



# Wyoming Drought Information



**Lake Marie//Medicine Bow Mountains--June 10, 2008**

Photo taken by Jim Fahey-NOAA hydrologist

**June 17, 2008**

**...May precipitation across Wyoming's river basins averaged 92 to 255 percent of average...**

**...May and early June precipitation brought Riverton and Lander to greater than 120 percent of normal precipitation for the calendar year...**

**...Wyoming snowpack 149 percent of average as of June 11th...**

**...Seminoe Reservoir already half full--Boysen Reservoir nearly three-quarters full....**

**...Severe hydrologic drought conditions continue over the Upper and Lower Green River Basins...**

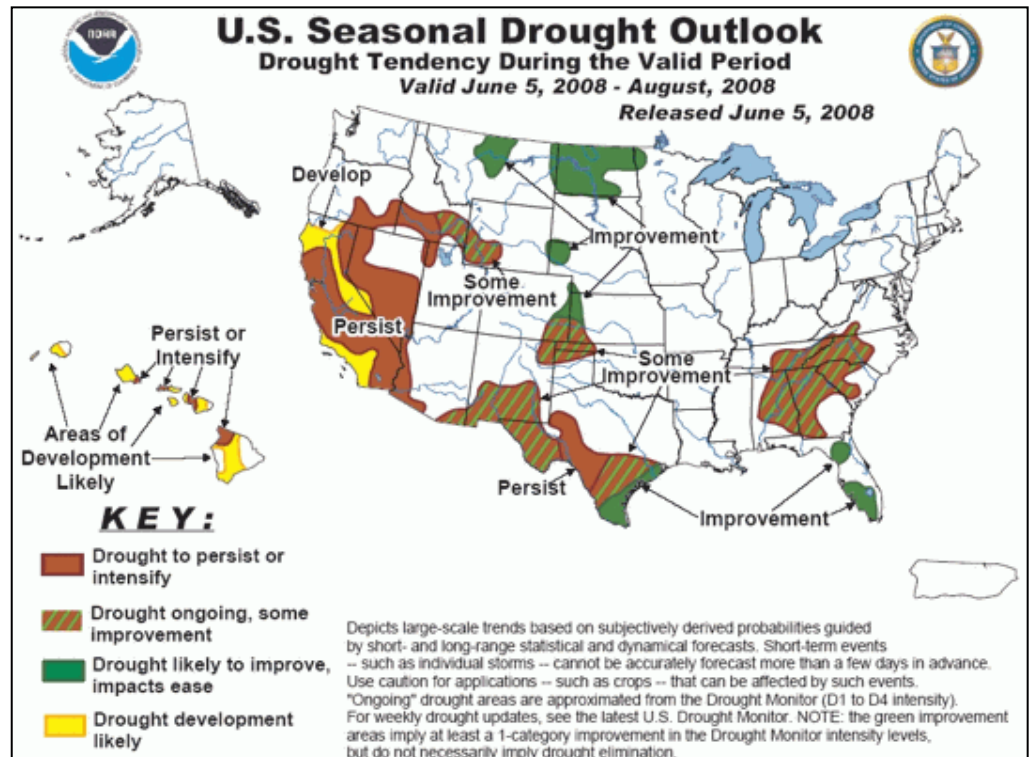
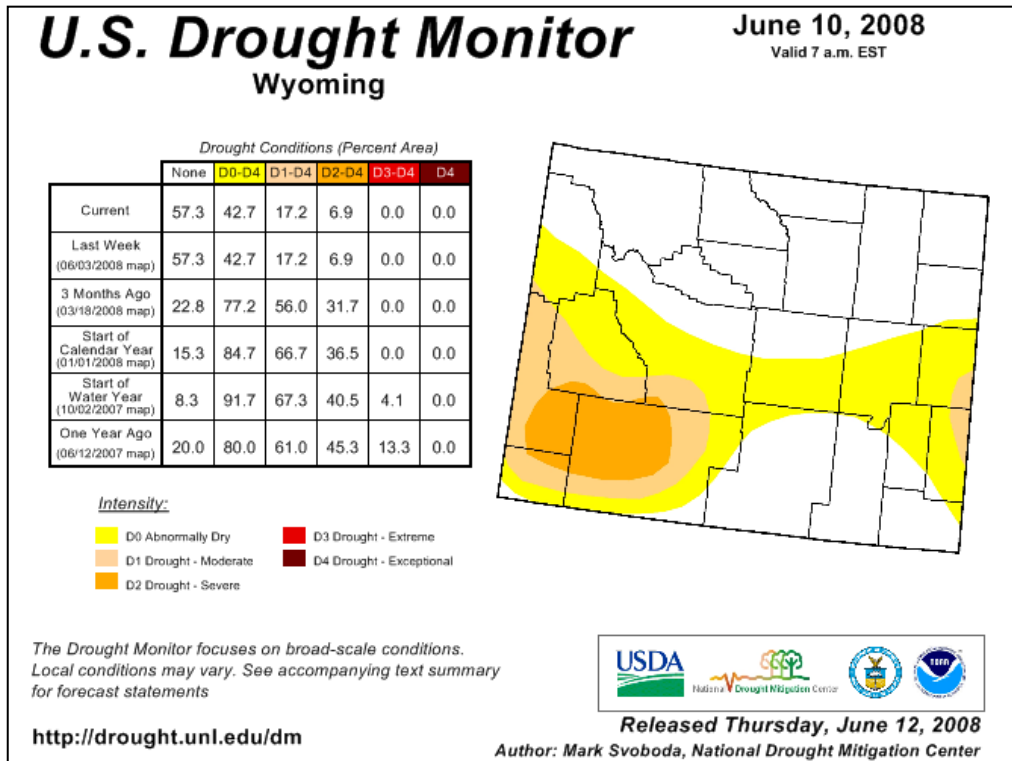
**.Synopsis...**

May rainfall across Wyoming's river basins averaged 95 to 255 percent of average. More importantly, the lower elevations to include range lands, pasture lands, and other agricultural centers across Wyoming received a soaking rain during May and early June. Riverton and Lander, before the May and early June precipitation, had only 54 and 43 percent of the normal yearly totals, respectively. After the rainfall in May and early June, Riverton's yearly total has increased to 133 percent of normal; while Lander's precipitation totals increased the yearly total to 124 percent of normal. Basin-wide precipitation totals across Wyoming for the water year 2008 (October07 - May 08) are 90 to 140 percent of normal. The long-range precipitation forecast (July through September) is calling for near normal precipitation across central and eastern Wyoming; with below normal precipitation expected over western Wyoming.

Water (or snow water equivalents--SWEs) in the Wyoming snowpack continued to be near normal to **above** normal during May--to right into the middle of June. Snowpack averages across Wyoming were still near normal (149% of the 30-yr normal) as late as June 11<sup>th</sup>. One year ago the SWE averages across Wyoming were only 16% of normal.

Wyoming's water supply still looks like it will be solid for the rest of the runoff and into the middle of summer. The latest water supply forecast indicates the most of the state will see normal to **above** normal streamflow volumes during the early to middle summer runoff. May inflows into Seminoe, Guernsey, and Glendo Reservoirs were well above average. Summer inflows to almost all of the major reservoirs are expected to be near normal to slightly above normal. Seminoe Reservoir is over half full (54% capacity as of June 16<sup>th</sup>). The last time that Seminoe Reservoir was at least half full was in 1999. USBR officials expect the reservoir to remain around 60 percent full for the rest of the water year. Boysen Reservoir is nearly three-quarters full (as of June 16<sup>th</sup>) and is expected to fill by late June/early July. Boysen Reservoir nearly filled in June of 2005. The long-range temperature outlook still indicates that there is a 30-40 percent chance of a warmer than normal summer for most of central and western Wyoming. This may initially help with increased inflows into most of the state's reservoirs; but a warmer than average summer may not carry the state's irrigation water supply deep into summer and into early fall.

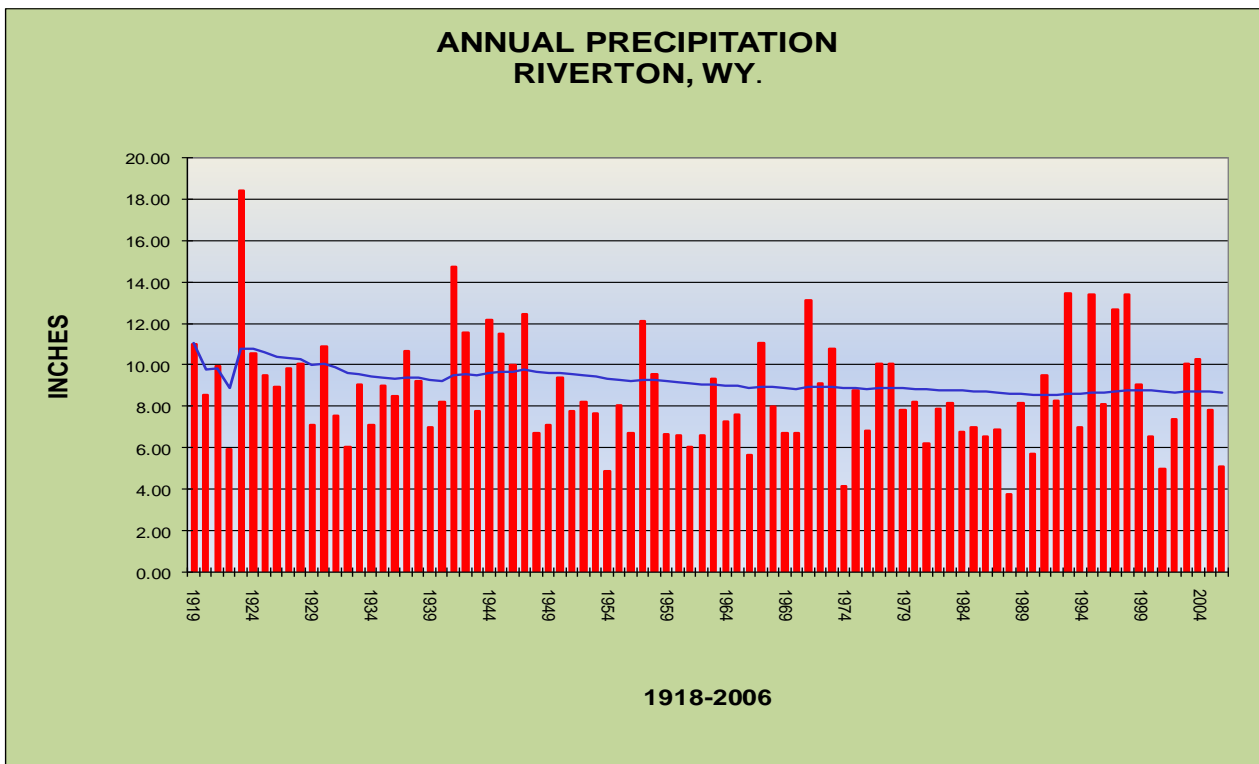
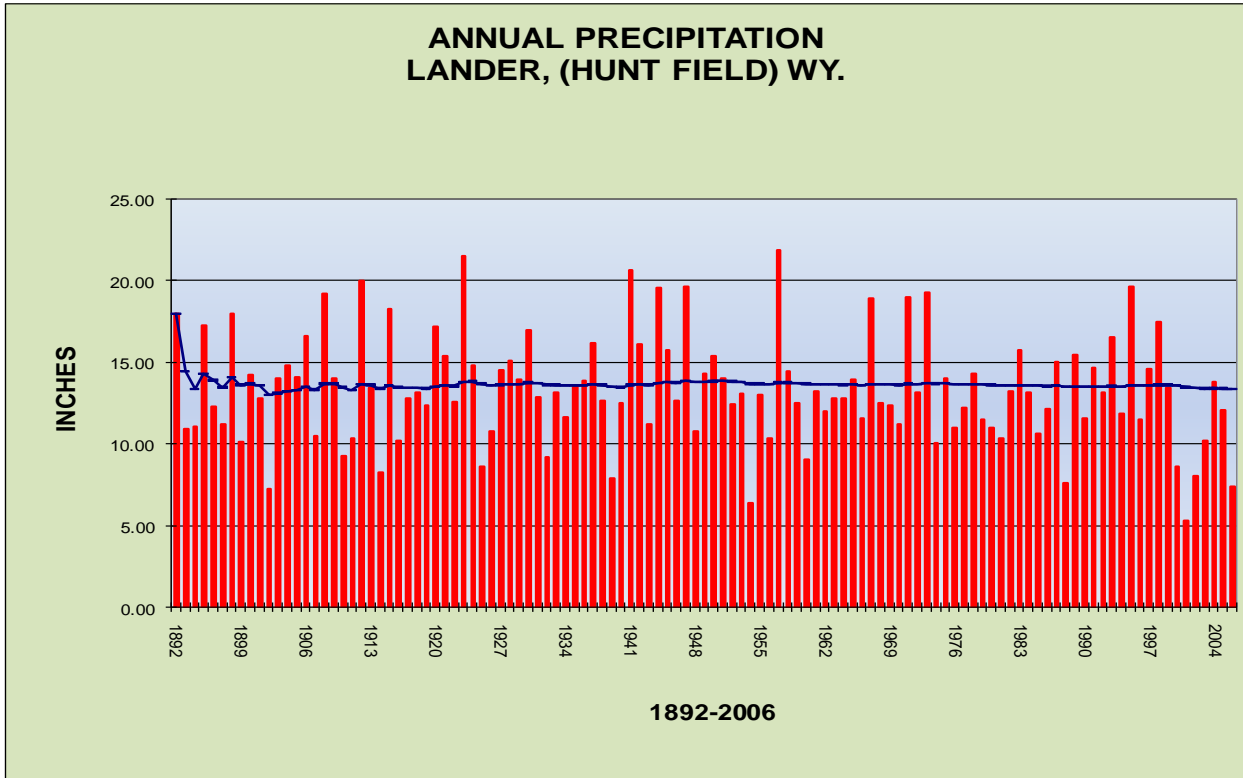
The Upper and Lower green River basins continue to under severe hydrologic conditions. The latest drought outlook through August 2008 indicates that most of Wyoming will see continued improvement in the current hydrologic drought.



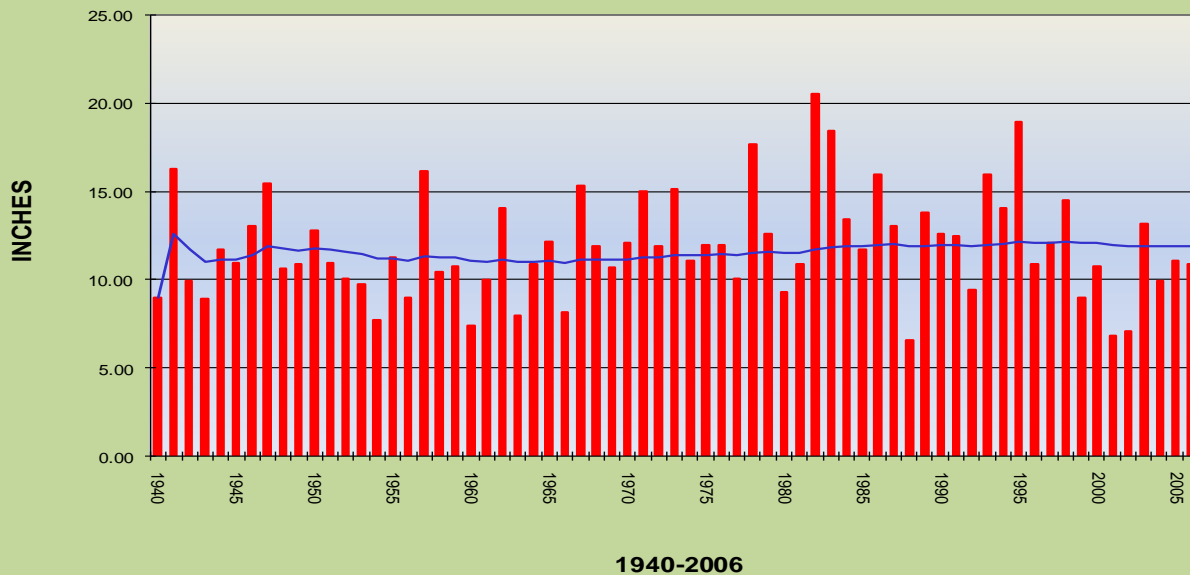
## .Climate Summary...

### >>Long Range Precipitation Trends...

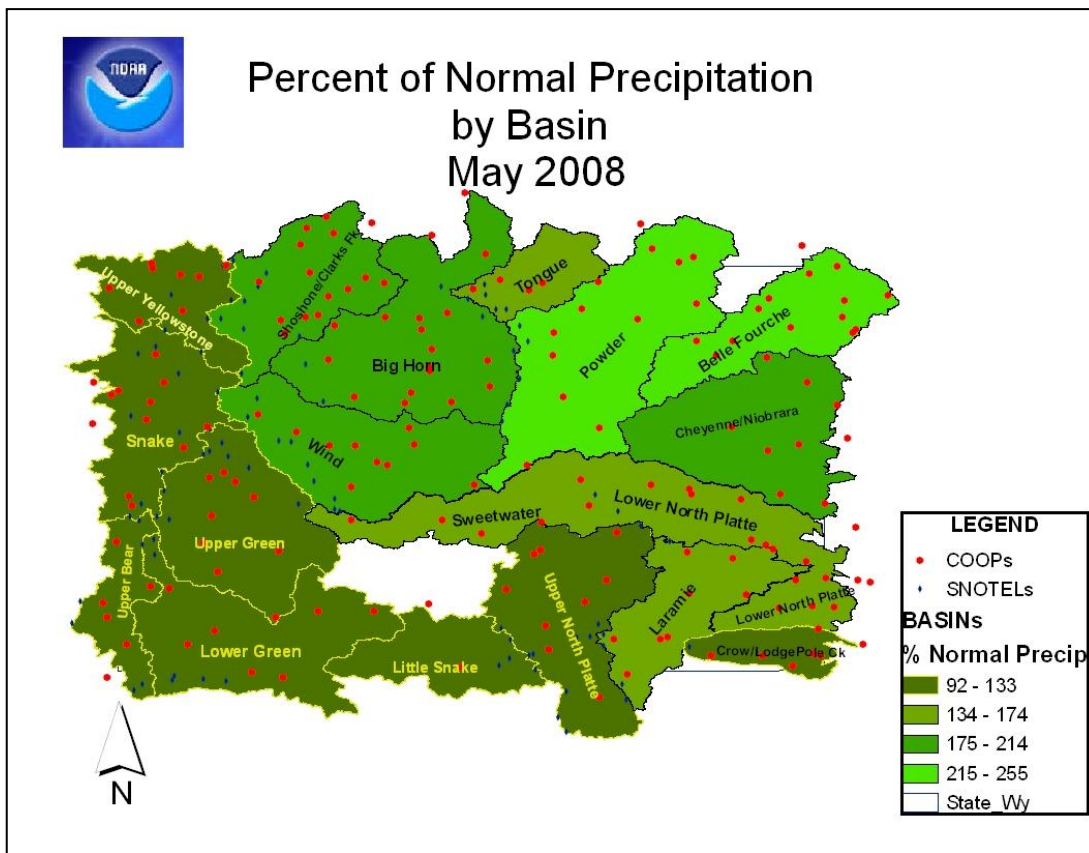
Lander's precipitation records go back to 1892—Riverton's precipitation records go back to 1919—and Casper's precipitation records go back to 1940.



## ANNUAL PRECIPITATION CASPER, WY.



>>Current Precipitation Trends...

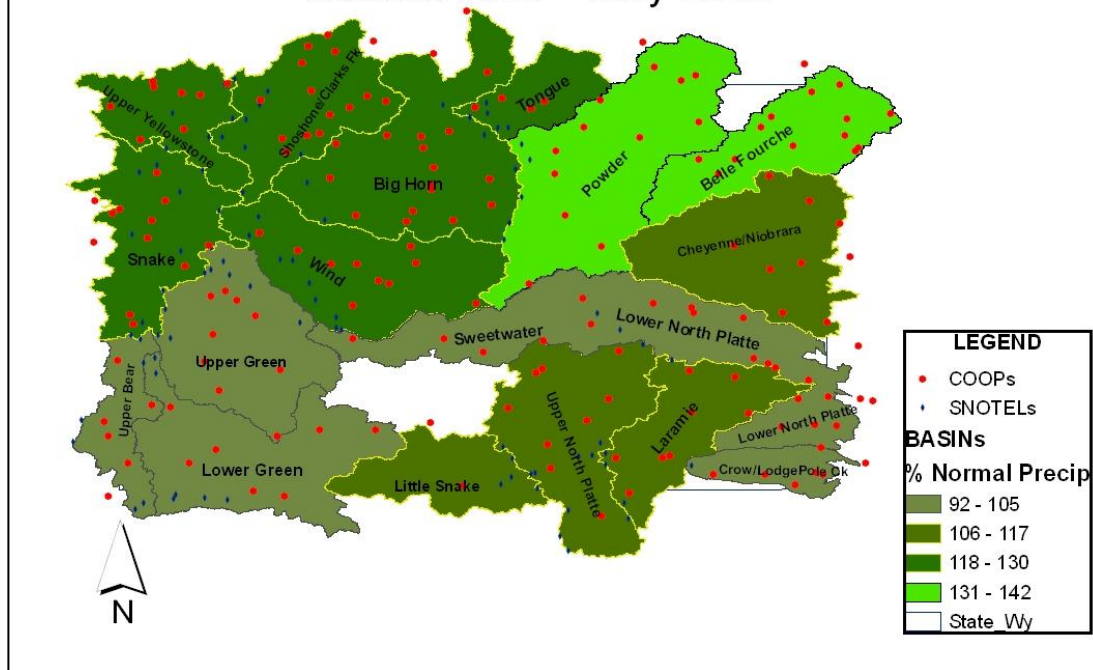


Water year by Major Basins (May 2008)





## Percent of Normal Precipitation by Basin October 2007 - May 2008



**Water year by Major Basins (October 2007 - May 2008)**

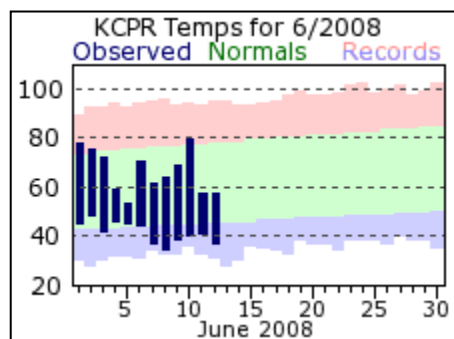
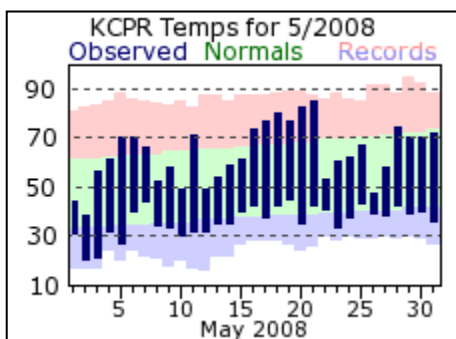
### Calendar year by climate locations (January - June 15, 2008)

	JAN - JUN 15 PRECIP	AVERAGE (JAN - JUN 15)	% AVERAGE
<b>SHERIDAN</b>	8.88	7.63	<b>116</b>
<b>CHEYENNE</b>	5.74	7.04	<b>82</b>
<b>DOUGLAS</b>	7.14	6.87	<b>112</b>
<b>LARAMIE</b>	6.17	5.05	<b>122</b>
<b>RAWLINS</b>	5.07	4.76	<b>107</b>
<b>CASPER</b>	7.33	6.84	<b>107</b>
<b>LANDER</b>	9.33	7.44	<b>125</b>
<b>RIVERTON</b>	5.95	4.46	<b>133</b>
<b>ROCK SPRINGS</b>	3.94	4.70	<b>84</b>

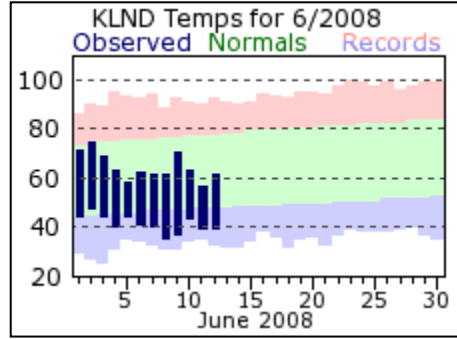
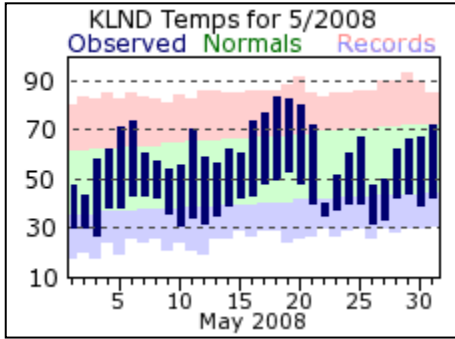
### >>Temperature Trends...

Near normal temperatures early to the middle of May; below to near normal temperatures from the middle of May to the middle of June.

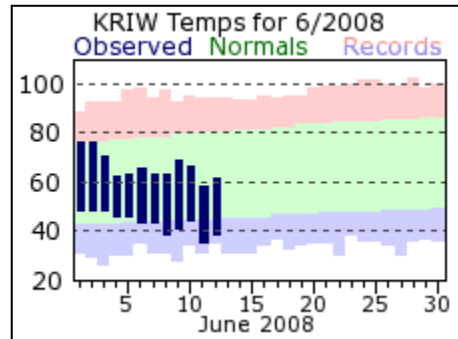
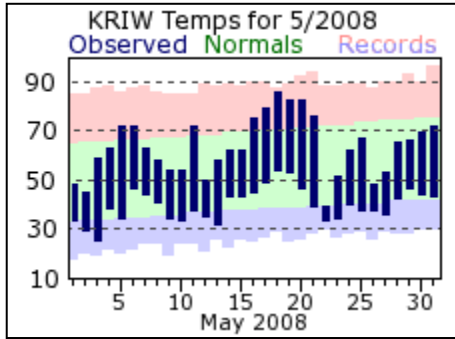
#### Casper



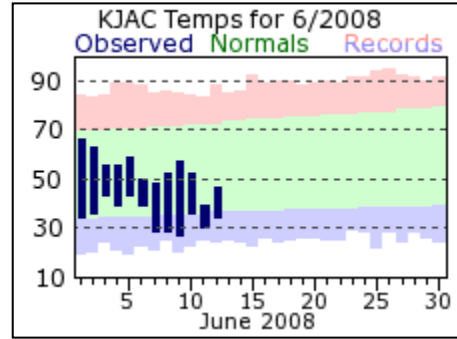
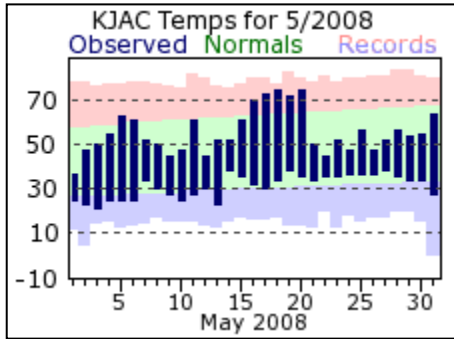
**Lander**



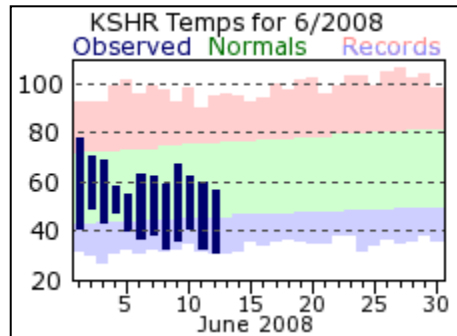
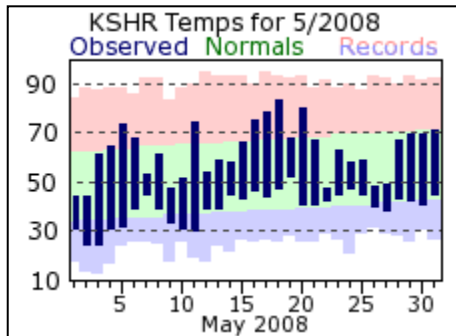
**Riverton**



**Jackson**

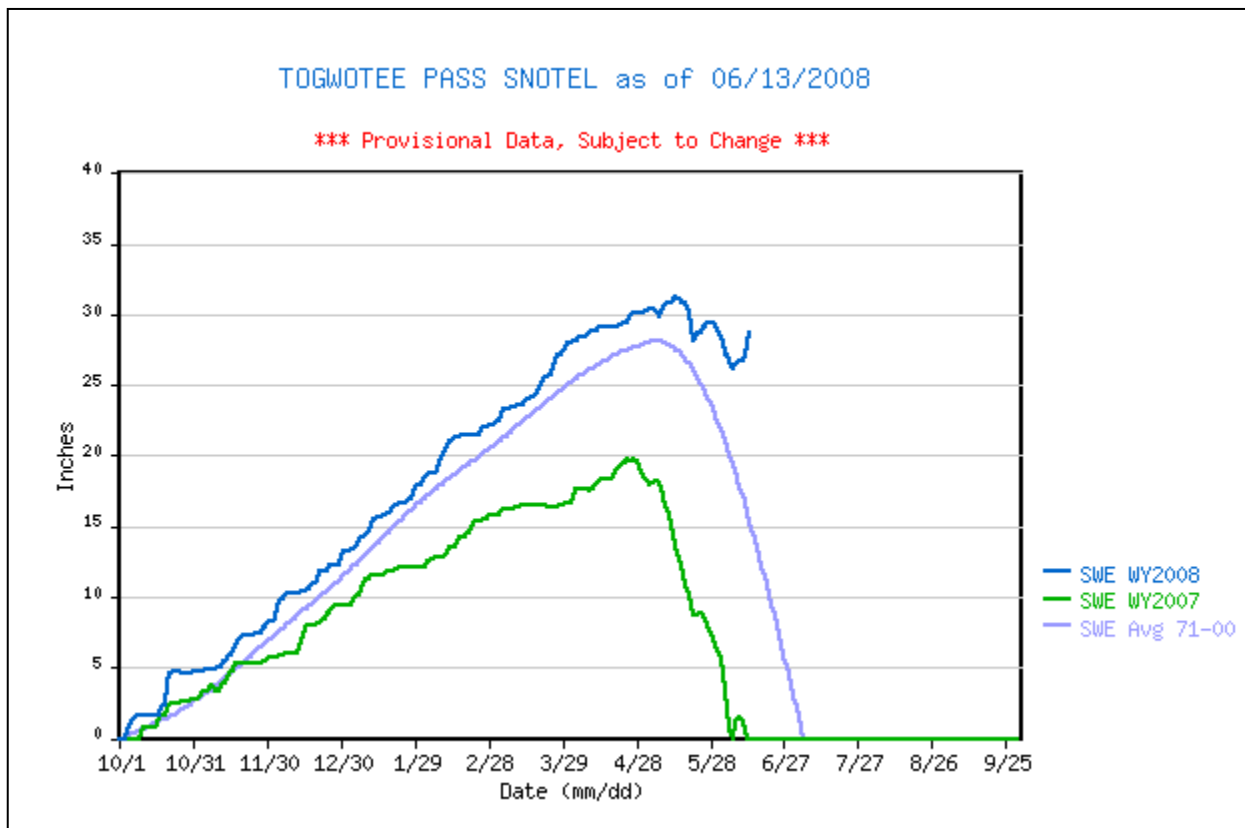
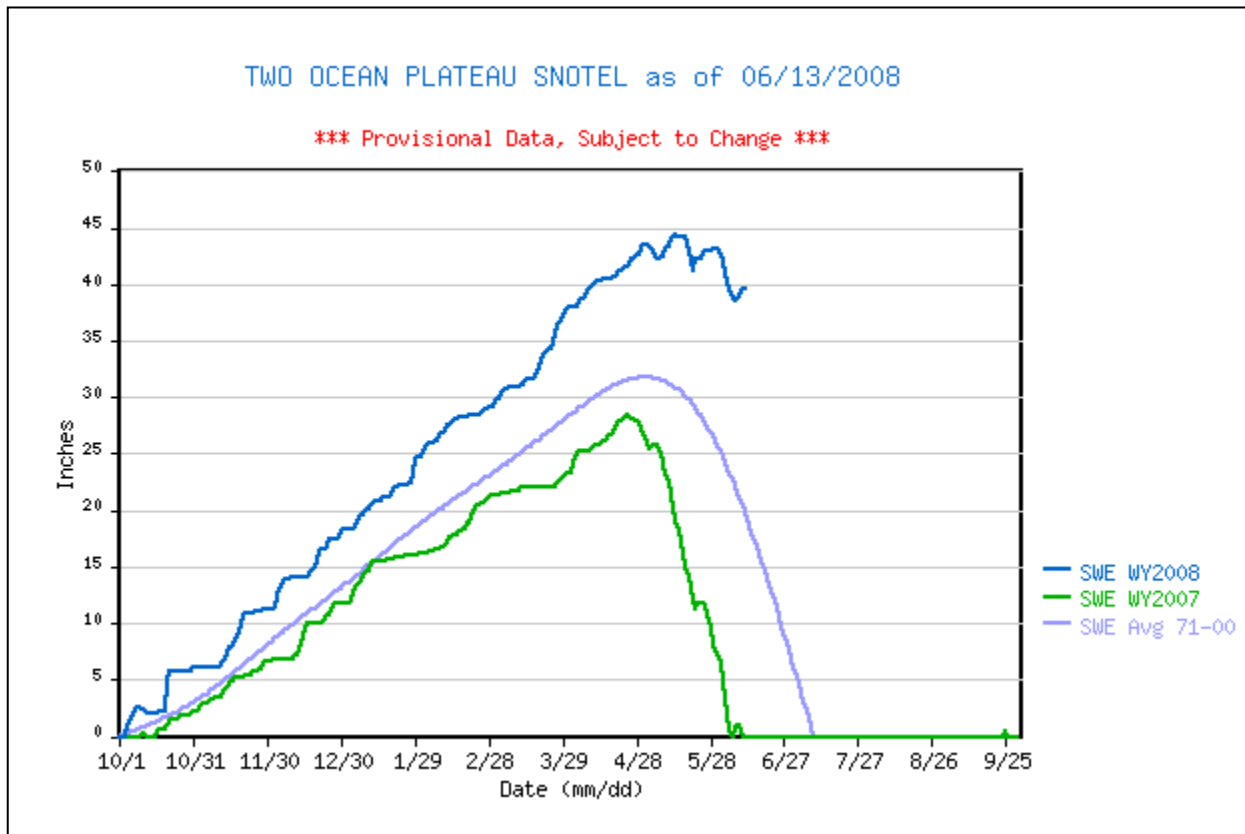


**Sheridan**



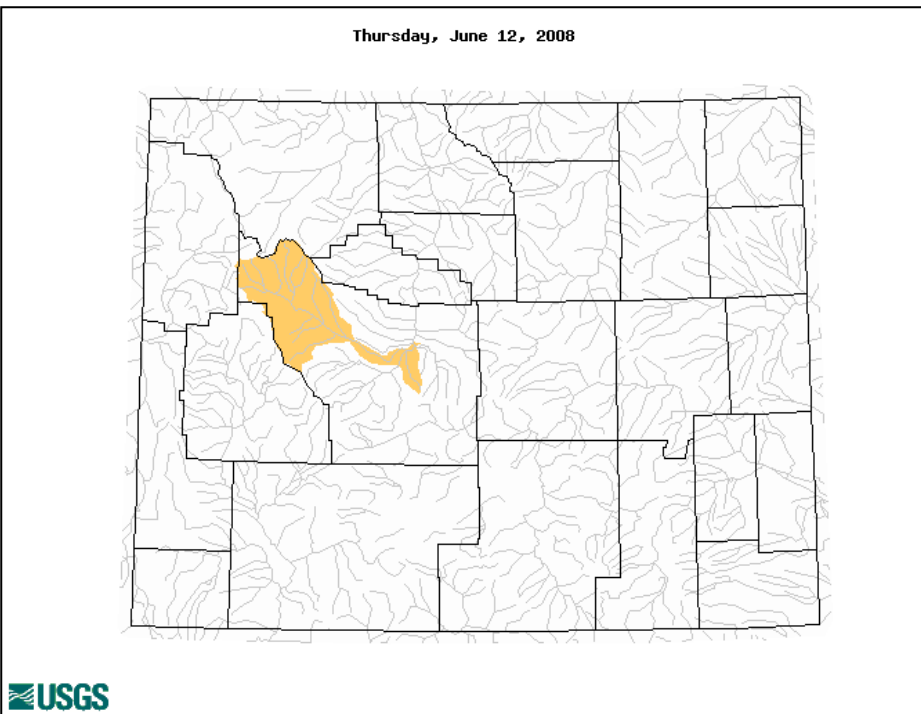
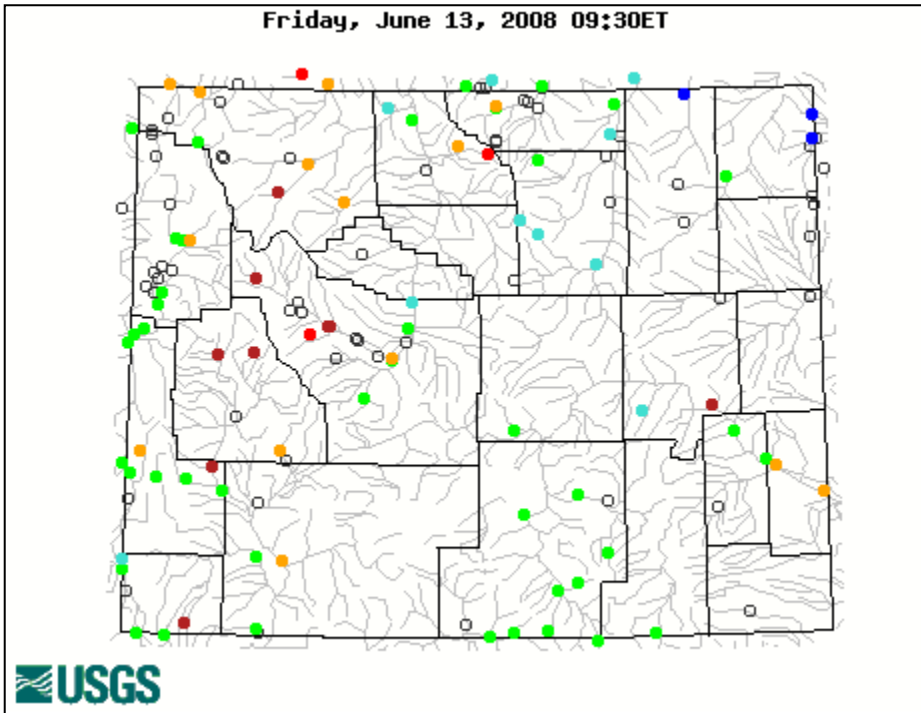
## .Snowpack/Snow Water Equivalent Averages and Trends...

Record to near record amounts of 'water' in the snowpack for Togwotee Pass SNOTEL (Wind/Snake Watersheds); and for Two Ocean Plateau SNOTEL (Snake River Drainage)



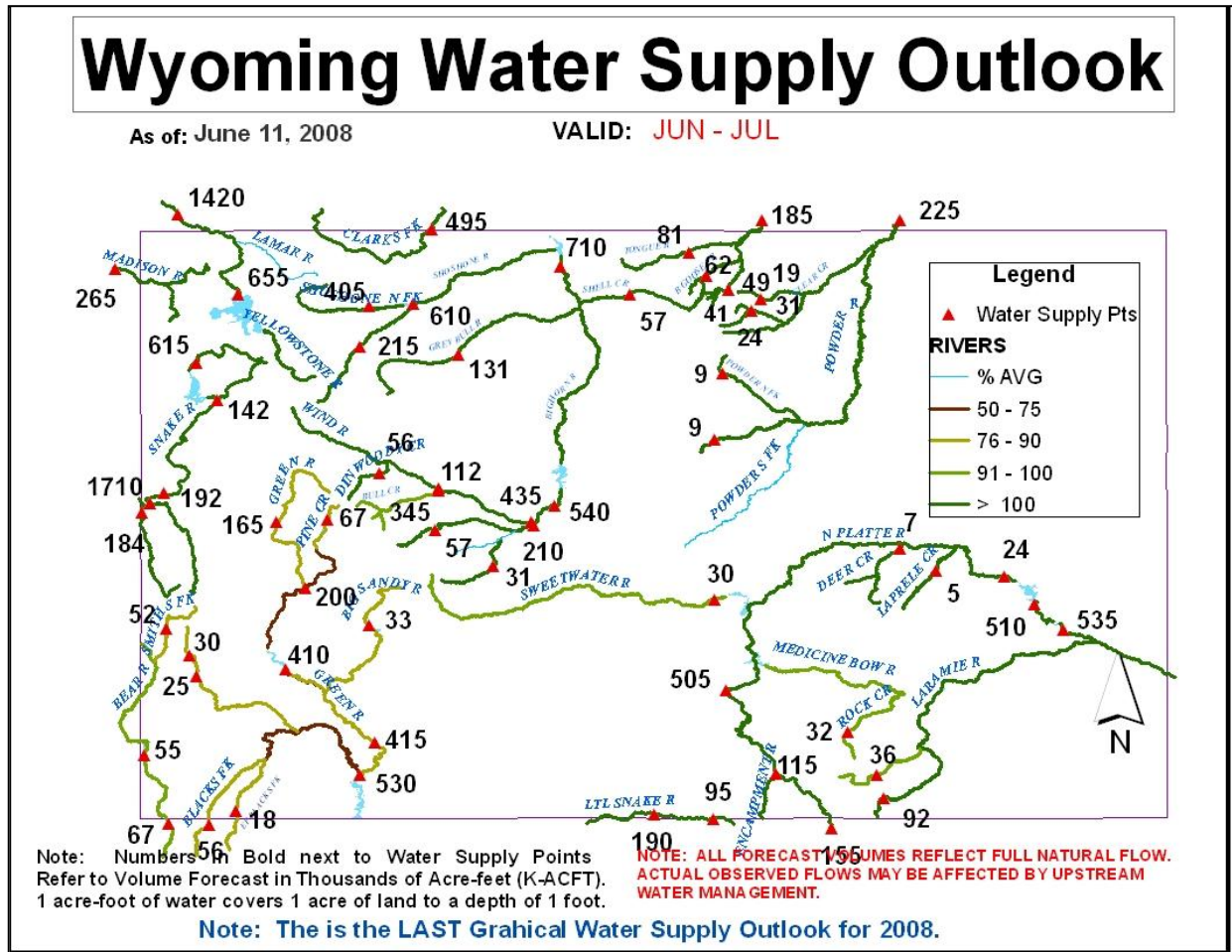


**.River and Streamflow Conditions //Water Supply Forecast/Reservoir Storage...**Spring runoff continues across Wyoming--many streams are flowing at near to above normal levels by the middle of June.

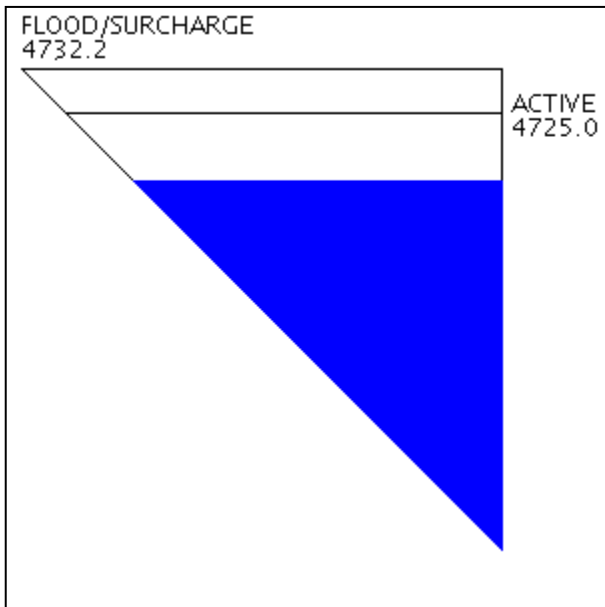


Map of **below-normal** streamflow conditions for Wyoming.

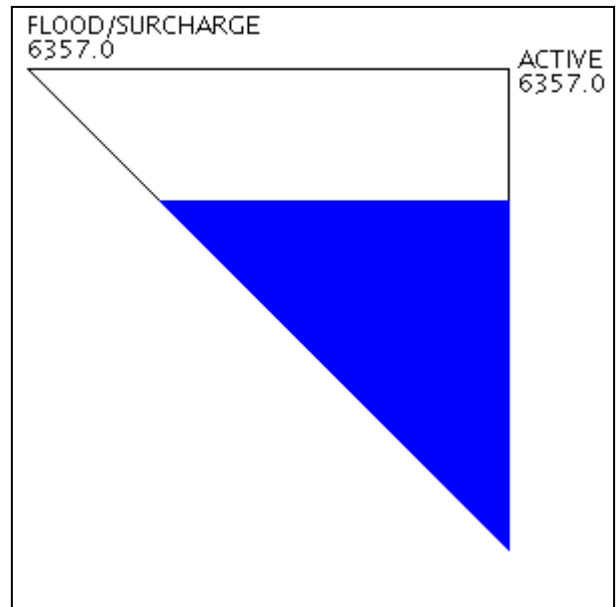
June Water Supply Outlook.



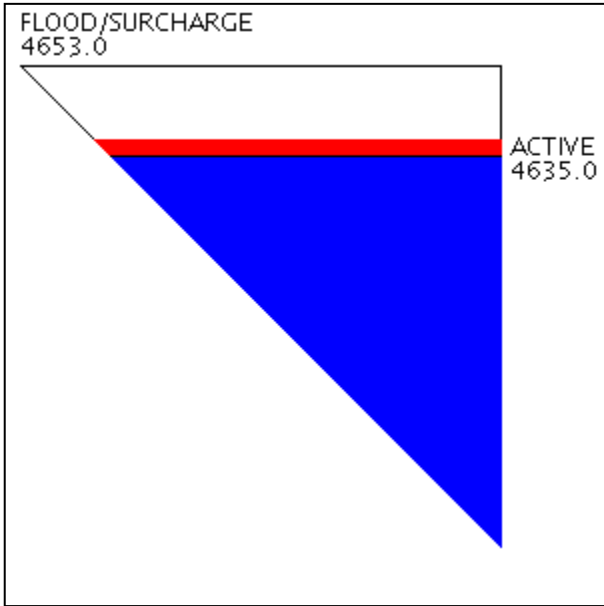
Reservoir Storages....



Boysen Reservoir Storage--71% full (6/16/2008)



Seminoe Reservoir Storage--54% full (6/16/2008)

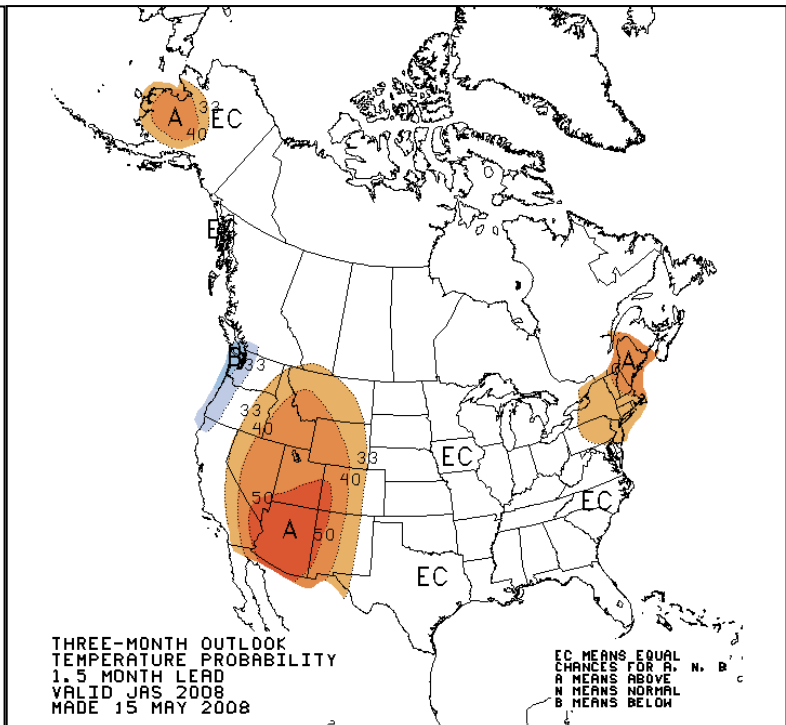
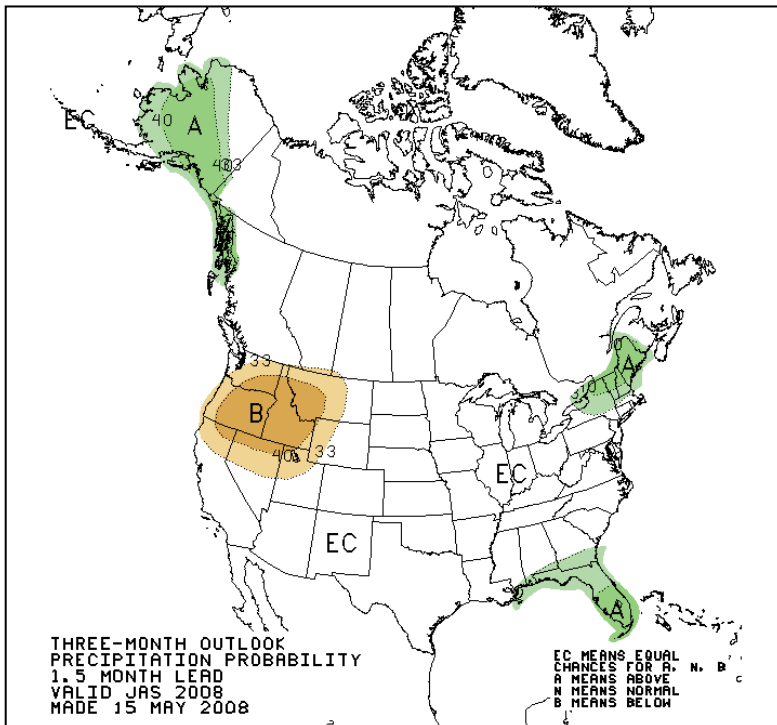


**Glendo Reservoir Storage--100% full (6/16/2008)**

**.Precipitation/Temperature Outlook...**

The 90-day outlook (July-September) indicates that there is a 30-40 percent chance of a warmer than average summer for all of Wyoming.

During July-September, most of Wyoming will see a 50 percent chance of either a drier or wetter than normal summer; with western Wyoming expected to experience a 30 percent chance of a drier than normal summer.



## **.Questions or comments...**

If you have any questions or comments about this drought information, please contact:

Jim Fahey  
Hydrologist  
NOAA/National Weather Service  
Riverton, WY  
307-857-3898

[James.Fahey@noaa.gov](mailto:James.Fahey@noaa.gov)

## **.Related web sites...**

Wyoming Drought Site...

[www.wrds.uwyo.edu/wrds/wsc/df](http://www.wrds.uwyo.edu/wrds/wsc/df)

USGS Wyoming Drought Watch...

[www.wy.water.usgs.gov/projects/drought](http://www.wy.water.usgs.gov/projects/drought)

U.S. Drought Monitor...

[www.drought.unl.edu/dm/monitor.html](http://www.drought.unl.edu/dm/monitor.html)

NOAA Drought Page...

[www.drought.noaa.gov](http://www.drought.noaa.gov)

Western Regional Climate Center...

[www.wrcc.dri.edu](http://www.wrcc.dri.edu)

NOAA/NWS Climate Page...

[www.weather.gov/climate/index/php?wfo=riw](http://www.weather.gov/climate/index/php?wfo=riw)

Wyoming River Information...

NWS - [www.crh.noaa.gov/ahps2/index.php?wfo=riw](http://www.crh.noaa.gov/ahps2/index.php?wfo=riw)/(or cys/unr)  
<http://ahps2.wrh.noaa.gov/ahps2/index.php?wfo=slc>/(or byz)

USGS - [www.waterdata.usgs.gov/wy/nwis/rt](http://www.waterdata.usgs.gov/wy/nwis/rt)

NRCS Snow Survey/Snowpack Information...

[www.wrds.uwyo.edu/wrds/nrcs](http://www.wrds.uwyo.edu/wrds/nrcs)

Climate Prediction Center...

[www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

## **.Acknowledgements...**

This Wyoming Graphical Drought Informational Statement is a multi-agency effort involving NOAA's National Weather Service and the National Climatic Center, the NRCS, Wyoming State Climatologist's Office, regional center climatologists, and the National Drought Mitigation Center. Information for this statement has been gathered from the NWS and FAA observation sites...state cooperative services...the NRCS...and the USGS.

## **.Next issuance...**

This product will be updated by the **25 of October 2008**.