

Hydrologic Highlights WY04 & WY05 Climate Outlook

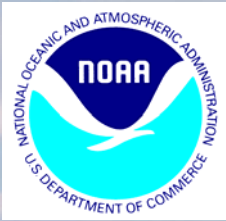
Wind-Bighorn River

Basin Advisory Group

September 28, 2004

Jim Fahey, Hydrologist

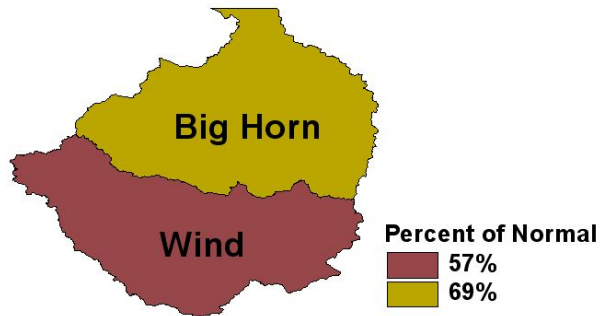
National Weather Service, Riverton WY



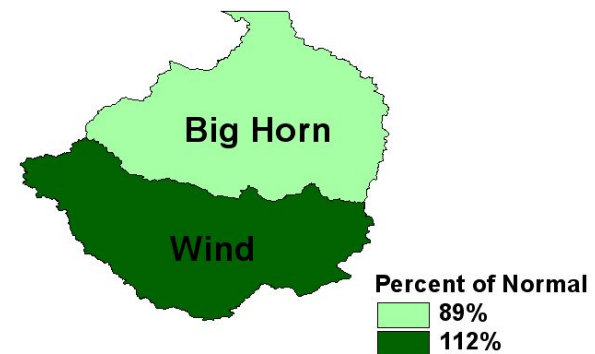
Precipitation Comparisons

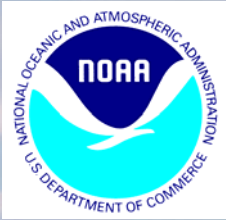


Percent of Normal Precipitation for WY 01



Percent of Normal Precipitation for WY 04

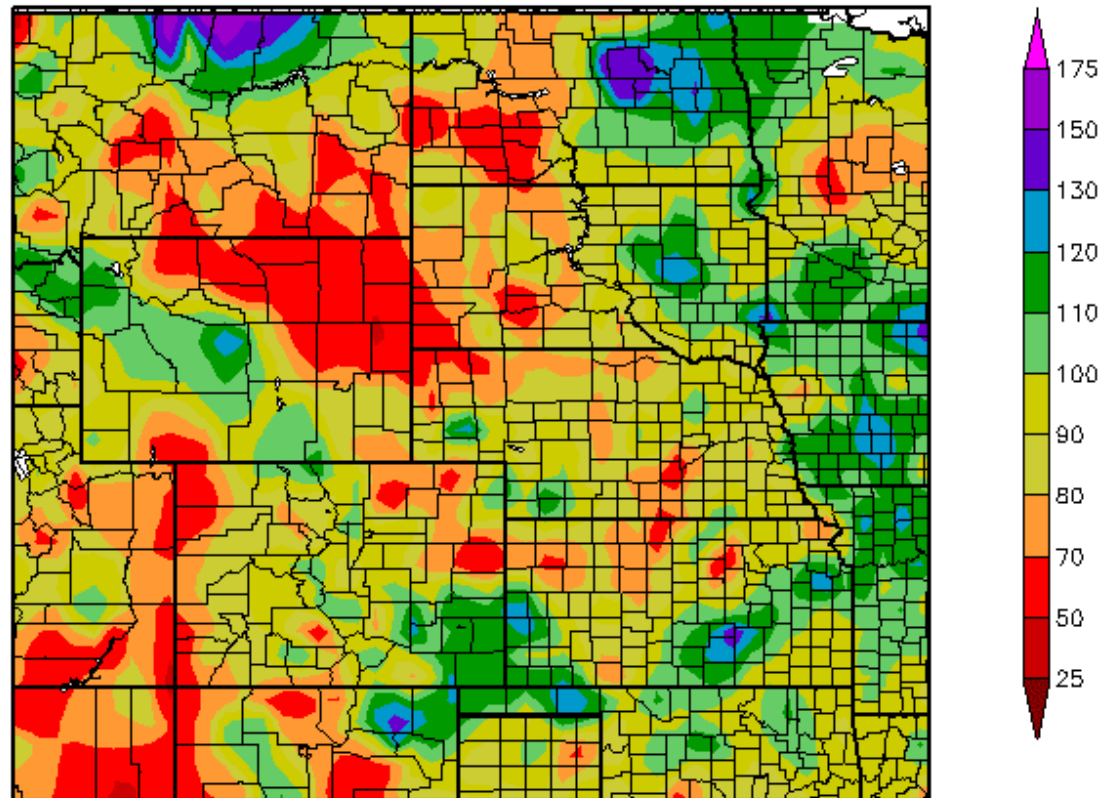




Regional 1-yr Precipitation

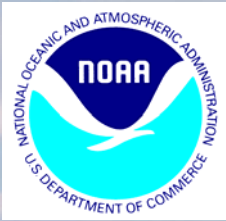


Percent of Normal Precipitation (%)
9/16/2003 - 9/15/2004



Generated 9/16/2004 at HPRCC using provisional data.

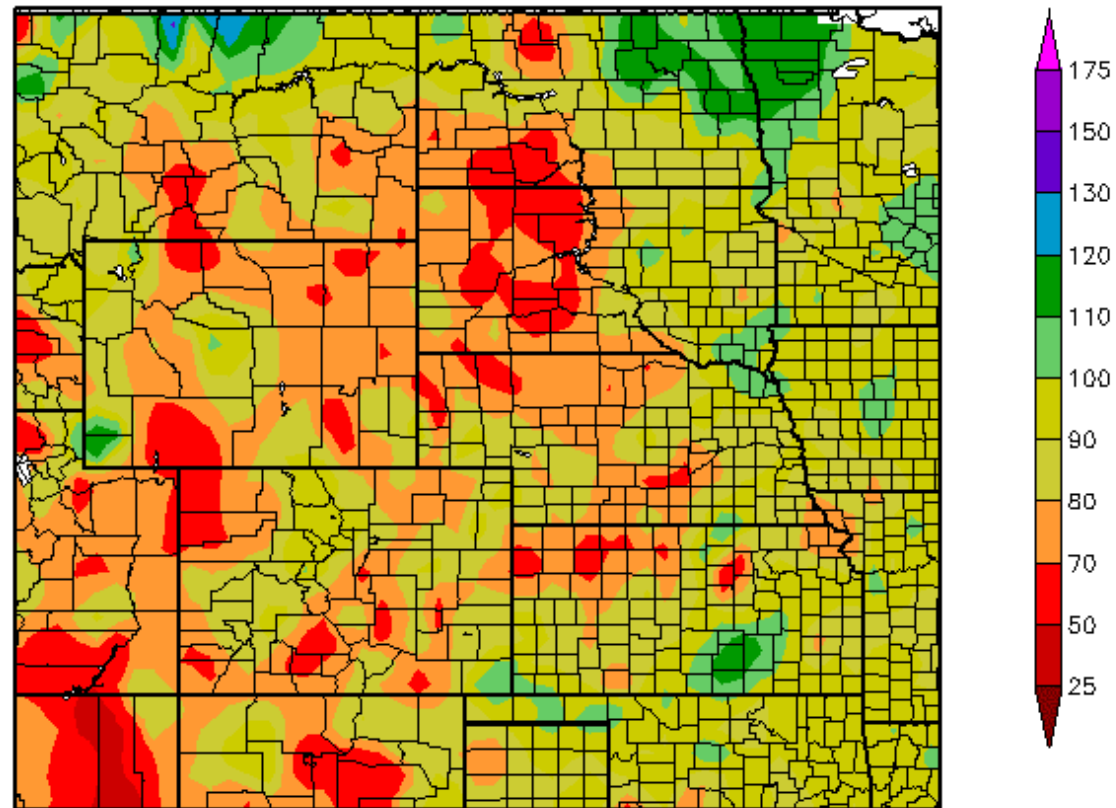
NOAA Regional Climate Centers



Regional 3-yr Precipitation

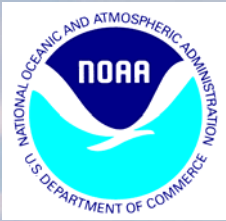


Percent of Normal Precipitation (%)
9/16/2001 - 9/15/2004



Generated 9/16/2004 at HPRCC using provisional data.

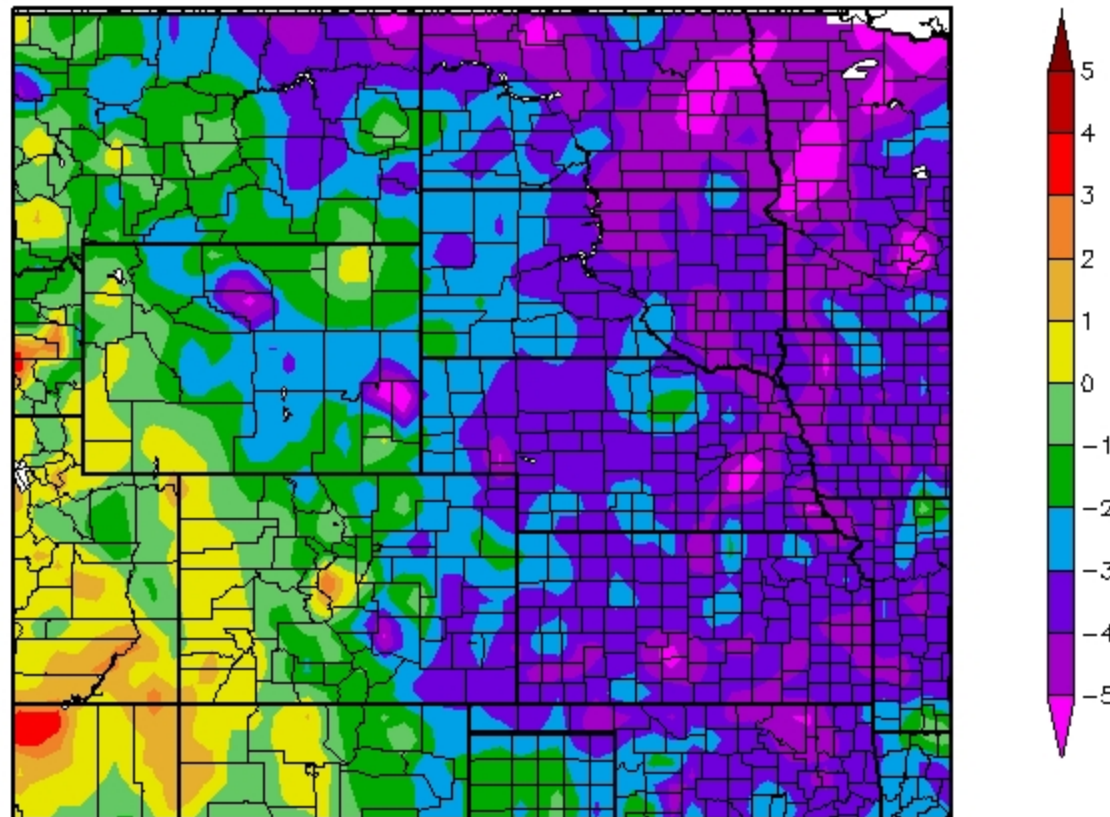
NOAA Regional Climate Centers



Regional Temperature Anomalies



Departure from Normal Temperature (F)
6/1/2004 - 8/31/2004

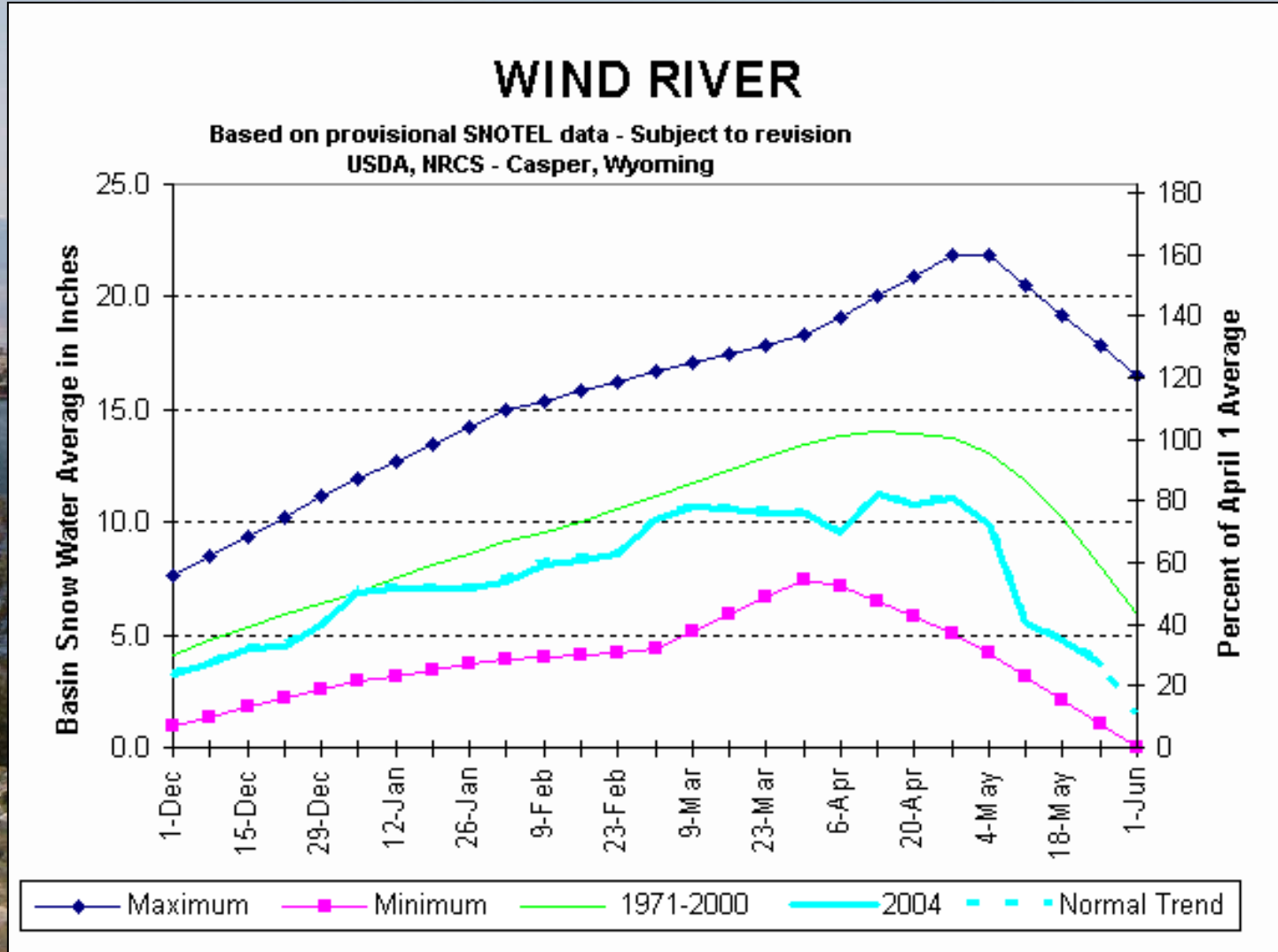


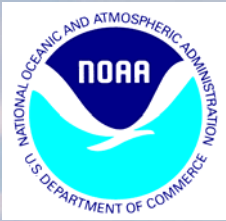
Generated 9/21/2004 at HPRCC using provisional data.

NOAA Regional Climate Centers

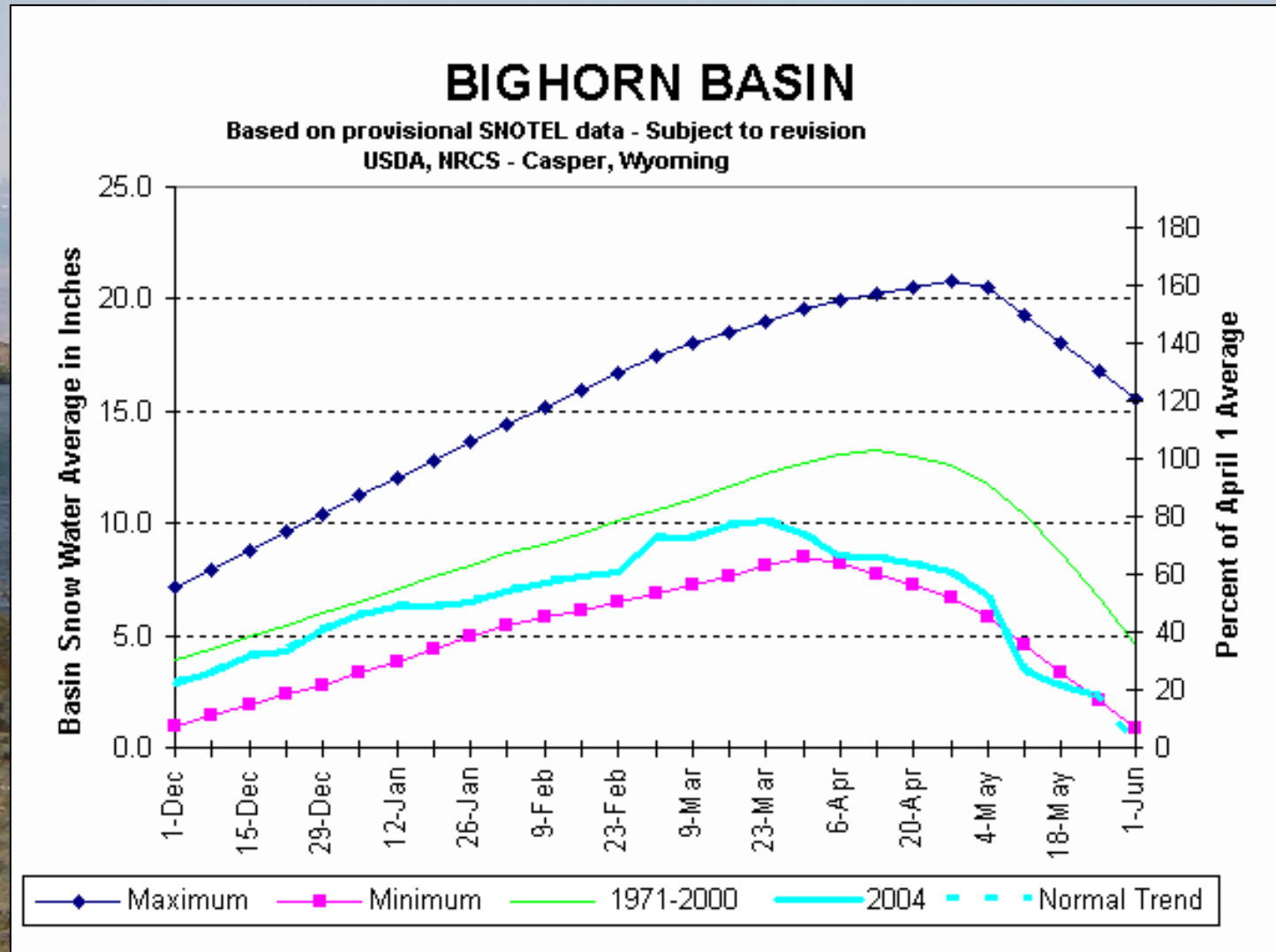


SWE for WY04 Wind River Basin



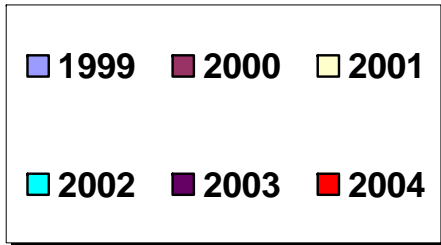


SWE for WY04 Bighorn River Basin

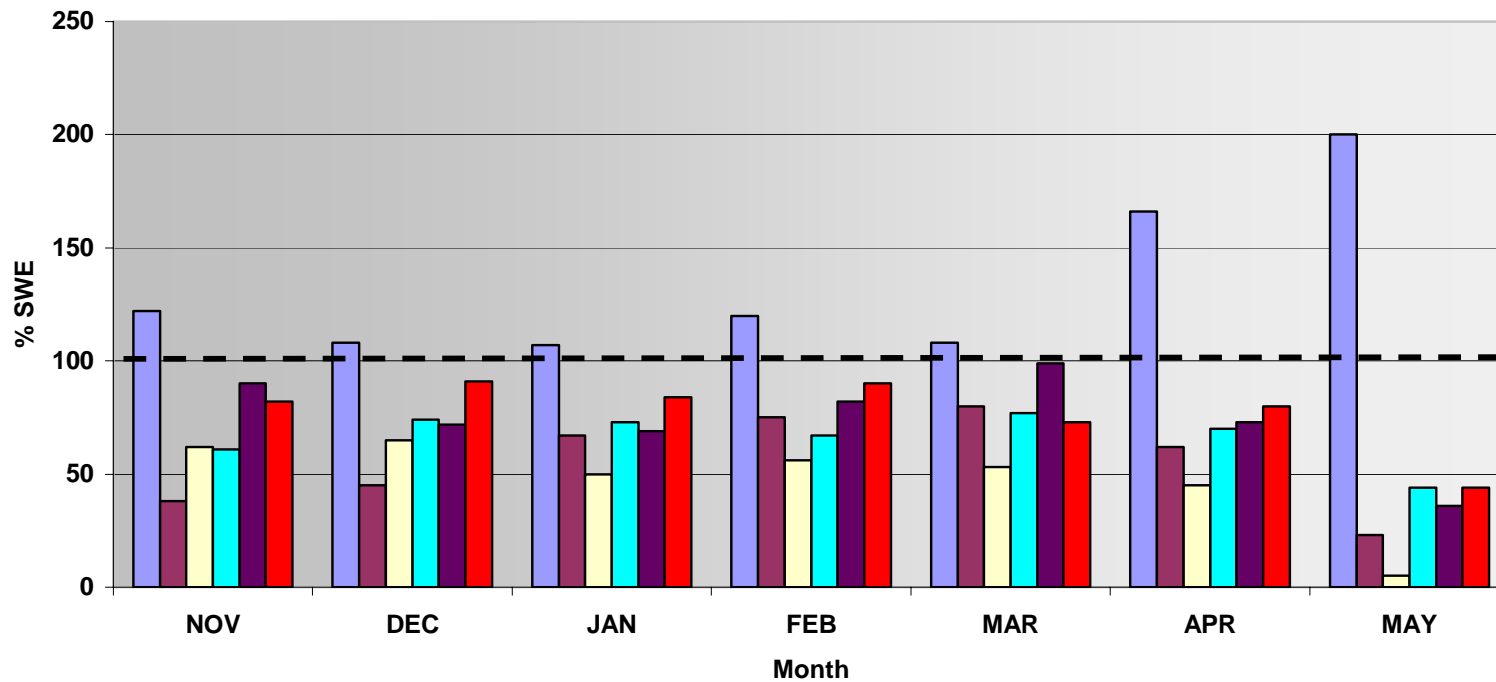


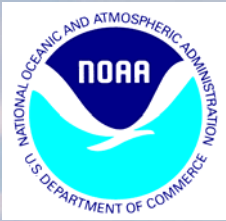


SWE Trends Wind River Basin



Snow Water Equivalents (SWE's) by Water Year
for
WIND RIVER BASIN

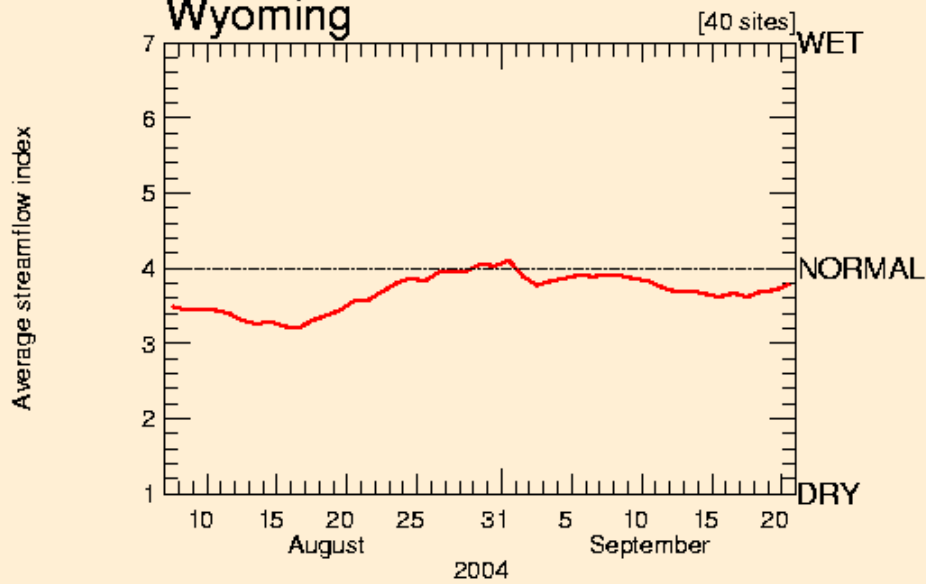




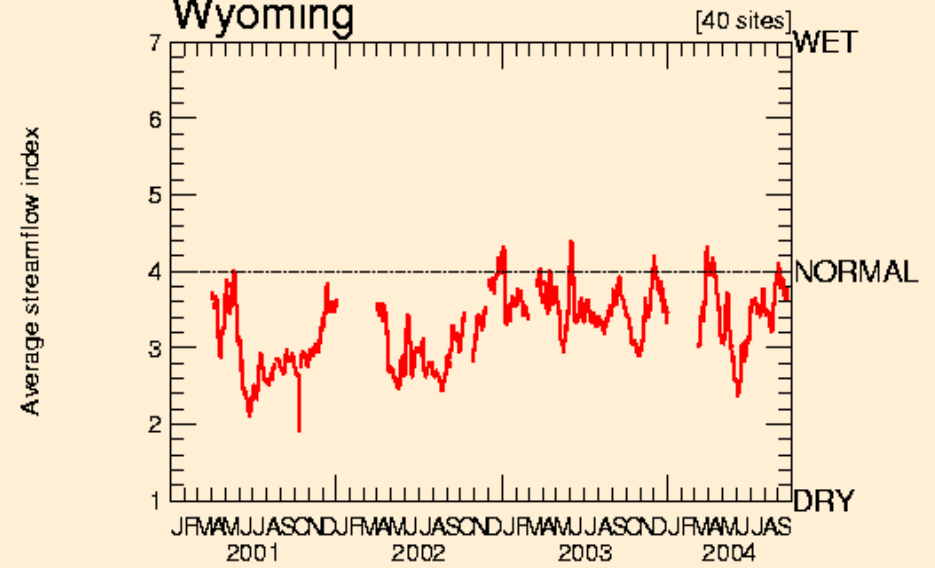
Streamflow Trends

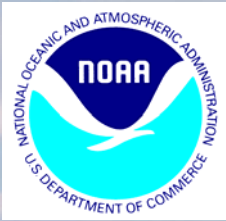


Last 45 Days
Wyoming



Since January 16, 2001
Wyoming

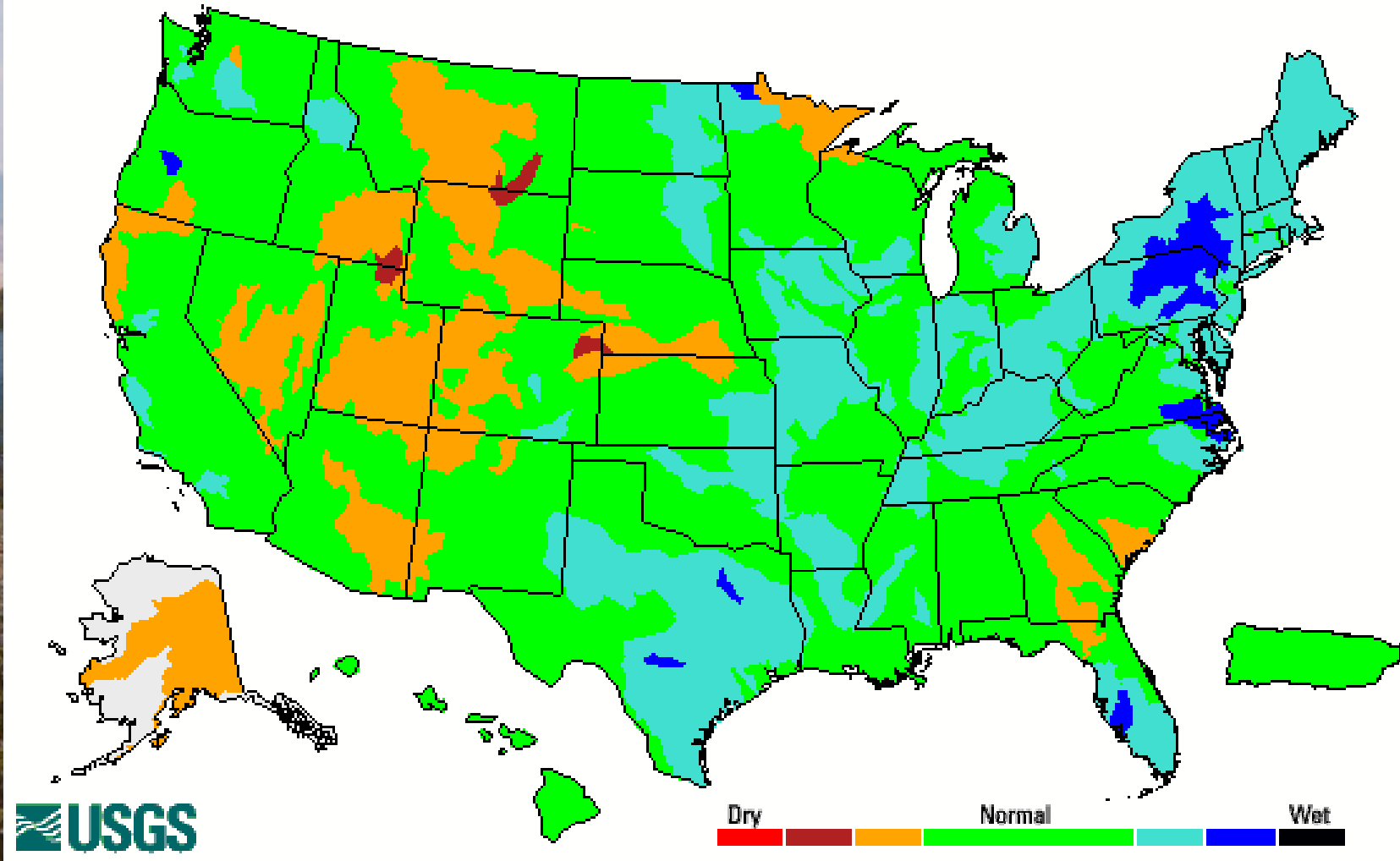


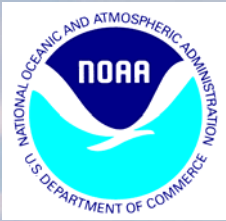


Average Streamflow for August 04

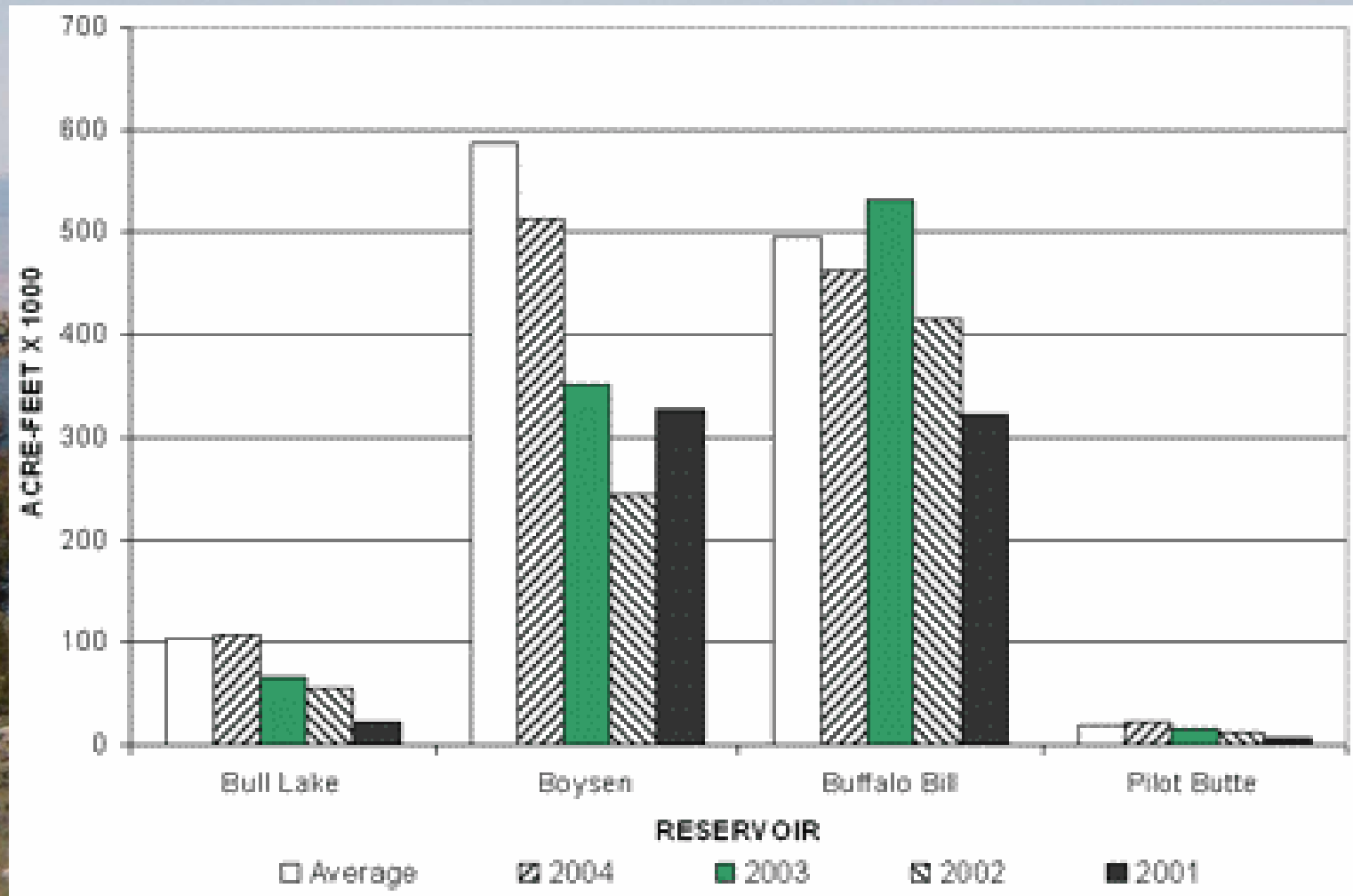


August 2004





Reservoir Storage WY01-04

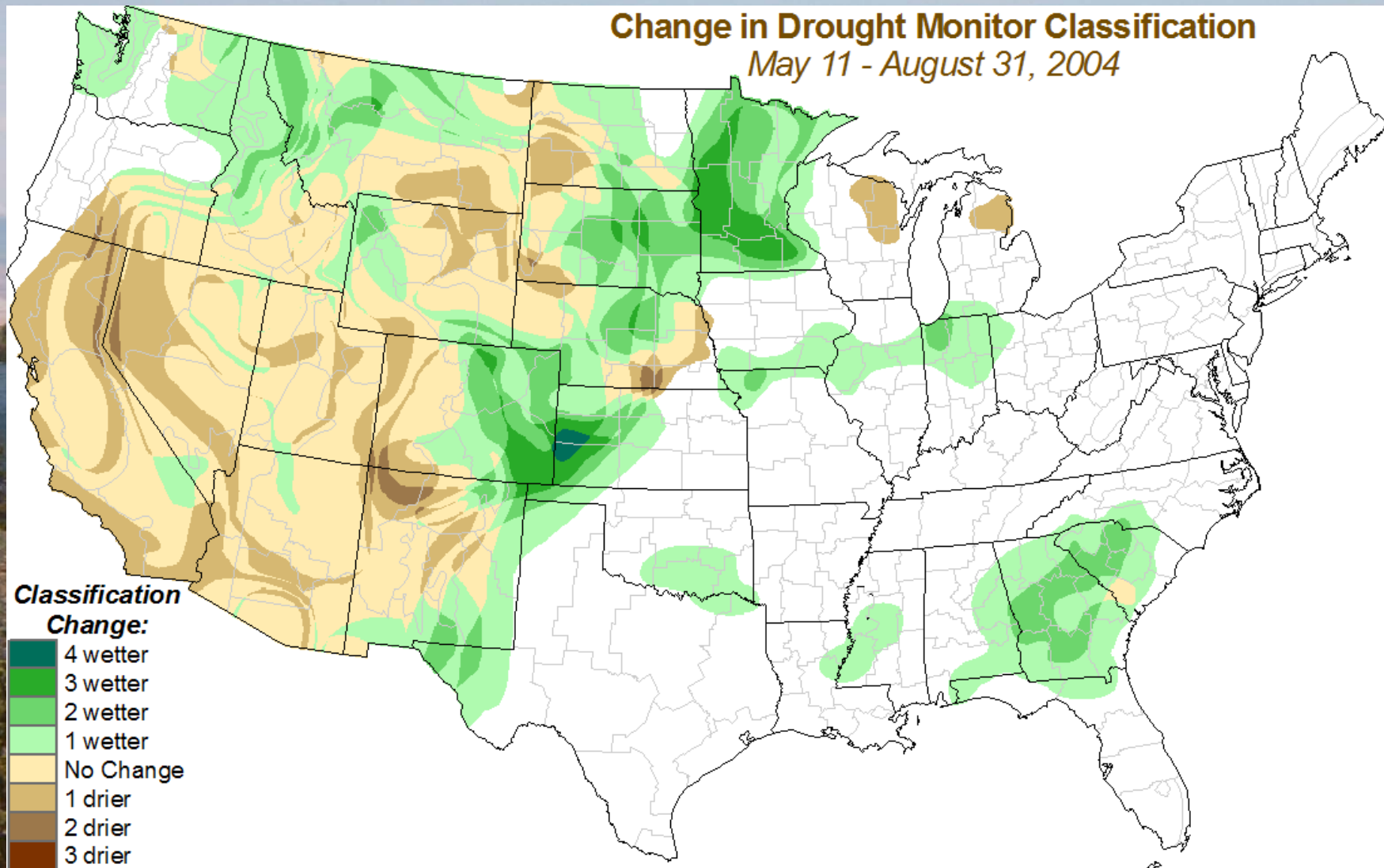




Drought Monitor Trends



Change in Drought Monitor Classification
May 11 - August 31, 2004



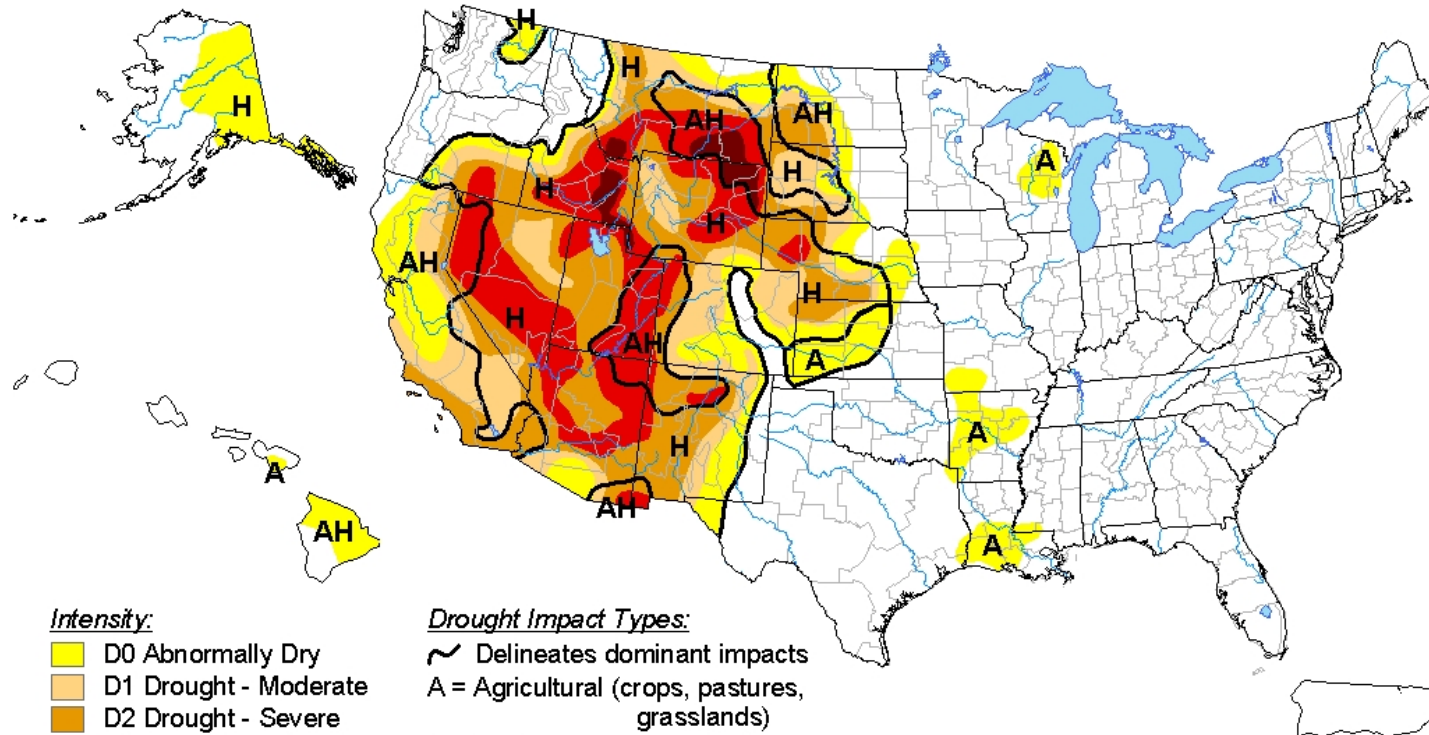


National Drought Monitor



U.S. Drought Monitor

September 21, 2004
Valid 8 a.m. EDT



Intensity:

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

Drought Impact Types:

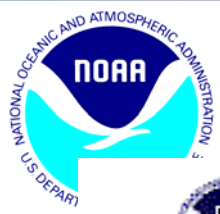
- Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)
- (No type = Both impacts)

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

<http://drought.unl.edu/dm>



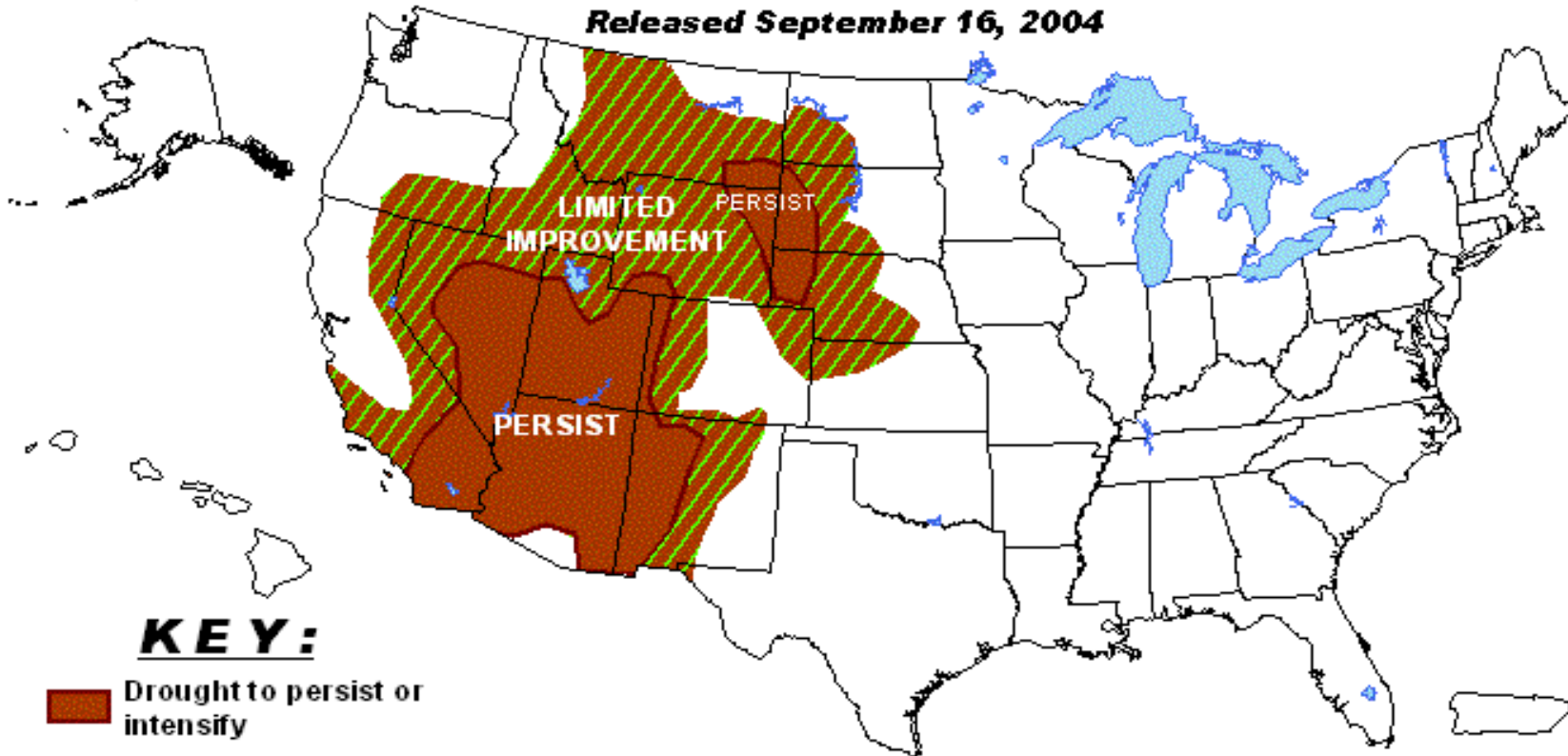
Released Thursday, September 23, 2004
Author: Brad Rippey, U.S. Department of Agriculture



Drought Outlook



U.S. Seasonal Drought Outlook Through December 2004 Released September 16, 2004



KEY:

-  Drought to persist or intensify
-  Drought ongoing, some improvement
-  Drought likely to improve, impacts ease
-  Drought development likely

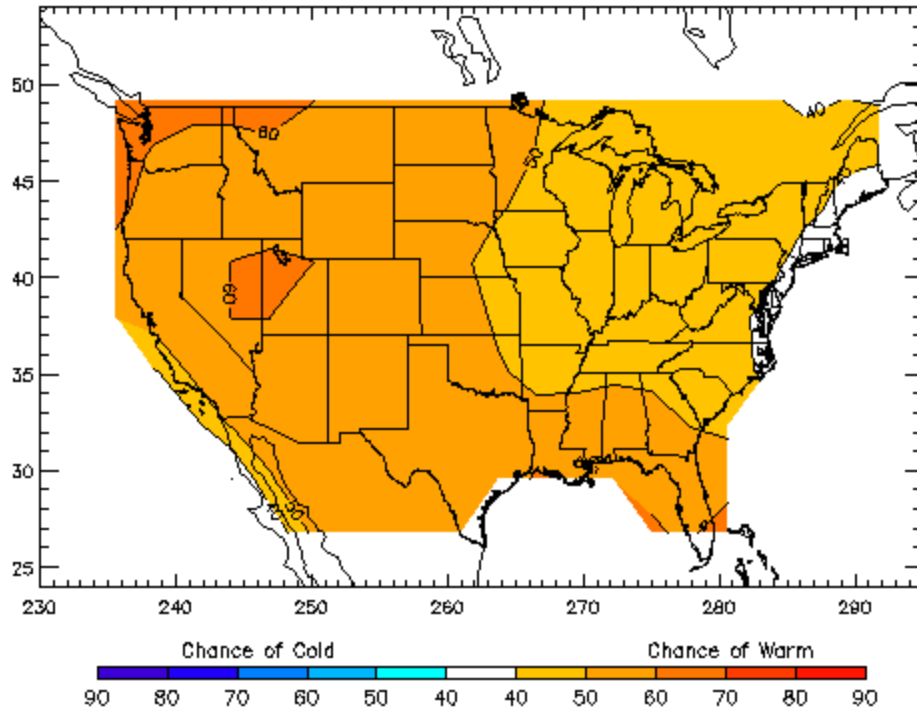
Depicts general, large-scale trends based on subjectively derived probabilities guided by numerous indicators, including short and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance, so use caution if using this outlook for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are schematically approximated from the Drought Monitor (D1 to D4). For weekly drought updates, see the latest Drought Monitor map and text.



Climate Outlook for the next 3 months



Oct–Nov–Dec 2004

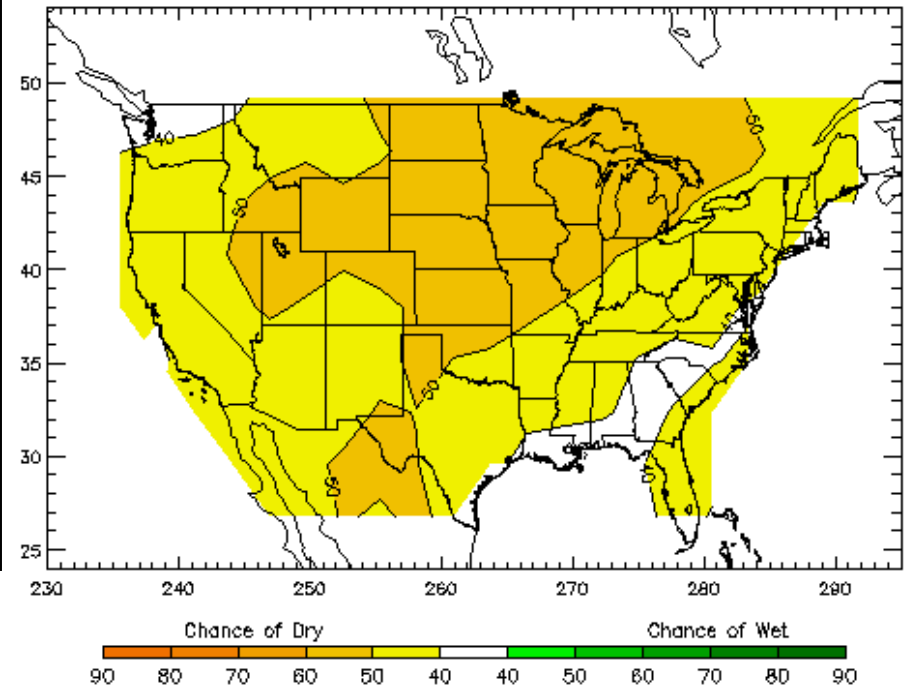


Surface Temperature Guidance
1-month lead
made on 1 Sep. 2004

NOAA–CIRES
Climate Diagnostics Center

PRECIPITATION

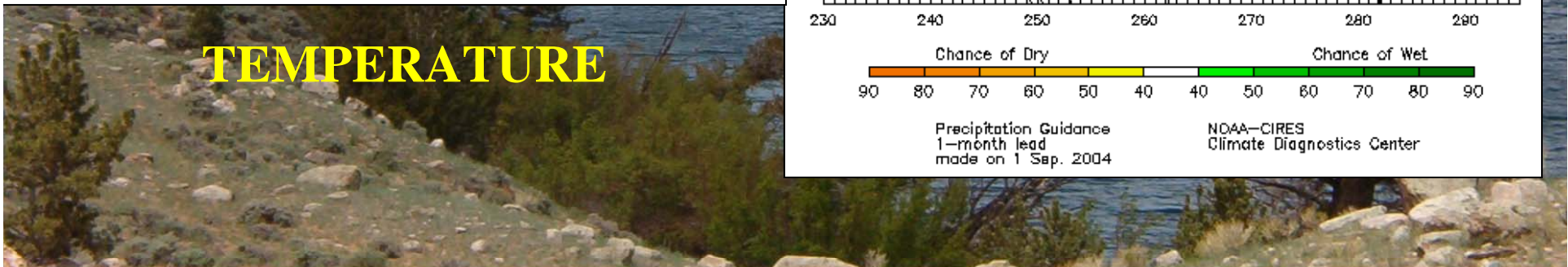
Oct–Nov–Dec 2004



Precipitation Guidance
1-month lead
made on 1 Sep. 2004

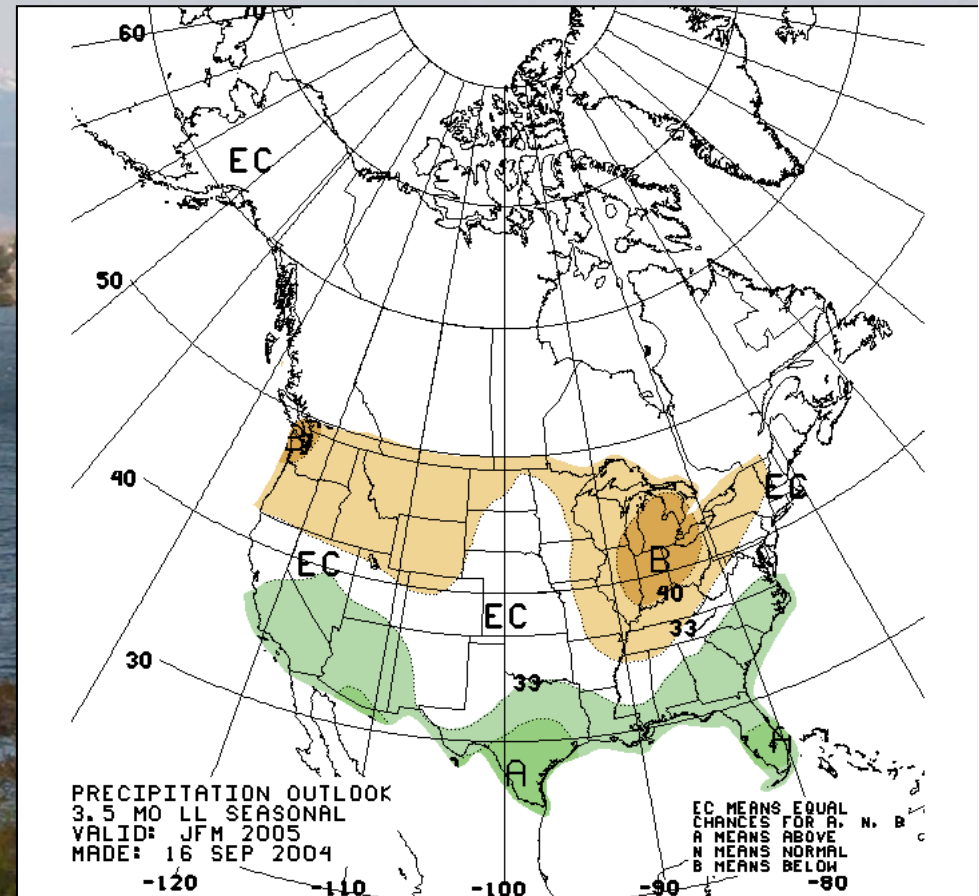
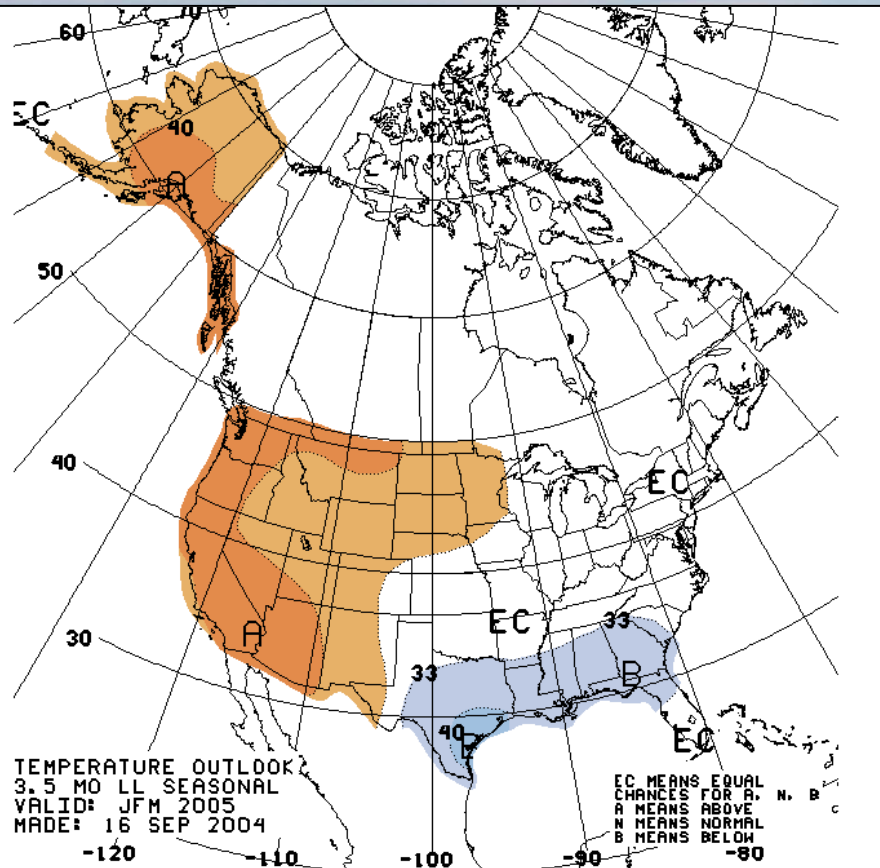
NOAA–CIRES
Climate Diagnostics Center

TEMPERATURE



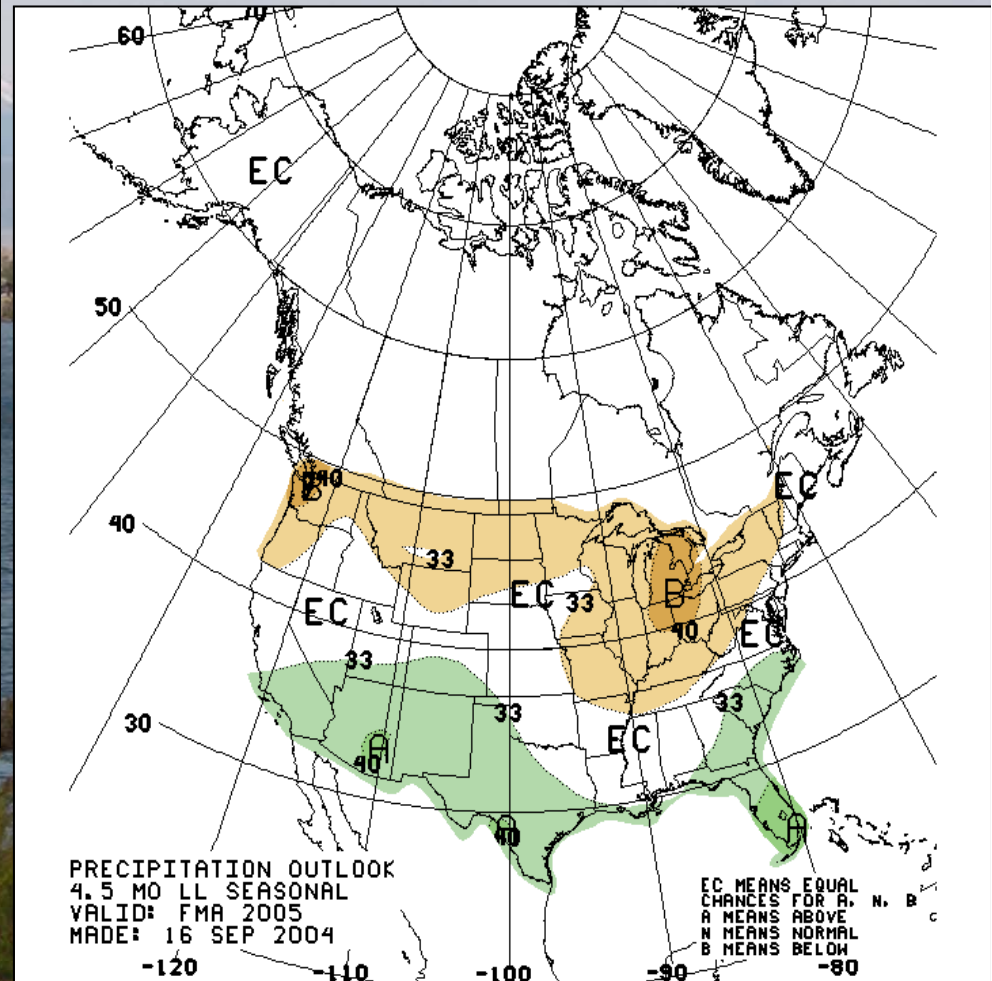
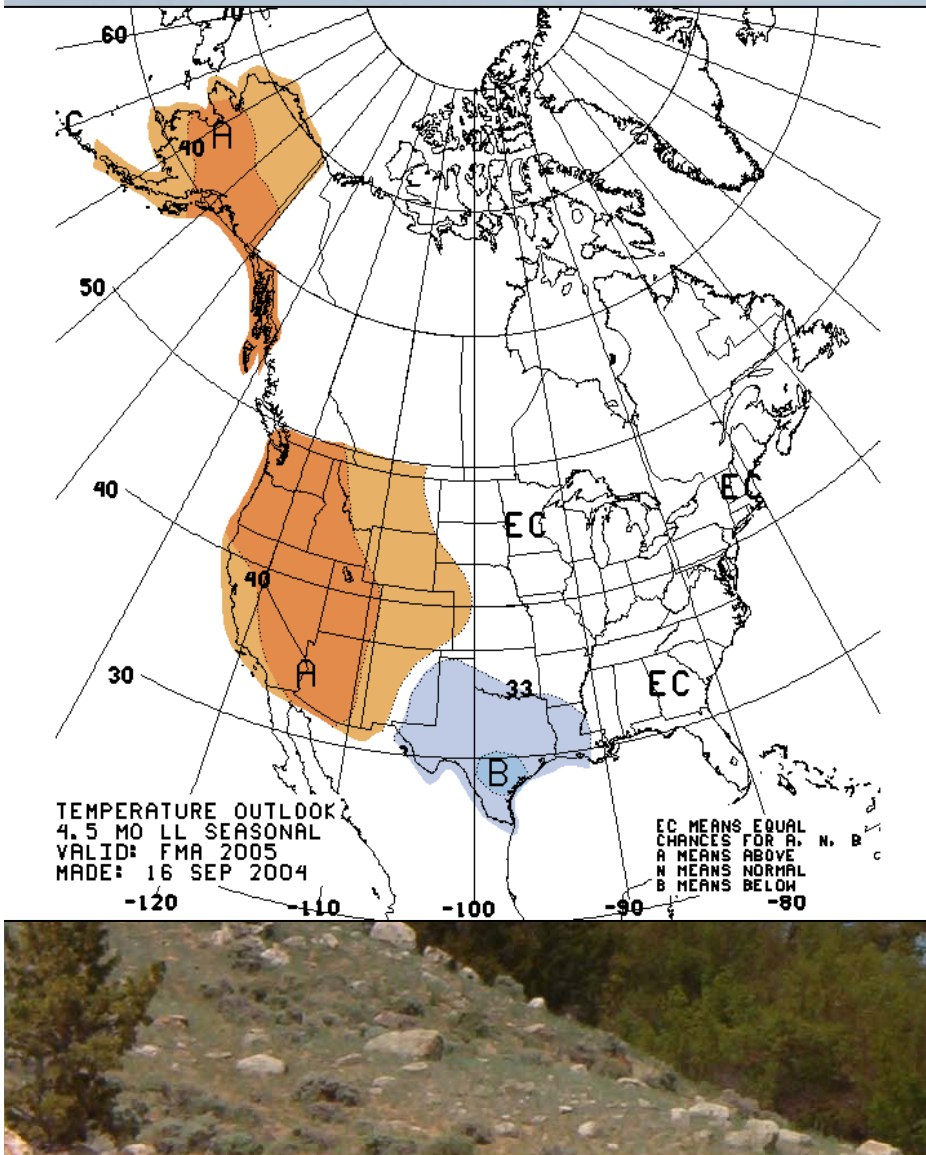


JAN-FEB-MAR 2005



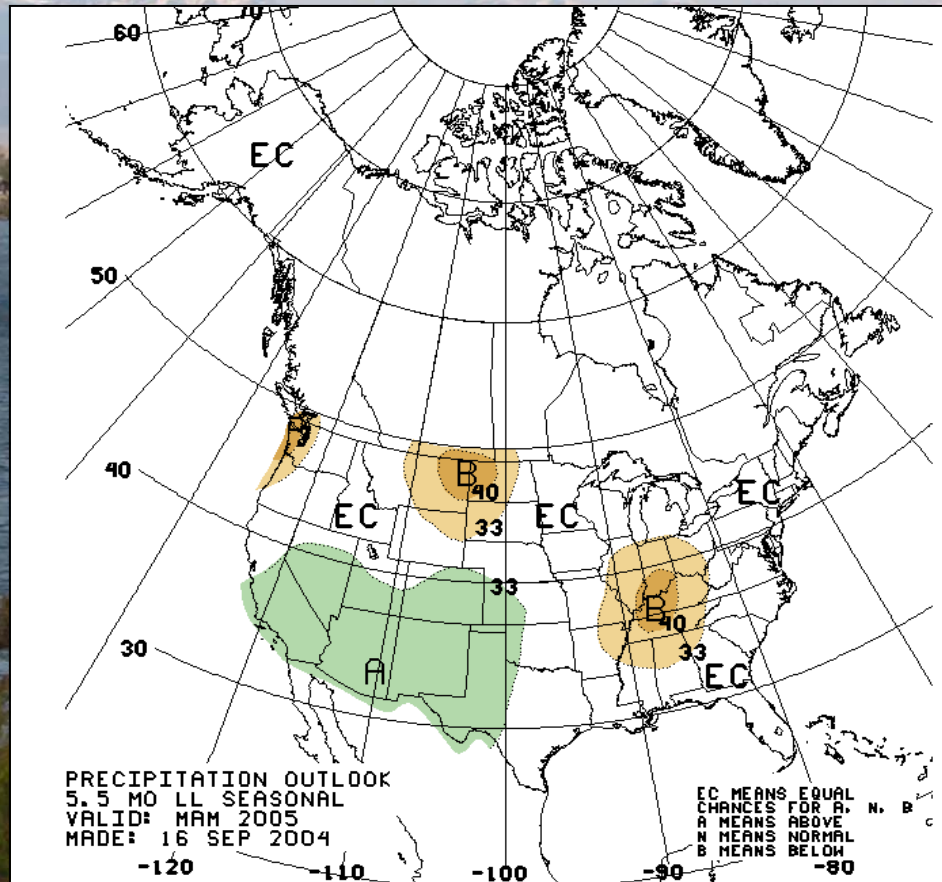
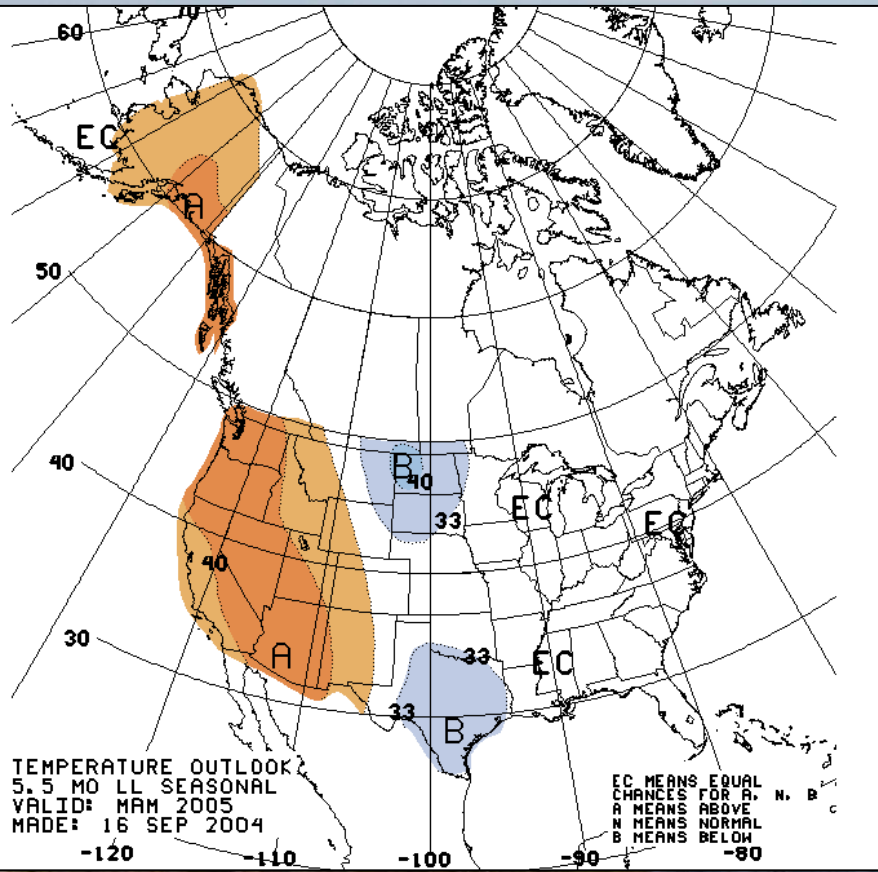


FEB-MAR-APR 2005



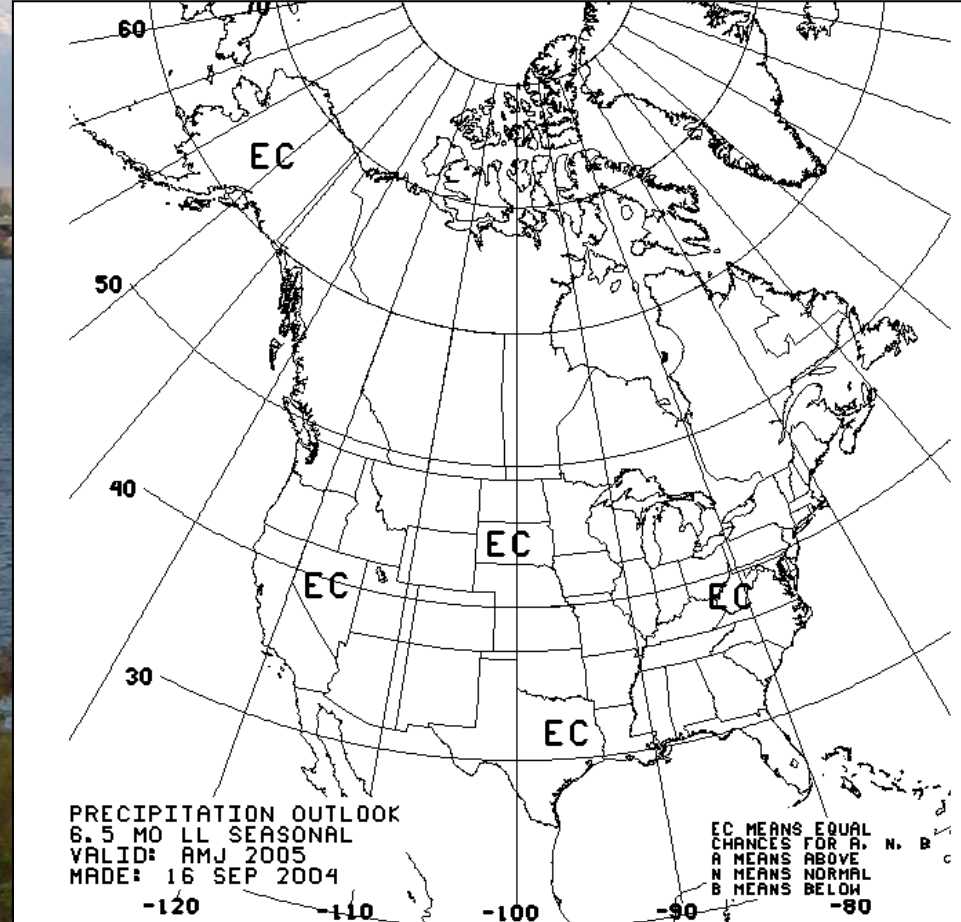
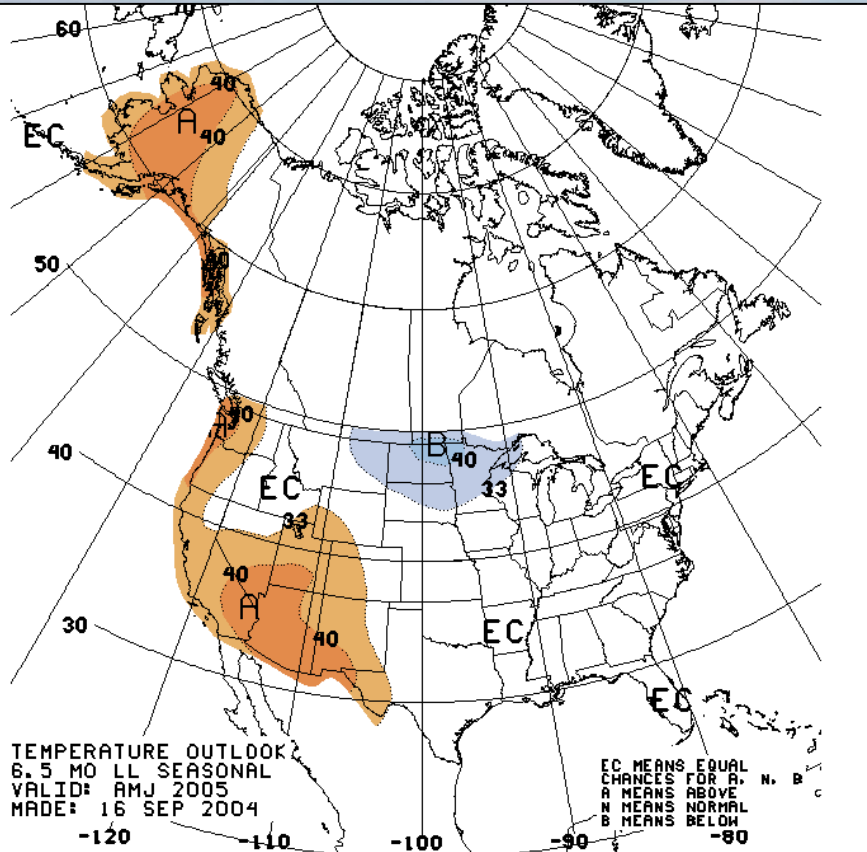


MAR-APR-MAY 2005





APR-MAY-JUN 2005





National Weather Service

Riverton, WY



NWS Mission Statement:

*The National Weather Service (NWS) **provides weather, hydrologic, and climate forecasts and warnings** for the United States, its territories, adjacent waters and ocean areas, **for the protection of life and property and the enhancement of the national economy.** **NWS data** and products form a national information database and infrastructure which **can be used by other governmental agencies, the private sector, the public, and the global community.***



National Weather Service

Riverton, WY



How can you access NWS information?

- NOAA Weather Radio (NWR)
- Internet

www.crh.noaa.gov/riw

- Telephone: (800) 211-1448



National Weather Service

Riverton, WY



www.nws.noaa.gov

National Weather Service Forecast Office
Riverton, WY

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Top News of the Day

- High and Lows by Zones
- Casper Posts the Wettest June and Sixth Wettest Month
- Rock Springs Records their Fifth Wettest June
- Severe Storms Rock Central Wyoming - June 28, 2003
- 2003 Spotter Training Schedule
- Past News Stories
- How Do I Find Past Weather Information?

National Weather Service Forecasts for Wyoming and Surrounding Areas

Click on map for forecasts, warnings, and observations for a specific location.
Click here for a summary of all warnings and advisories

Hazardous Weather Outlook

07-14-2003 2:38Z
(03:38PM MDT)

Latest Satellite Image

Latest Radar Image



National Weather Service



www.nws.noaa.gov



National Weather Service Forecast Office

Riverton, WY



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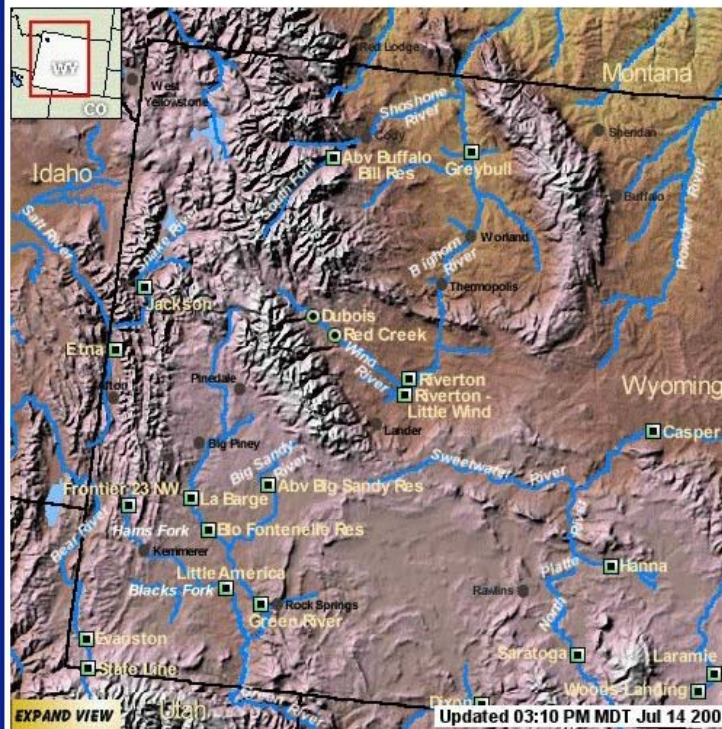
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AHPS Advanced Hydrologic Prediction Service

Please check our [Text Products Page](#) for current watches, warnings, and statements.



Click on a point or river on the map or select from the menus below.

- North Platte River --
- Little Wind River --
- Wind River --
- South Fork Shoshone River --
- Big Horn River --
- Snake River --
- Salt River --
- Big Sandy River --
- Black's Fork River --
- Ham's Fork River --
- Green River --

Map Legend

- or ■ above Flood Stage
- or □ near Flood Stage
- ⊙ or ⊠ below Flood Stage
- A square indicates that hydrograph information is available
- ⊙ A circle indicates that both probability and hydrograph information are available



National Weather Service Advanced Hydrologic Prediction Service - Netscape

File Edit View Go Communicator Help

Location: <http://www.crh.noaa.gov/cgi-bin/ahps.cgi?riv&wdrw4>

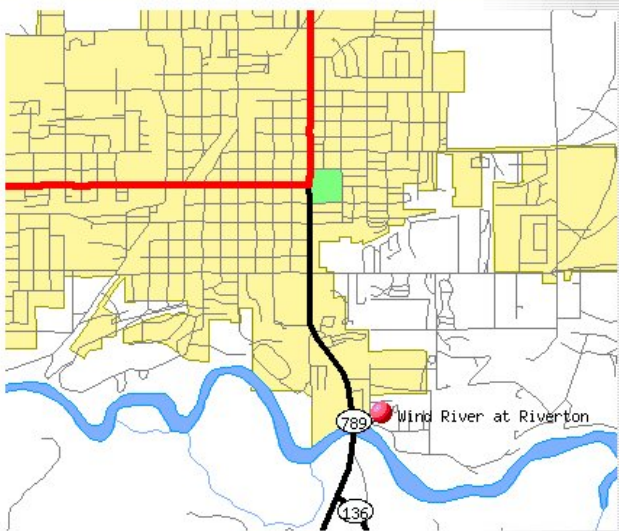
Forecast Precipitation

Information

Photos
[At the gage location](#)
[Looking upstream](#)
[Looking downstream](#)

Top 5 Historical Crests
(1) 10.86 ft on 06/10/1997
(2) 10.84 ft on 06/20/1999
(3) 10.8 ft on 12/30/1983
(4) 10.5 ft on 06/14/1991
(5) 10.15 ft on 06/15/1935
[More Past Crest and Flow Information](#)

Top Low Water Event
(1) 1.5 ft on 05/28/1977
[Low Water Flow Information](#)



Impacts

10.9 Feet	Record flooding begins.
10.9 Feet	Record flood stage set June 10, 1997.
10.8 Feet	Occupied mobile homes northeast of Gas Hills Road Jct. is still dry. Continuous monitoring/repair of levees be residents necessary. Nutrition center is dry, but the water is within 20 ft of the structure. There is 2-4 inches of water flowing across the driveway of the Nutrition Center. WY Hwy 789 is still open.
10.0 Feet	Abandoned mobile homes are under 2-3 ft of water. Mobile homes to the east are still protected by dirt and sandbag levees. The Nutrition Center is sandbagged, but the water is 30 to 50 feet from the structure. WY Hwy 789 is usually sand leved by WYDOT on the north side of the river. The Hwy remains open.
9.0 Feet	The old channel, closest to WY Hwy 789 will break through the temporary levees. Abandoned mobile homes will begin to flood. Other temporary levees protecting 4 to 6 mobile homes to the east, next to the Nutrition Center, are monitored.

Other Data Sources
[U.S. Geological Survey \(USGS\) Data and Site Info for Riverton](#)

The National Weather Service prepares its forecasts and other services in collaboration with agencies like the US Geological Survey, US Bureau of Reclamation, US Army Corps of Engineers, Natural Resource Conservation Service, National Park Service, ALERT Users Group, Bureau of Indian Affairs, and many state and local emergency managers across the country. For details, please click here.

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AHPS

Advanced Hydrologic Prediction Services

Monthly Precipitation Summary

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 SRUS55 KRIW 081951
 HYMRIW
 WYC003-013-017-019-023-025-029-035-037-039-043-601-302300-

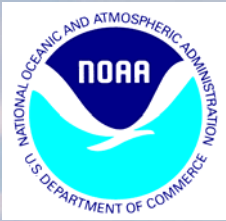
MONTHLY PRECIPITATION FOR WYOMING
 NATIONAL WEATHER SERVICE RIVERTON WY
 151 PM MDT TUE JUL 8 2003

WYOMING PRECIPITATION TOTALS FOR JUNE 2003
 ALL DATA PRELIMINARY...OFFICIAL CLIMATE DATA AVAILIABLE THROUGH THE
 NATIONAL CLIMATIC DATA CENTER APPROXIMATELY 60 DAYS AFTER END OF THE
 MONTH.

.BR RIW 0701 M DH00/PPM

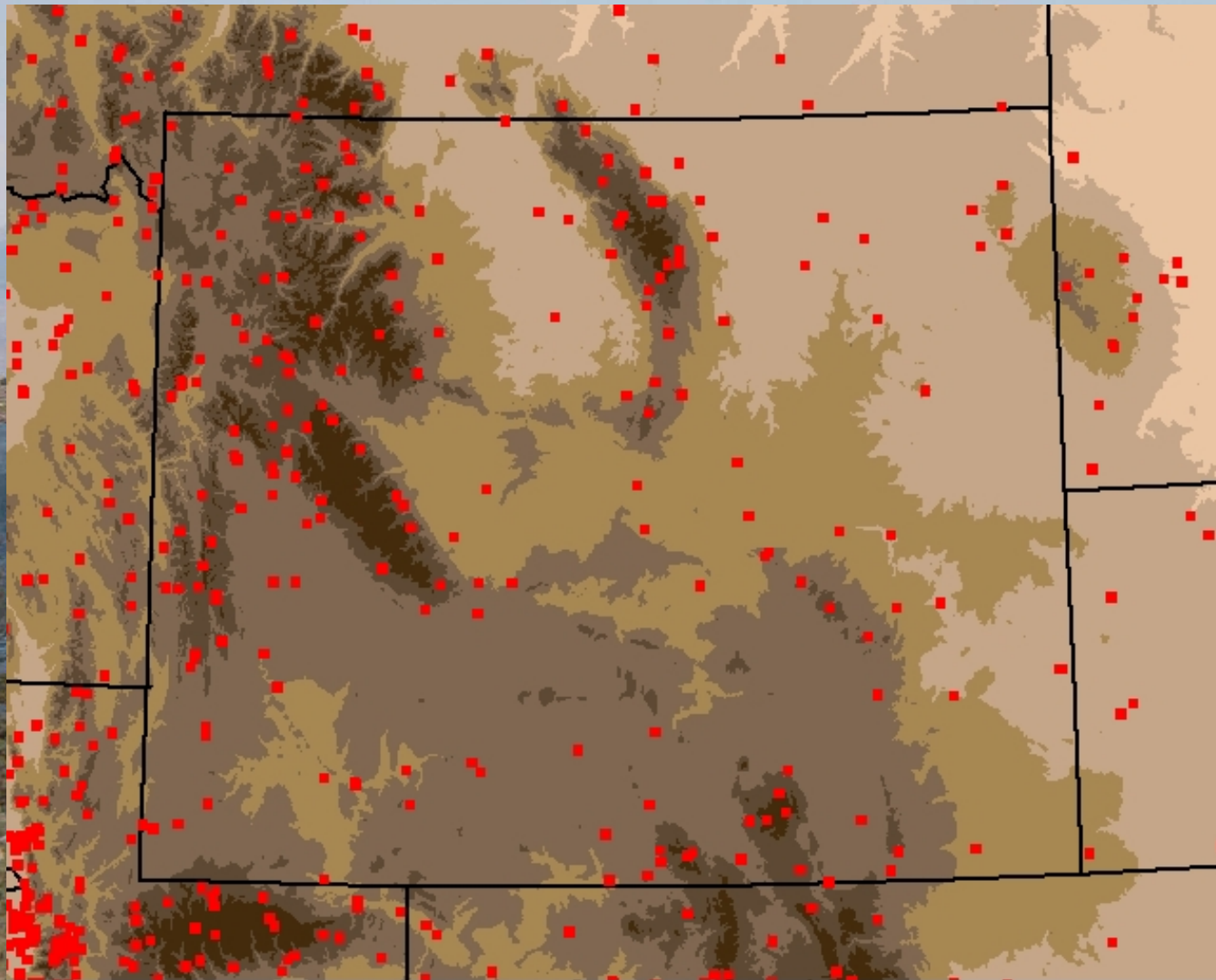
:SHEF ID	PCPN	AVG	PERCENT	STATION
ACVW4	3.35	: 1.06	316%	PATHFINDER DAM
AFOW4	1.30	: 1.49	87%	AFTON
ALTW4	0.99	: 2.12	47%	ALTA 1NNW
BCRW4	2.76	: 1.34	206%	BATES CREEK
BDFW4	1.52	: 1.85	82%	BEDFORD 3SE
BDRW4		: 1.10	%	BORDER 3N
BFFW4		: N/A	N/A	BUFFALO 5WSW
BFLW4		: N/A	N/A	BUFFALO SPOTTER
BITW4		: 0.60	N/A	BITTER CREEK 4NE
BKRW4		: N/A	N/A	BECHLER RIVER RS
BLYW4	2.24	: 2.07	108%	BILLY CREEK
BMTW4	1.89	: 1.36	139%	THERMOPOLIS 9NE
BNWW4	1.13	: 1.56	72%	BONDURANT
BPI	1.13	: N/A	N/A	BIG PINEY-MARBLETON ASOS
BPIW4	1.49	: 0.72	207%	BIG PINEY
BRRW4	1.91	: 1.18	162%	BURRIS
BRSW4	1.49	: 1.21	123%	BOULDER REARING STATION
BRNW4	0.81	: 1.00	81%	BASIN
BTSW4		: N/A	N/A	TENSLEEP 18SSE

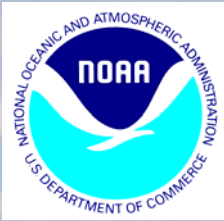




National Weather Service

Riverton, WY





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- Daily and Monthly Climate Summaries
- ASOS 15 Day Summaries and MesoWest, WYDOT stations' climatology
- Local Climate Data (LCDs)
- Snow and River Data & Miscellaneous Climate Links
- Weather Trivia
- Primary Sources for Official Climate Records (for legal reasons, etc)
- Other Regional Climate Centers
- FAQ - Where to Find Weather and Climate Information

Daily Climate Reports	Last Month's Climate Summaries
<ul style="list-style-type: none"> • Casper • Lander/Riverton • Cheyenne 	<ul style="list-style-type: none"> • Casper • Lander/Riverton • Cheyenne <p style="text-align: center;">Monthly Precipitation Summary (HYM)</p>

Preliminary Local Climate Data (F-6)

- Casper
- Lander
- Riverton
- Archived (F-6)

Note: This data is considered "unofficial". The National Climatic Data Center (NCDC) in Asheville, NC, which collects and stores this information, is the official source of climate in the U.S. For a copy of an official F-6, contact:

NCDC
 151 Patton Ave, Rm 120
 Asheville, NC 28801-5001
 (828) 271-4800 (ask for "Climate Services Division")

<http://lwf.ncdc.noaa.gov/oa/ncdc.html>

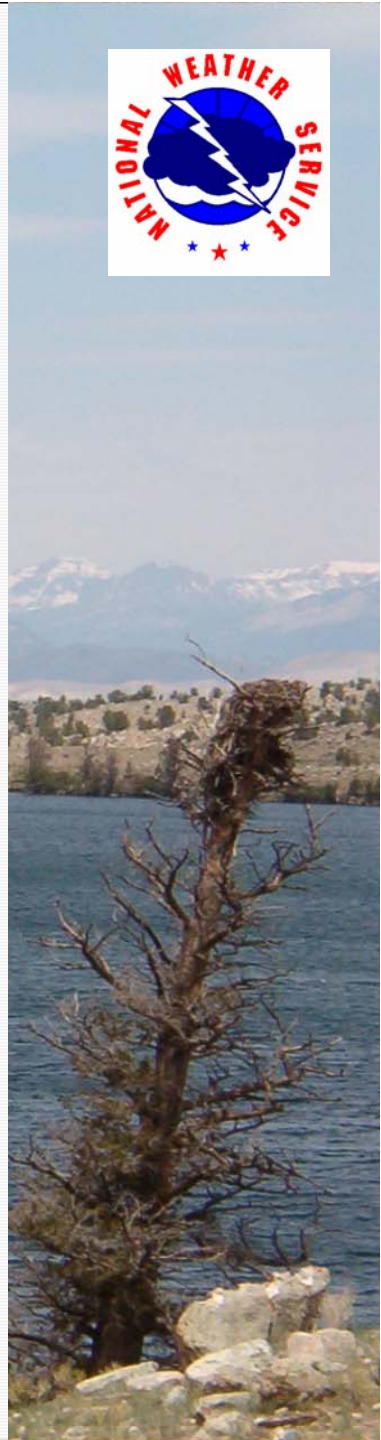
e-mail requests at: orders@ncdc.noaa.gov

Maximum/Minimum Temperatures and Precipitation Tables	Record Reports
<ul style="list-style-type: none"> • Western and Central Wyoming • Southeast Wyoming/Nebraska Panhandle • Wyoming • Yellowstone's Winter Daily Report 	<ul style="list-style-type: none"> • Record Report for West and Central Wyoming • Record Report for Southeast Wyoming • Record Report for Northeast Wyoming

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15 Day Summaries from ASOS (Automated Surface Observing Systems)

*Some data sets may be missing due to software upgrades or outages





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 - River Info/AHPS
 - Flash Floods
- Climate
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 - Climate Prediction
- Weather Safety
 - Spring/Summer
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Regional Temp/Precip Table

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ASUS65 KRIW 151704
RTPRIW
REGIONAL TEMPERATURE AND PRECIPITATION TABLE
NATIONAL WEATHER SERVICE RIVERTON WY
1059 AM MDT TUE JUL 15 2003

.BR RIW 0715 M DH00/TX/DH06/TAIRZP/PP/SF/SD
:
:VALUES REPRESENT YESTERDAYS HIGHS...LOWS OVER THE LAST 12 HOURS
:AND PRECIPITATION OVER THE LAST 24 HRS ENDING AT 0600 AM
:
:          24 HR SNOW  SNOW
:ID      STATION      ELEV  HIGH  LOW  PCPN  FALL  DEPTH
BPI  : BIG PINEY      6974:  89 / 46 / 0.00 / /
BYC  : BUFFALO       4968:  85 / 57 / 0.00 / /
CPR  : CASPER        5319:  91 / 53 / 0.00 / /
COD  : CODY          5100:  84 / 59 / 0.00 / /
EVW  : EVANSTON      7163:  88 / 62 / 0.00 / /
GEY  : GREYBULL      3933:  91 / 58 / 0.00 / /
JAC  : JACKSON AIRPORT 6444:  82 / 41 / 0.00 / /
P60  : LAKE YELLOWSTONE 7835:  76 / 38 / 0.00 / /
LND  : LANDER        5586:  94 / 61 / 0.00 / /
RIW  : RIVERTON      5568:  92 / 57 / 0.00 / /
RKS  : ROCK SPRINGS  6761:  91 / 62 / 0.00 / /
WRL  : WORLAND       4245:  91 / 54 / 0.00 / /
.END
:
.BR RIW 0715 M DH07/TX/TN/PP/SF/SD
:
:COOPERATIVE OBSERVATIONS
:VALUES ARE FOR THE PREVIOUS 24 HOURS
:
:          24 HR SNOW  SNOW
:ID      STATION      ELEV  HIGH  LOW  PCPN  FALL  DEPTH
AFOW4: AFTON          6210:  88 / 47 / 0.00 / 0.0 / 0
BRSW4: BOULDER       6940:  87 / 42 / 0.00 / 0.0 / 0
SBDW4: BOYSEN        4642:  94 / 63 / 0.00 / 0.0 / 0
KTOW4: CASPER K2     5220:  94 / 48 / 0.00 / 0.0 / 0
CLAW4: CLARK FISH HATCH 4090:  88 / 52 / 0.00 / 0.0 / 0
CRDW4: CRANDALL CREEK 6580:  85 / 37 / 0.00 / 0.0 / 0
DBOW4: DUBOIS        6960:  87 / 44 / 0.00 / 0.0 / 0
EYPW4: EAST ENTRANCE YNP 6951:  80 / 40 / 0.00 / 0.0 / 0
FSNW4: FARSON        6590:  91 / 54 / 0.00 / 0.0 / 0
HUDW4: HUDSON        5090:  97 / 52 / 0.00 / 0.0 / 0
JEFW4: JEFFREY CITY  6340:  95 / 48 / 0.00 / 0.0 / 0
KEYW4: KIRBY         4328:  92 / 56 / 0.00 / 0.0 / 0
LNRW4: LANDER (TOWN)  5320:  94 / 49 / 0.00 / 0.0 / 0
OLFW4: OLD FAITHFUL YNP 7360:  78 / 37 / 0.00 / 0.0 / 0
NFKW4: PAHASKA       6726:  82 / 39 / 0.00 / 0.0 / 0
PVLW4: PAVILLION     5440:  95 / 54 / 0.00 / 0.0 / 0
PFSW4: POWRELL FRIED ST 4370:  90 / 56 / 0.00 / 0.0 / 0

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National Weather Service

Riverton, WY



Questions?

