



# Wyoming Drought Information



**Jackson Lake at near record low levels – October, 2001**

|

**April 16, 2007**

# ...Below to well below average Spring runoff expected across Wyoming...

## ...Slight relief from hydrologic drought across the Wind, Sweetwater, and Powder River Basins...

### .Synopsis...

The Wind, Sweetwater, and Powder River Basins have seen a slight relief from the extended hydrologic drought. The “wet” snowstorm at the end of March prompted the national drought monitor to downgrade the Wind, Sweetwater, and Powder Watersheds to at least one category.

The wettest part of the year, for watersheds east of the continental divide, is during April through June. However, the latest long-range predictions (the next 3 months) for precipitation across Wyoming indicate that there is will be no above normal precipitation chances for the region.

Snowpack averages across Wyoming continues to be below normal for a majority of basins across the state. The greatest gains of snow water equivalents (SWEs) averages during March were over the Tongue and Powder River Drainages. Wyoming is very dependent on late spring snowfall to carry the states water supply deep into summer and into early fall. Again, long-range predictions indicate that the late season snowpack will see no significant additional accumulations.

The true measure of drought conditions in Wyoming is the amount of water that runs off into streams and lakes from the mountain snowpack. Inflows to the major reservoirs this spring and summer are expected to be below to well below normal. Current and future temperature trends are very important on how much runoff flows into the streams and reservoirs and how long the snowpack will last into the summer.

# U.S. Drought Monitor

## Wyoming

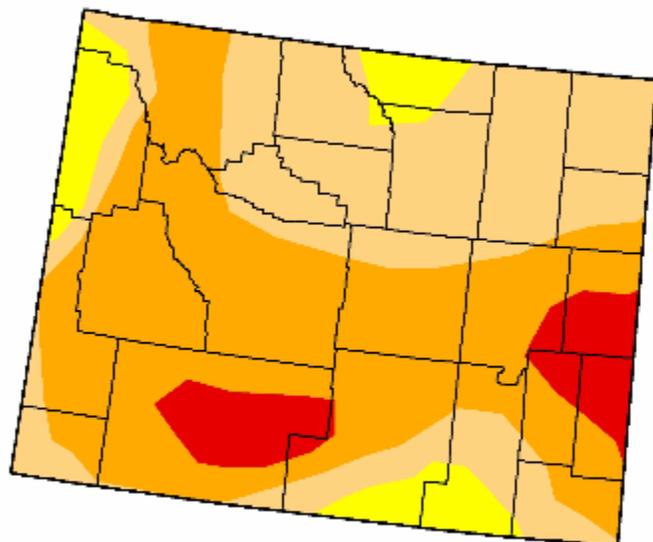
April 10, 2007  
Valid 7 a.m. EST

Drought Conditions (Percent Area)

|   | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4  |
|---|------|-------|-------|-------|-------|-----|
| Current                                       | 0.0  | 100.0 | 91.9  | 54.9  | 8.1   | 0.0 |
| Last Week<br>(04/03/2007 map)                 | 0.0  | 100.0 | 93.8  | 50.2  | 8.1   | 0.0 |
| 3 Months Ago<br>(01/16/2007 map)              | 0.0  | 100.0 | 98.7  | 84.9  | 54.1  | 0.0 |
| Start of<br>Calendar Year<br>(01/02/2007 map) | 1.6  | 98.4  | 92.1  | 71.5  | 40.9  | 0.0 |
| Start of<br>Water Year<br>(10/03/2006 map)    | 0.3  | 99.7  | 97.2  | 69.0  | 50.0  | 0.0 |
| One Year Ago<br>(04/11/2006 map)              | 23.9 | 76.1  | 36.6  | 0.0   | 0.0   | 0.0 |

Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

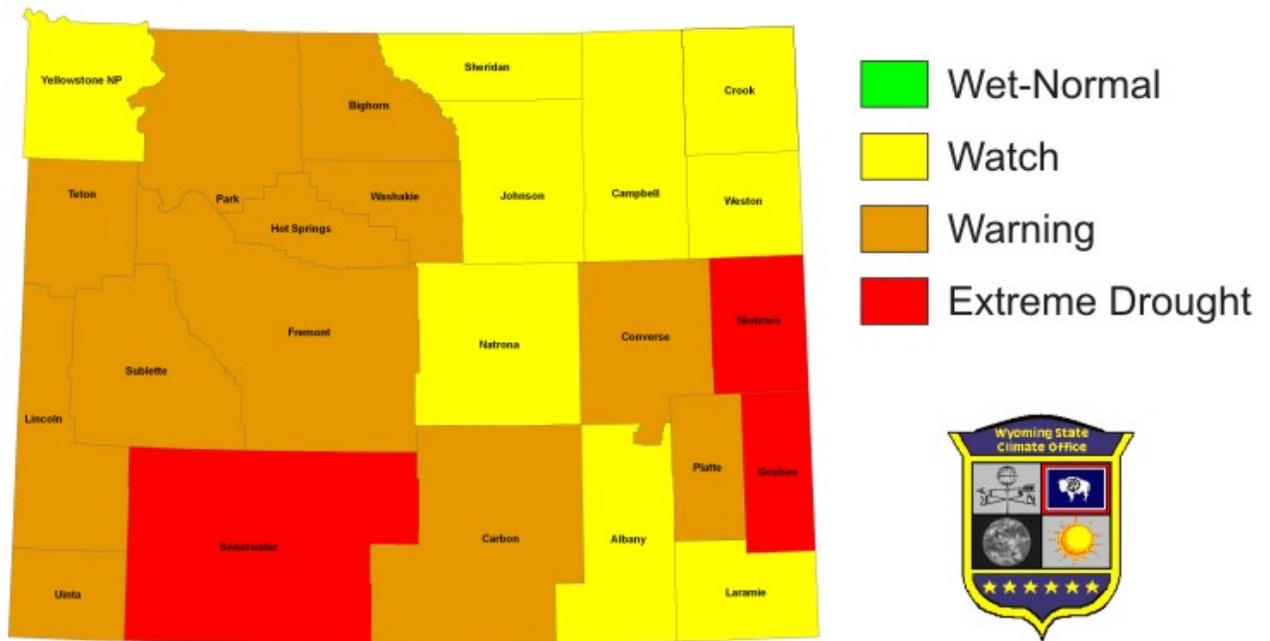


The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements



**>>Drought Status Update (from the State Climatologist's Office):**

## Drought Status Update April 6, 2007



Please see <http://www.wrds.uwyo.edu/wrds/wsc/df/drought.html> for additional information

### **.Local area affected...**

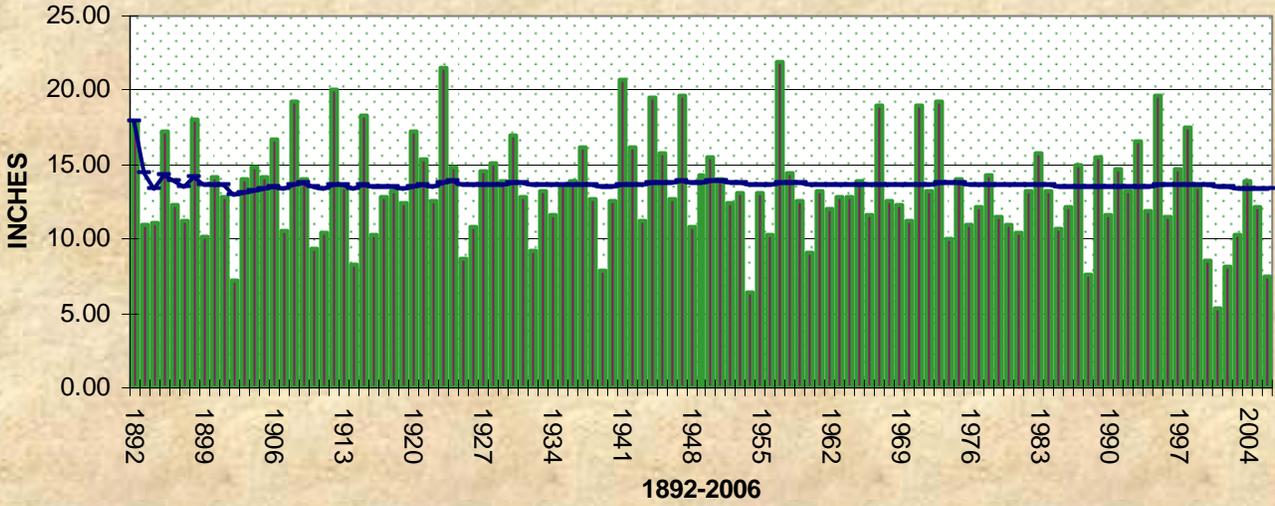
All major river basins and counties in Wyoming are affected.

### **.Climate Summary...**

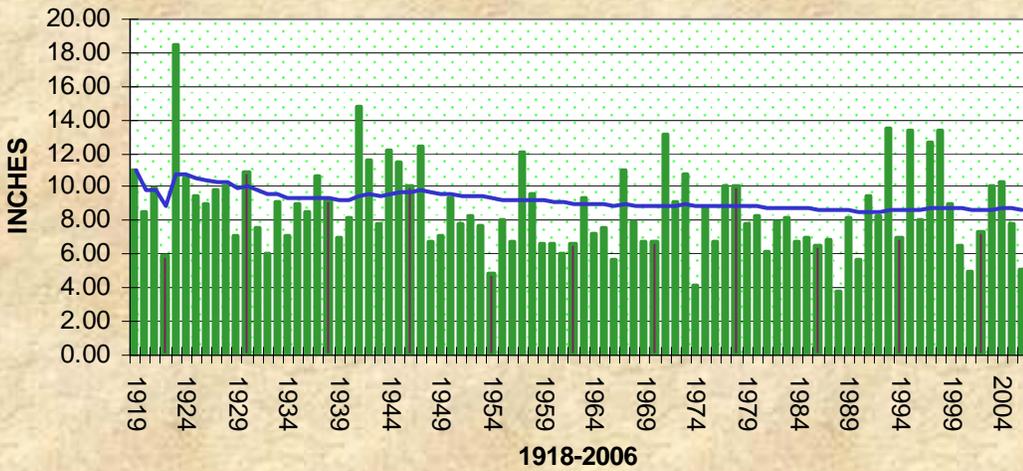
#### **>>Long Range Precipitation Trends...**

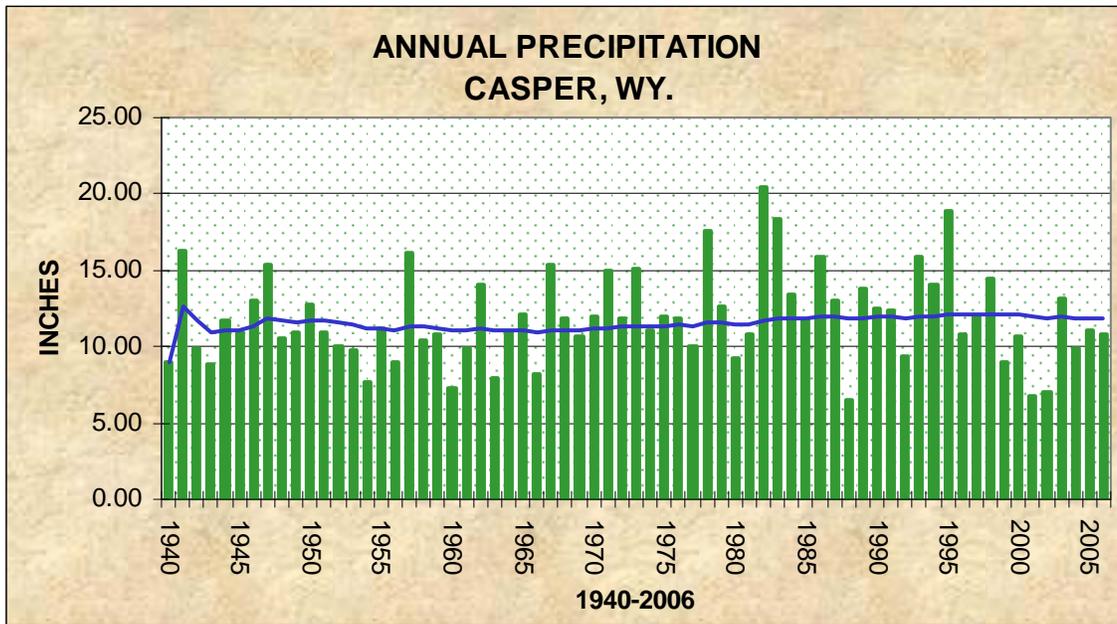
Lander's precipitation records go back to 1892—Riverton's precipitation records go back to 1919—and Casper's precipitation records go back to 1940.

### ANNUAL PRECIPITATION AT HUNT FIELD LANDER, WY.



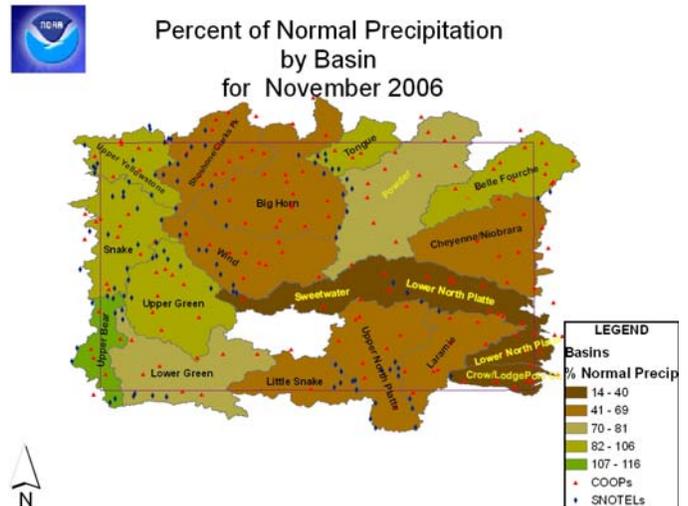
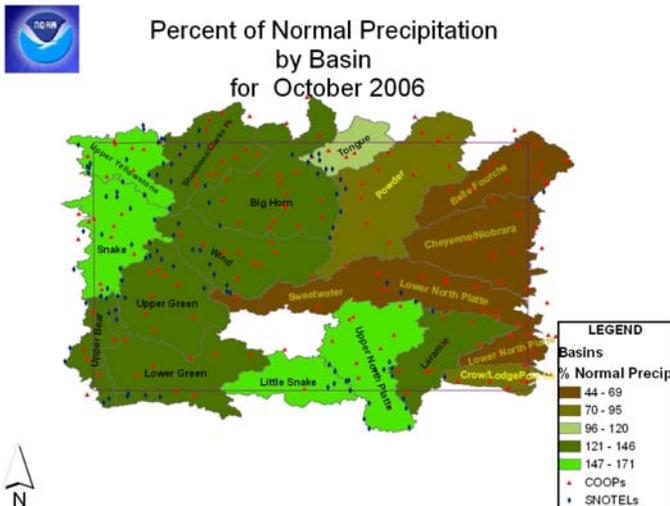
### ANNUAL PRECIPITATION RIVERTON, WY.





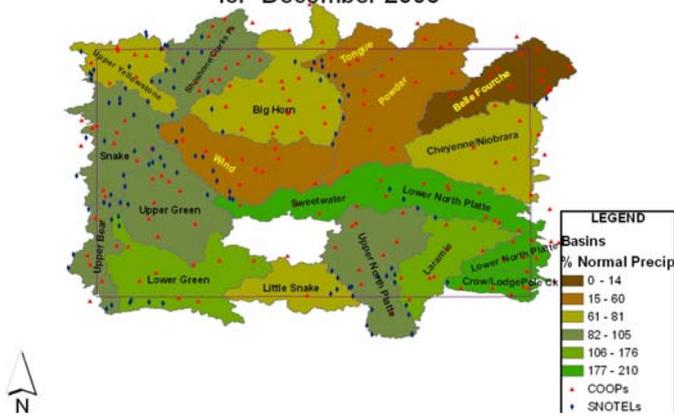
### >>Current Precipitation Trends...(Last 6 Months)

October-March precipitation across major basins across Wyoming was generally near to just above average. The Snake, Upper Green, Wind, and Cheyenne Basins recorded below normal precipitation during the current water year. The monthly basin averages for the past 6 months are below:





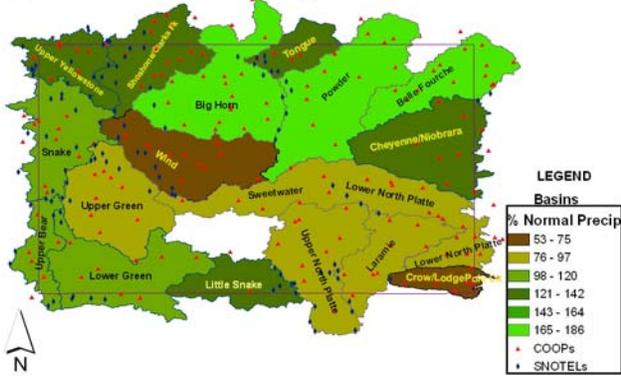
Percent of Normal Precipitation  
by Basin  
for December 2006



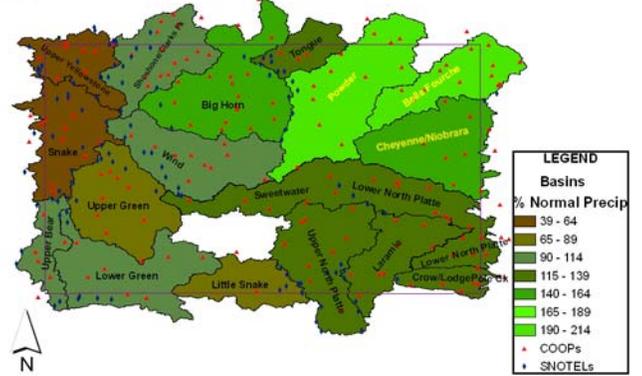
Percent of Normal Precipitation  
by Basin  
for January 2007



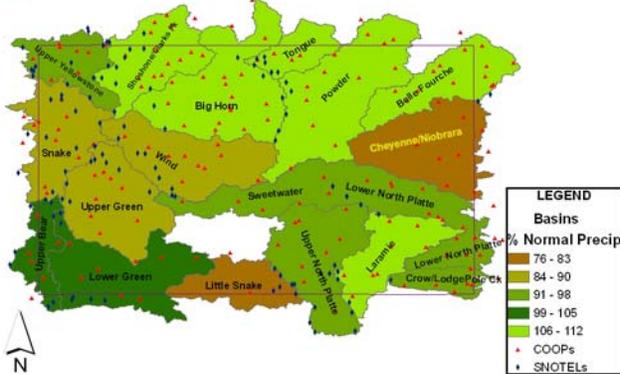
Percent of Normal Precipitation  
by Basin  
for February 2007



Percent of Normal Precipitation  
by Basin  
March 2007



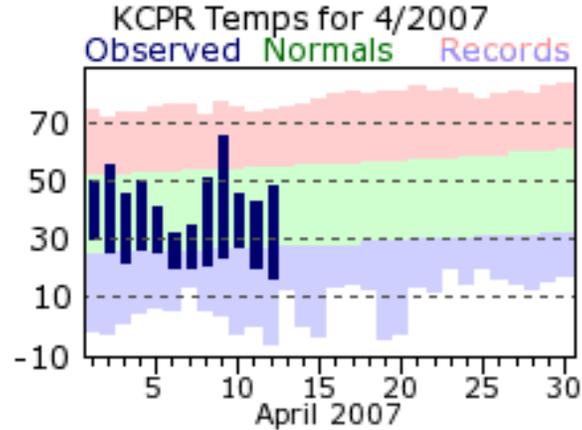
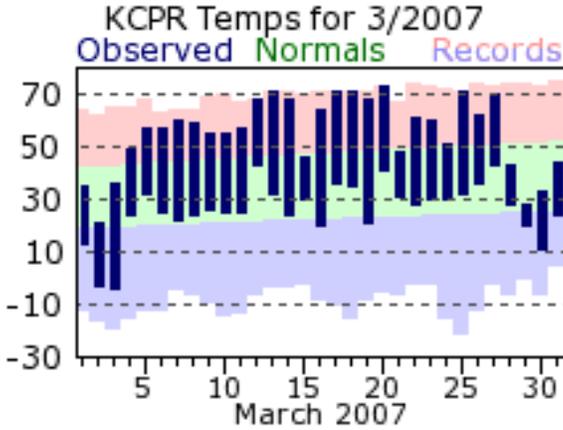
Percent of Normal Precipitation  
by Basin  
October - March 2007



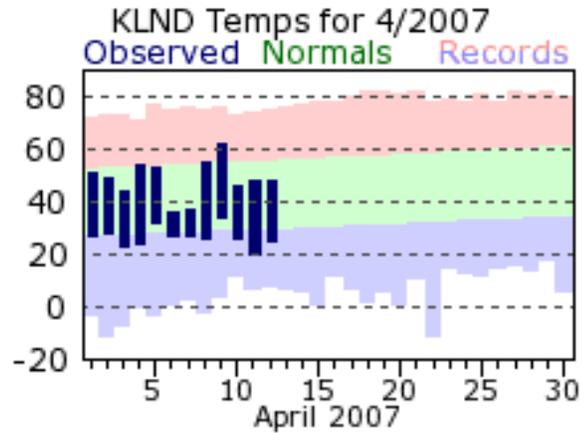
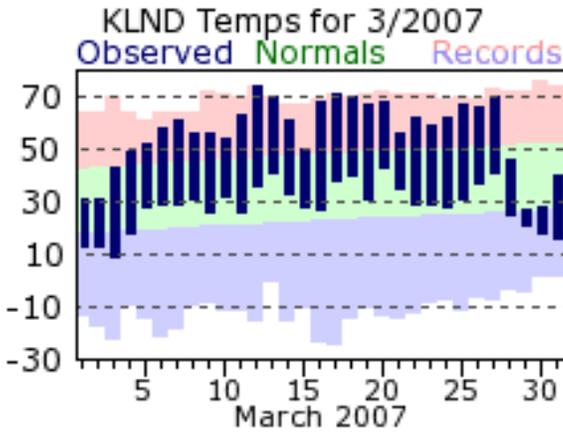
## >>Temperature Trends...

Warmer than average for most of March with slightly below average temperatures at the end of March through the middle of April.

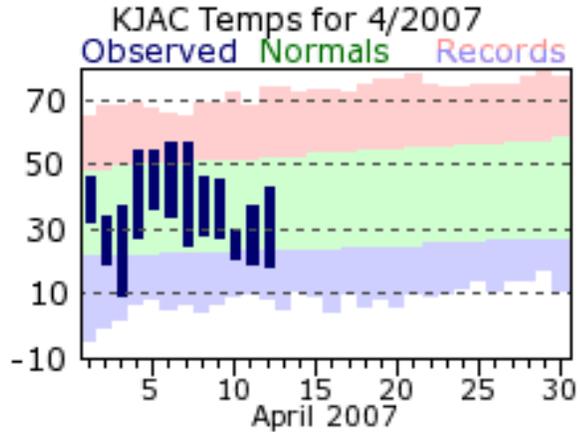
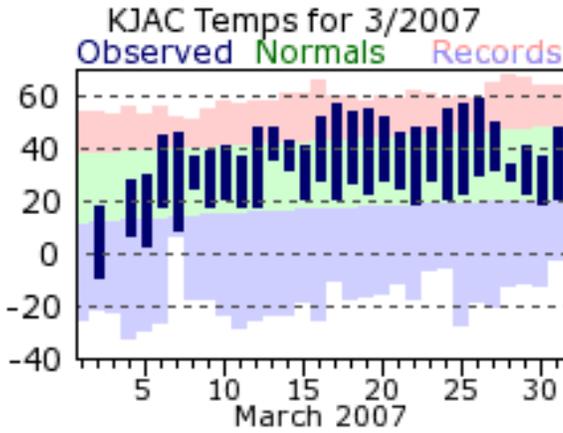
### Casper



### Lander



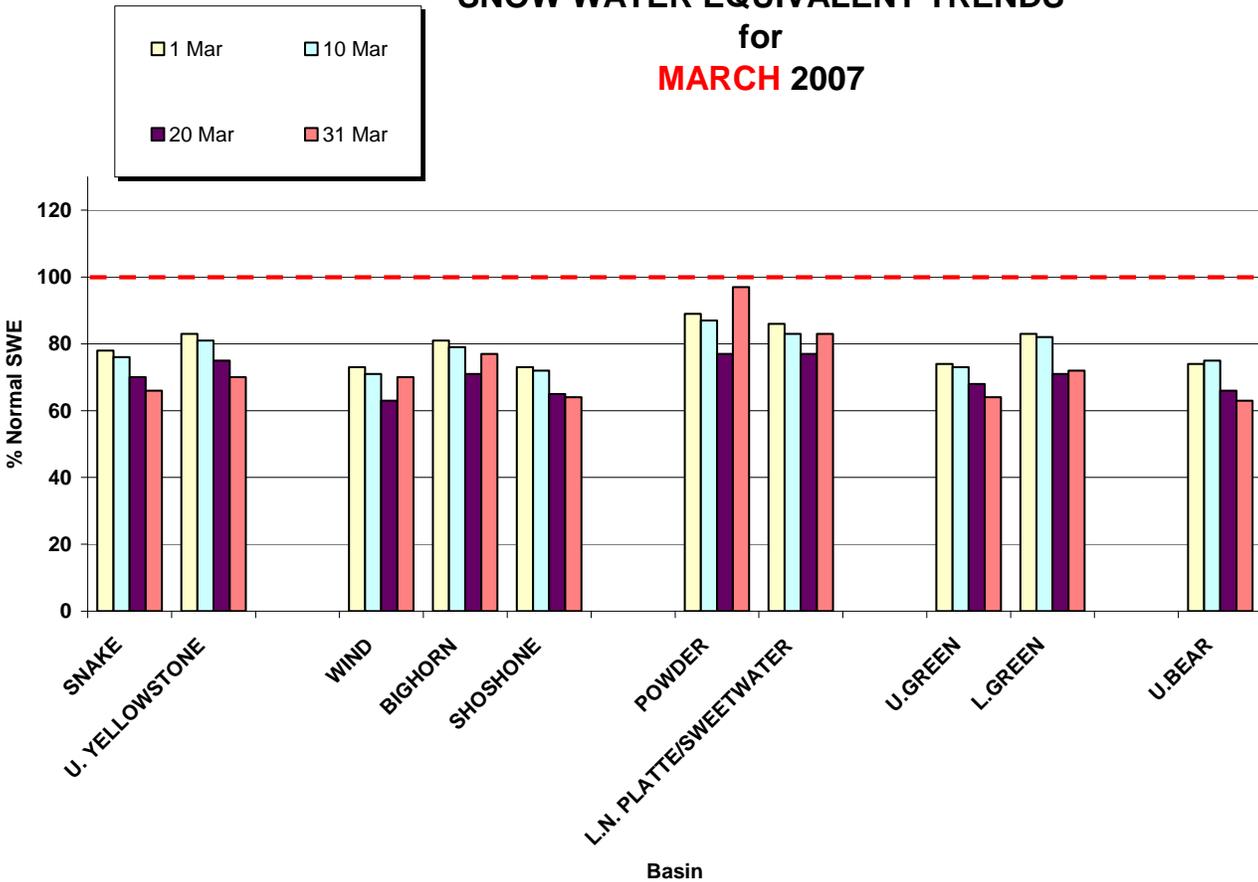
**Jackson**



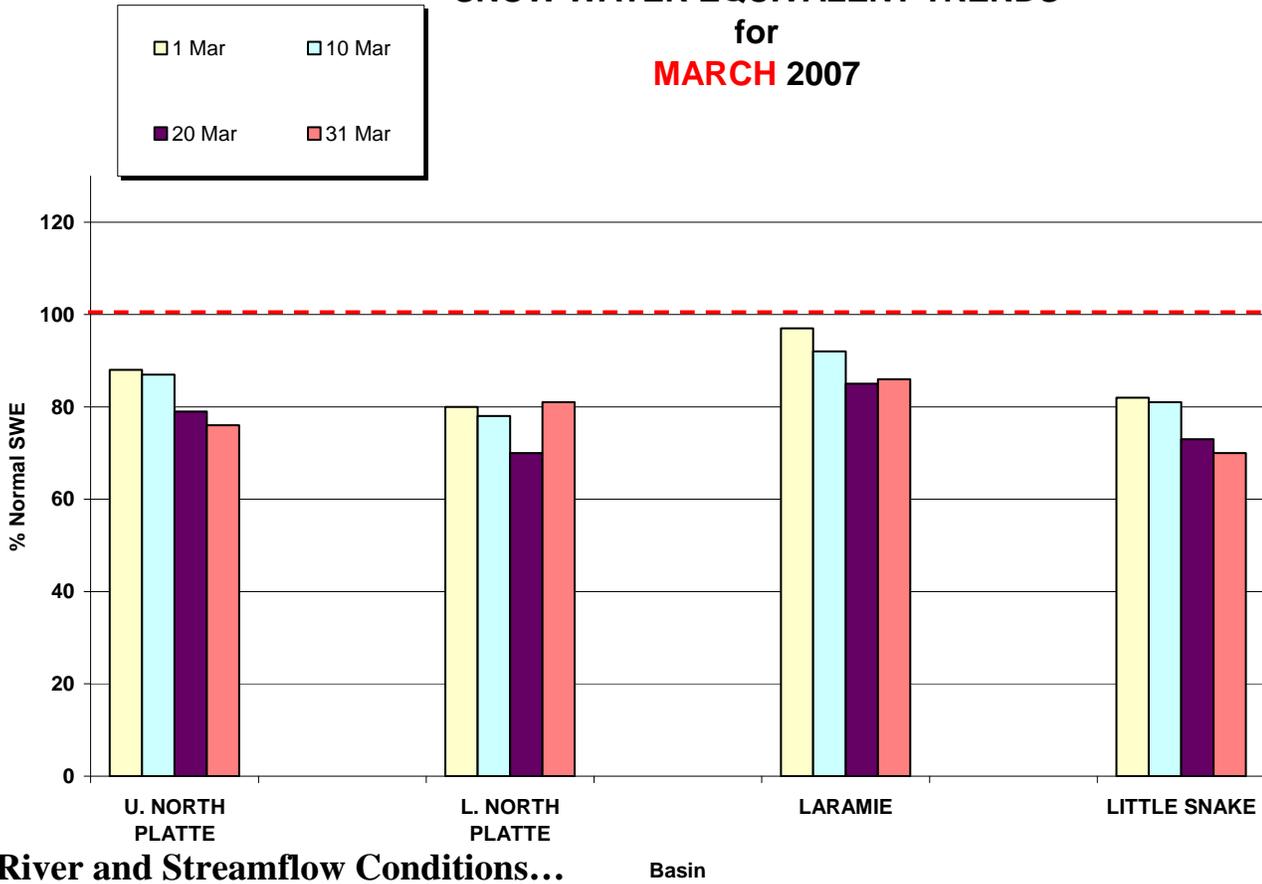
**>>Snow pack trends...**

Snow water equivalents (SWEs) in the mountain snowpack across Wyoming remained to 65 to 80 percent of average by the end of March. The only exception was across the Powder (including the Tongue) Watershed--where SWEs rose to near 100% of normal at the end of the month.

**SNOW WATER EQUIVALENT TRENDS  
for  
MARCH 2007**



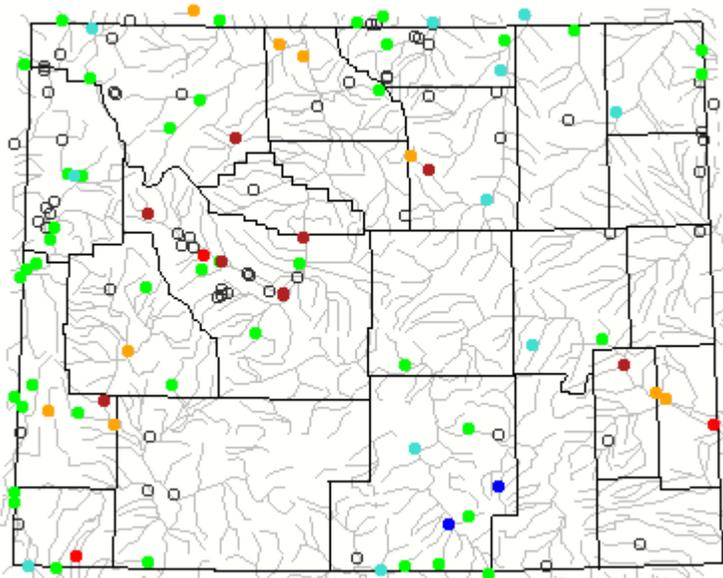
## SNOW WATER EQUIVALENT TRENDS for **MARCH 2007**



### River and Streamflow Conditions...

A majority of streams and rivers across Wyoming are flowing and have been flowing at normal to just above normal levels for this time of year.

Friday, April 13, 2007 09:06ET

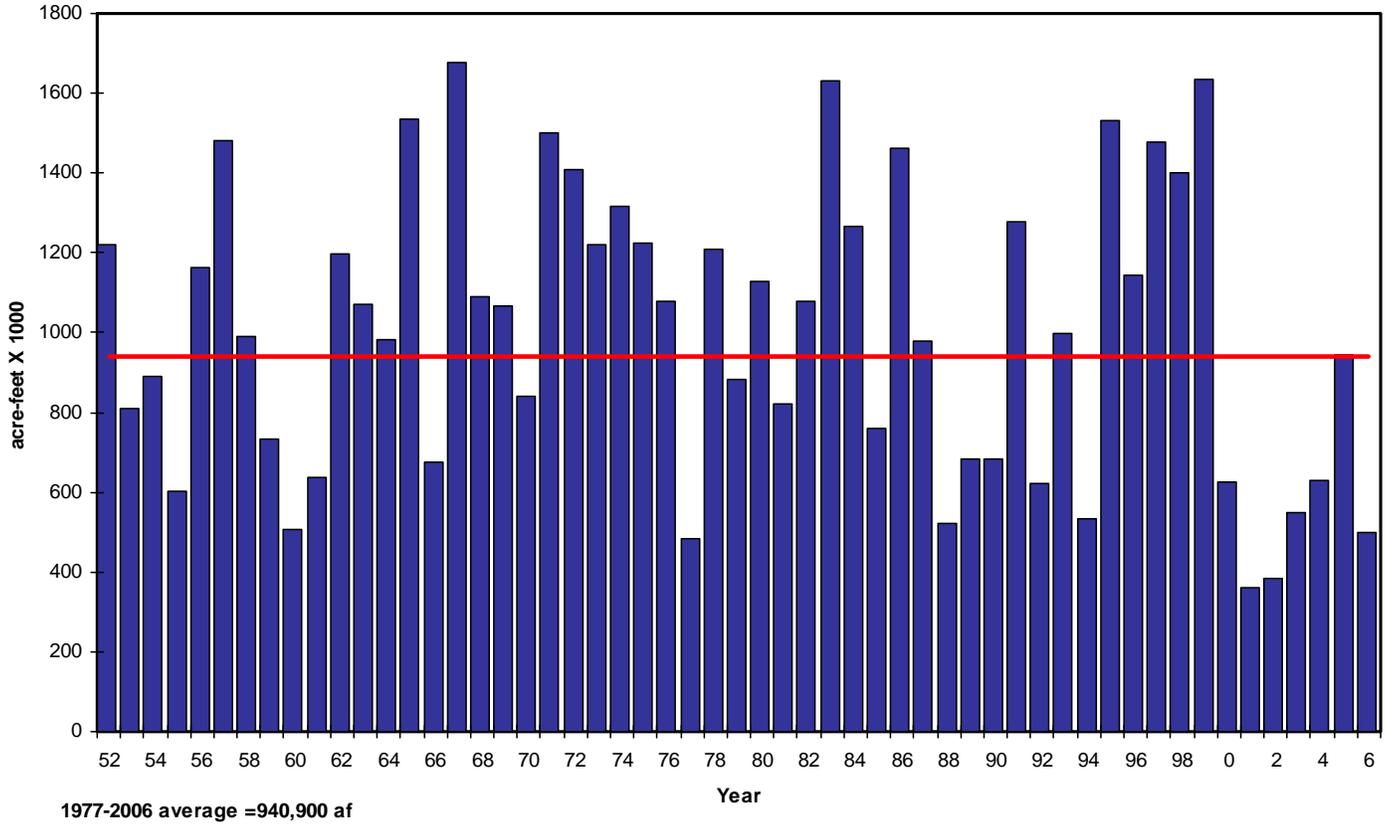




Boysen

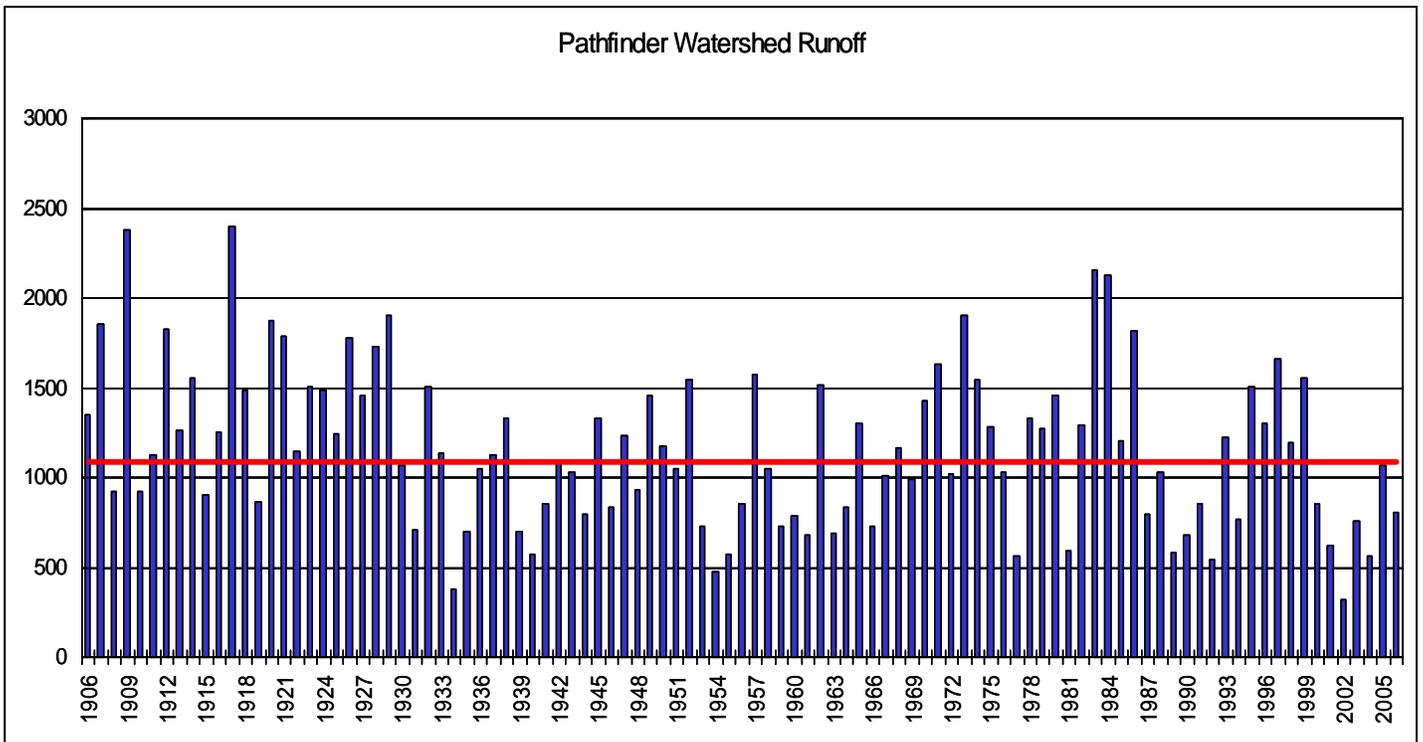
# Boysen Inflow

## Total Water Year



**Note: 435,000 ac-ft is expected for WY07**

## Pathfinder



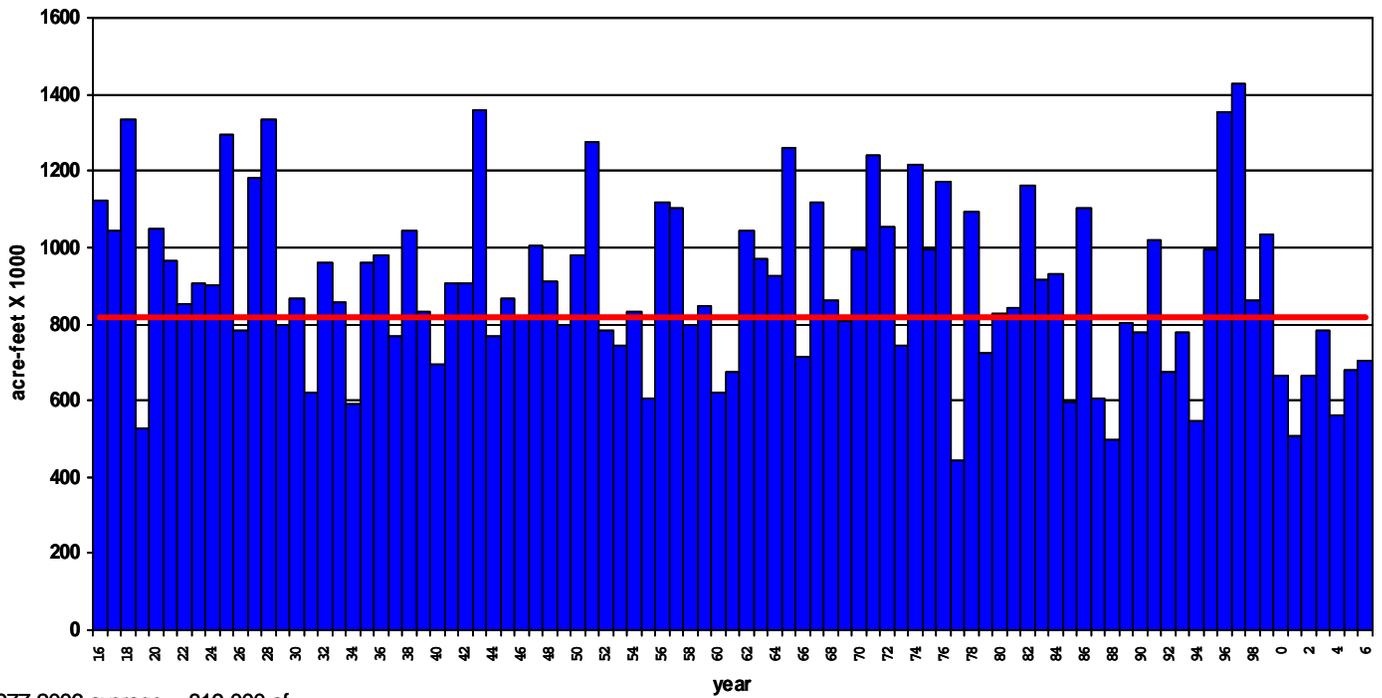
1977-2006 average = 1,086,000 af

**Note: 646,000 ac-ft is expected WY07**

**Buffalo Bill**

# Buffalo Bill Inflow

## Total Water Year

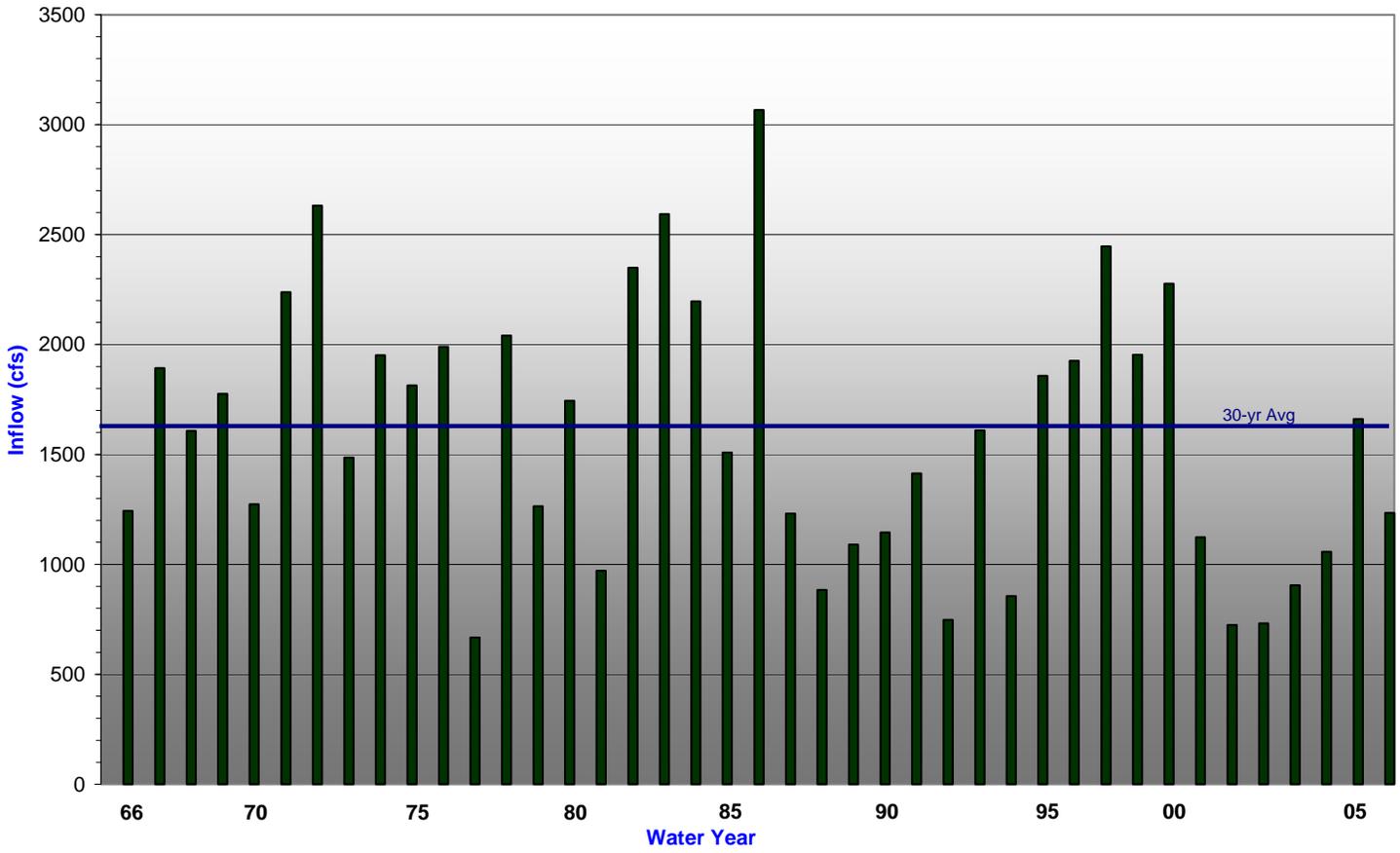


1977-2006 average = 819,000 ac-ft

**Note: 605,000 ac-ft is expected for WY07**

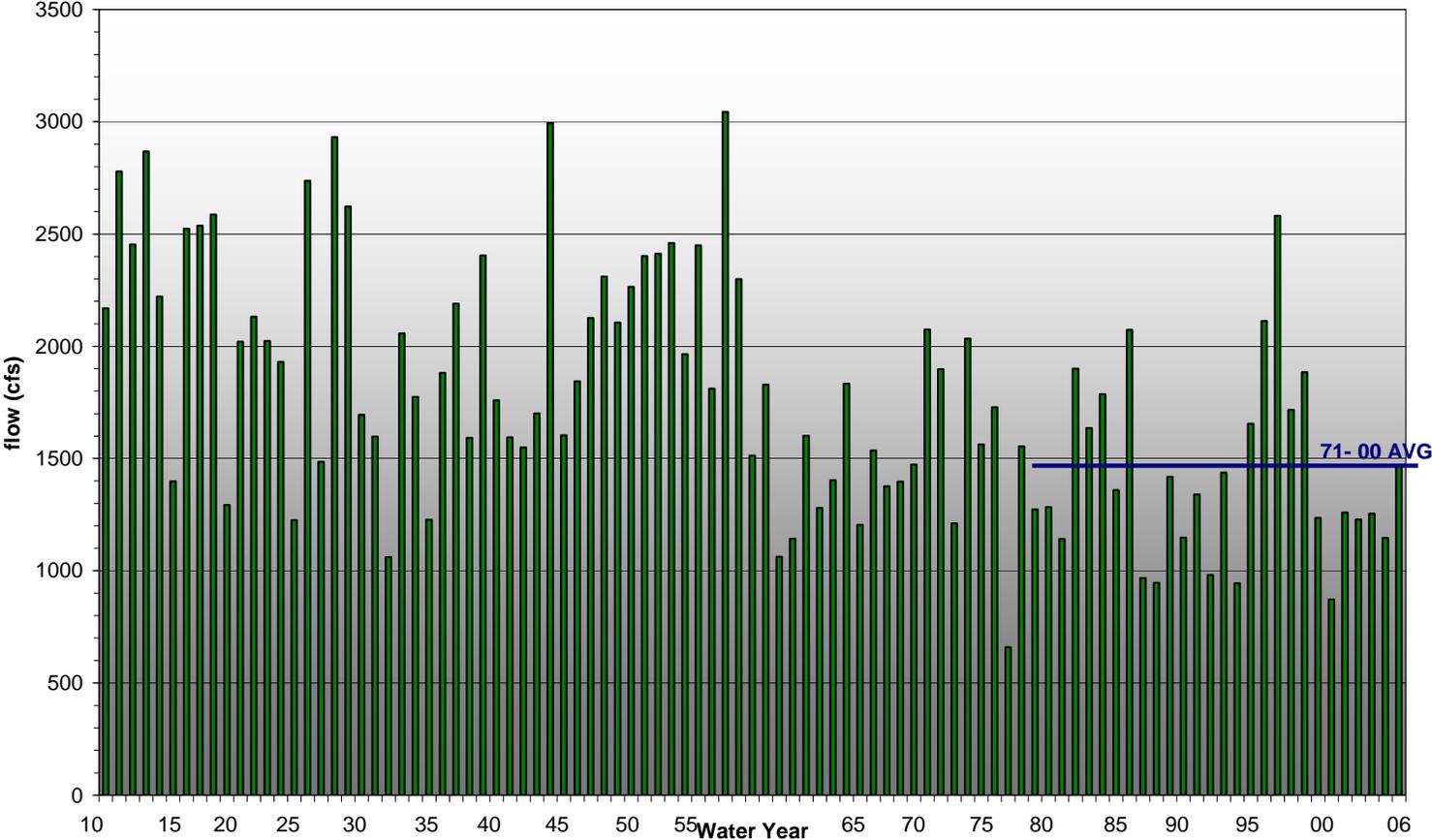
# Fontenelle

## Average Yearly Fontenelle Reservoir Inflow



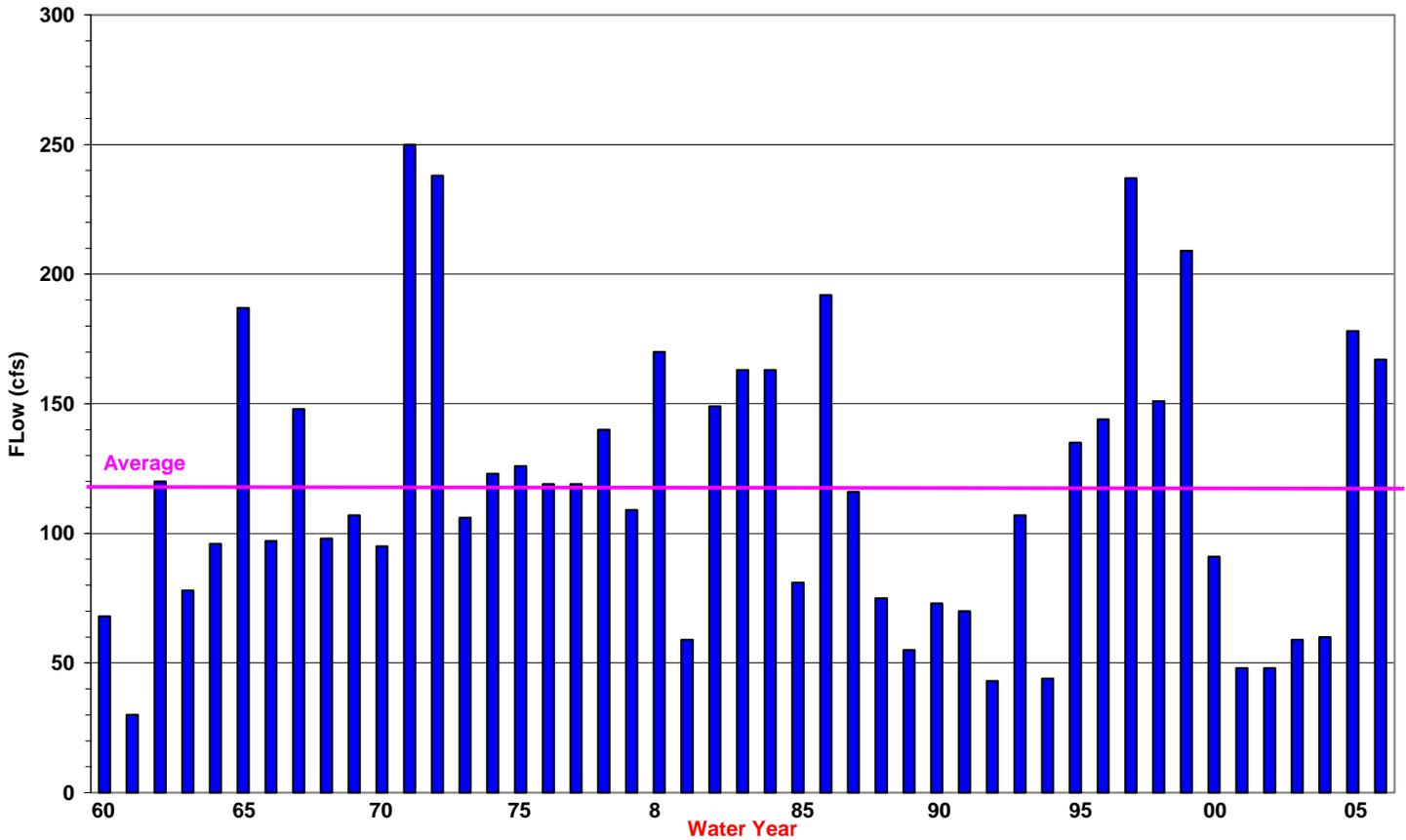
**Jackson Dam**

**Jackson Lake Dam Average Inflow WY1910 - WY2006**



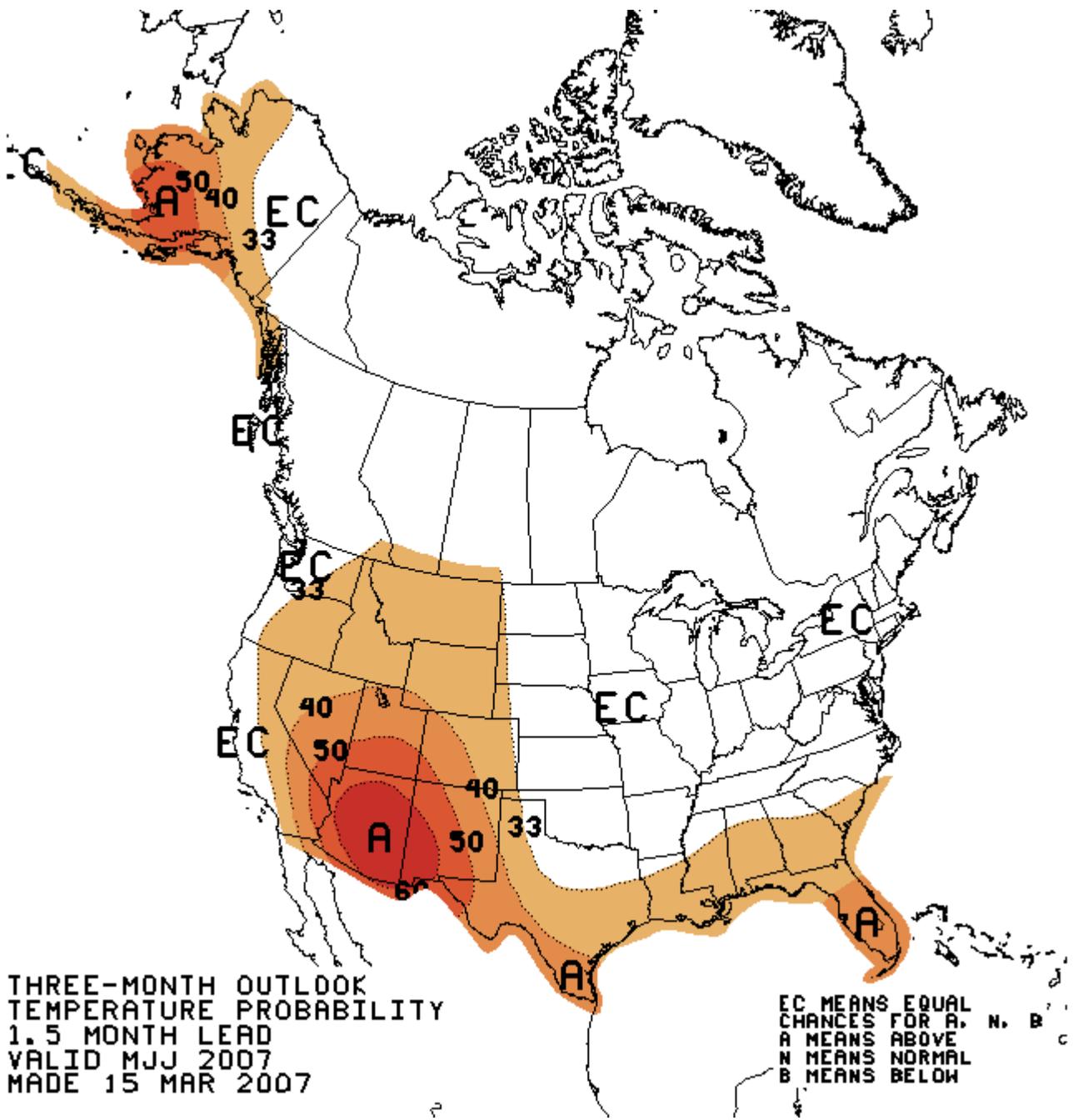
## Viva Naughton

# Viva Naughton Reservoir Inflow--WY60-06

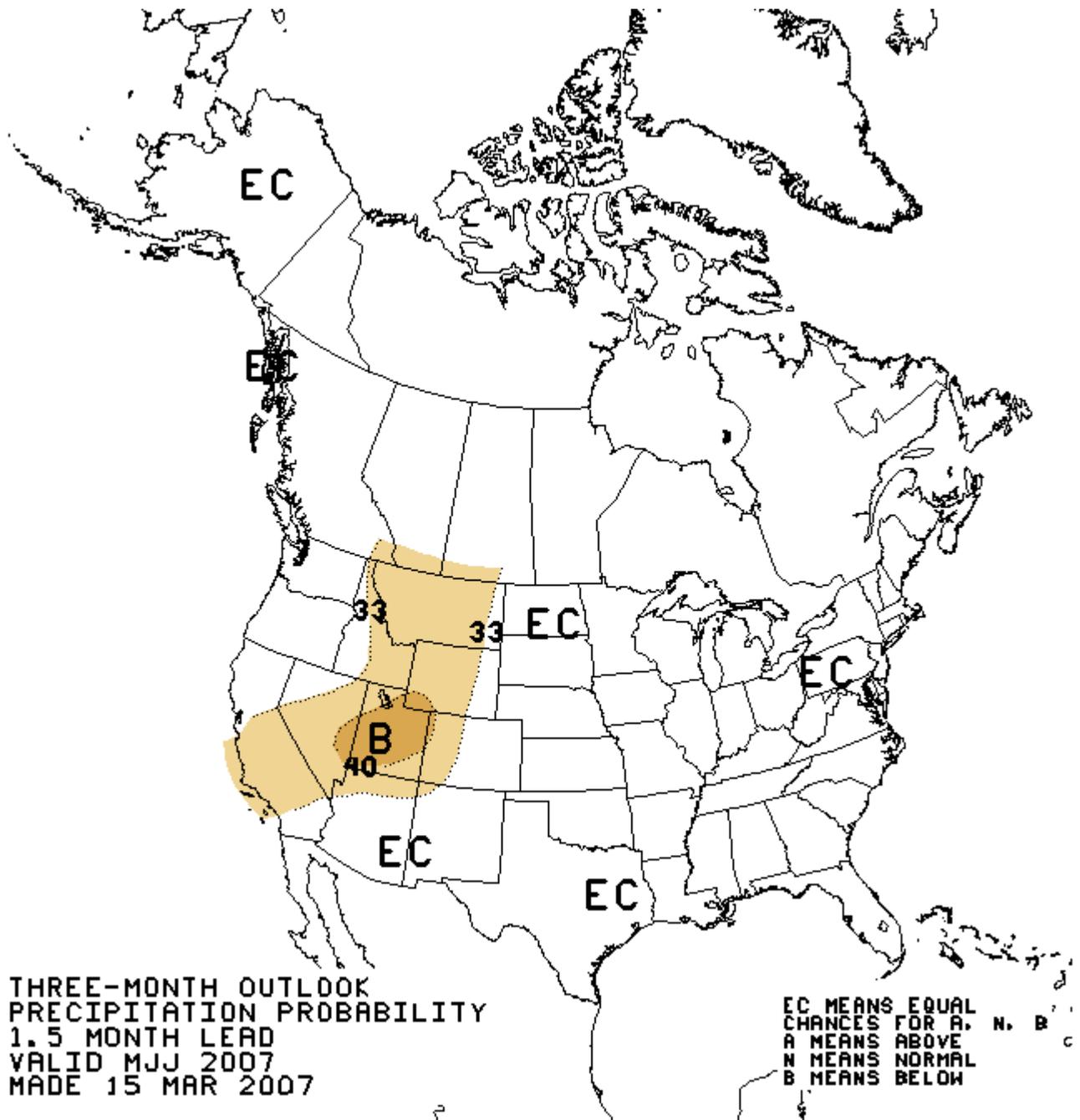


## .Precipitation/Temperature Outlook...

The 90-day outlook (May-July) indicates that there is a 30 to 40 percent chance for **warmer** than normal temperatures for Wyoming.



During May-July, southwestern Wyoming can expect to have a 30-40 percent chance of **below** normal precipitation; western and central Wyoming is expected to have a 30 percent chance **drier** than normal precipitation chances; and eastern Wyoming is expected to have equal chances (50% either side) of a wetter or drier than normal precipitation throughout the period



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

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

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## **.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 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 **20<sup>th</sup> of May**