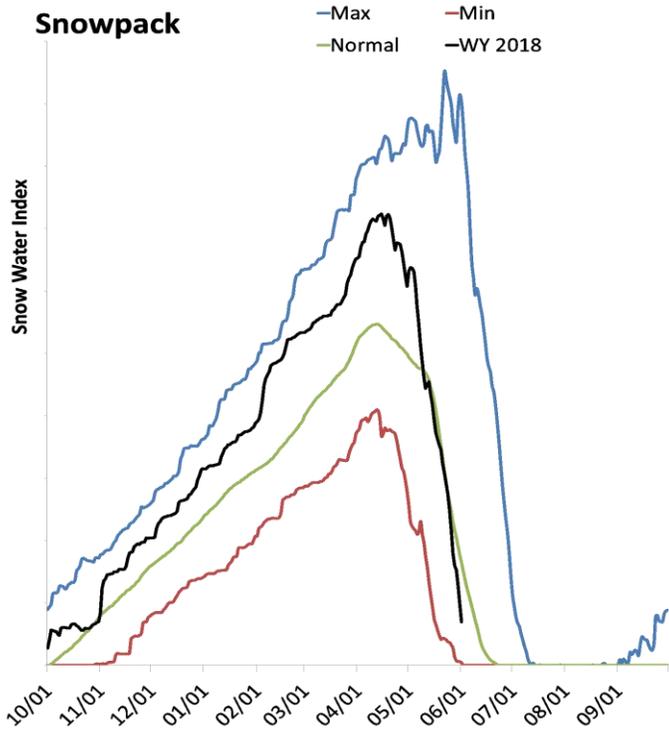
- 98% of Normal SWE
- 103% of Normal Precipitation
- 127% of Normal Precipitation Last Month



# Bighorn River Basin

June 1, 2018

Snowpack in the Bighorn River Basin is much below normal at 42% of normal, compared to 170% last year. Precipitation in May was above average at 119%, which brings the seasonal accumulation (Oct-May) to 101% of average. Reservoir storage is at 80% of capacity, compared to 60% last year. Forecast streamflow volumes range from 100% to 114% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Bighorn River Basin Streamflow Forecasts - June 1, 2018

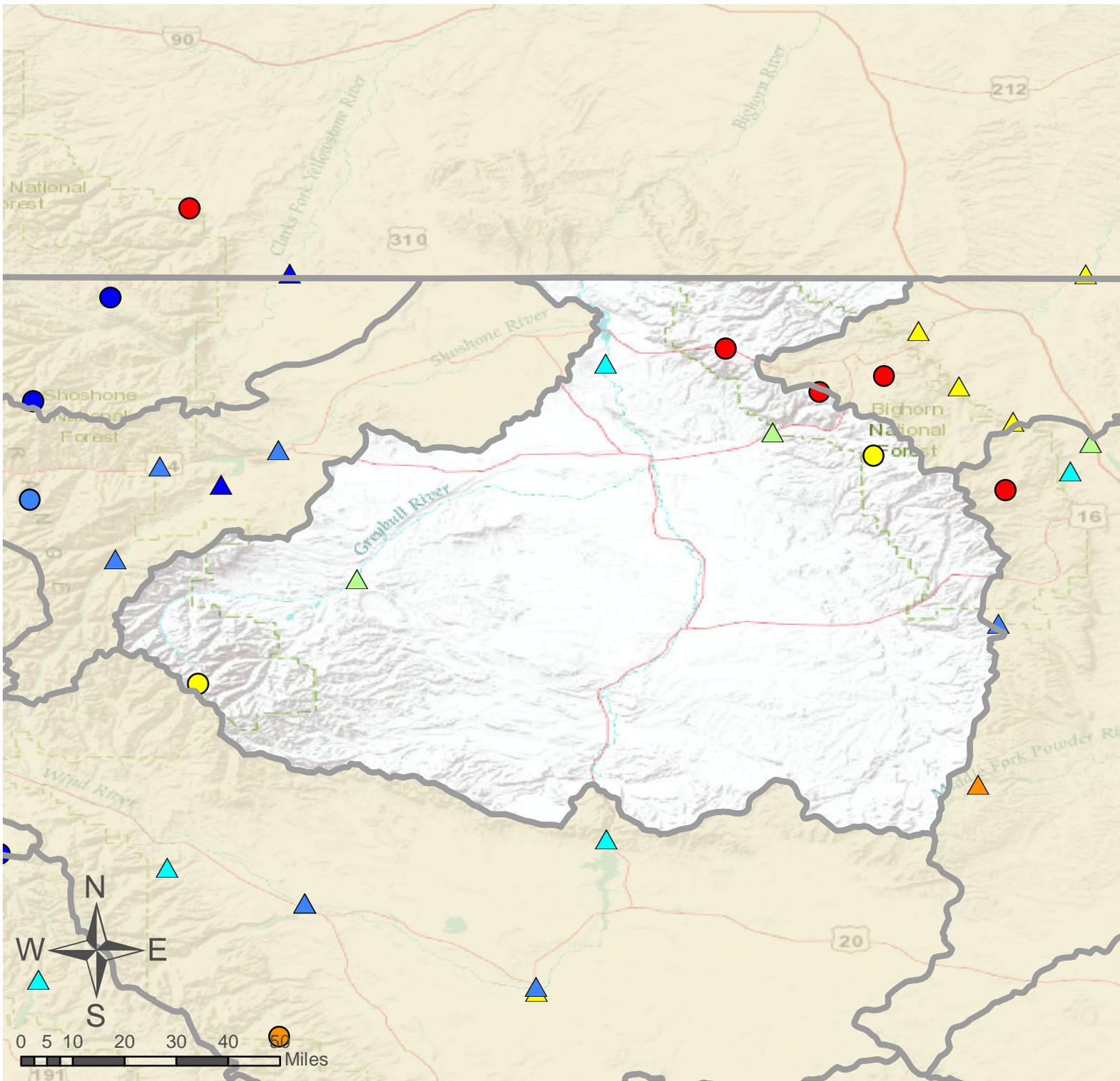
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

BIGHORN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Boysen Reservoir Inflow	JUN-JUL	345	430	485	114%	540	625	425
	JUN-SEP	365	470	540	111%	610	715	485
Greybull R at Meeteetse	JUN-JUL	67	88	102	106%	117	138	96
	JUN-SEP	106	132	150	106%	168	194	142
Shell Ck nr Shell	JUN-JUL	25	31	35	100%	39	44	35
	JUN-SEP	35	41	46	100%	51	57	46
Bighorn R at Kane	JUN-JUL	390	540	640	112%	740	890	570
	JUN-SEP	405	585	705	112%	825	1010	630

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Boysen	630.3	443.3	498.4	596.0
Bighorn Lake	932.4	728.7	848.0	1356.0
Basin-wide Total	1562.7	1172.0	1346.4	1952.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
NOWOOD RIVER	4		
GREYBULL RIVER	2	76%	800%
SHELL CREEK	3	40%	136%
BIGHORN RIVER	10	42%	170%

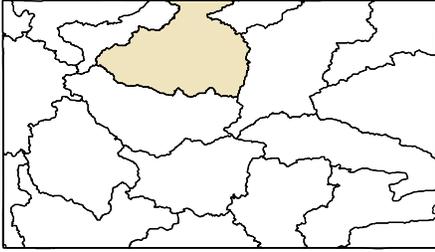


# Bighorn River Basin

- SNOTEL Site
- △ Forecast Point

## % of Normal

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



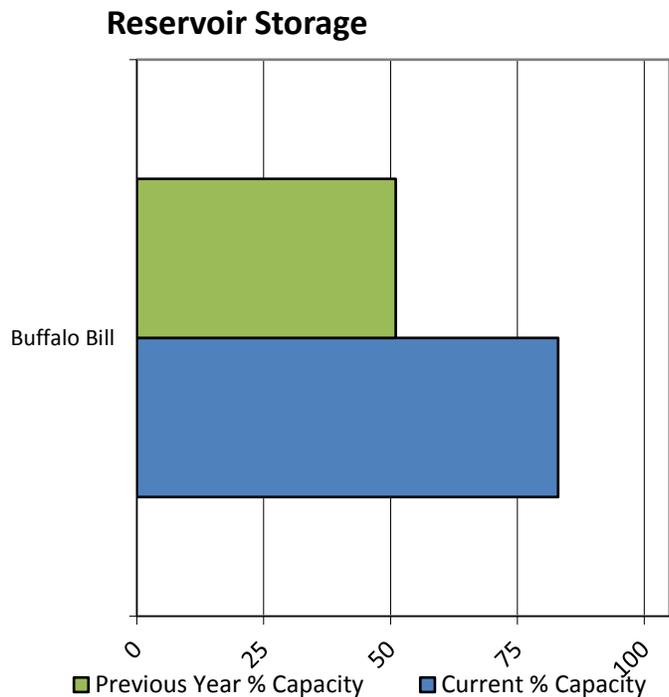
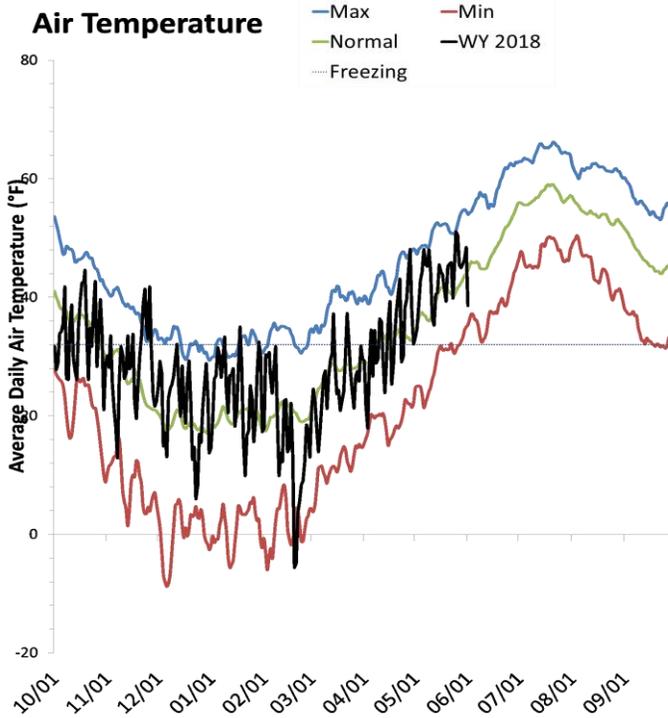
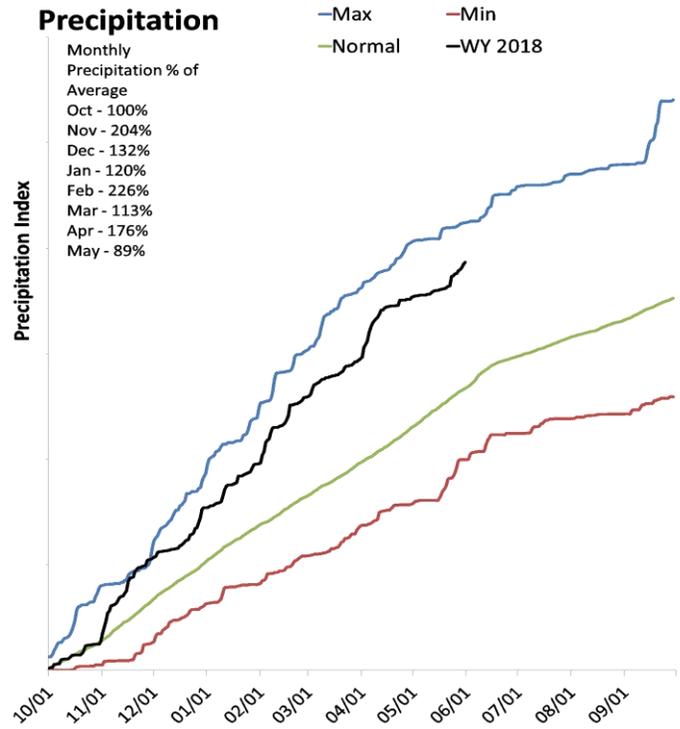
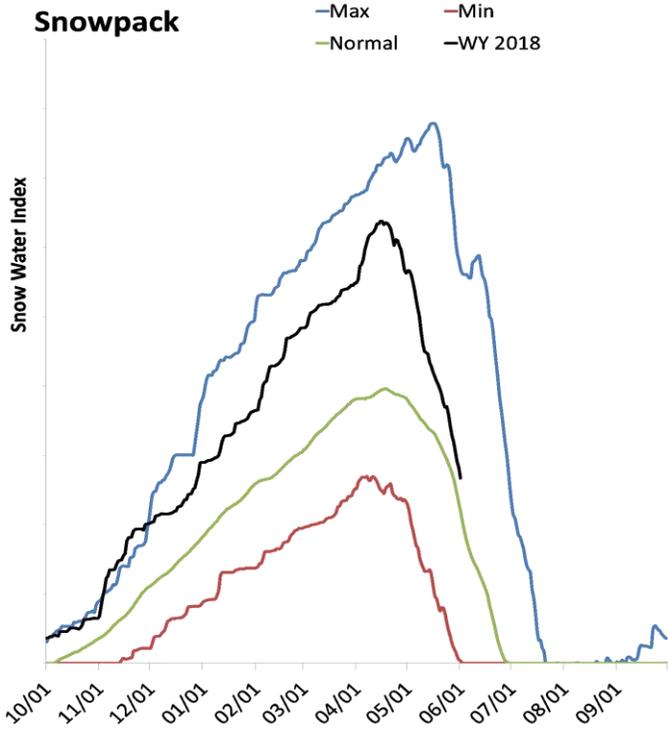
As of June 1, 2018:

- 42% of Normal SWE
- 101% of Normal Precipitation
- 119% of Normal Precipitation Last Month

# Shoshone River Basin

June 1, 2018

Snowpack in the Shoshone River Basin is above average at 121% of normal, compared to 167% last year. Precipitation in May was below average at 86%, which brings the seasonal accumulation (Oct-May) to 137% of average. Reservoir storage is at 83% of capacity, compared to 51% last year. Forecast streamflow volumes range from 143% to 155% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Shoshone River Basin Streamflow Forecasts - June 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	JUN-JUL	375	415	440	144%	465	505	305
	JUN-SEP	435	480	510	142%	540	585	360
SF Shoshone R nr Valley	JUN-JUL	196	215	225	143%	240	260	157
	JUN-SEP	230	255	270	143%	285	310	189
SF Shoshone R ab Buffalo Bill Reservoir	JUN-JUL	181	205	225	155%	240	270	145
	JUN-SEP	194	225	245	160%	265	290	153
Buffalo Bill Reservoir Inflow <sup>2</sup>	JUN-JUL	570	635	680	146%	725	790	465
	JUN-SEP	655	730	780	146%	830	900	535

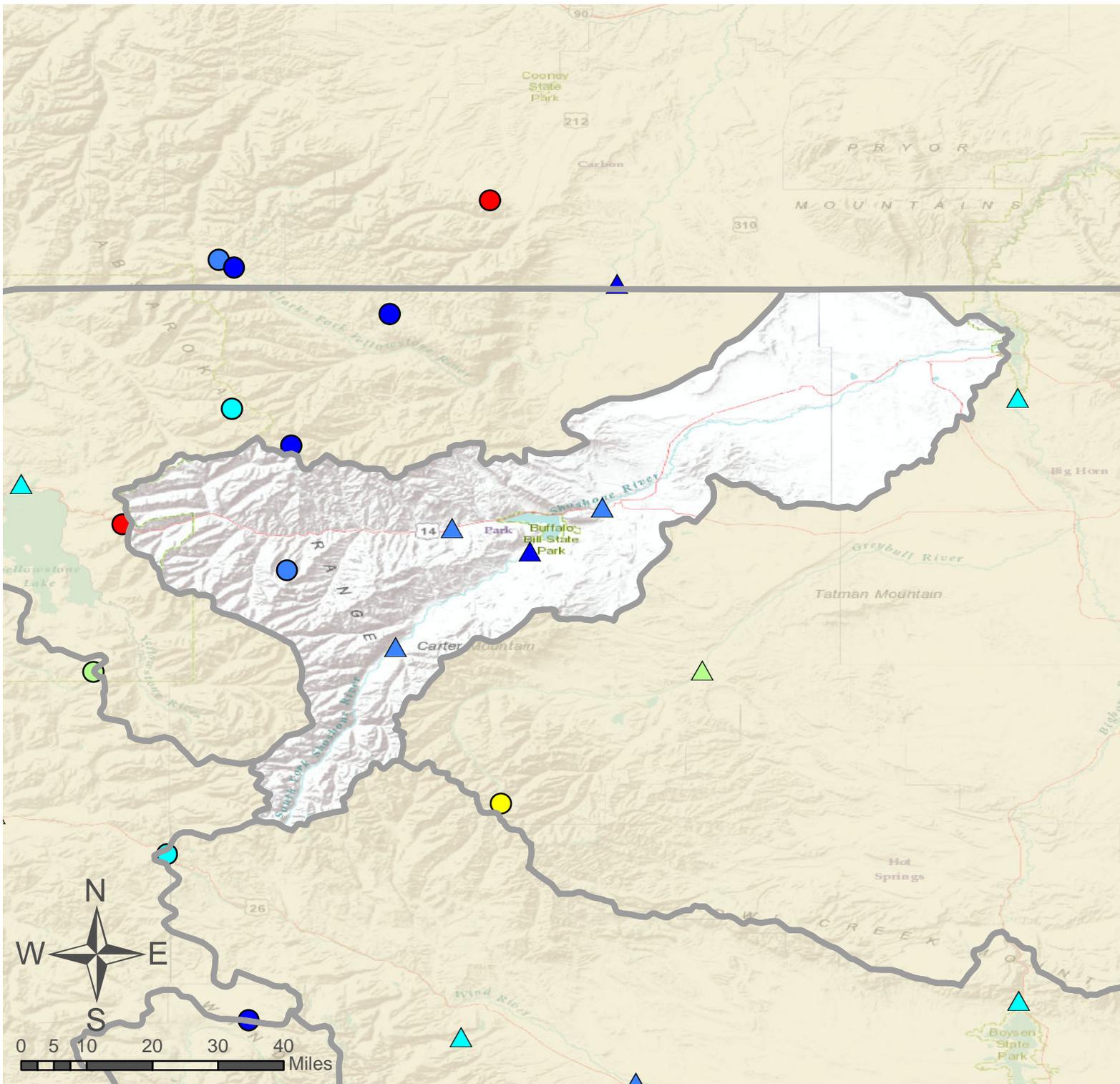
1) 90% and 10% exceedance probabilities are actually 95% and 5%

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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Buffalo Bill	535.3	331.9	385.4	646.6
Basin-wide Total	535.3	331.9	385.4	646.6
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
SHOSHONE RIVER	4	121%	167%



# Shoshone River Basin

- SNOTEL Site
- △ Forecast Point

## % of Normal

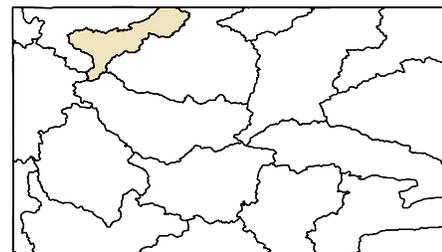
- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

As of June 1, 2018:

121% of Normal SWE

137% of Normal Precipitation

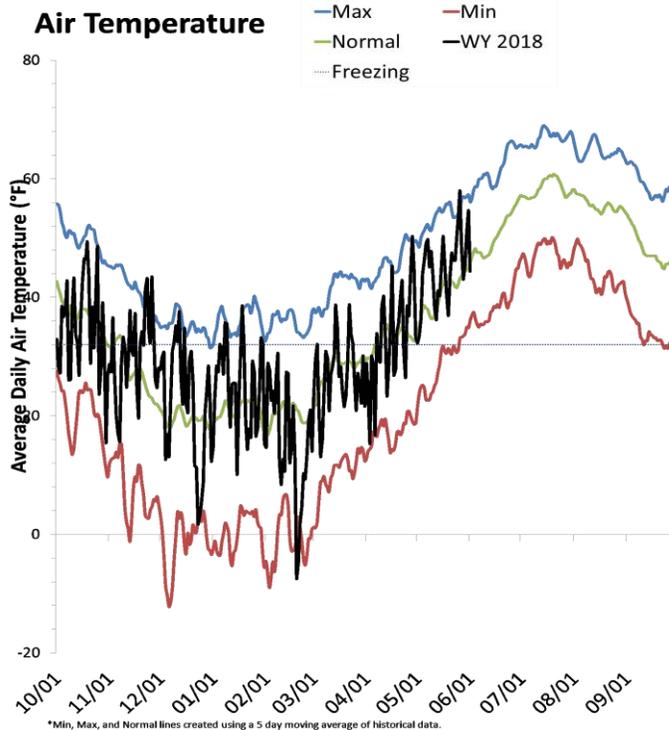
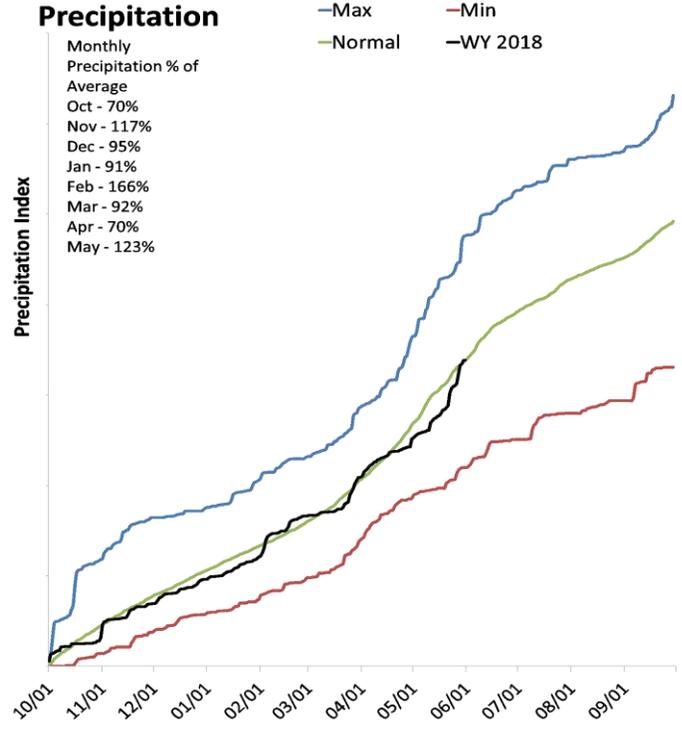
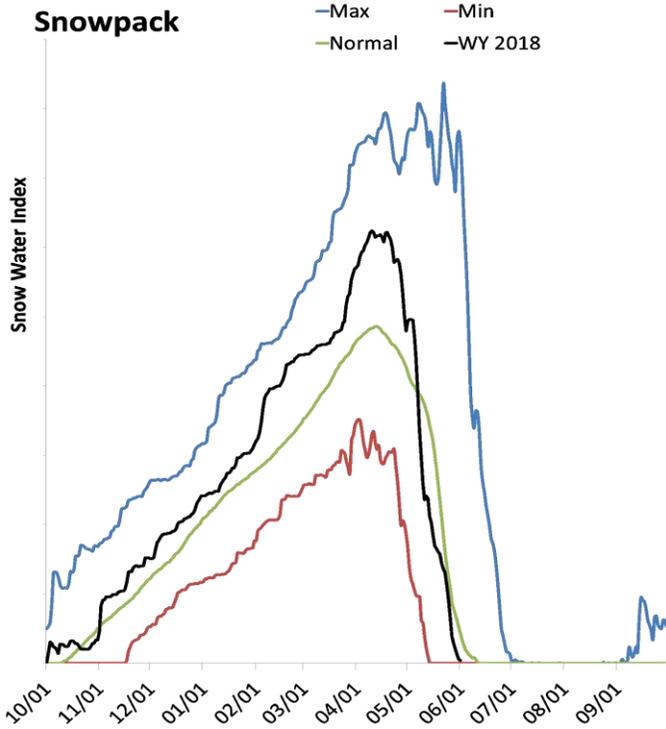
86% of Normal Precipitation Last Month



# Powder River Basin

June 1, 2018

Snowpack in the Powder River Basin is much below normal at 10% of normal, compared to 300% last year. Precipitation in May was above average at 122%, which brings the seasonal accumulation (Oct-May) to 100% of average. Forecast streamflow volumes range from 63% to 131% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

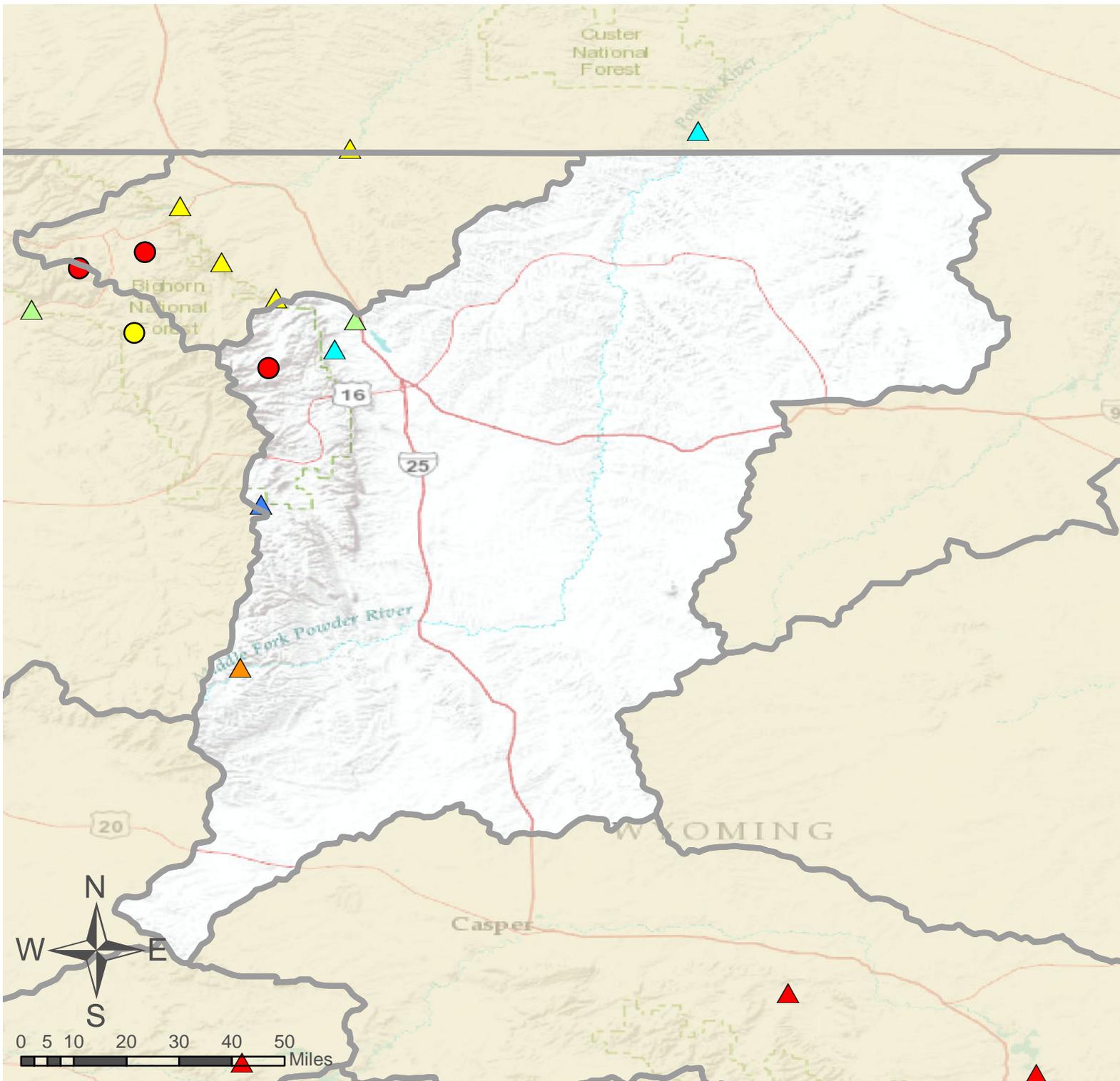
**Powder River Basin  
Streamflow Forecasts - June 1, 2018**

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast
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<b>POWDER RIVER BASIN</b>	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
MF Powder R nr Barnum	JUN-JUL	0.5	1.6	3	63%	4.4	6.5	4.8
	JUN-SEP	0.5	2.1	3.6	63%	5.1	7.2	5.7
NF Powder R nr Hazelton	JUN-JUL	3.8	5	5.9	131%	6.7	7.9	4.5
	JUN-SEP	4.3	5.7	6.6	127%	7.5	8.9	5.2
Rock Ck nr Buffalo	JUN-JUL	8.5	11.4	13.4	119%	15.4	18.3	11.3
	JUN-SEP	11.7	15	17.3	115%	19.6	23	15
Piney Ck at Kearny	JUN-JUL	13.4	20	25	100%	30	37	25
	JUN-SEP	14.6	23	28	100%	33	41	28
Powder R at Moorehead	JUN-JUL	57	91	114	124%	137	171	92
	JUN-SEP	66	105	132	120%	159	198	110

- 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

<b>Watershed Snowpack Analysis June 1, 2018</b>	# of Sites	% Median	Last Year % Median
UPPER POWDER RIVER	4		
CLEAR CREEK	2	10%	300%
CRAZY WOMAN CREEK	1		
POWDER RIVER	6	10%	300%



# Powder River Basin

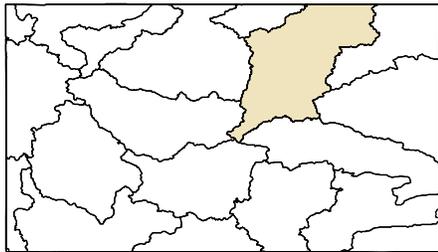
- SNOTEL Site
- △ Forecast Point

### % of Normal

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

As of June 1, 2018:

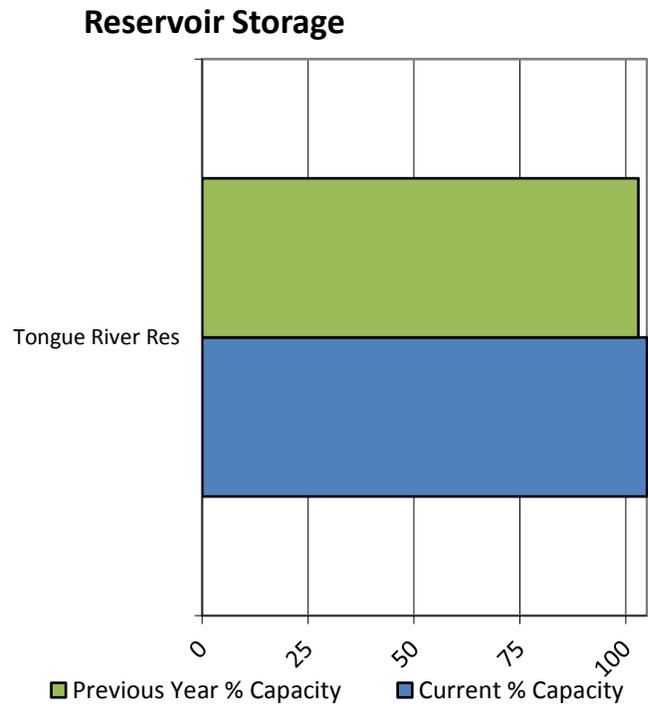
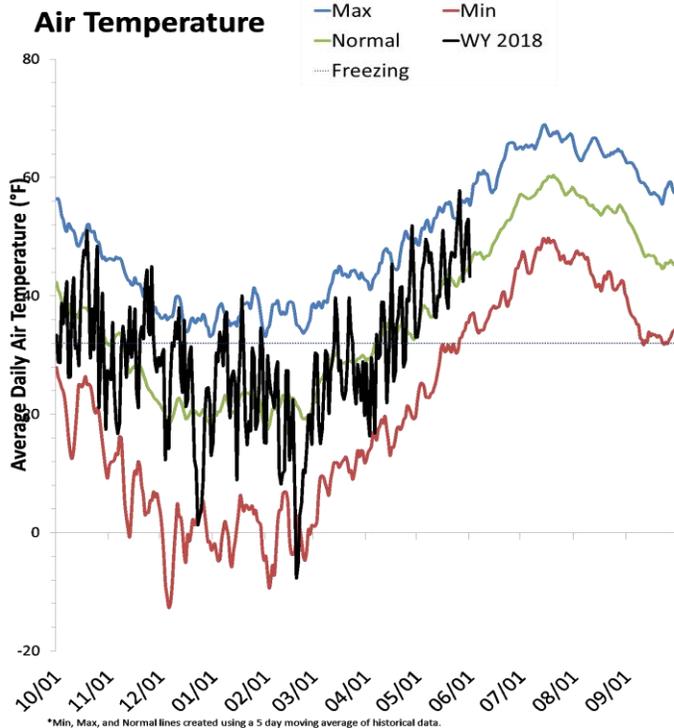
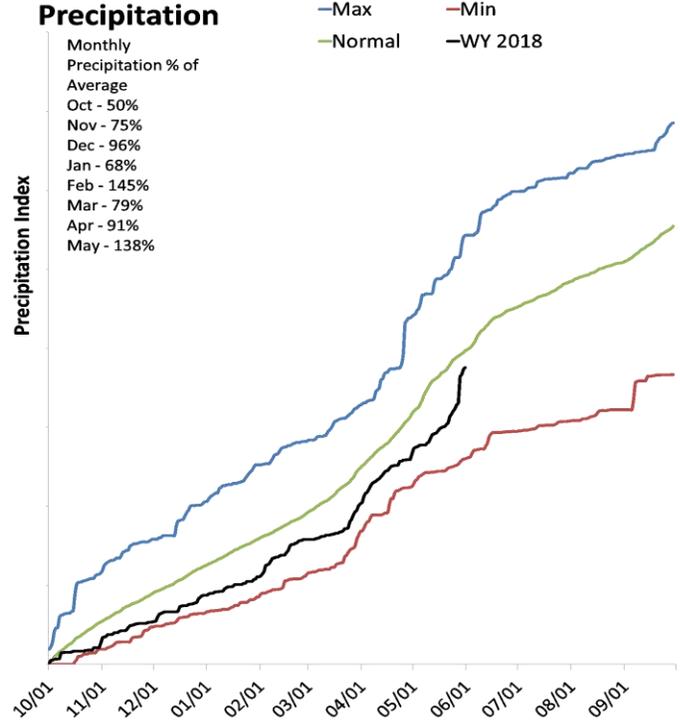
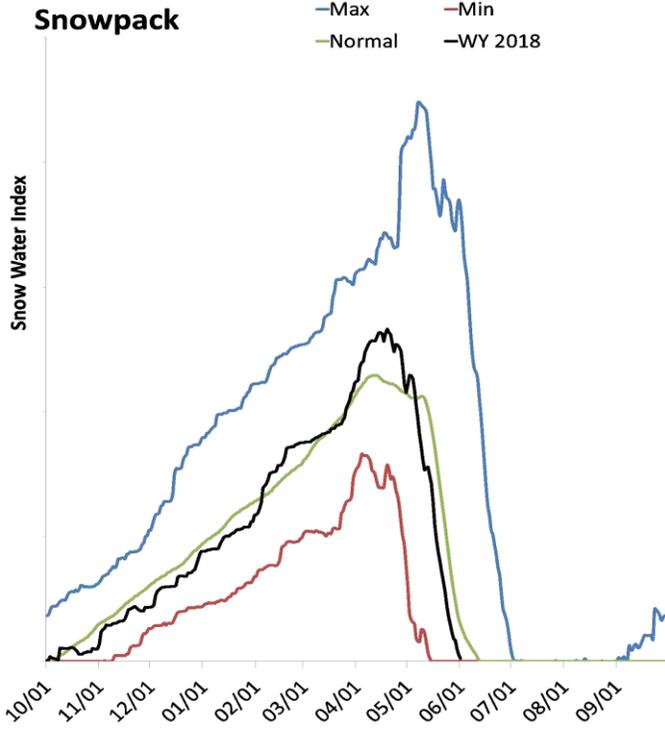
- 10% of Normal SWE
- 100% of Normal Precipitation
- 122% of Normal Precipitation Last Month



# Tongue River Basin

June 1, 2018

Snowpack in the Tongue River Basin is much below normal at 8% of normal, compared to 352% last year. Precipitation in May was much above average at 137%, which brings the seasonal accumulation (Oct-May) to 95% of average. Reservoir storage is at 105% of capacity, compared to 103% last year. Forecast streamflow volumes range from 76% to 86% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Tongue River Basin Streamflow Forecasts - June 1, 2018

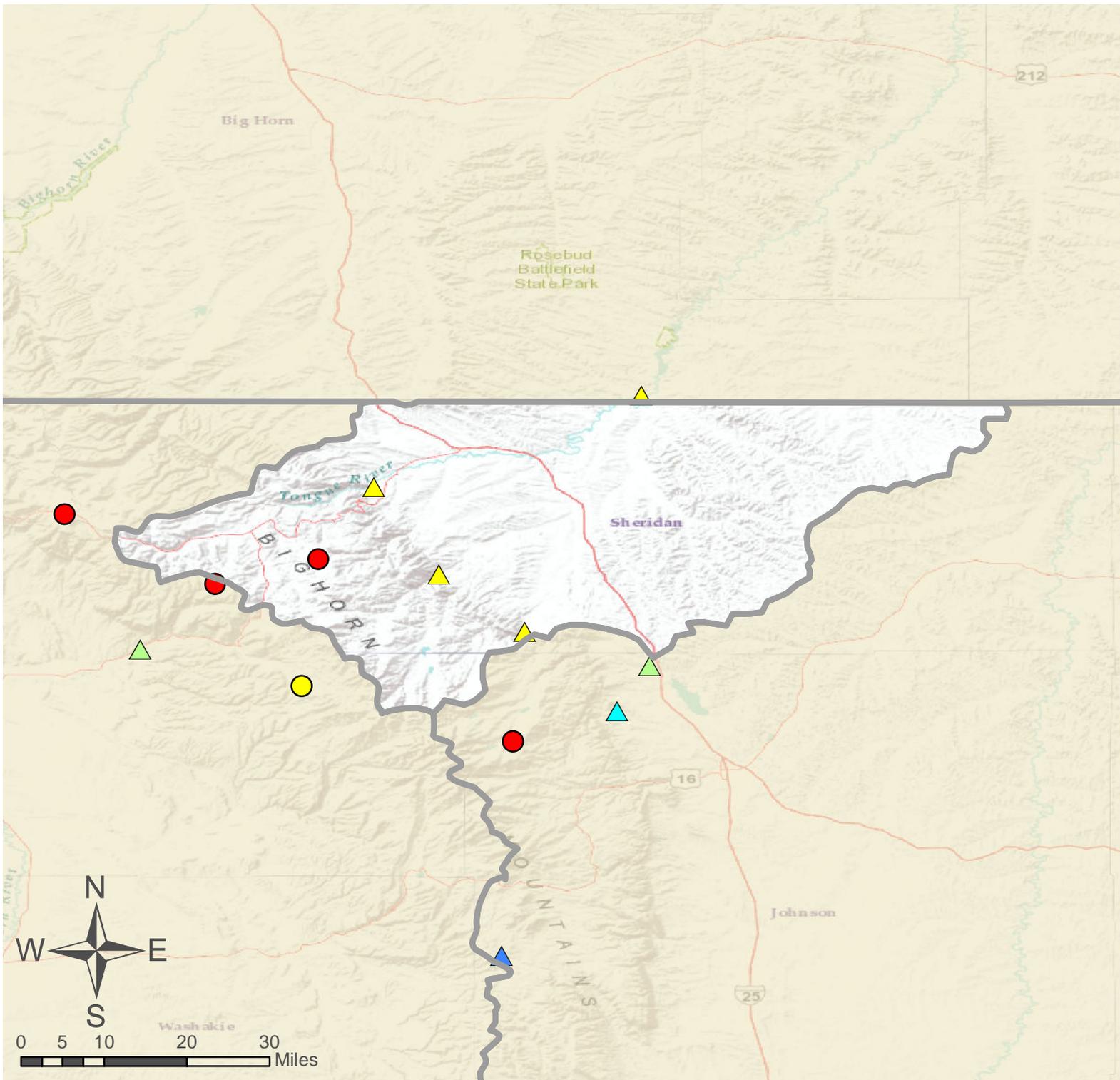
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

TONGUE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Tongue R nr Dayton	JUN-JUL	23	33	39	80%	45	55	49
	JUN-SEP	32	43	50	81%	58	69	62
Big Goose Ck nr Sheridan	JUN-JUL	13.9	20	25	81%	29	36	31
	JUN-SEP	21	28	33	85%	37	44	39
Little Goose Ck nr Big Horn	JUN-JUL	11.8	14.6	16.5	86%	18.4	21	19.1
	JUN-SEP	18.1	22	24	89%	27	31	27
Tongue River Reservoir Inflow	JUN-JUL	37	65	84	76%	104	132	110
	JUN-SEP	47	81	104	78%	127	162	134

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Tongue River Res	83.3	81.2	52.6	79.1
Basin-wide Total	83.3	81.2	52.6	79.1
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
GOOSE CREEK	2		
TONGUE RIVER	6	8%	352%



# Tongue River Basin

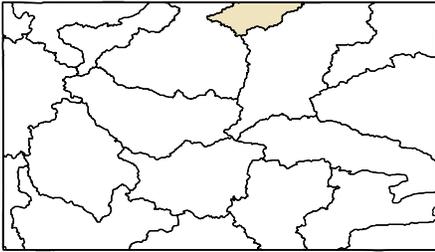
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

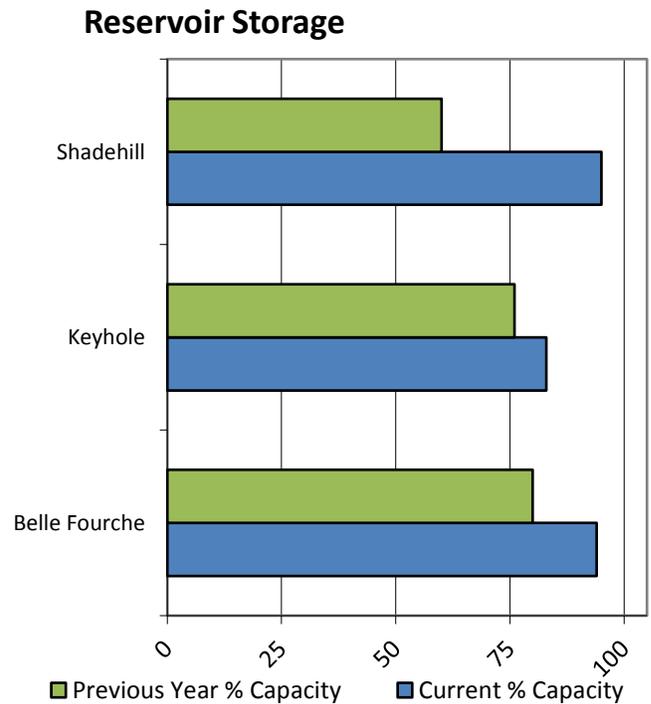
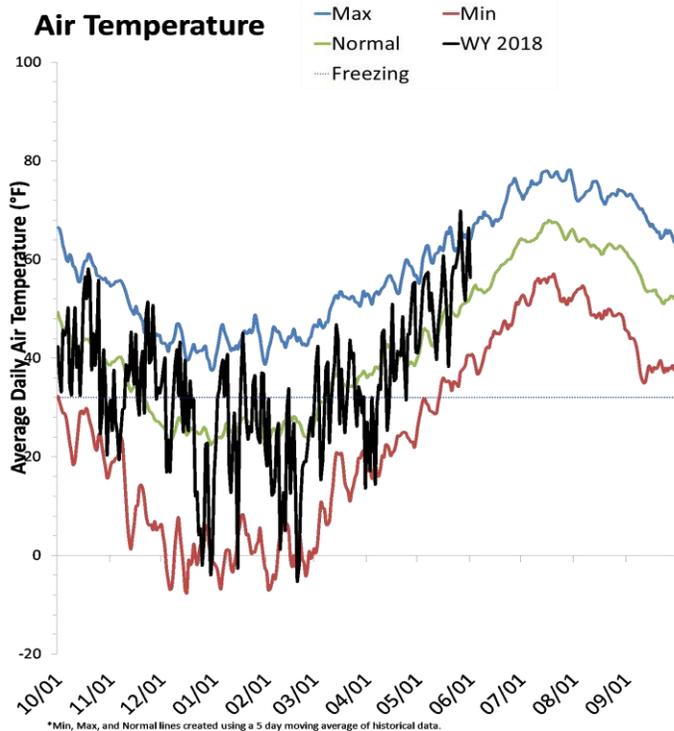
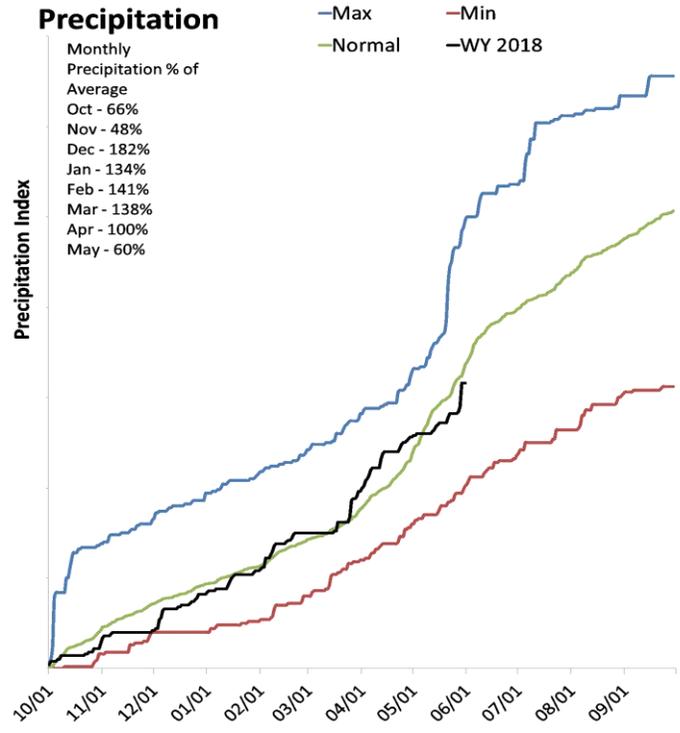
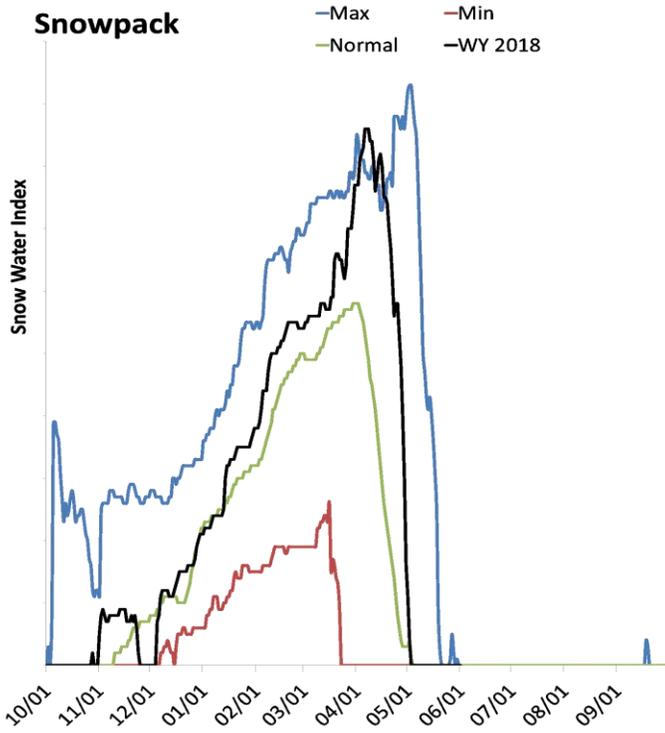
- 8% of Normal SWE
- 95% of Normal Precipitation
- 137% of Normal Precipitation Last Month



# Belle Fourche River Basin

June 1, 2018

Snowpack in the Belle Fourche River Basin is much below normal at 0% of normal, compared to 0% last year. Precipitation in May was much below average at 60%, which brings the seasonal accumulation (Oct-May) to 94% of average. Reservoir storage is at 90% of capacity, compared to 75% last year. Forecast streamflow volumes range from 0% to 0% of average.



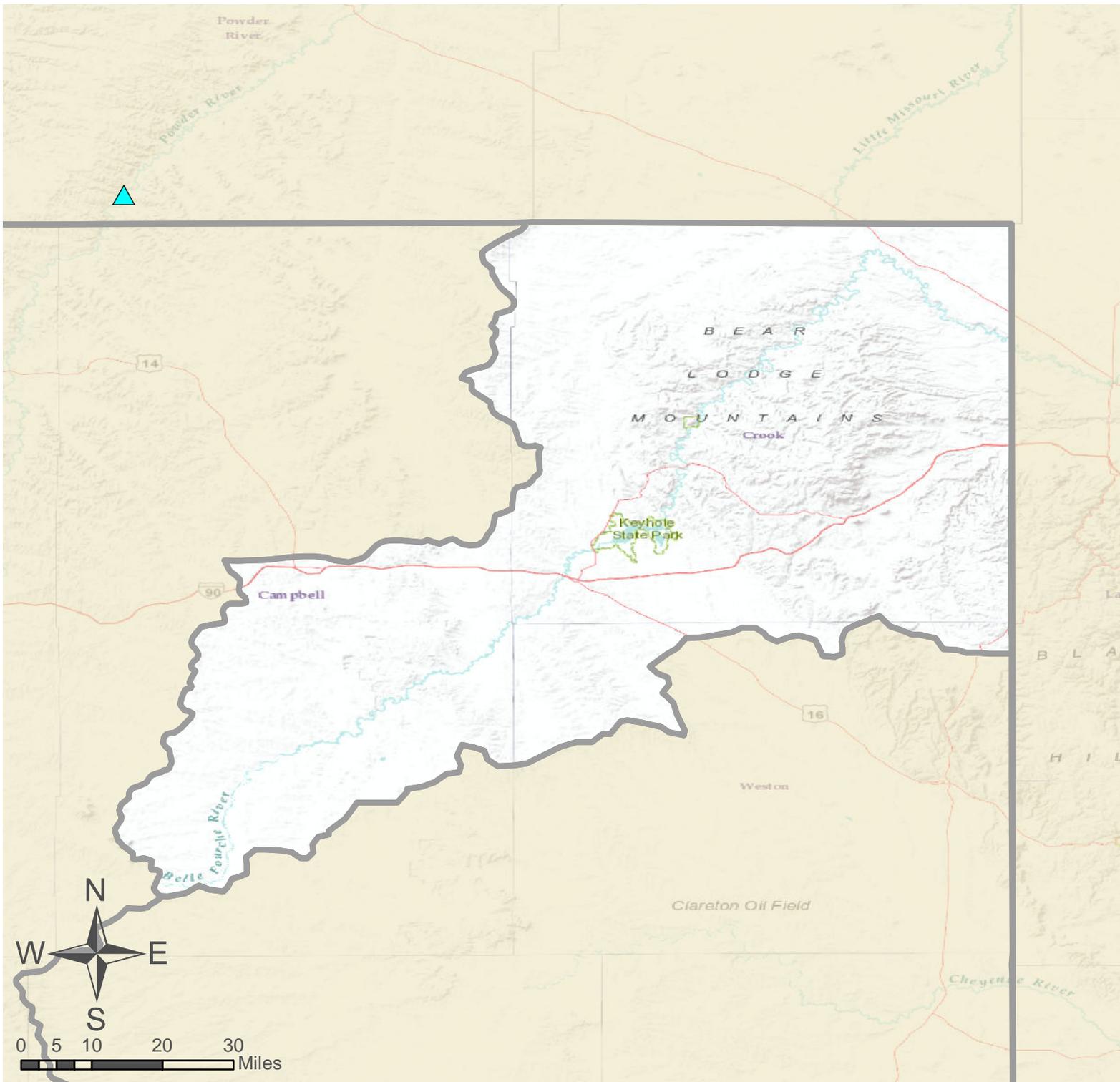
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

Data Current as of: 6/14/2018 7:54:15 AM

### Belle Fourche River Basin - June 1, 2018

<b>Reservoir Storage End of May, 2018</b>	<b>Current (KAF)</b>	<b>Last Year (KAF)</b>	<b>Average (KAF)</b>	<b>Capacity (KAF)</b>
Belle Fourche	168.6	142.6	155.1	178.4
Keyhole	161.6	147.3	100.9	193.8
Shadehill	77.0	48.8	61.4	81.4
Basin-wide Total	407.2	338.7	317.4	453.6
# of reservoirs	3	3	3	3

<b>Watershed Snowpack Analysis June 1, 2018</b>	<b># of Sites</b>	<b>% Median</b>	<b>Last Year % Median</b>
BELLE FOURCHE RIVER	1		



# Belle Fourche River Basin

- SNOTEL Site
- △ Forecast Point

## % of Normal

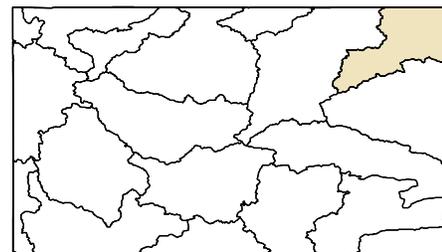
- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

As of June 1, 2018:

0% of Normal SWE

94% of Normal Precipitation

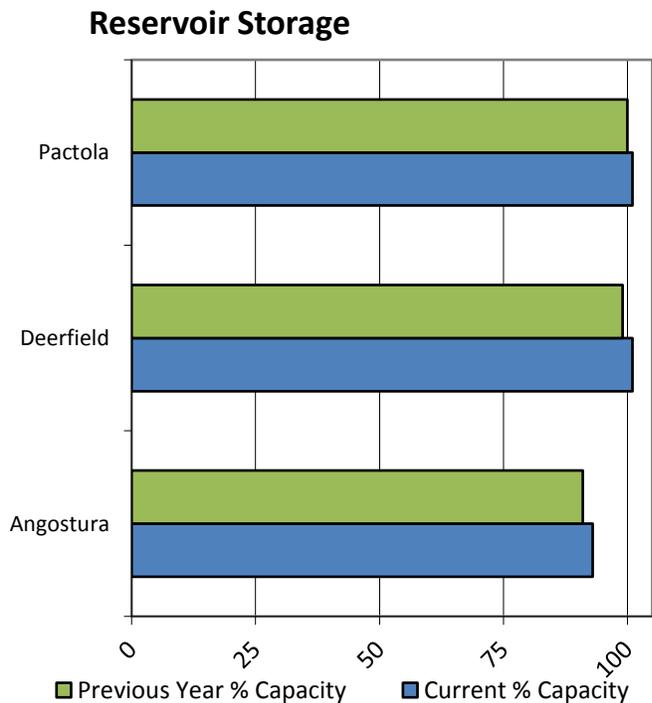
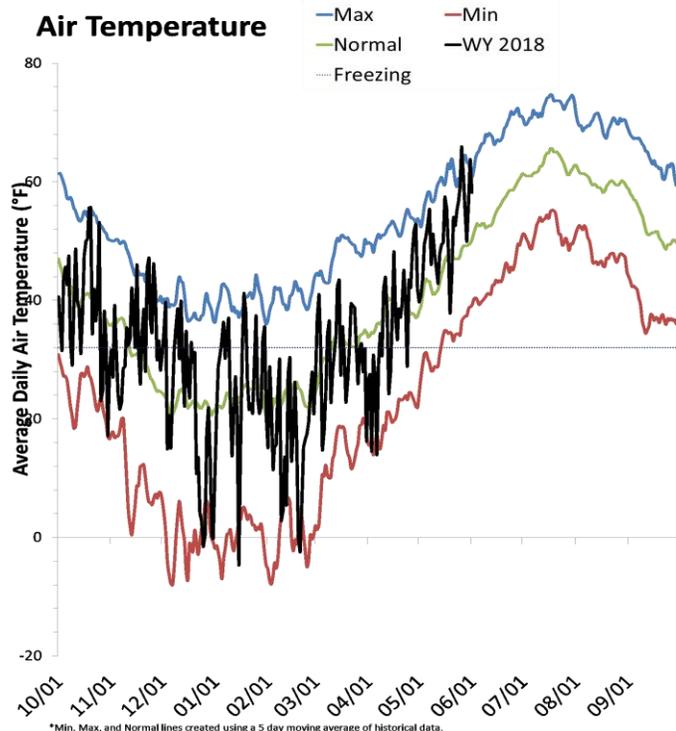
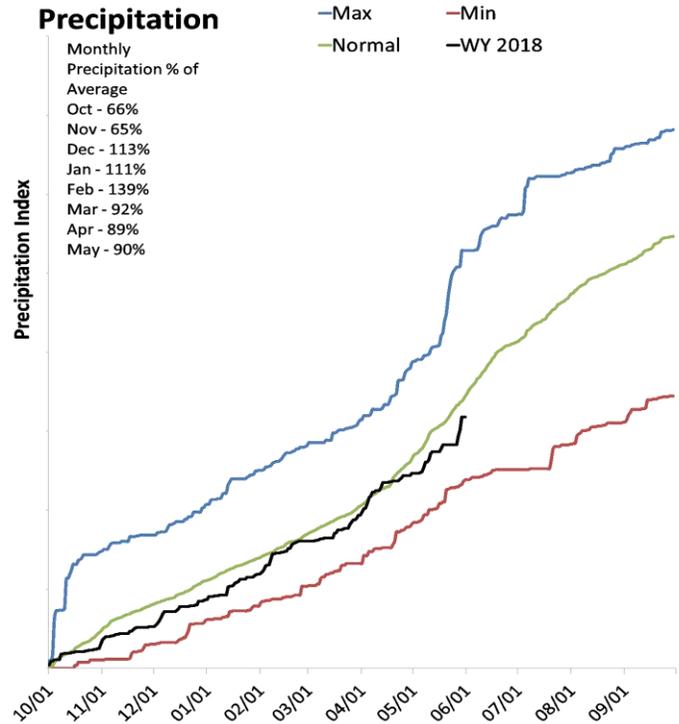
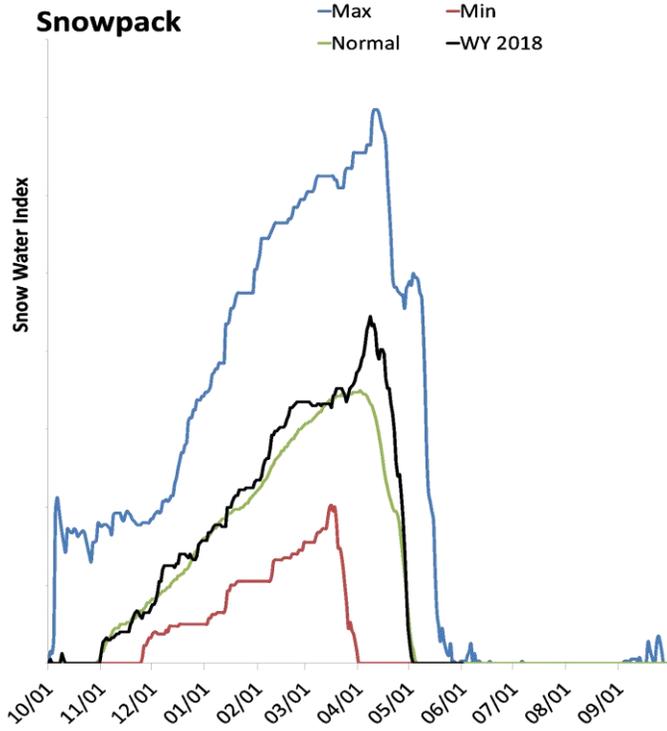
60% of Normal Precipitation Last Month



# Cheyenne River Basin

June 1, 2018

Snowpack in the Cheyenne River Basin is much below normal at 0% of normal, compared to 0% last year. Precipitation in May was near average at 90%, which brings the seasonal accumulation (Oct-May) to 92% of average. Reservoir storage is at 96% of capacity, compared to 94% last year. Forecast streamflow volumes range from 0% to 0% of average.



## Cheyenne River Basin Streamflow Forecasts - June 1, 2018

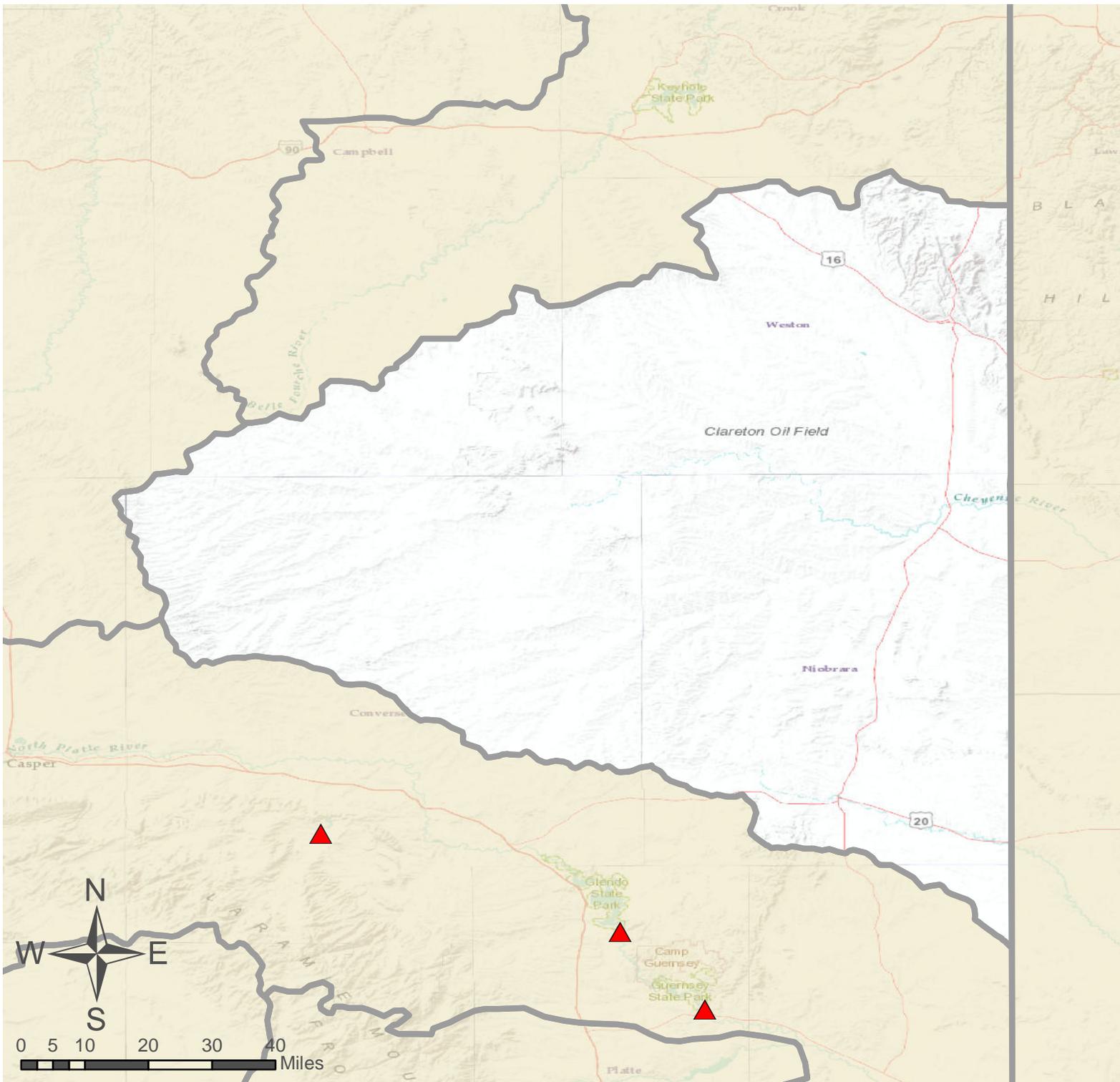
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

<b>CHEYENNE RIVER BASIN</b>	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
<hr/>								
Deerfield Reservoir Inflow								
Pactola Reservoir Inflow								
<hr/>								

- 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

<b>Reservoir Storage End of May, 2018</b>	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Angostura	114.0	111.0	101.3	122.1
Deerfield	15.4	15.1	14.3	15.2
Pactola	55.7	54.8	48.9	55.0
Basin-wide Total	185.1	180.9	164.5	192.3
# of reservoirs	3	3	3	3

<b>Watershed Snowpack Analysis June 1, 2018</b>	# of Sites	% Median	Last Year % Median
CHEYENNE RIVER	2		



# Cheyenne River Basin

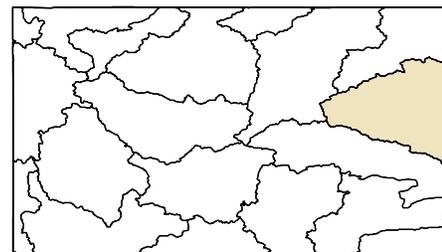
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

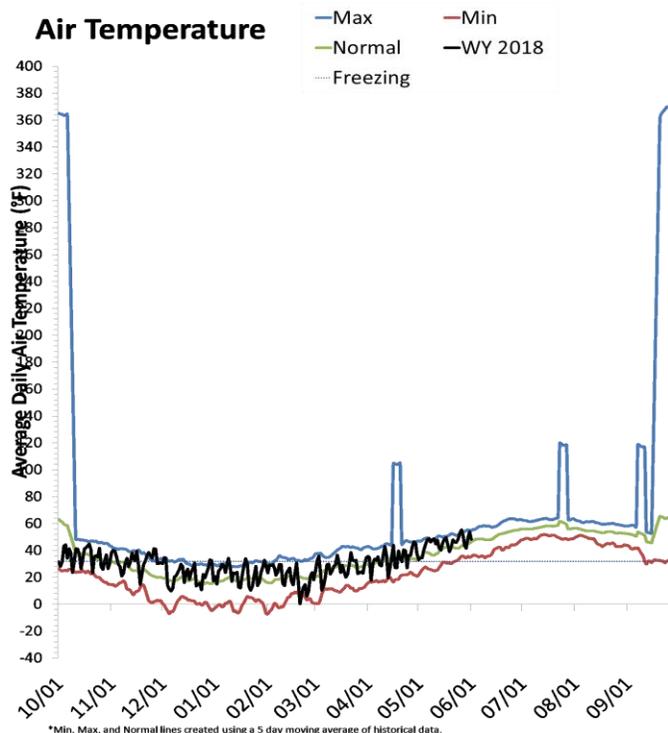
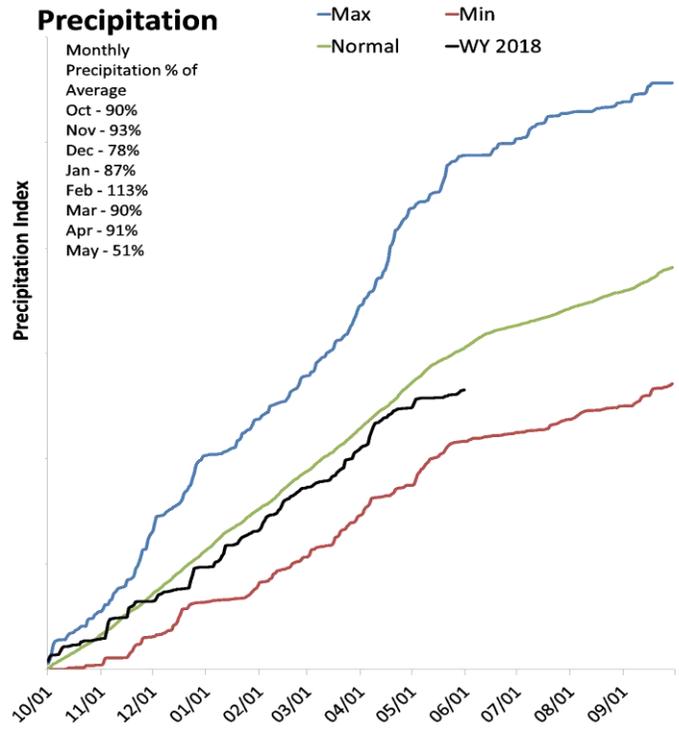
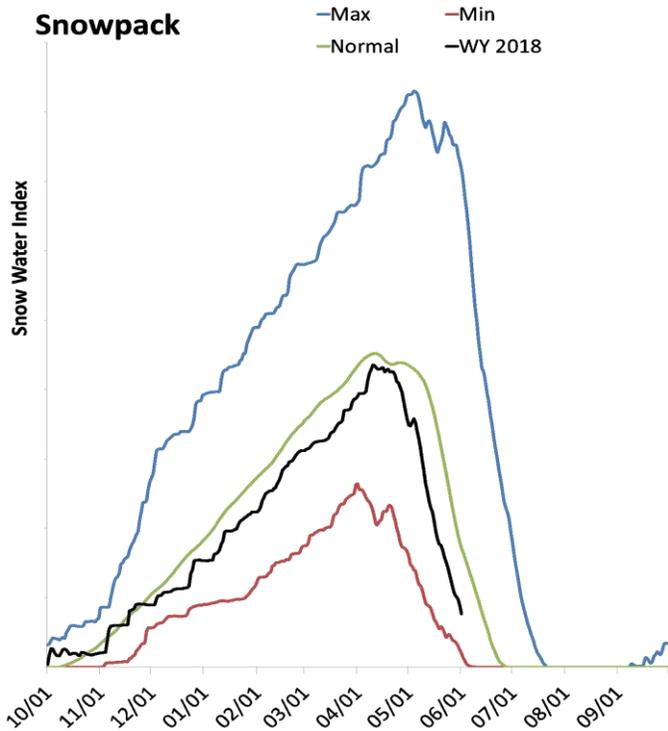
- 0% of Normal SWE
- 92% of Normal Precipitation
- 90% of Normal Precipitation Last Month



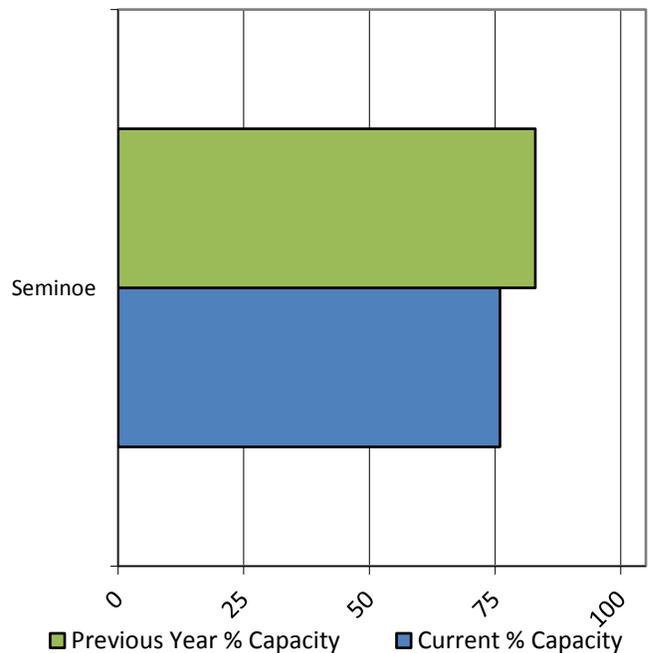
# Upper North Platte River Basin

June 1, 2018

Snowpack in the Upper North Platte River Basin is much below normal at 45% of normal, compared to 137% last year. Precipitation in May was much below average at 51%, which brings the seasonal accumulation (Oct-May) to 87% of average. Soil moisture at sites with sensors is at 77% of saturation. Reservoir storage is at 76% of capacity, compared to 83% last year. The forecast streamflow volume for North Platte into Seminoe is 45% of average.



## Reservoir Storage



### Upper North Platte River Basin Streamflow Forecasts - June 1, 2018

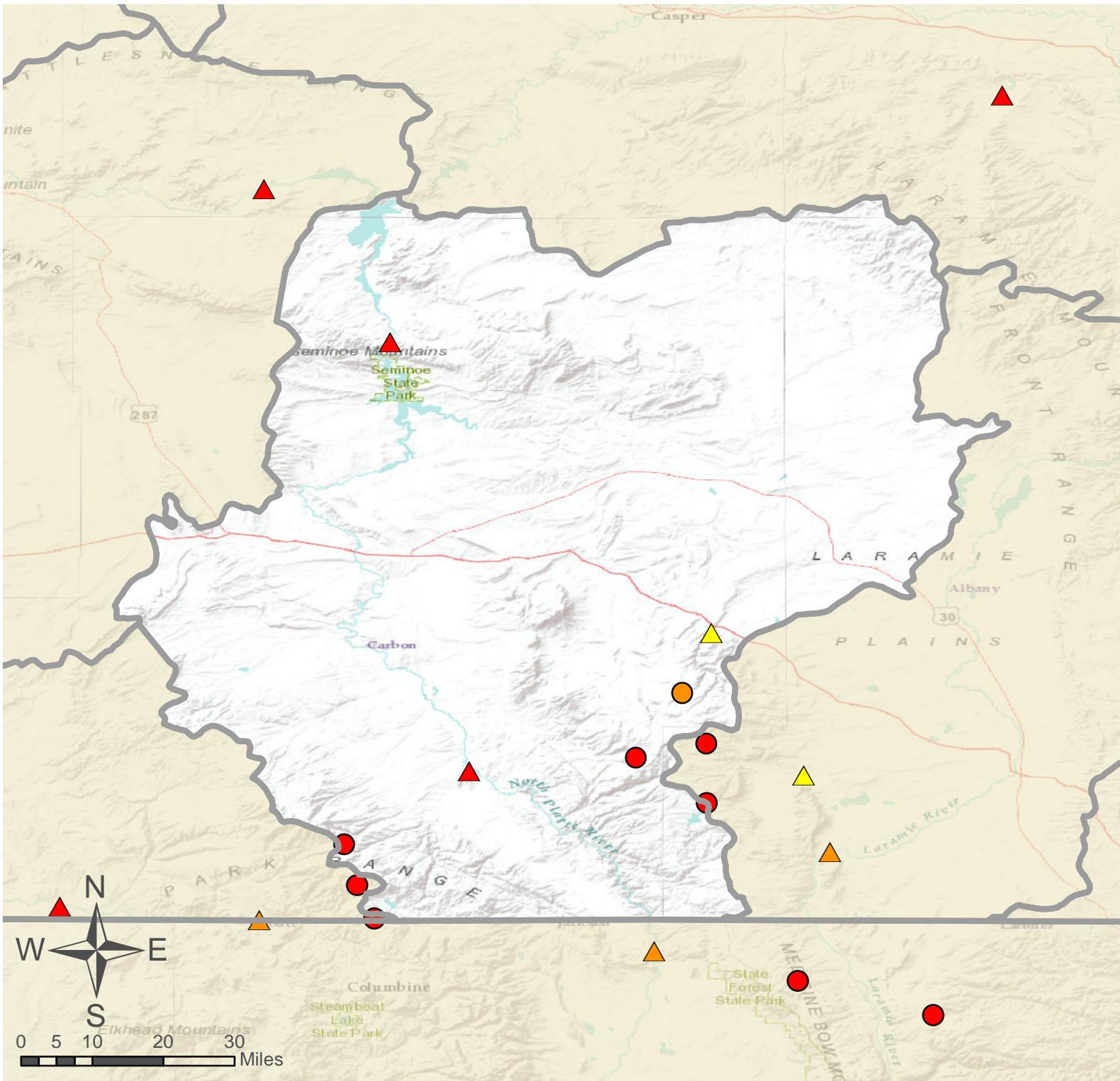
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

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	JUN-JUL	30	56	74	60%	92	118	123
	JUN-SEP	39	70	90	62%	111	141	146
Encampment R nr Encampment <sup>2</sup>	JUN-JUL	1	2.7	12.7	17%	23	37	75
	JUN-SEP	1	7.7	18.1	22%	28	44	84
Rock Ck ab King Canyon Cnl nr Arlington	JUN-JUL	14.8	20	24	75%	28	33	32
	JUN-SEP	16.5	22	26	74%	30	36	35
Sweetwater R nr Alcova	JUN-JUL	0.28	6.3	10.4	40%	14.5	20	26
	JUN-SEP	1.13	8.4	13.3	43%	18.3	26	31
Seminole Reservoir Inflow	JUN-JUL	36	114	167	43%	220	300	390
	JUN-SEP	63	145	200	45%	260	340	445

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Seminole	772.6	847.0	607.1	1016.7
Basin-wide Total	772.6	847.0	607.1	1016.7
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
N PLATTE above Northgate	9	45%	139%
ENCAMPMENT RIVER	3	27%	159%
BRUSH CREEK	2	47%	93%
MEDICINE BOW & ROCK CREEKS	1	66%	143%
UPPER NORTH PLATTE RIVER	17	45%	137%



# Upper North Platte River Basin

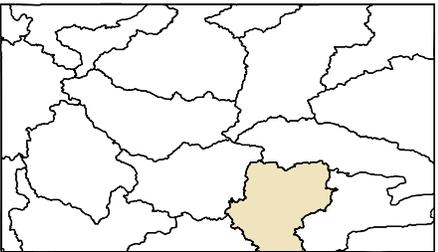
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

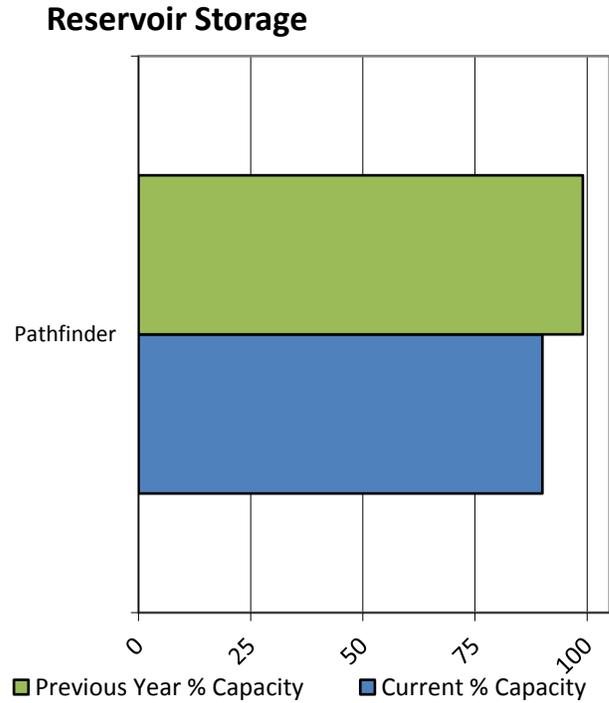
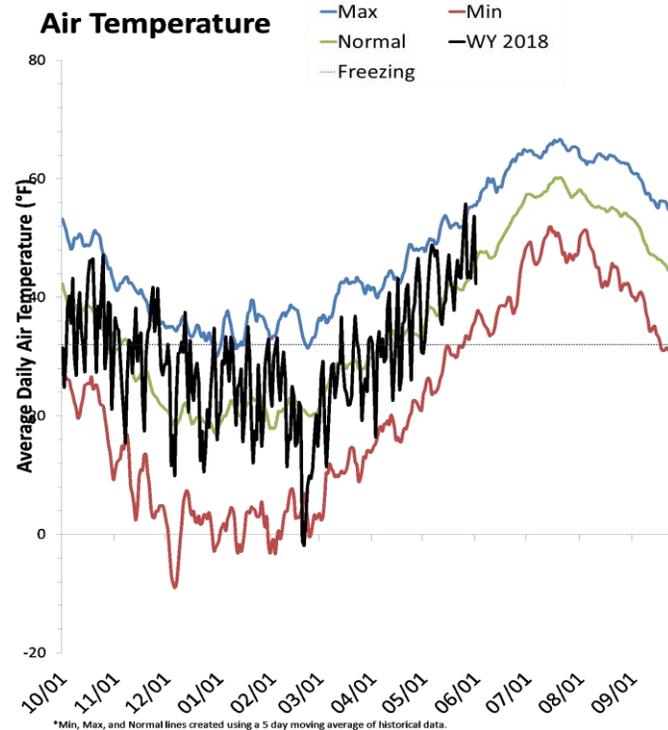
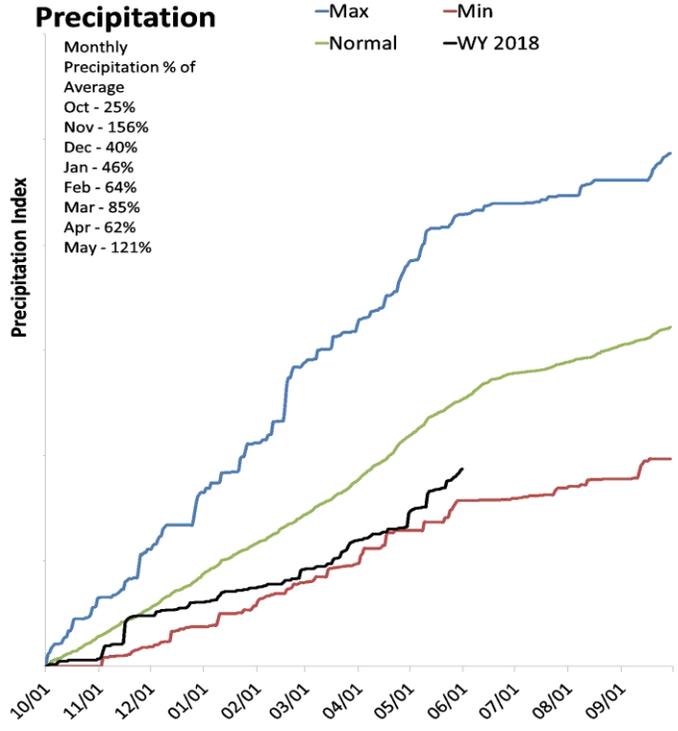
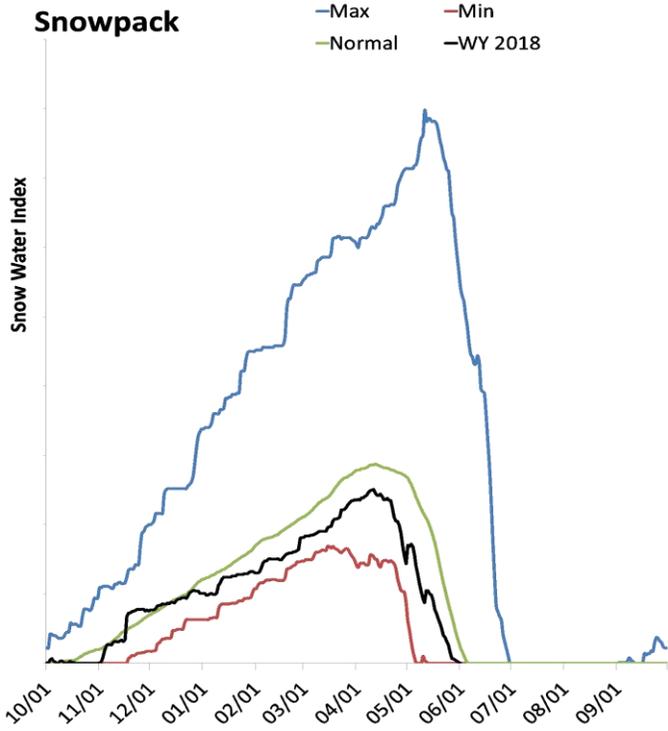
- 45% of Normal SWE
- 87% of Normal Precipitation
- 51% of Normal Precipitation Last Month



# Sweetwater River Basin

June 1, 2018

Snowpack in the Sweetwater River Basin is much below normal at 0% of normal, compared to 1609% last year. Precipitation in May was above average at 122%, which brings the seasonal accumulation (Oct-May) to 74% of average. Soil moisture at sites with sensors is at 40% of saturation. Reservoir storage is at 90% of capacity, compared to 99% last year. Forecast streamflow volumes range from 40% to 40% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Sweetwater River Basin Streamflow Forecasts - June 1, 2018

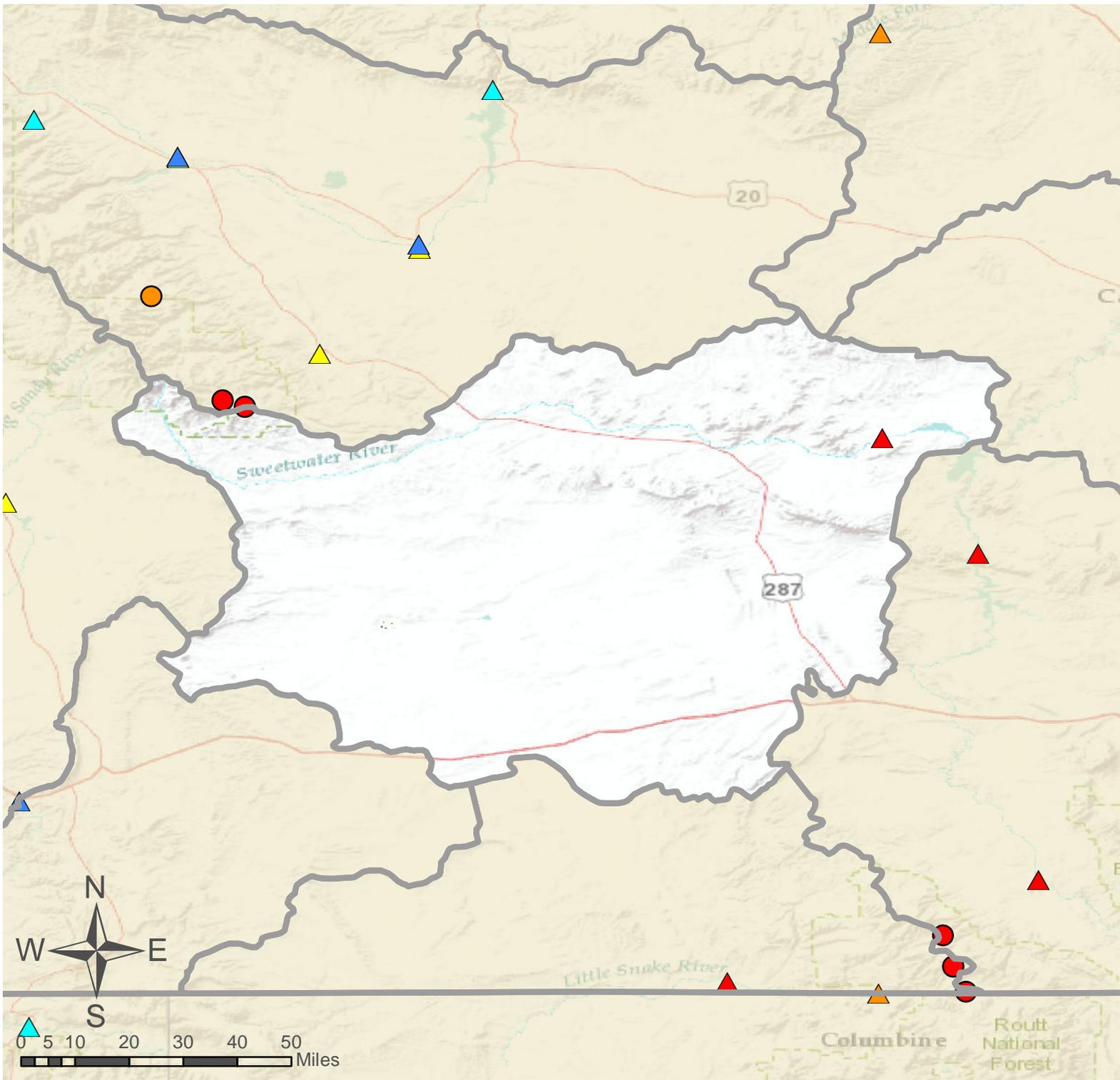
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

SWEETWATER RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Sweetwater R nr Alcova								
	JUN-JUL	0.28	6.3	10.4	40%	14.5	20	26
	JUN-SEP	1.13	8.4	13.3	43%	18.3	26	31

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Pathfinder	913.0	1010.1	633.8	1016.5
Basin-wide Total	913.0	1010.1	633.8	1016.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
SWEETWATER RIVER	3	0%	1609%



# Sweetwater River Basin

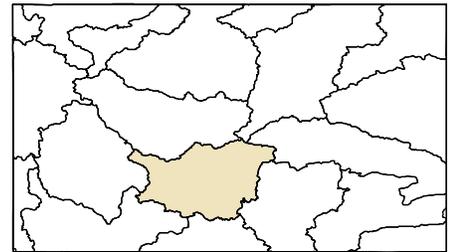
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

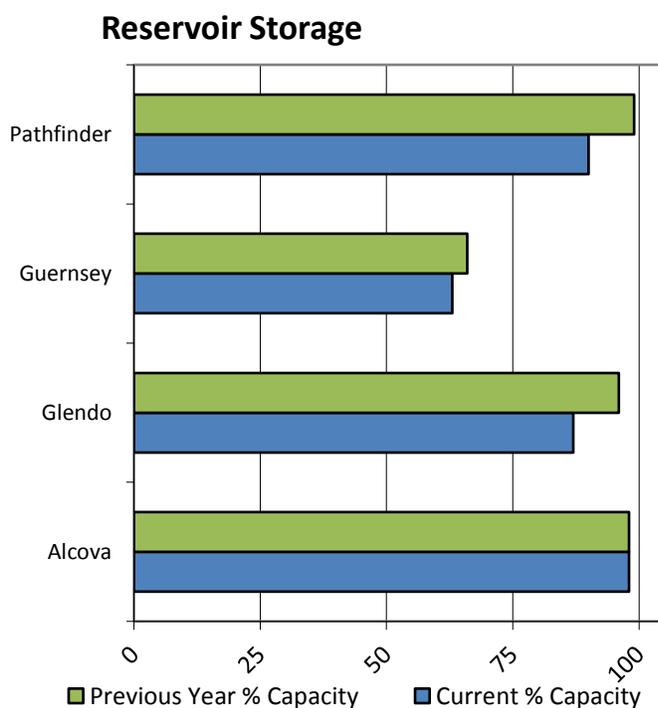
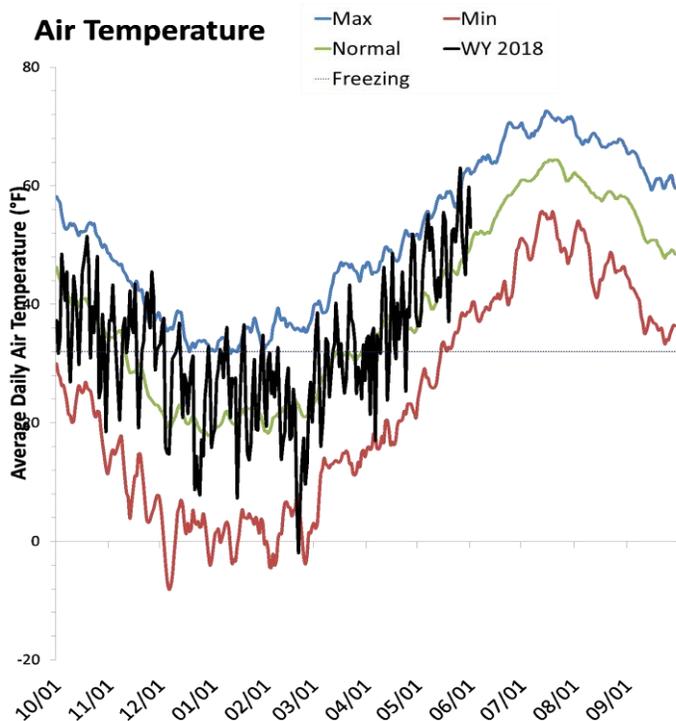
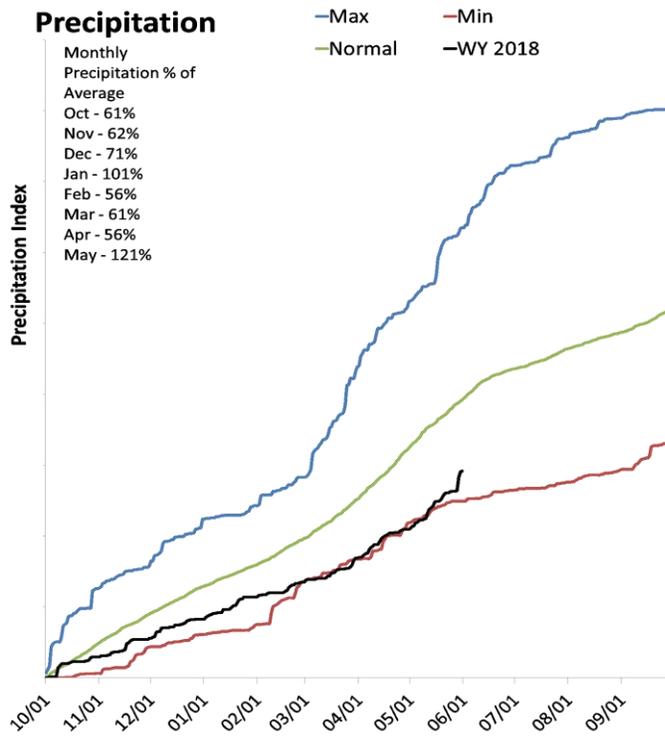
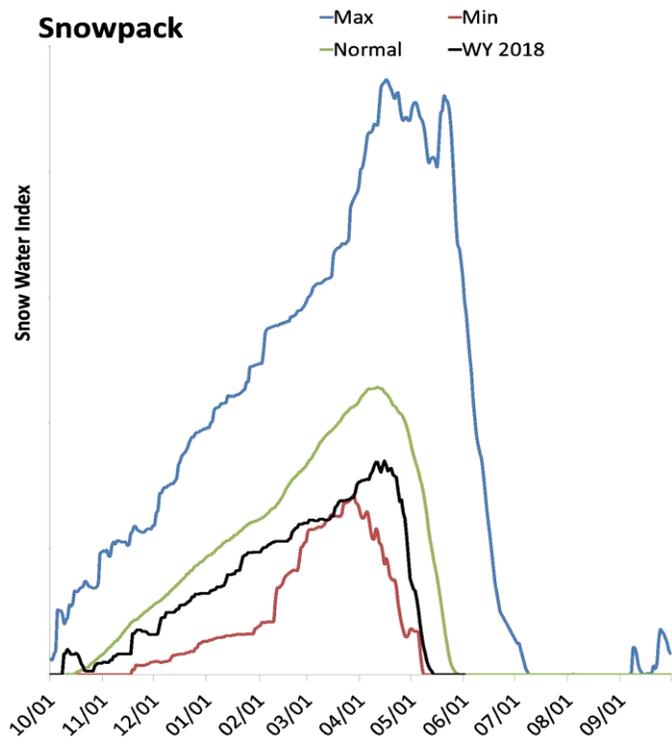
- 0% of Normal SWE
- 74% of Normal Precipitation
- 122% of Normal Precipitation Last Month



# Lower North Platte River Basin

June 1, 2018

Snowpack in the Lower North Platte River Basin is much below normal at 0% of normal, compared to 0% last year. Precipitation in May was above average at 120%, which brings the seasonal accumulation (Oct-May) to 74% of average. Soil moisture at sites with sensors is at 39% of saturation. Reservoir storage is at 89% of capacity, compared to 97% last year. The forecast streamflow volume for the North Platte River is 29% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

### Lower North Platte River Basin Streamflow Forecasts - June 1, 2018

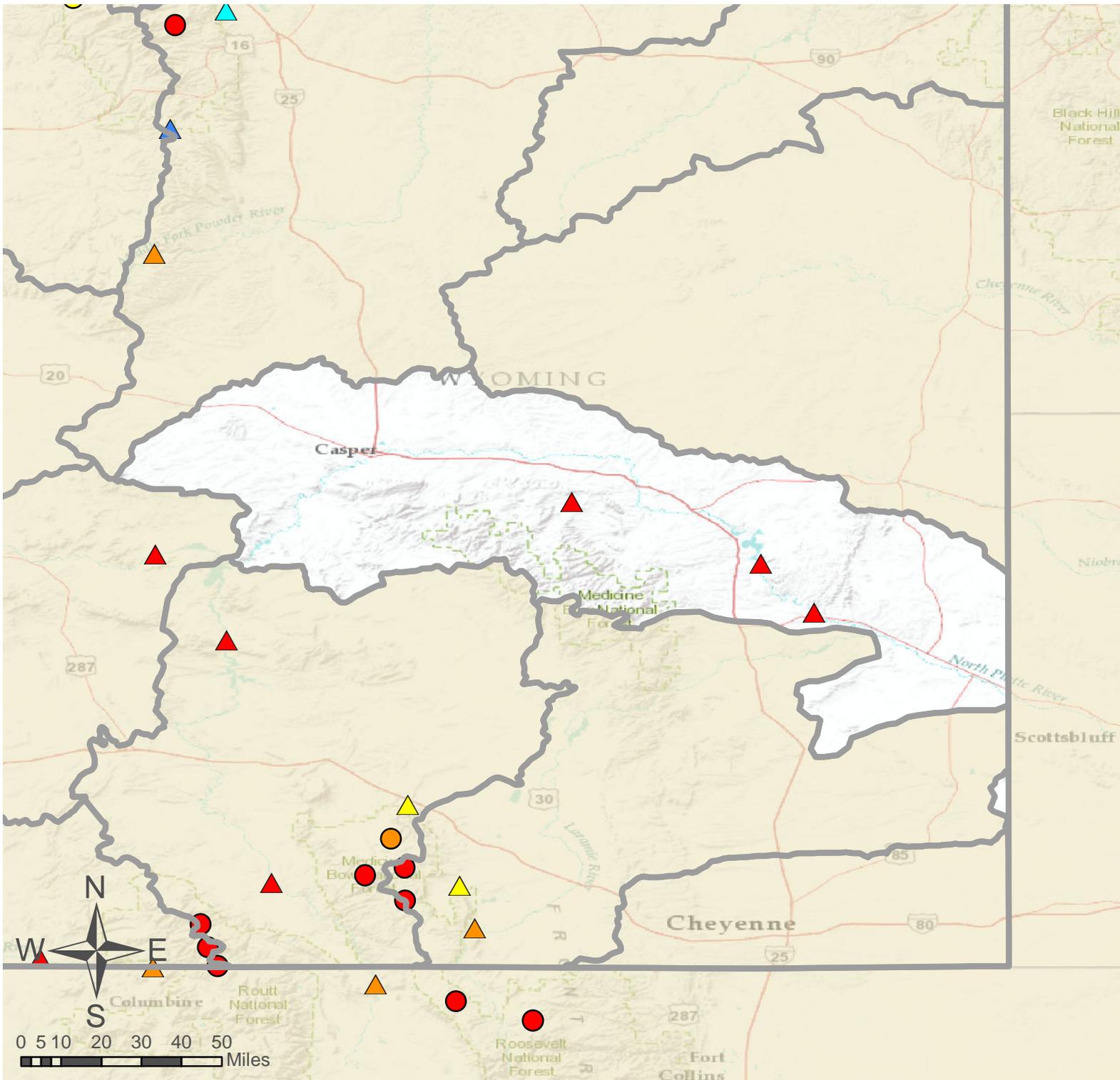
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

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	JUN-JUL	0.05	0.4	0.98	22%	2.5	4.9	4.5
	JUN-SEP	0.1	0.5	1.3	27%	2.9	5.3	4.8
North Platte R bl Glendo Reservoir	JUN-JUL	-11.1	68	122	33%	176	255	375
	JUN-SEP	-16.7	70	128	32%	187	275	405
North Platte R bl Guernsey Reservoir	JUN-JUL	-28	53	109	29%	164	245	370
	JUN-SEP	-34	55	115	29%	174	265	400

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Alcova	180.3	180.5	179.7	184.3
Glendo	439.2	487.1	475.0	506.4
Guernsey	28.5	30.0	34.3	45.6
Pathfinder	913.0	1010.1	633.8	1016.5
Basin-wide Total	1561.0	1707.8	1322.8	1752.8
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
DEER & LaPRELE CREEKS	2		
LOWER NORTH PLATTE RIVER	4		



# Lower North Platte River Basin

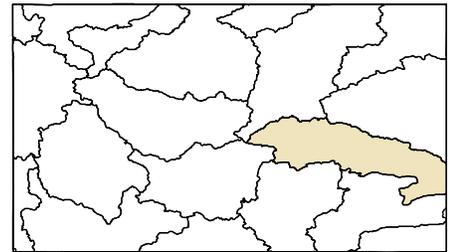
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

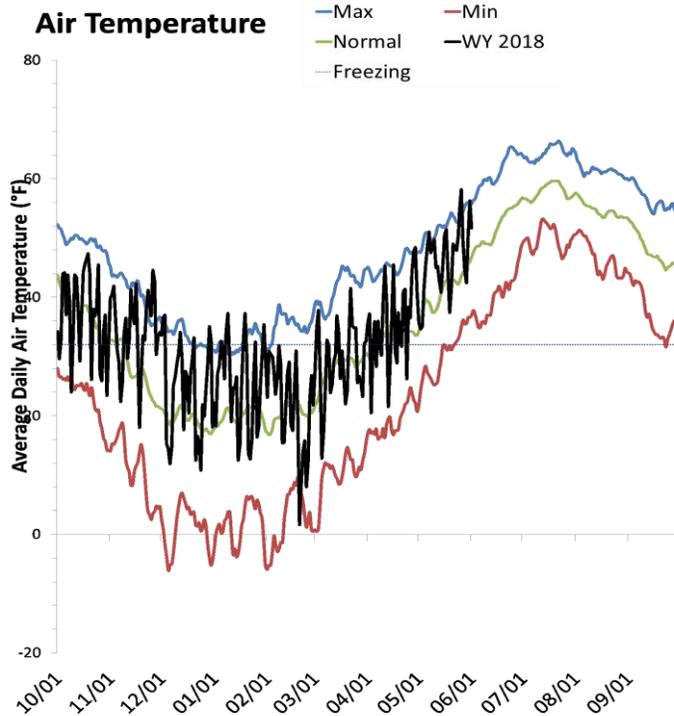
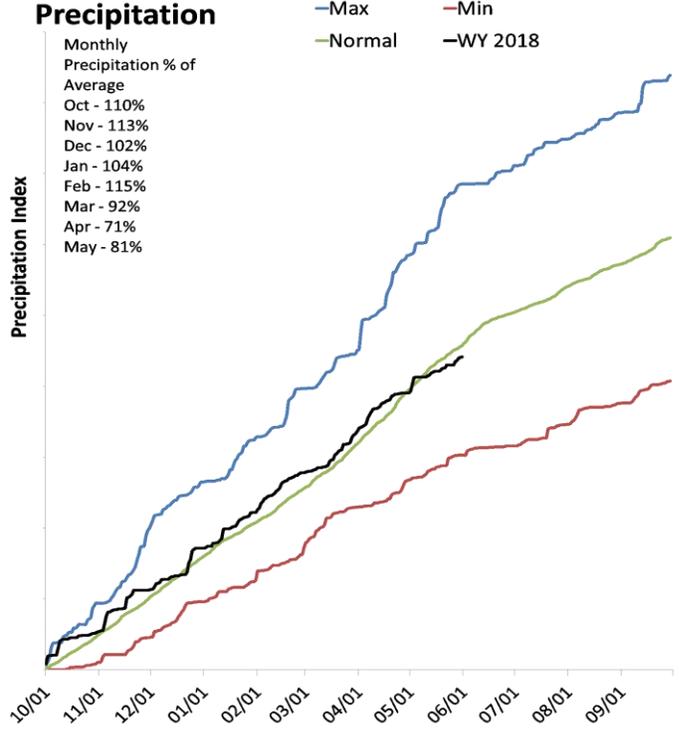
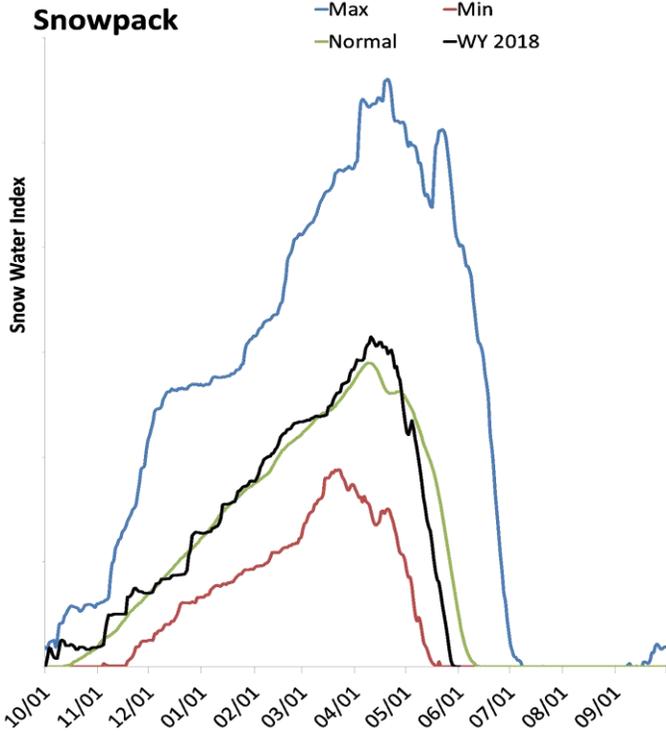
- 0% of Normal SWE
- 74% of Normal Precipitation
- 120% of Normal Precipitation Last Month



# Laramie River Basin

June 1, 2018

Snowpack in the Laramie River Basin is much below normal at 0% of normal, compared to 173% last year. Precipitation in May was below average at 81%, which brings the seasonal accumulation (Oct-May) to 96% of average. Soil moisture at sites with sensors is at 73% of saturation. Reservoir storage is at 88% of capacity, compared to 90% last year. The forecast streamflow volume for the Laramie River is 67% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Laramie River Basin Streamflow Forecasts - June 1, 2018

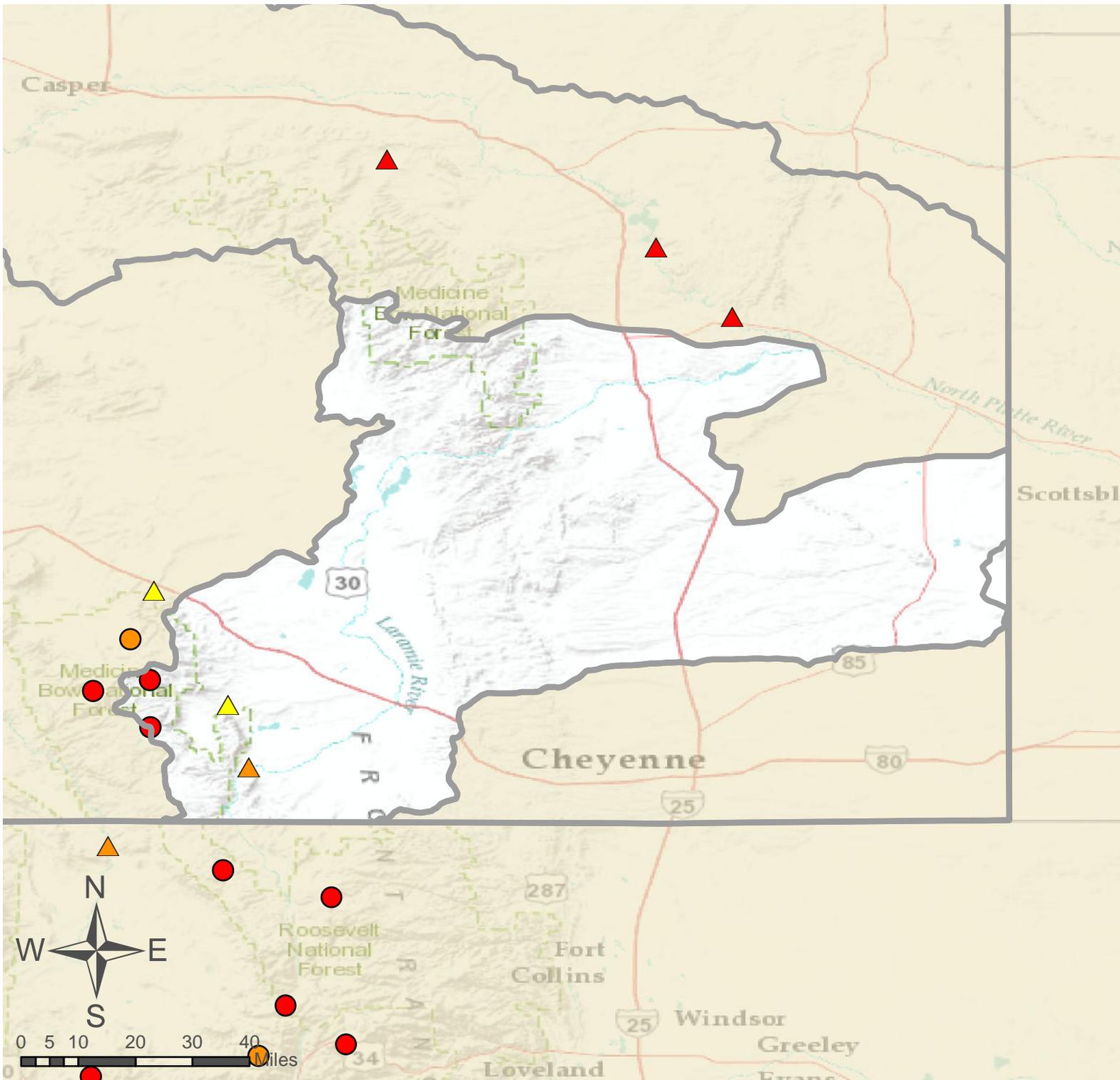
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

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	JUN-JUL	23	37	46	65%	56	70	71
	JUN-SEP	29	44	55	67%	65	81	82
Little Laramie R nr Filmore	JUN-JUL	22	27	31	89%	35	41	35
	JUN-SEP	24	31	35	90%	40	46	39

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Wheatland #2	86.8	89.0	55.7	98.9
Basin-wide Total	86.8	89.0	55.7	98.9
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
LARAMIE RIVER abv Laramie	4	0%	204%
LITTLE LARAMIE RIVER	2	0%	125%
LARAMIE RIVER	7	0%	173%
NORTH PLATTE TOTAL RIVER	26	40%	169%



# Laramie River Basin

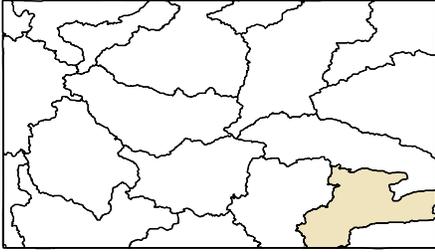
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

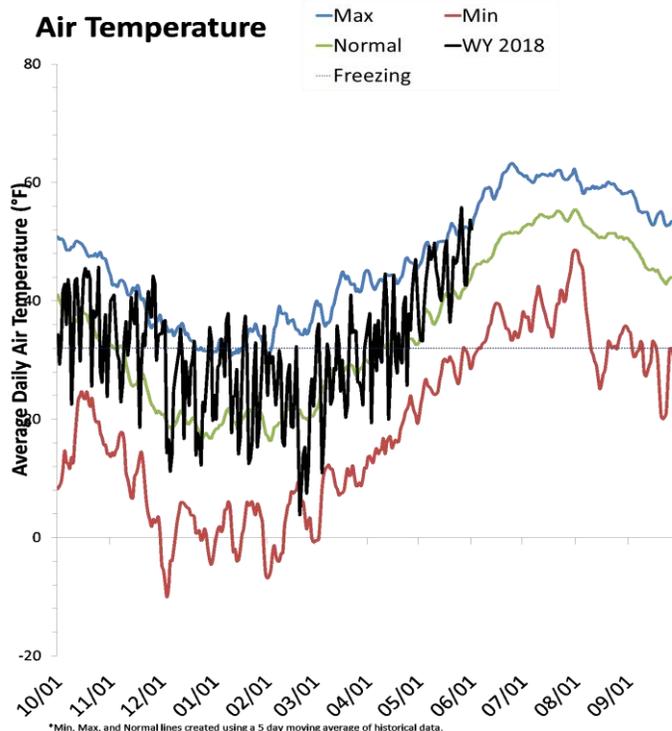
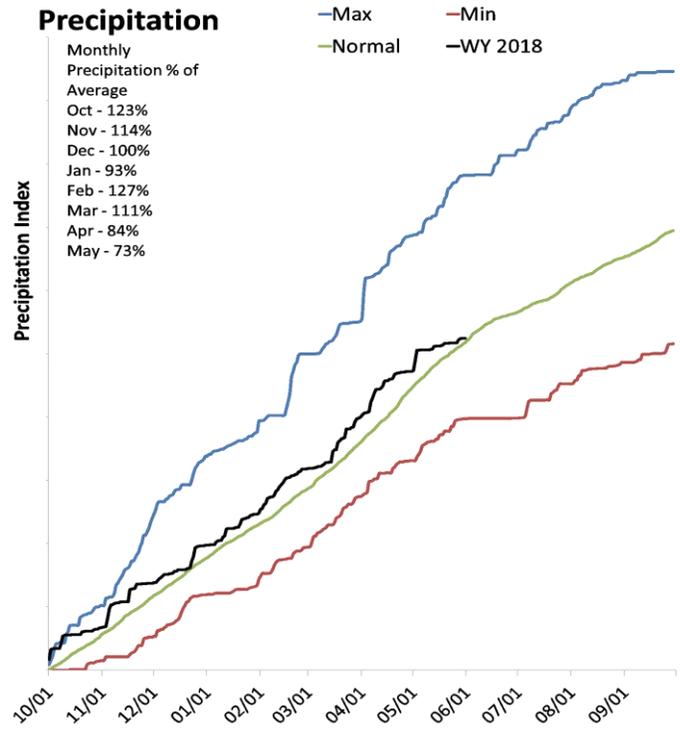
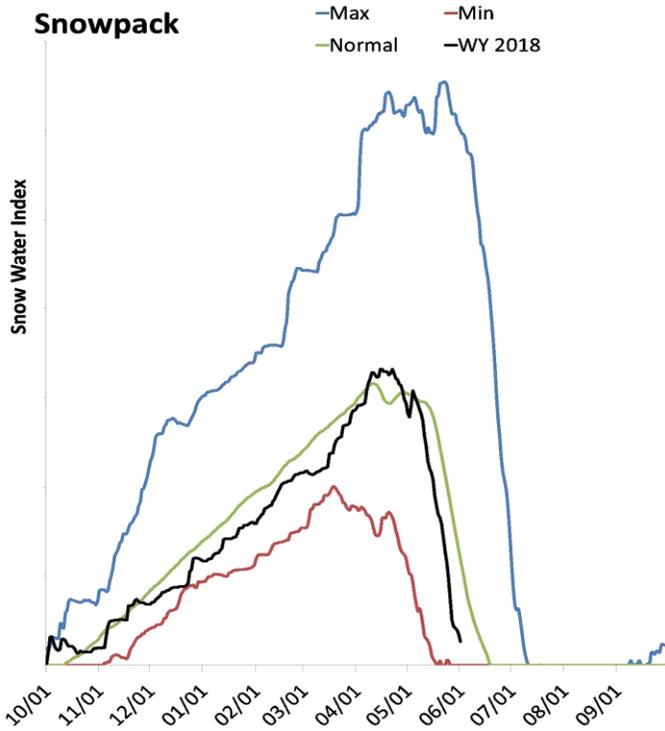
0% of Normal SWE  
 96% of Normal Precipitation  
 81% of Normal Precipitation Last Month



# South Platte River Basin

June 1, 2018

Snowpack in the South Platte River Basin is much below normal at 22% of normal, compared to 177% last year. Precipitation in May was below average at 72%, which brings the seasonal accumulation (Oct-May) to 101% of average. Soil moisture at sites with sensors is at 95% of saturation. Forecast streamflow volumes range from 0% to 0% of average.

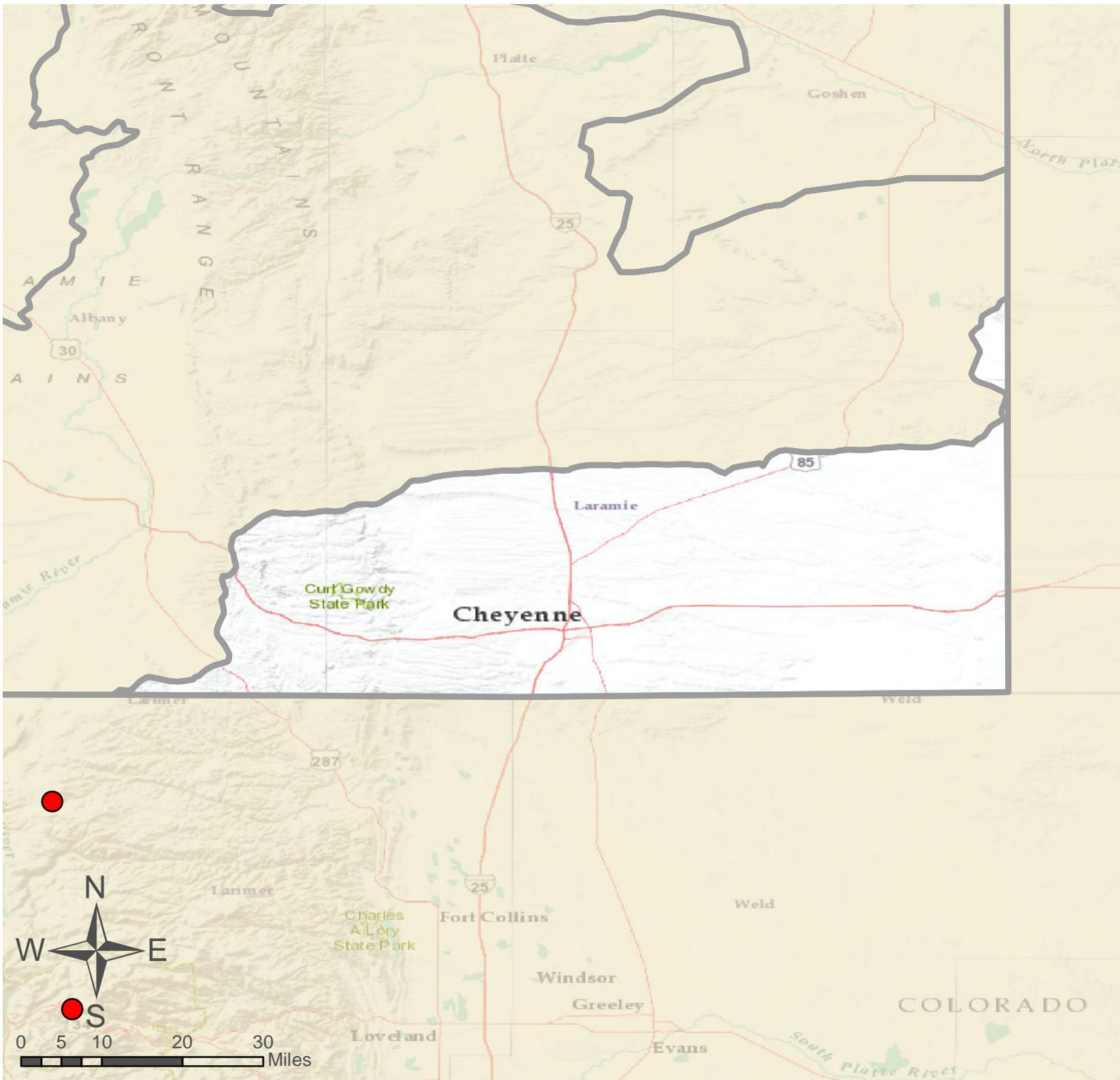


\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

Data Current as of: 6/14/2018 7:54:38 AM

## South Platte River Basin - June 1, 2018

<b>Watershed Snowpack Analysis June 1, 2018</b>	# of Sites	% Median	Last Year % Median
<u>SOUTH PLATTE RIVER</u>	4	22%	177%



# South Platte River Basin

- SNOTEL Site
- △ Forecast Point

## % of Normal

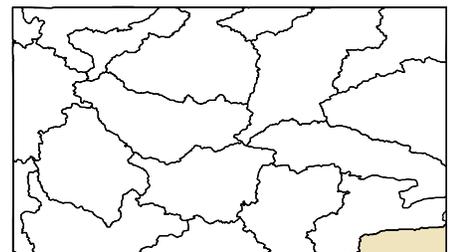
- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

As of June 1, 2018:

22% of Normal SWE

101% of Normal Precipitation

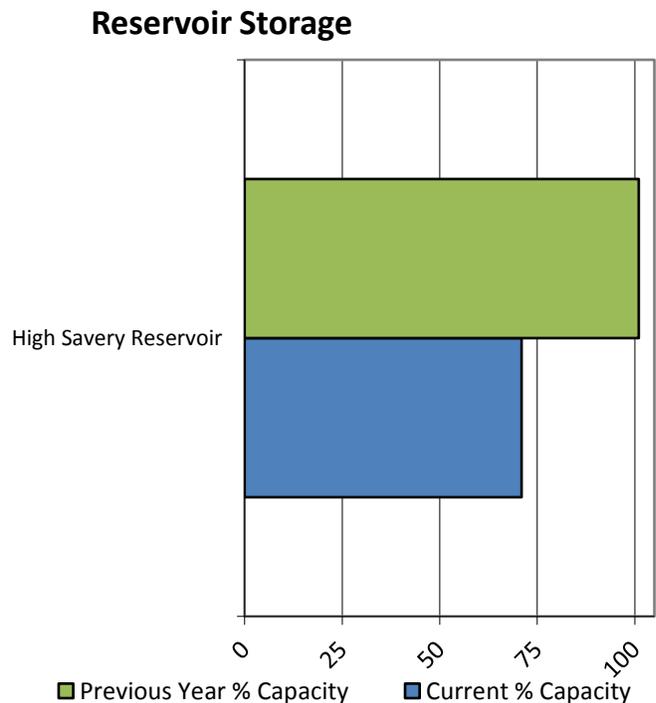
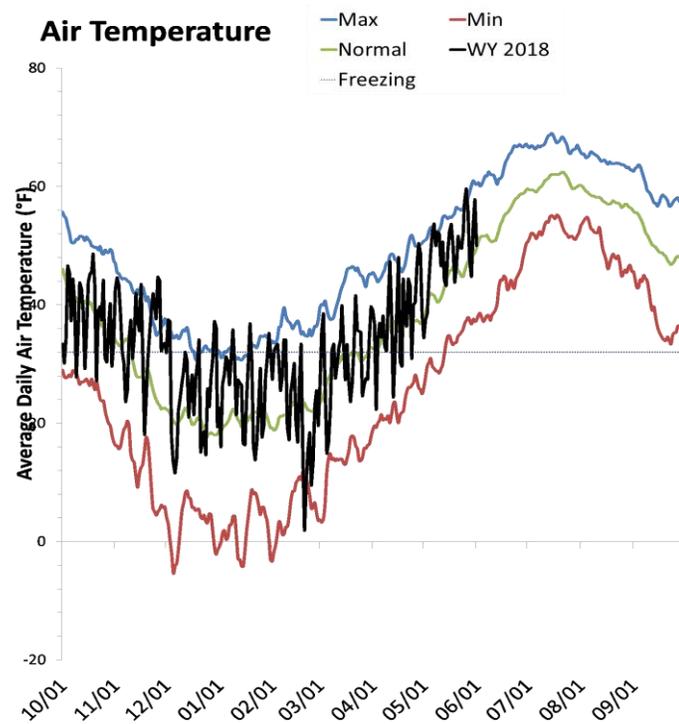
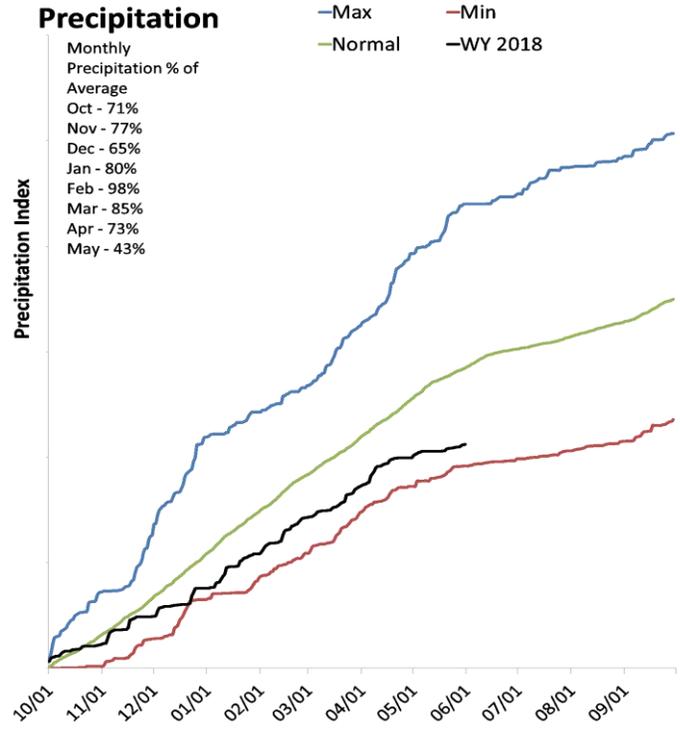
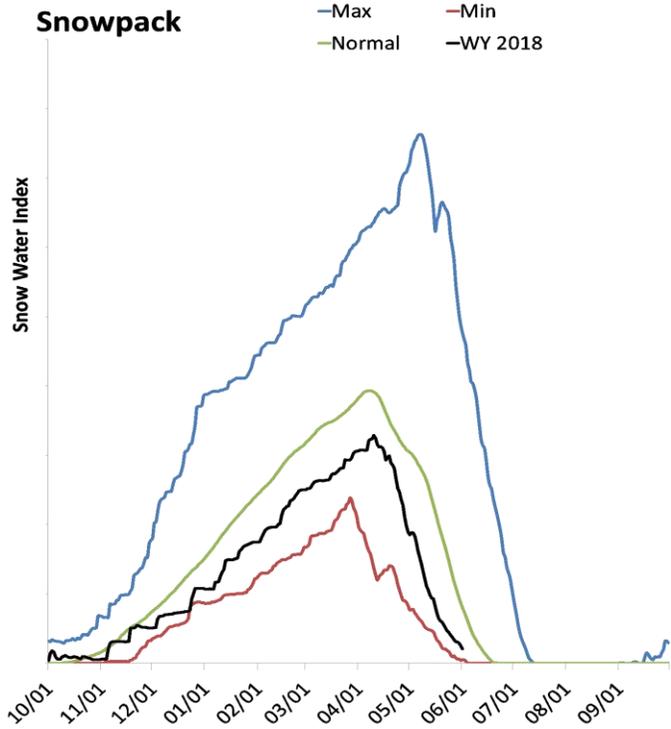
72% of Normal Precipitation Last Month



# Little Snake River Basin

June 1, 2018

Snowpack in the Little Snake River Basin is much below normal at 26% of normal, compared to 145% last year. Precipitation in May was much below average at 43%, which brings the seasonal accumulation (Oct-May) to 75% of average. Soil moisture at sites with sensors is at 75% of saturation. Reservoir storage is at 71% of capacity, compared to 101% last year. Forecast streamflow volumes range from 16% to 63% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

### Little Snake River Basin Streamflow Forecasts - June 1, 2018

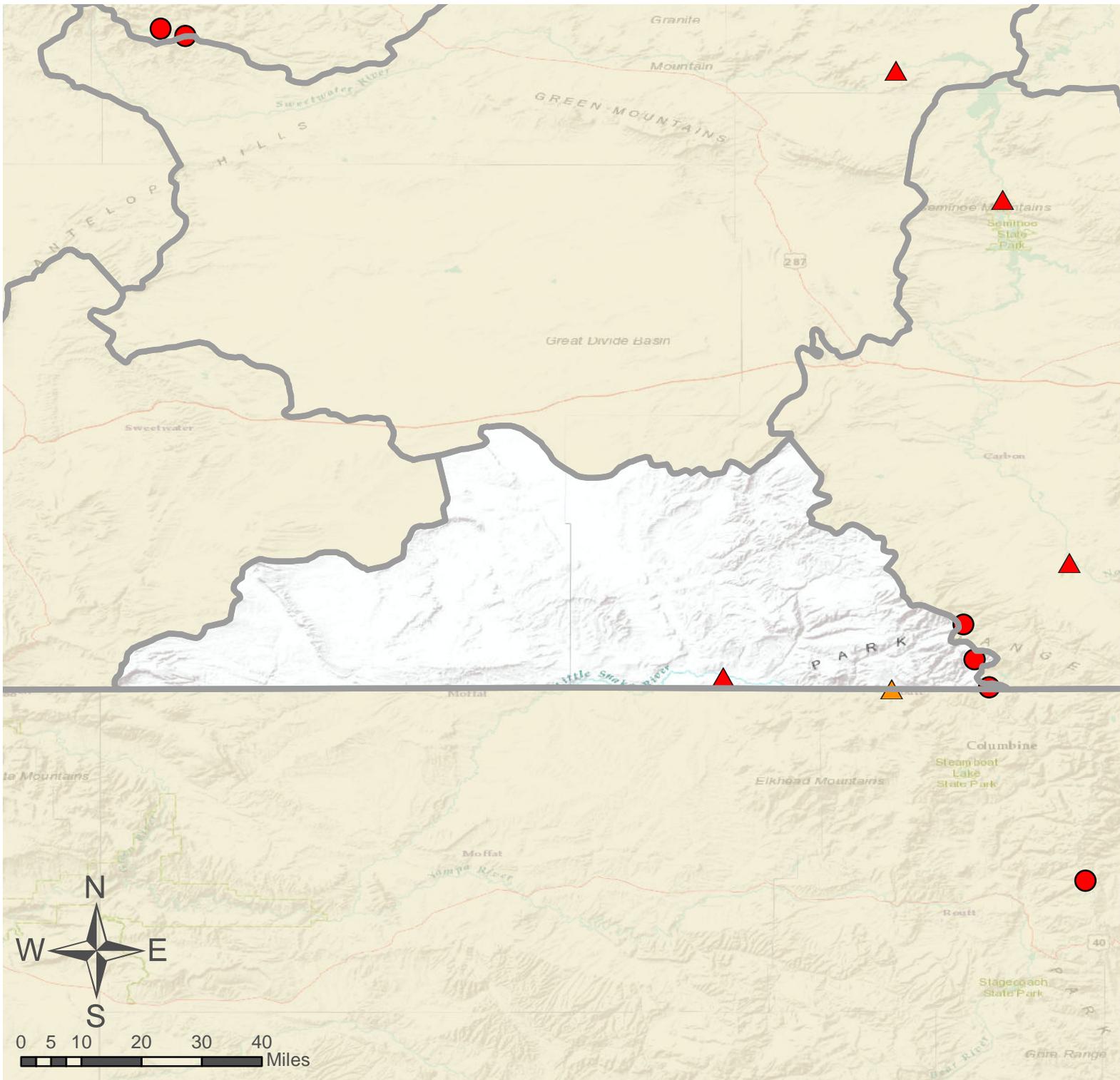
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

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 <sup>2</sup>	APR-JUL	85	89	98	63%	109	126	156
	JUN-JUL	8.4	12	21	32%	32	49	66
Little Snake R nr Dixon <sup>2</sup>	APR-JUL	125	129	138	40%	158	187	345
	JUN-JUL	8.4	12	21	16%	41	70	135

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
High Savery Reservoir	16.0	22.7	21.6	22.4
Basin-wide Total	16.0	22.7	21.6	22.4
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
LITTLE SNAKE RIVER	8	26%	145%



# Little Snake River Basin

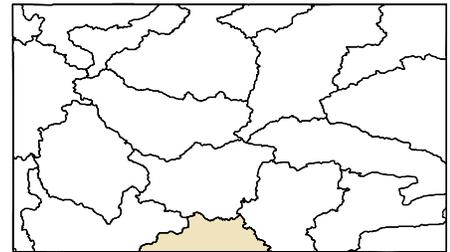
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

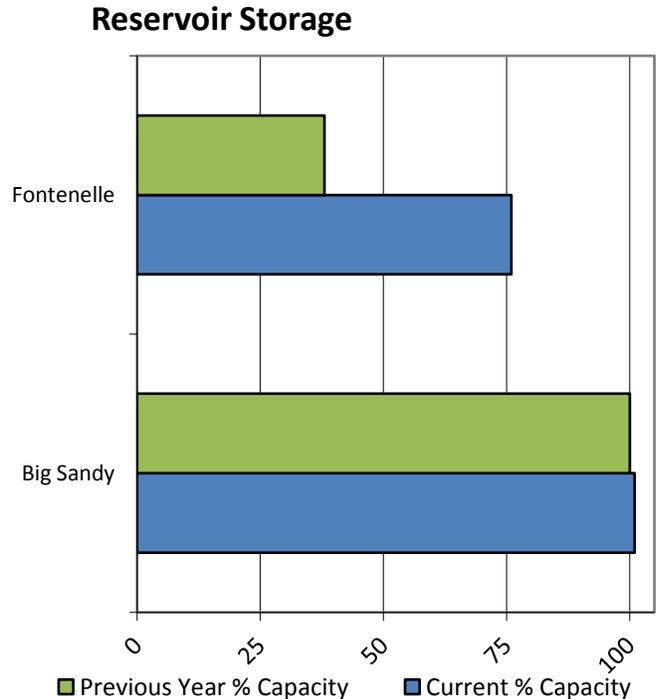
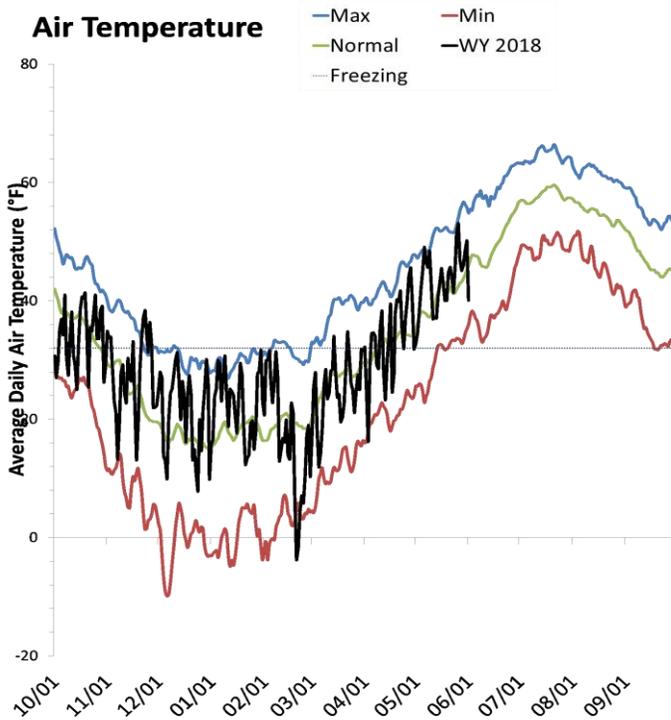
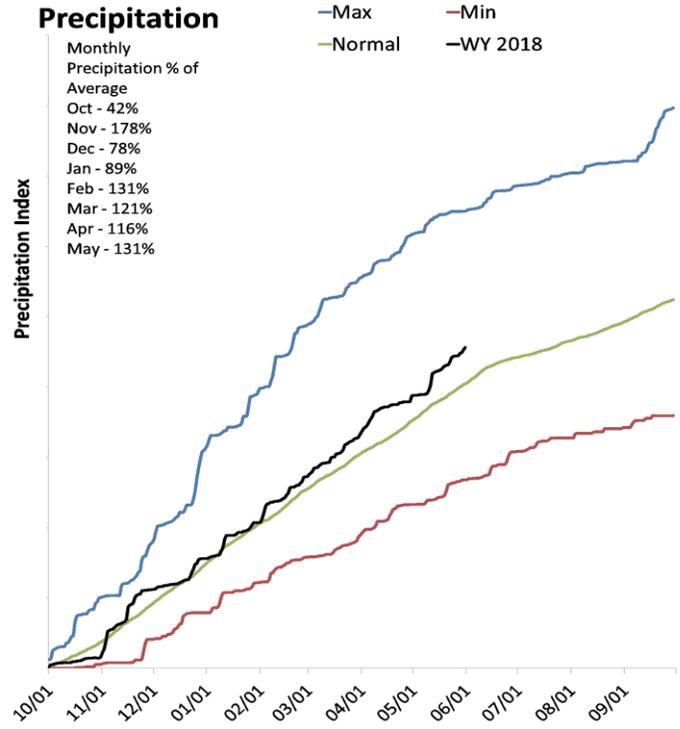
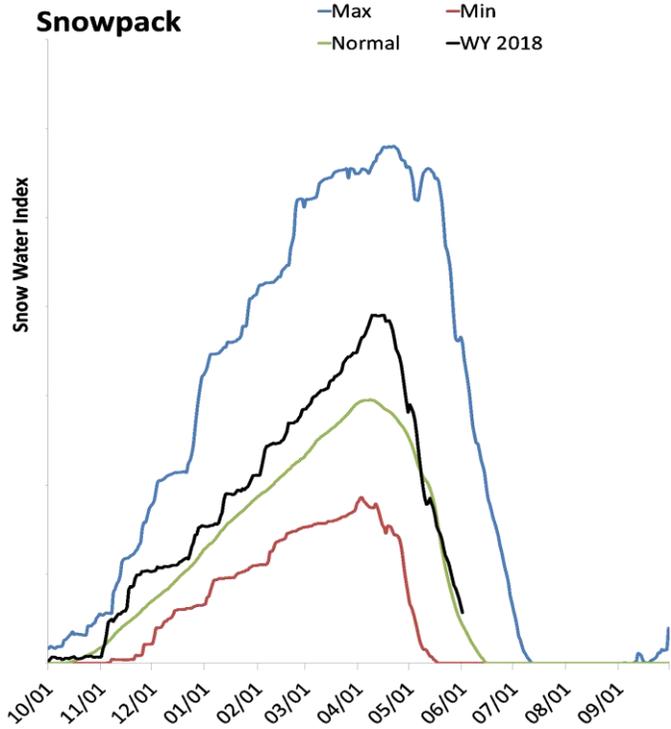
- 26% of Normal SWE
- 75% of Normal Precipitation
- 43% of Normal Precipitation Last Month



# Upper Green River Basin

June 1, 2018

Snowpack in the Upper Green River Basin is much above normal at 132% of normal, compared to 417% last year. Precipitation in May was above average at 130%, which brings the seasonal accumulation (Oct-May) to 113% of average. Soil moisture at sites with sensors is at 72% of saturation. Reservoir storage is at 78% of capacity, compared to 44% last year. Forecast streamflow volumes range from 85% to 143% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Upper Green River Basin Streamflow Forecasts - June 1, 2018

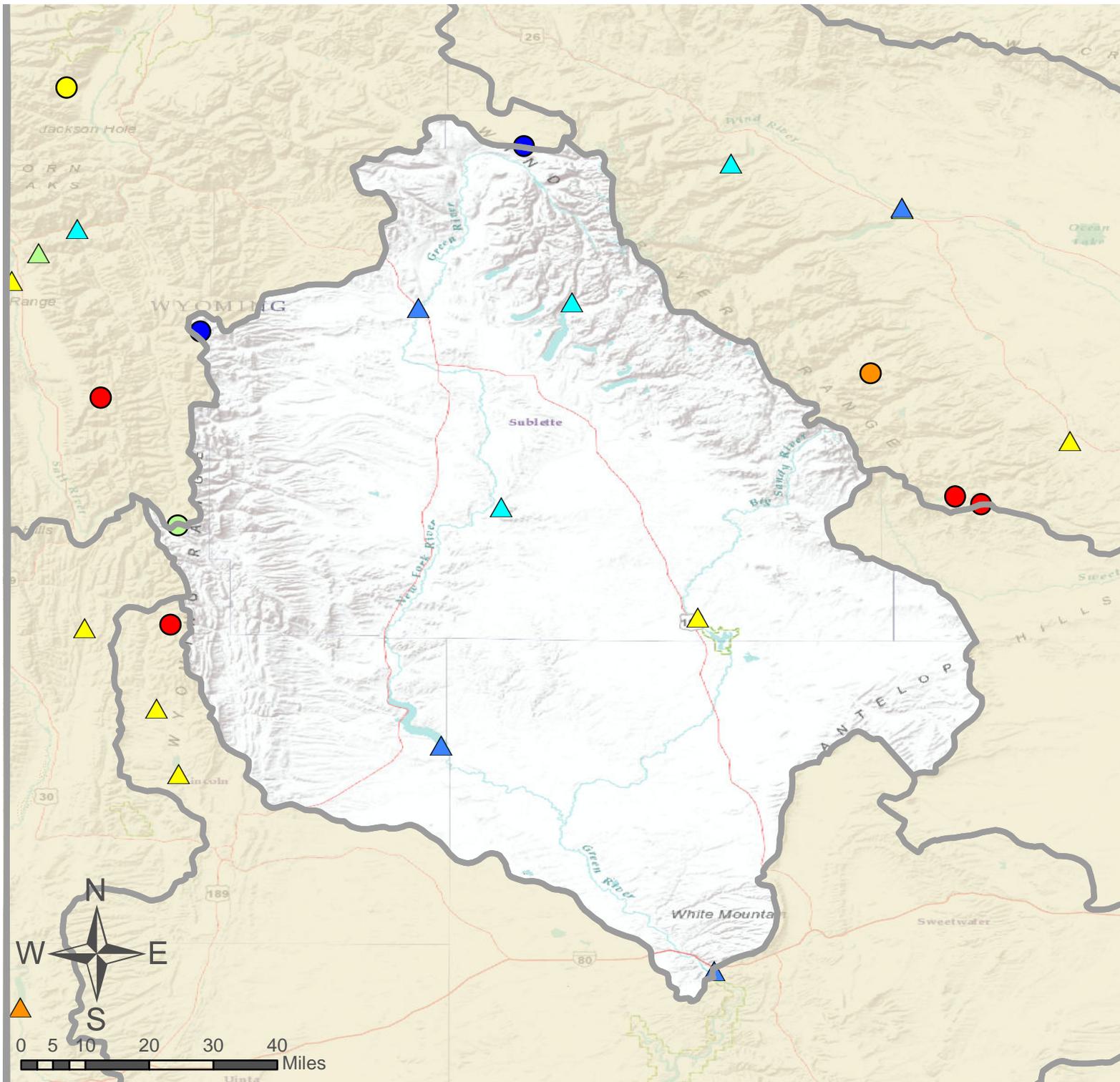
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

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	320	335	350	143%	365	380	245
	JUN-JUL	168	187	200	119%	215	230	168
Pine Creek ab Fremont Lake	APR-JUL	106	113	118	120%	123	130	98
	JUN-JUL	66	73	78	103%	83	90	76
New Fork R nr Big Piney	APR-JUL	380	410	430	121%	450	480	355
	JUN-JUL	198	230	250	98%	270	300	255
Fontenelle Reservoir Inflow	APR-JUL	875	940	985	136%	1030	1090	725
	JUN-JUL	420	485	530	112%	575	640	475
Big Sandy R nr Farson	APR-JUL	35	40	44	85%	48	53	52
	JUN-JUL	9.9	15.2	18.8	55%	22	28	34

- 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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Big Sandy	38.5	38.4	29.1	38.3
Fontenelle	260.4	129.5	164.0	344.8
Basin-wide Total	298.9	167.9	193.1	383.1
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
GREEN above Warren Bridge	5	186%	932%
UPPER GREEN - West Side	4	125%	320%
NEWFORK RIVER	2		
BIG SANDY-EDEN VALLEY	2		
GREEN above Fontenelle	12	132%	417%
UPPER GREEN RIVER	12	132%	417%



# Upper Green River Basin

- SNOTEL Site
- △ Forecast Point

## % of Normal

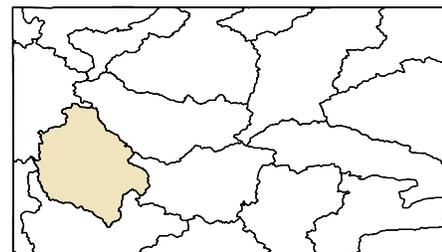
- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

As of June 1, 2018:

132% of Normal SWE

113% of Normal Precipitation

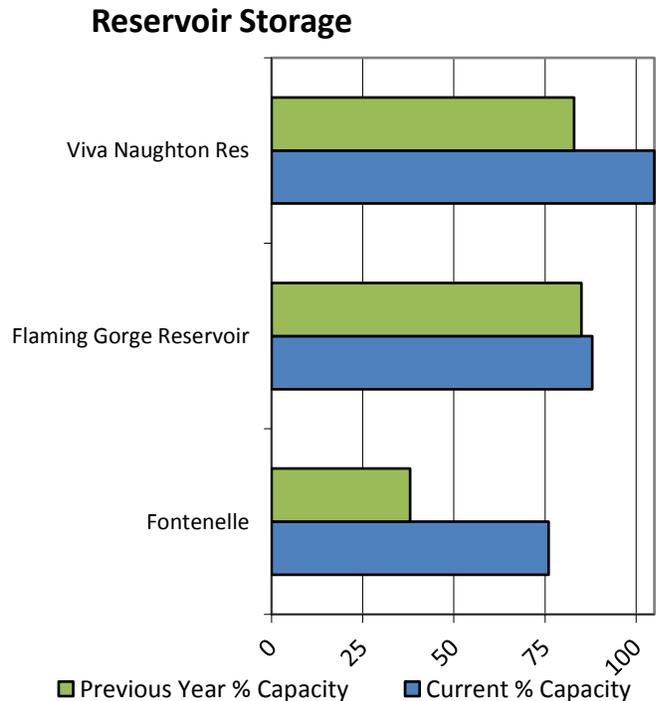
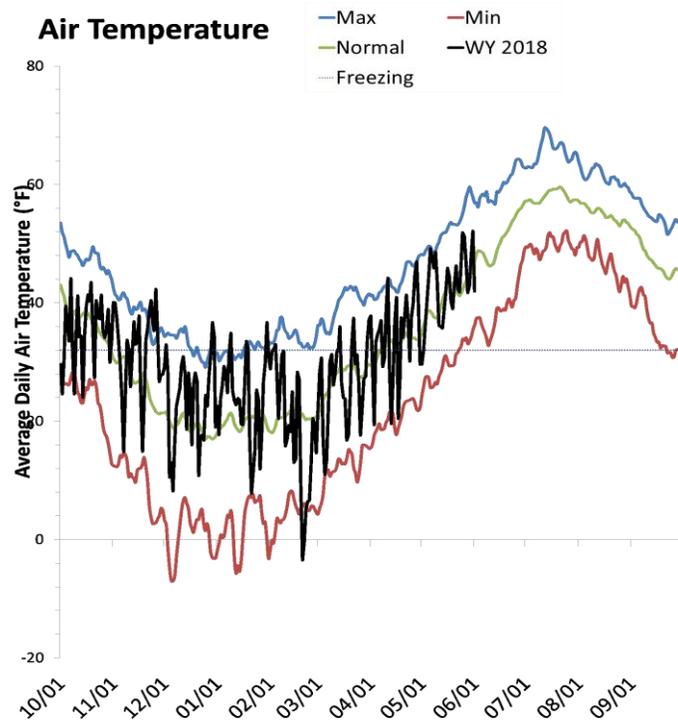
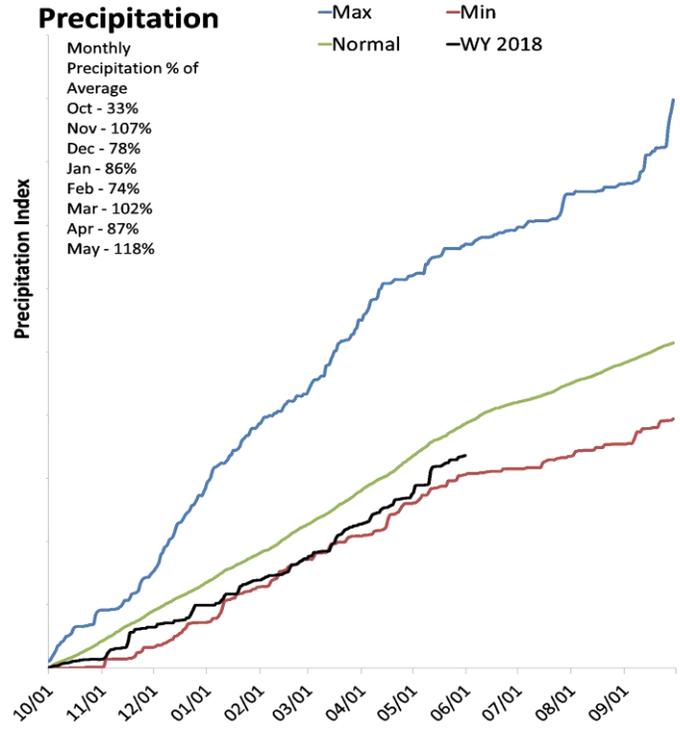
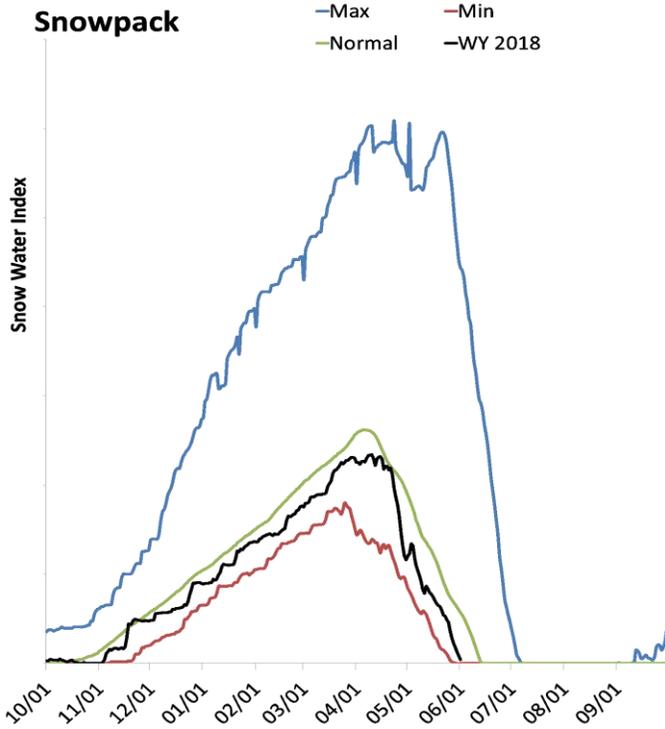
130% of Normal Precipitation Last Month



# Lower Green River Basin

June 1, 2018

Snowpack in the Lower Green River Basin is much below normal at 7% of normal, compared to 183% last year. Precipitation in May was above average at 118%, which brings the seasonal accumulation (Oct-May) to 87% of average. Soil moisture at sites with sensors is at 87% of saturation. Reservoir storage is at 87% of capacity, compared to 81% last year. Forecast streamflow volumes range from 70% to 137% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

### Lower Green River Basin Streamflow Forecasts - June 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 <sup>2</sup>	APR-JUL	895	955	1000	137%	1050	1110	730
	JUN-JUL	440	500	545	114%	590	650	480
Blacks Fk nr Robertson	APR-JUL	61	69	74	86%	79	86	86
	JUN-JUL	17.5	25	30	55%	35	42	55
EF of Smiths Fork nr Robertson <sup>2</sup>	APR-JUL	16.9	20	23	85%	25	28	27
	JUN-JUL	4.4	7.7	10	56%	12.3	15.6	17.7
Hams Fk bl Pole Ck nr Frontier	APR-JUL	30	34	38	70%	41	46	54
	JUN-JUL	2.6	7.3	10.6	41%	13.8	18.6	26
Viva Naughton Reservoir Inflow	APR-JUL	51	53	56	76%	62	71	74
	JUN-JUL	4	6	9.6	31%	15.2	24	31
Flaming Gorge Reservoir Inflow <sup>2</sup>	APR-JUL	925	1020	1080	110%	1150	1240	980
	JUN-JUL	380	475	540	90%	605	700	600

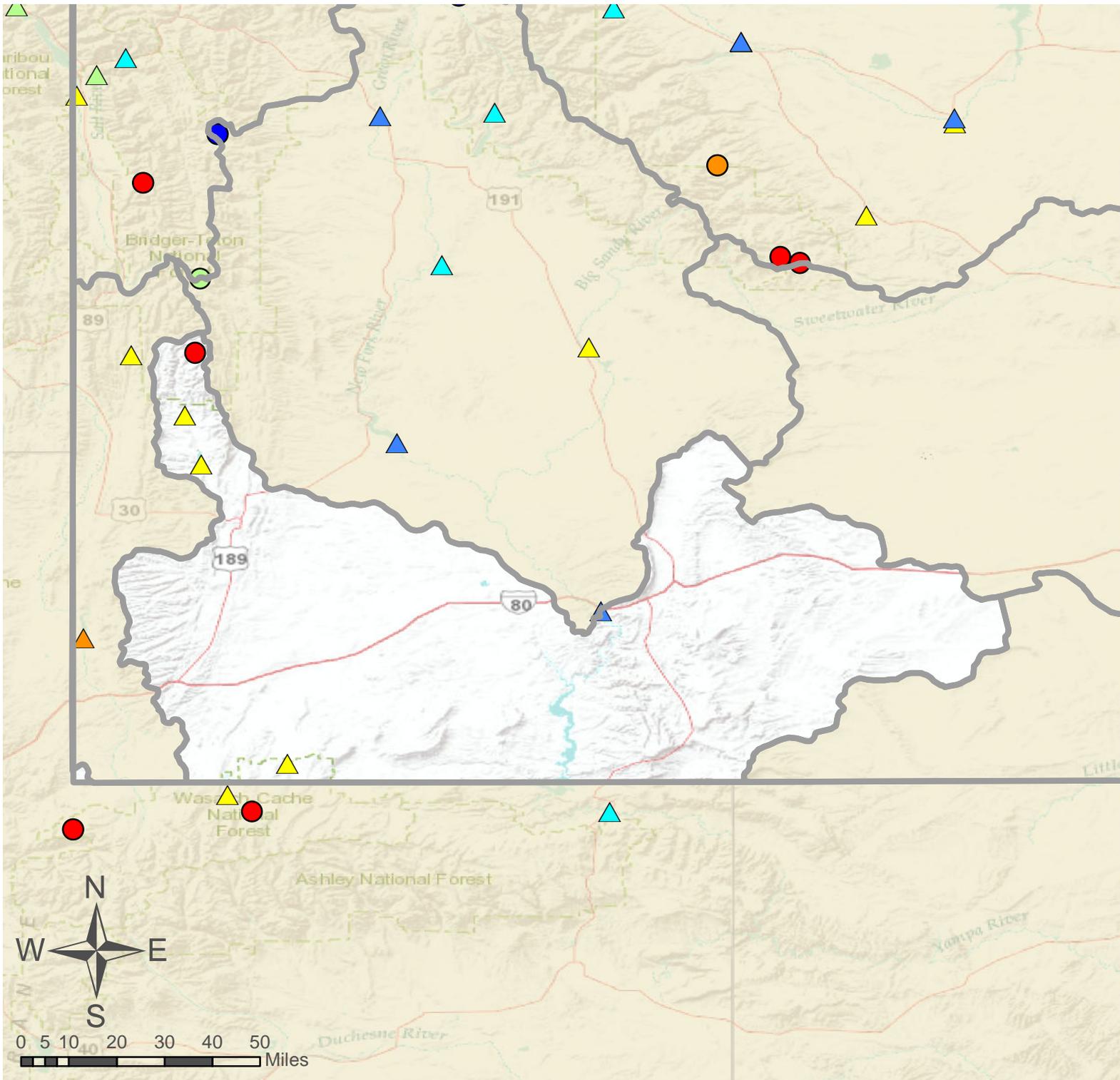
1) 90% and 10% exceedance probabilities are actually 95% and 5%

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 May, 2018	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Fontenelle	260.4	129.5	164.0	344.8
Flaming Gorge Reservoir	3294.2	3202.9	3070.0	3749.0
Viva Naughton Res	44.7	35.2	41.5	42.4
Basin-wide Total	3599.3	3367.6	3275.5	4136.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis June 1, 2018	# of Sites	% Median	Last Year % Median
HAMS FORK RIVER	3	13%	248%
BLACKS FORK	2	0%	112%
HENRYS FORK	2		
LOWER GREEN RIVER	7	7%	183%
GREEN above FLAMING GORGE	19	78%	316%



# Lower Green River Basin

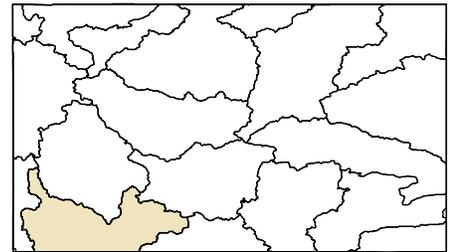
- SNOTEL Site
- △ Forecast Point

## % of Normal

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

As of June 1, 2018:

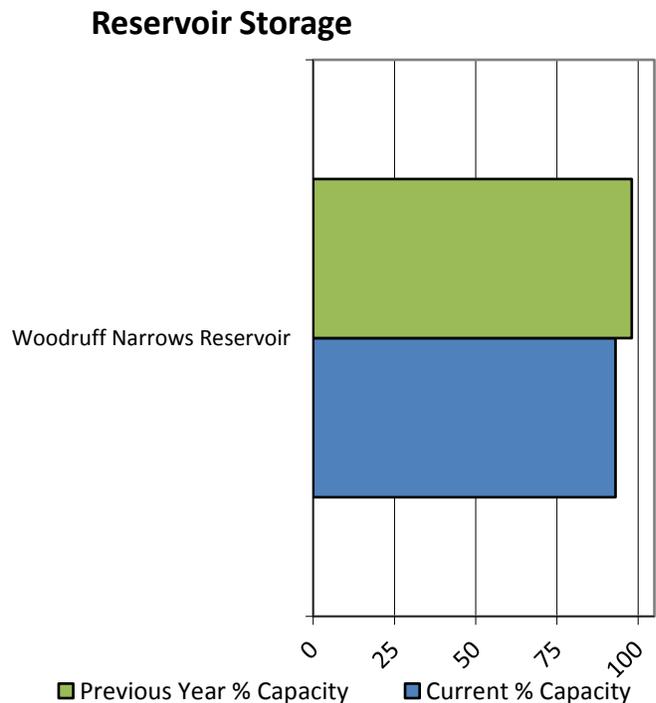
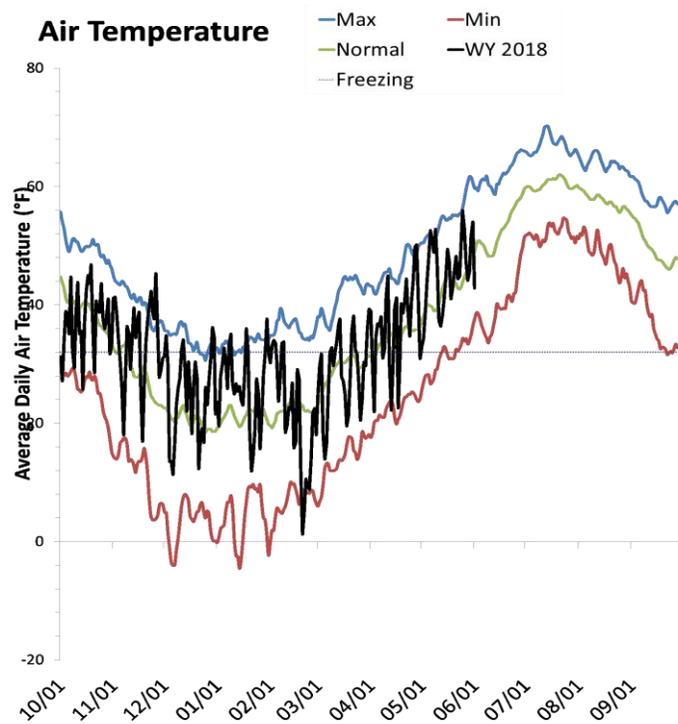
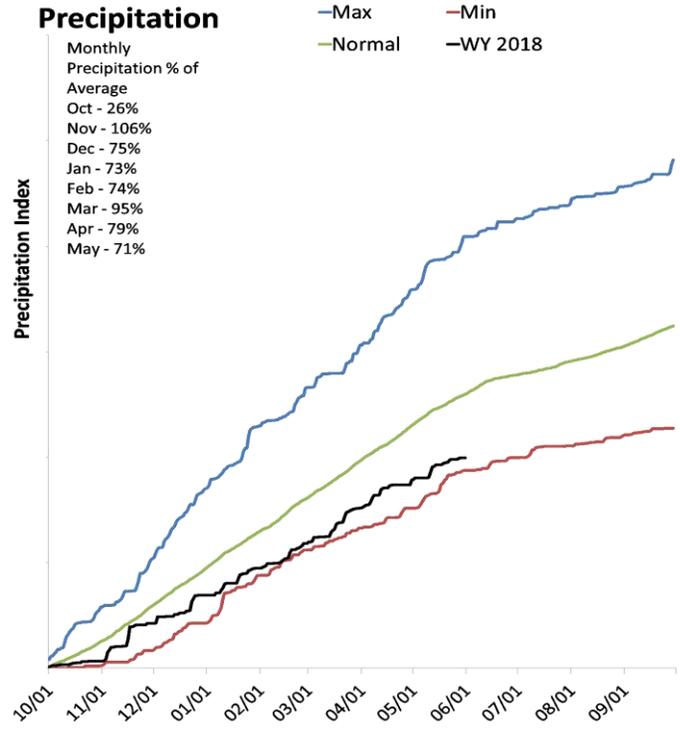
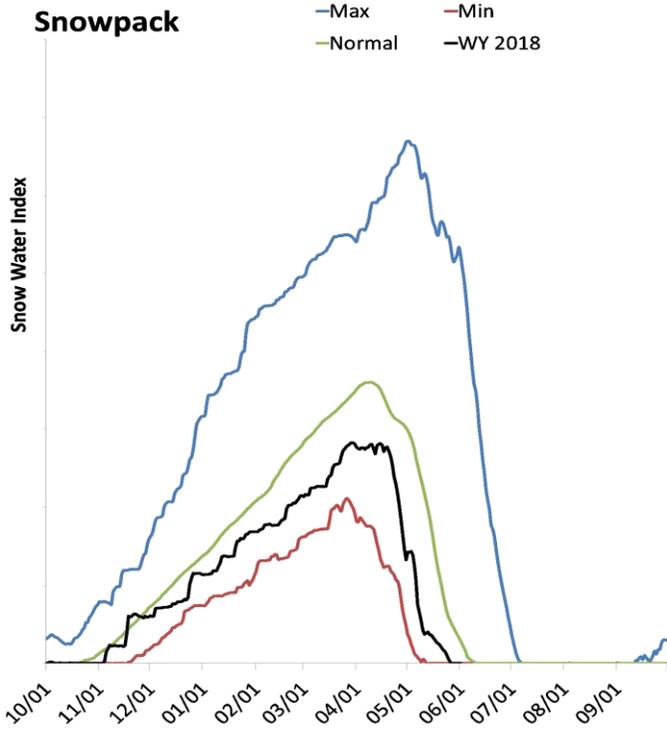
- 7% of Normal SWE
- 87% of Normal Precipitation
- 118% of Normal Precipitation Last Month



# Upper Bear River Basin

June 1, 2018

Snowpack in the Upper Bear River Basin is much below normal at 0% of normal, compared to 306% last year. Precipitation in May was below average at 71%, which brings the seasonal accumulation (Oct-May) to 77% of average. Soil moisture at sites with sensors is at 82% of saturation. Reservoir storage is at 93% of capacity, compared to 98% last year. Forecast streamflow volumes range from 52% to 87% of average.



\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

## Upper Bear River Basin Streamflow Forecasts - June 1, 2018

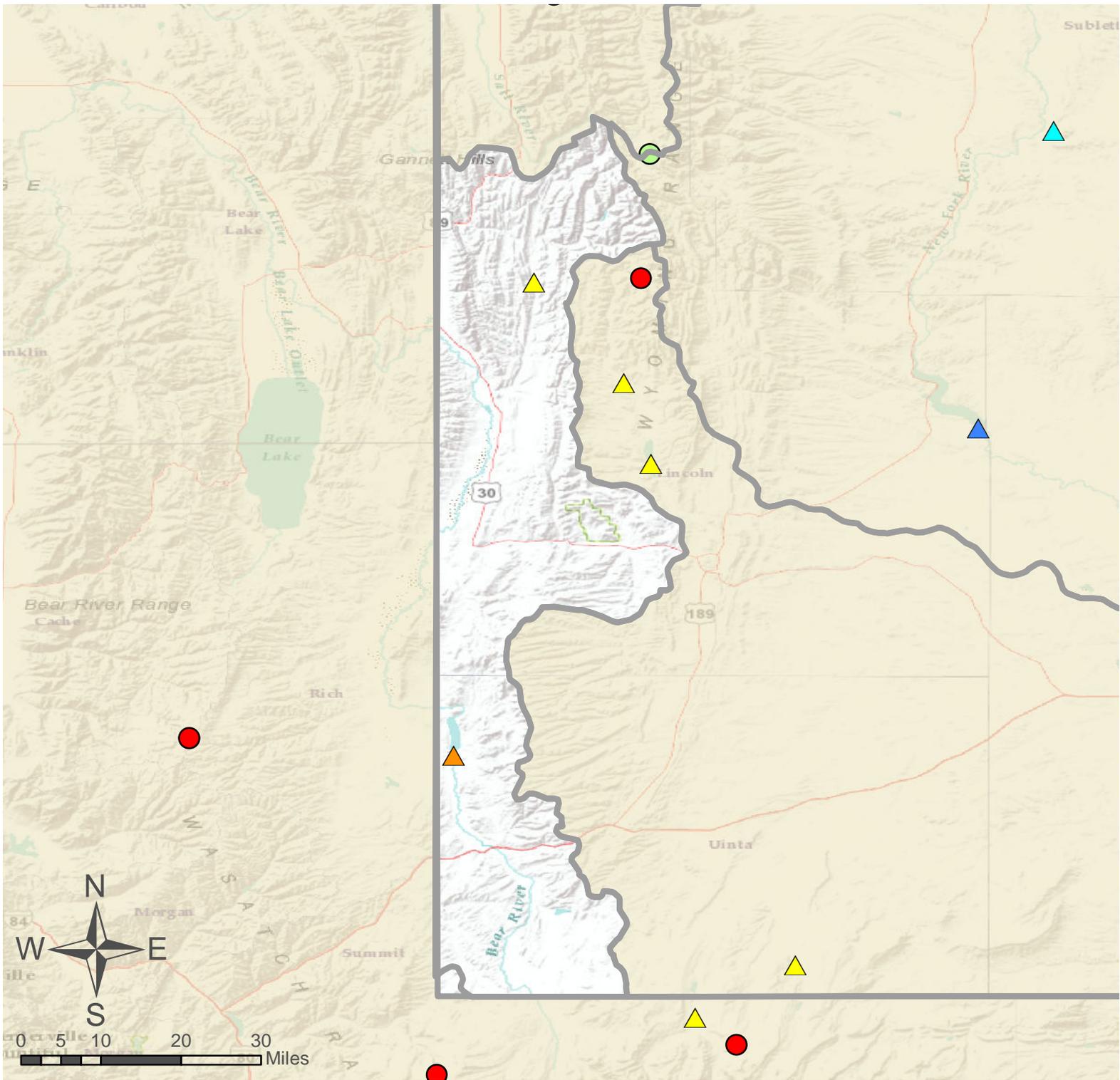
Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

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	57	69	62%	81	98	112
	APR-SEP	43	63	76	62%	89	109	123
	JUN-JUL	9.7	24	33	50%	42	56	66
	JUN-SEP	12.8	29	40	51%	51	67	78
Bear R ab Resv nr Woodruff	APR-JUL	3.6	38	63	52%	87	124	121
	APR-SEP	6.4	38	66	52%	94	136	128
	JUN-JUL	2.8	6.3	17	30%	33	55	57
	JUN-SEP	2	5.8	20	31%	39	67	64
Smiths Fk nr Border	APR-JUL	62	71	77	87%	84	93	89
	APR-SEP	74	84	91	88%	98	108	104
	JUN-JUL	32	38	42	84%	46	52	50
	JUN-SEP	43	51	56	86%	60	68	65

- 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

<b>Reservoir Storage End of May, 2018</b>	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Woodruff Narrows Reservoir	53.3	56.0	44.8	57.3
Basin-wide Total	53.3	56.0	44.8	57.3
# of reservoirs	1	1	1	1

<b>Watershed Snowpack Analysis June 1, 2018</b>	# of Sites	% Median	Last Year % Median
UPPER BEAR RIVER in Utah	3	0%	178%
SMITHS & THOMAS FORKS	3	91%	247%
UPPER BEAR RIVER	7	0%	306%



# Upper Bear River Basin

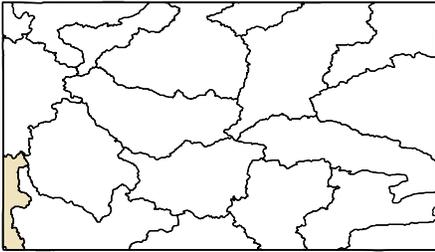
- SNOTEL Site
- △ Forecast Point

As of June 1, 2018:

0% of Normal SWE  
 77% of Normal Precipitation  
 71% of Normal Precipitation Last Month

## % of Normal

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



*Issued by*

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**Acting Chief**  
**Natural Resources Conservation Service**  
**U.S. Department of Agriculture**

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**Casper, Wyoming**



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Snow Survey, NRCS, USDA  
100 East B Street  
Casper, WY 82602  
(307) 233-6784



# **Wyoming Water Supply Outlook Report**

**Natural Resources Conservation Service**  
**Casper, WY**

