

WRDS



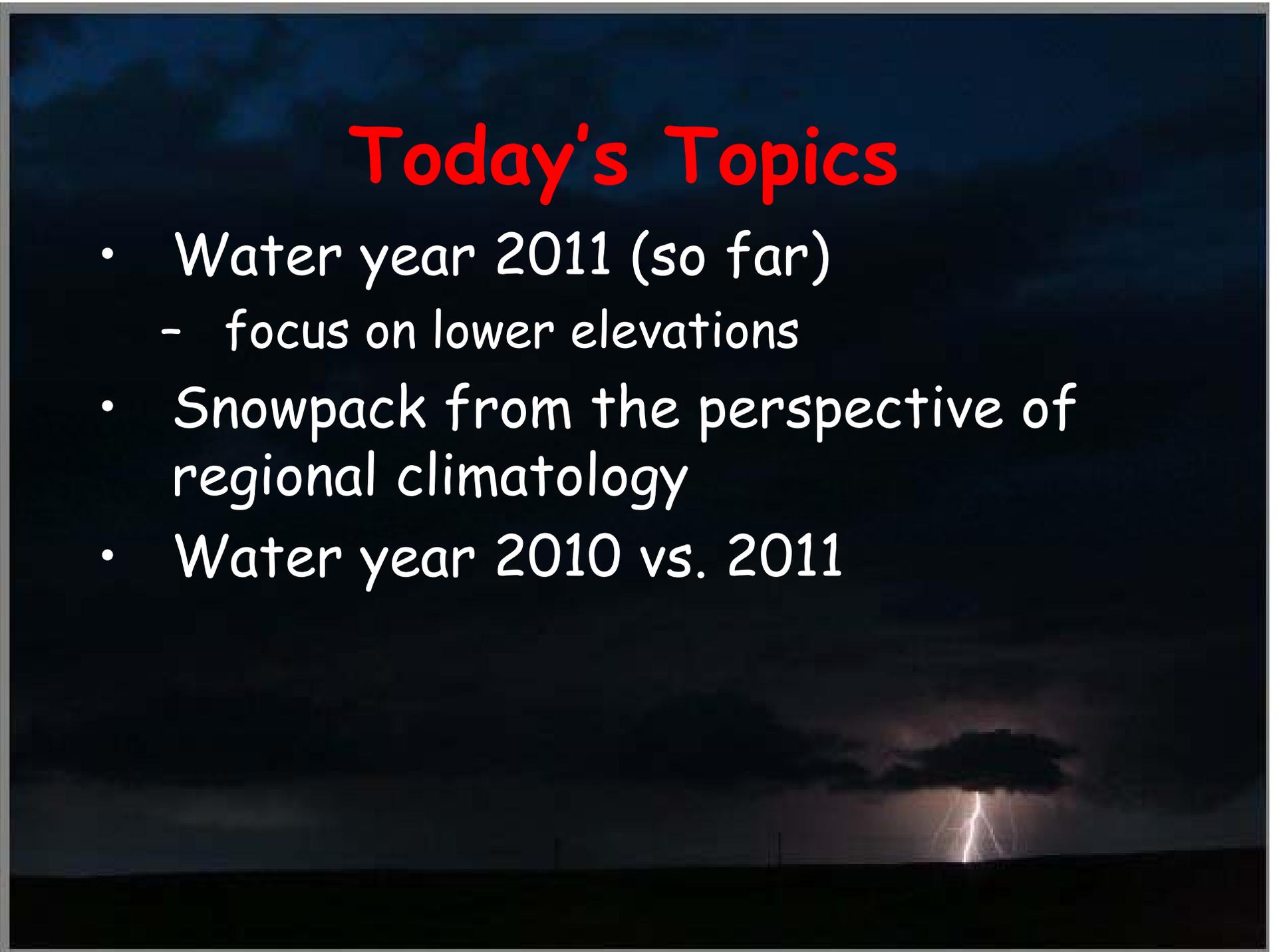
WATER RESOURCES DATA SYSTEM

Water Year 2011

Steve Gray
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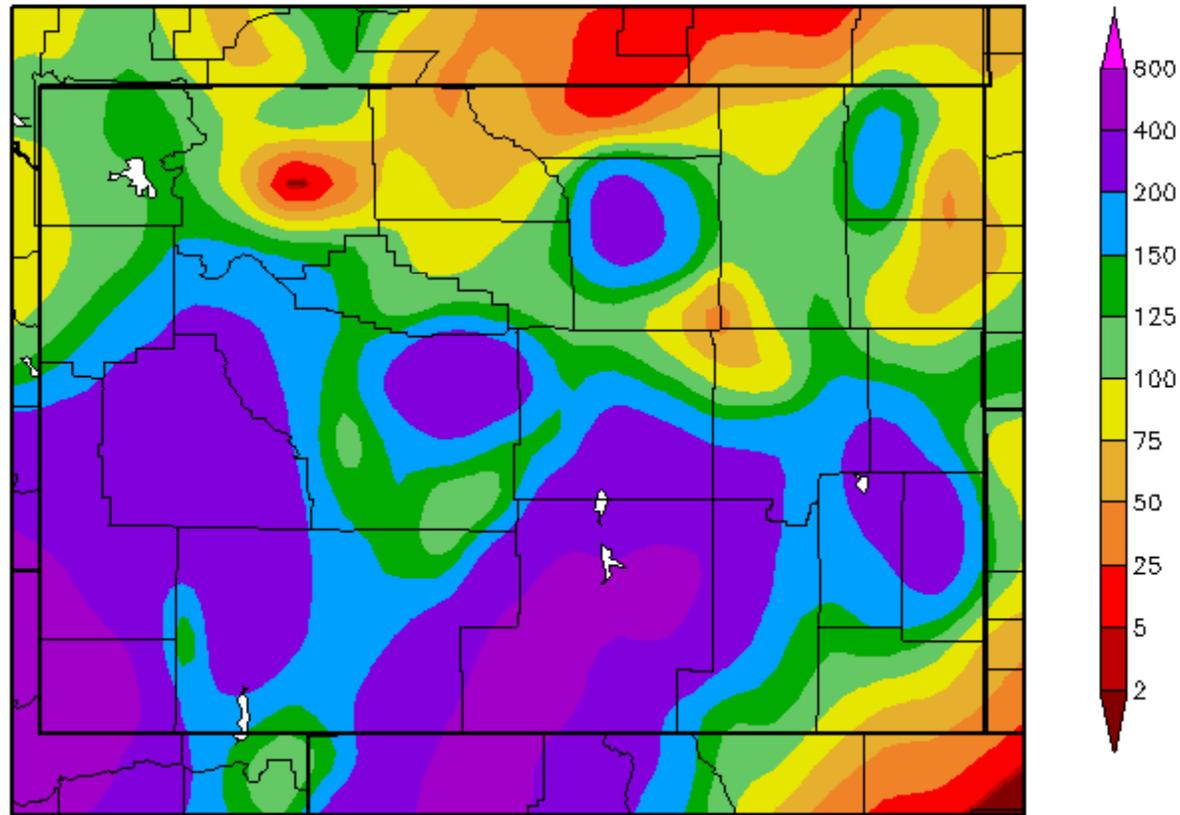
Today's Topics

- Water year 2011 (so far)
 - focus on lower elevations
- Snowpack from the perspective of regional climatology
- Water year 2010 vs. 2011



% of Average Precipitation (vs. 1971-2000): December 2010

Percent of Normal Precipitation (%)
12/1/2010 - 12/31/2010

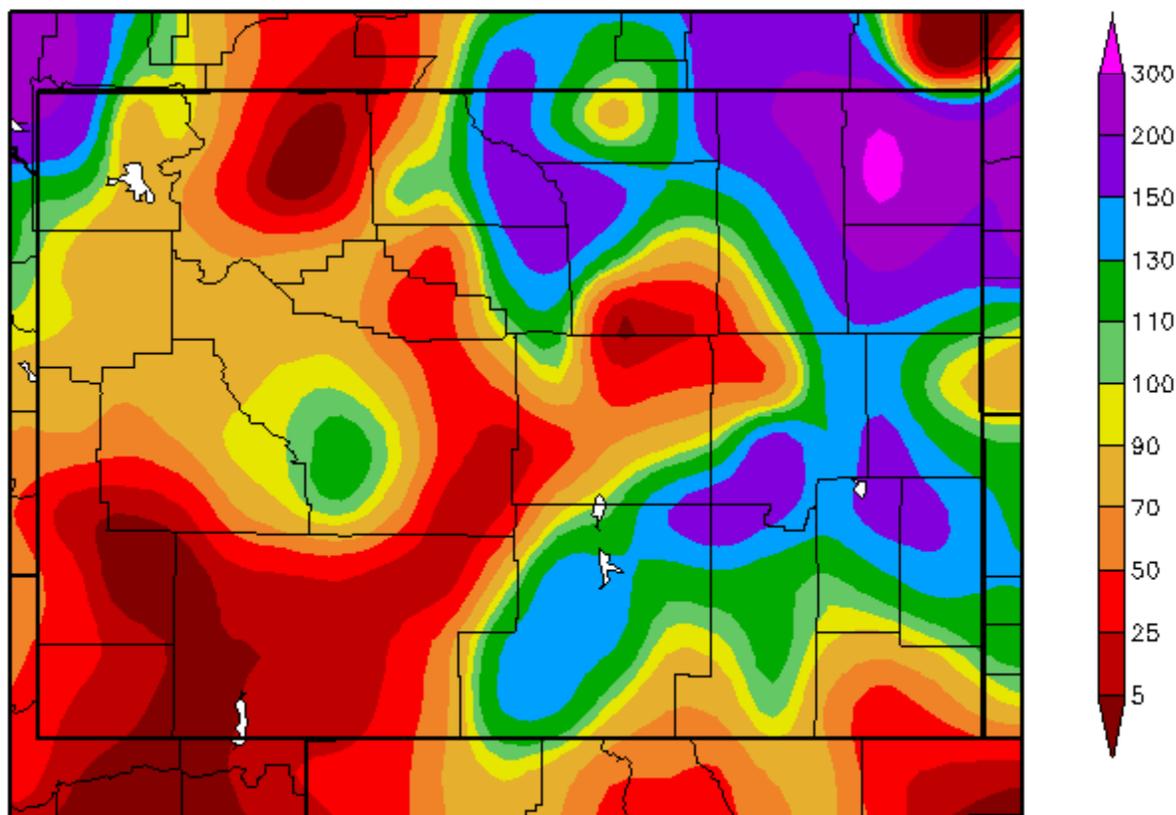


Generated 1/11/2011 at HPRCC using provisional data.

Regional Climate Centers

% of Average Precipitation: January 2011

Percent of Normal Precipitation (%)
1/1/2011 - 1/31/2011

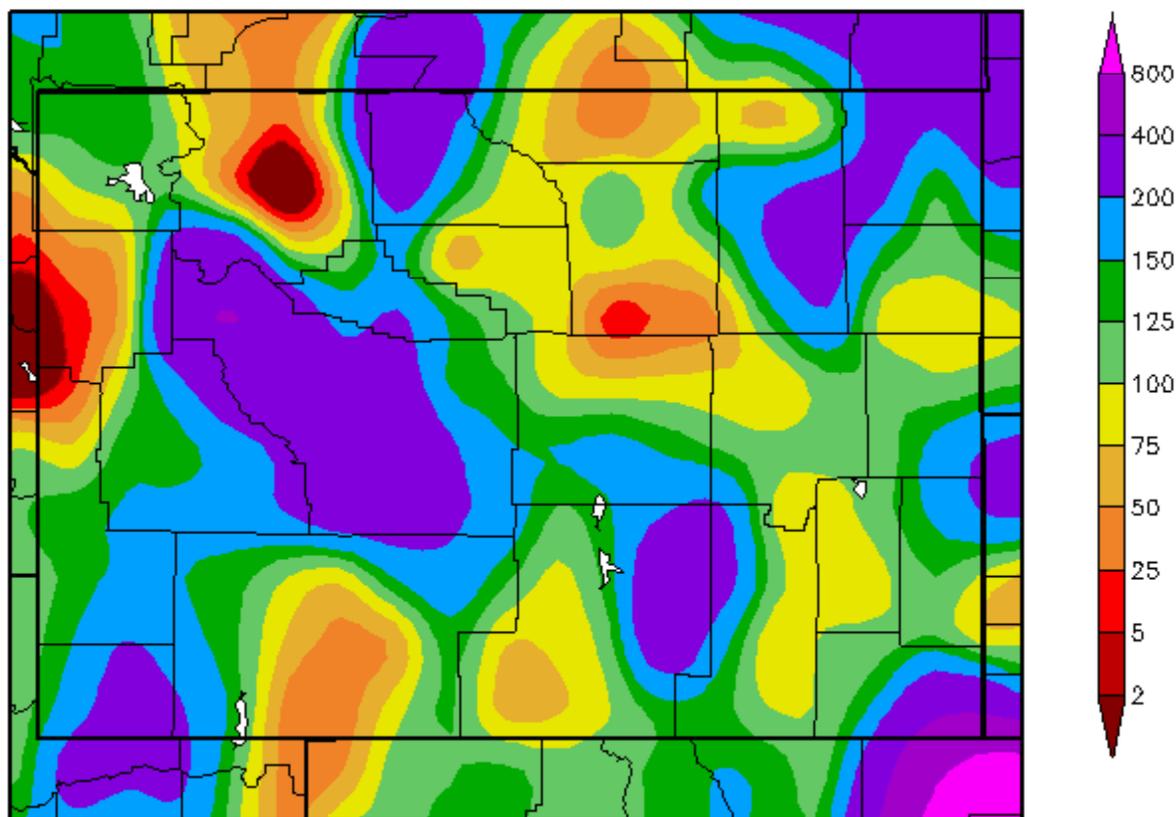


Generated 2/11/2011 at HPRCC using provisional data.

Regional Climate Centers

% of Average Precipitation: February 2011

Percent of Normal Precipitation (%)
2/1/2011 - 2/28/2011

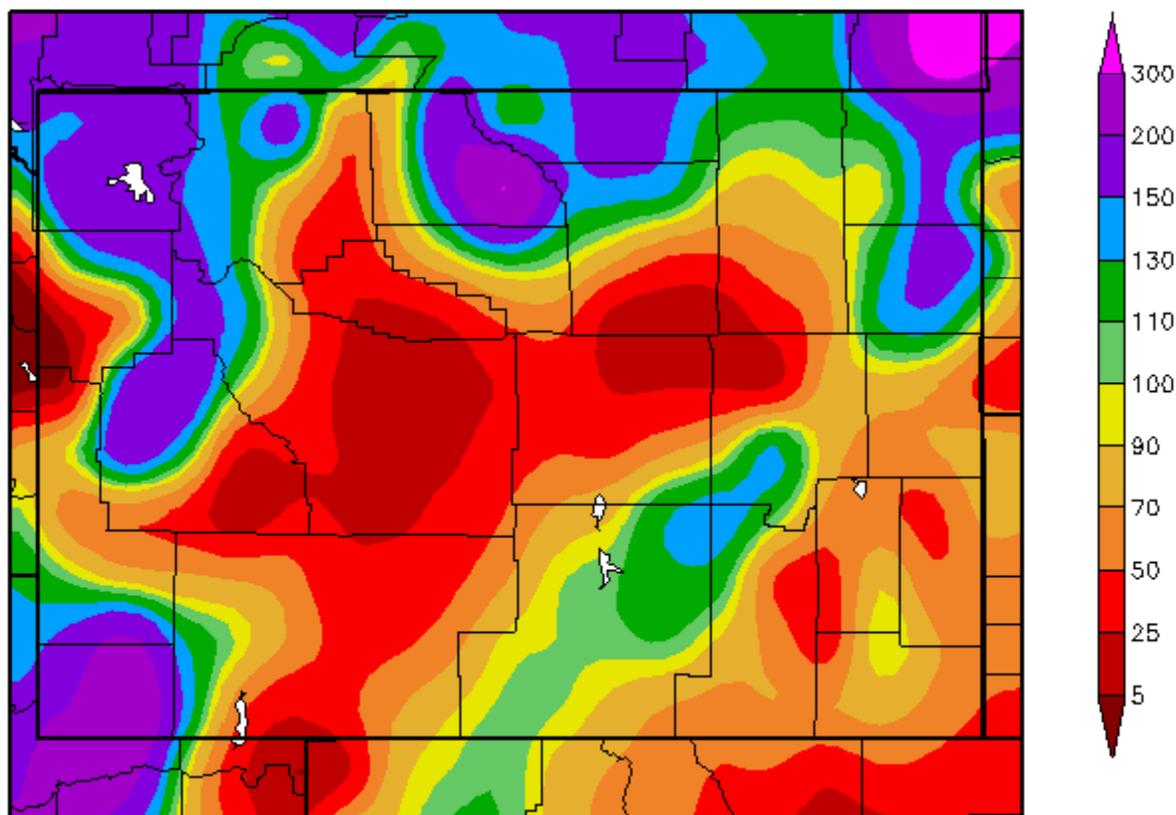


Generated 3/11/2011 at HPRCC using provisional data.

Regional Climate Centers

% of Average Precipitation: March 2011

Percent of Normal Precipitation (%)
3/1/2011 - 3/31/2011

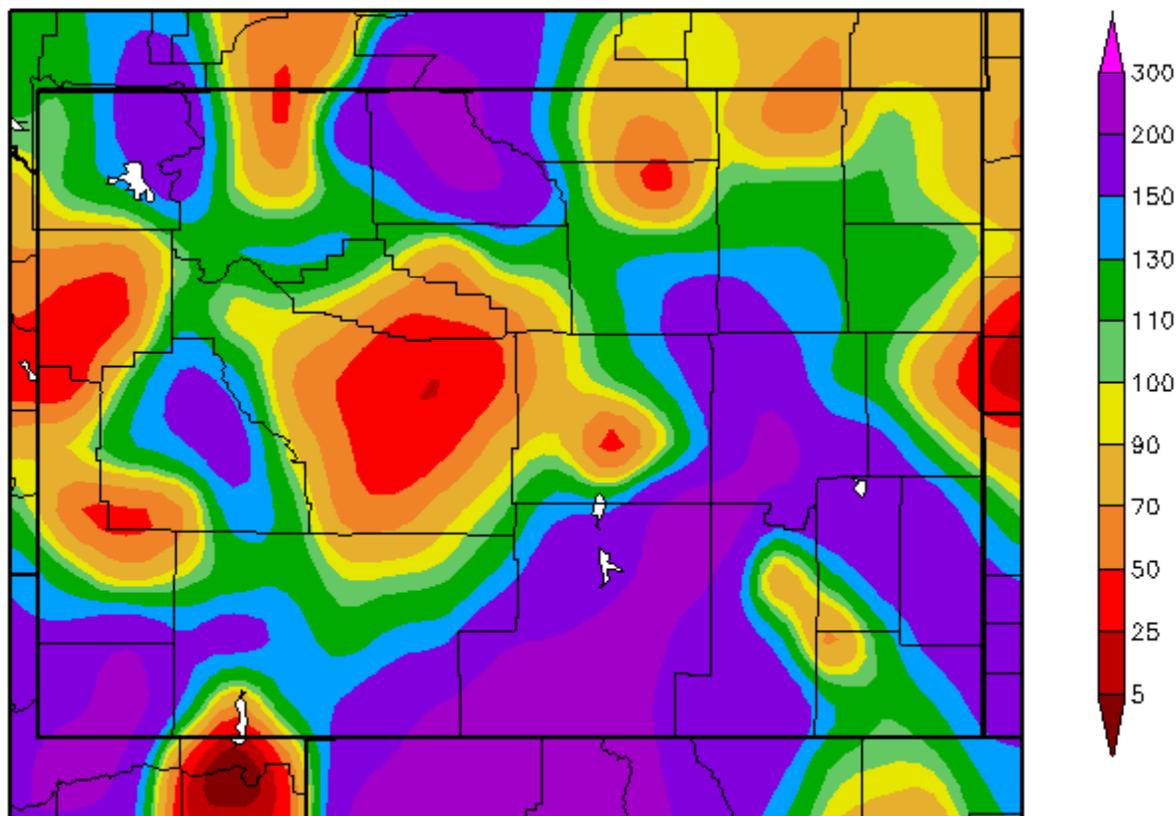


Generated 4/11/2011 at HPRCC using provisional data.

Regional Climate Centers

% of Average Precipitation: April 2011

Percent of Normal Precipitation (%)
4/1/2011 - 4/30/2011

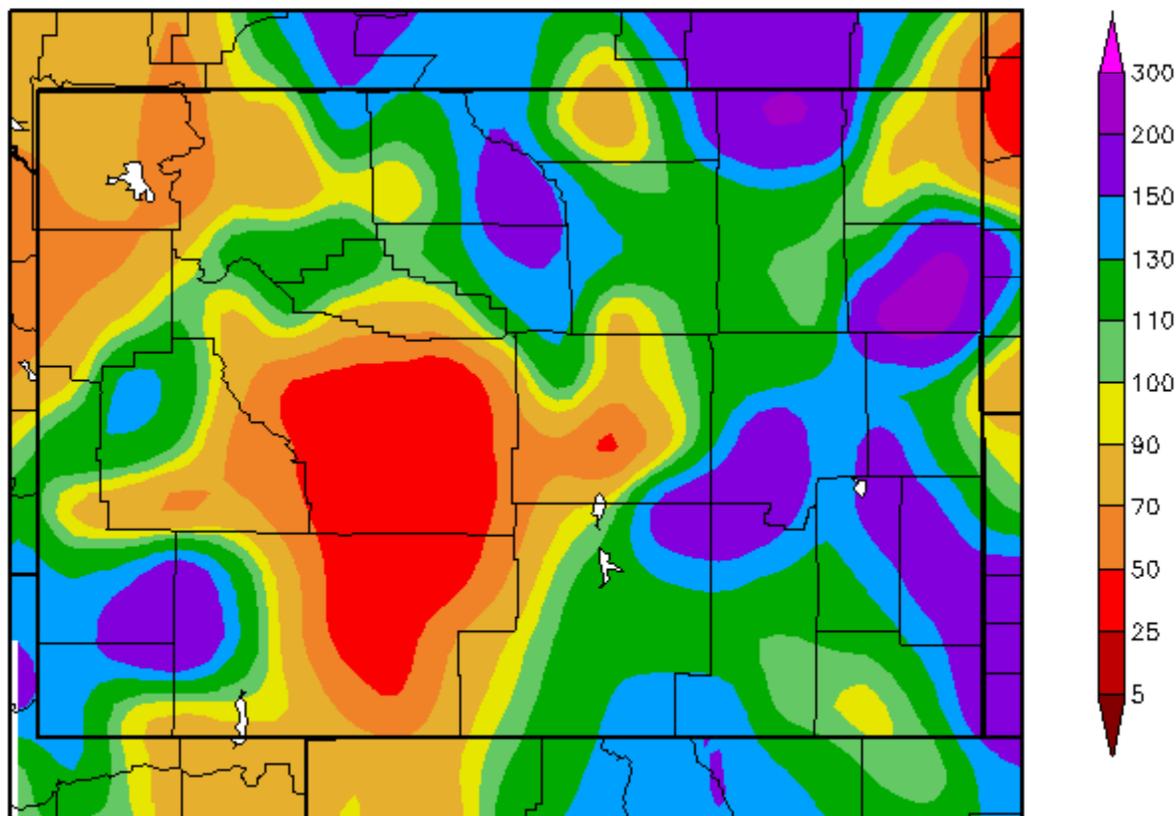


Generated 5/11/2011 at HPRCC using provisional data.

Regional Climate Centers

% of Average Precipitation: Past 30 Days

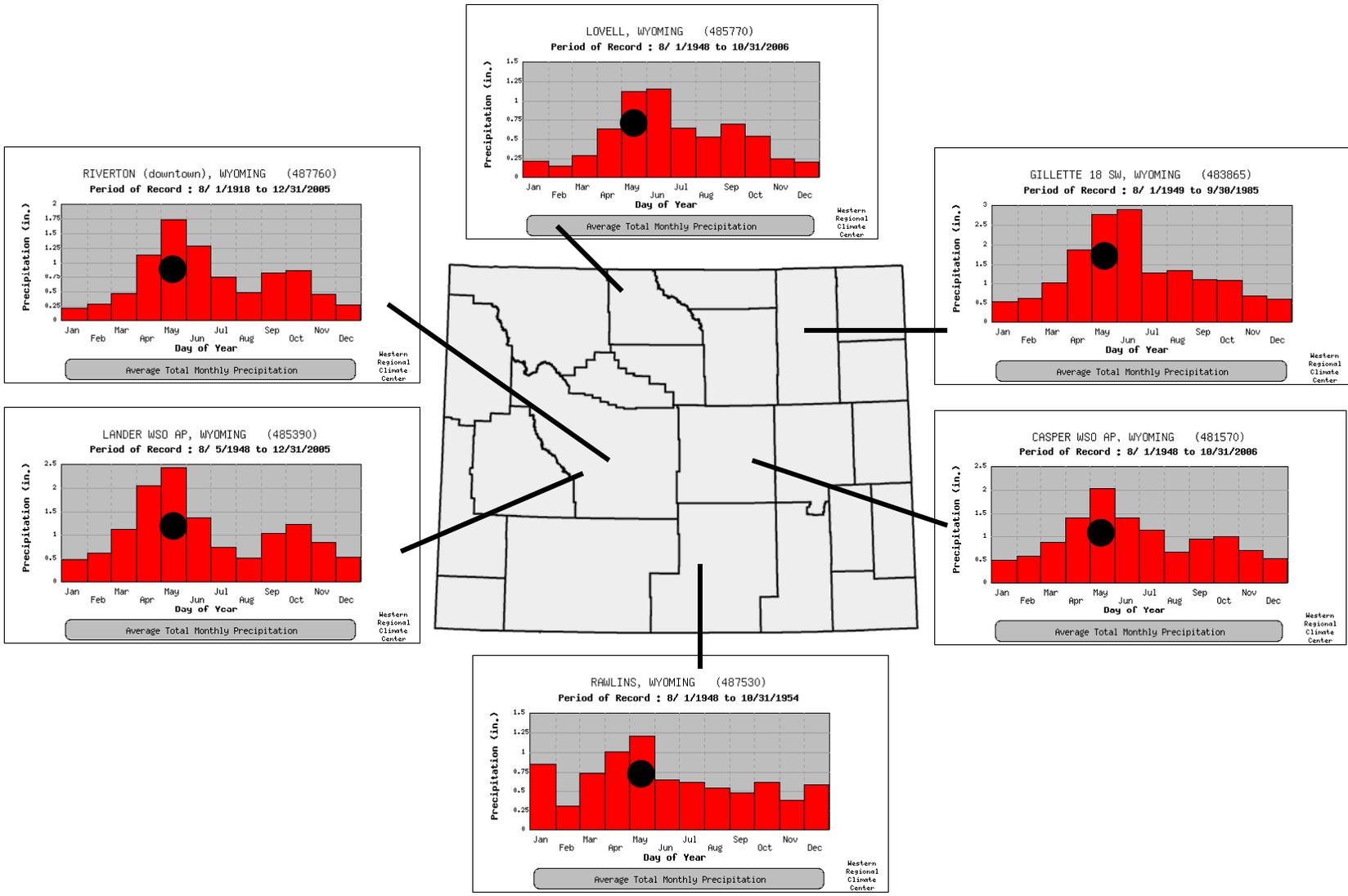
Percent of Normal Precipitation (%)
4/18/2011 – 5/17/2011



Generated 5/18/2011 at HPRCC using provisional data.

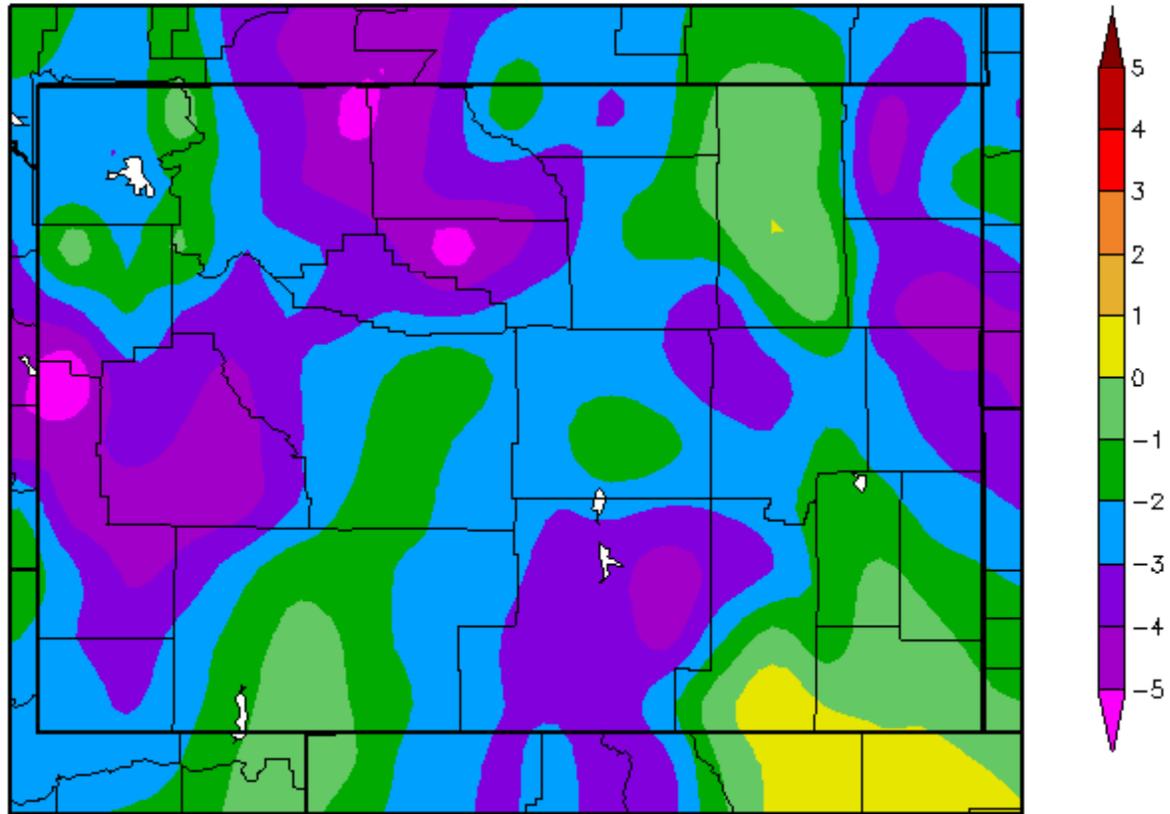
Regional Climate Centers

Peak precipitation over much of Wyoming occurs in late spring



Temperature Departures: Feb-Apr 2011

Departure from Normal Temperature (F)
2/1/2011 - 4/30/2011

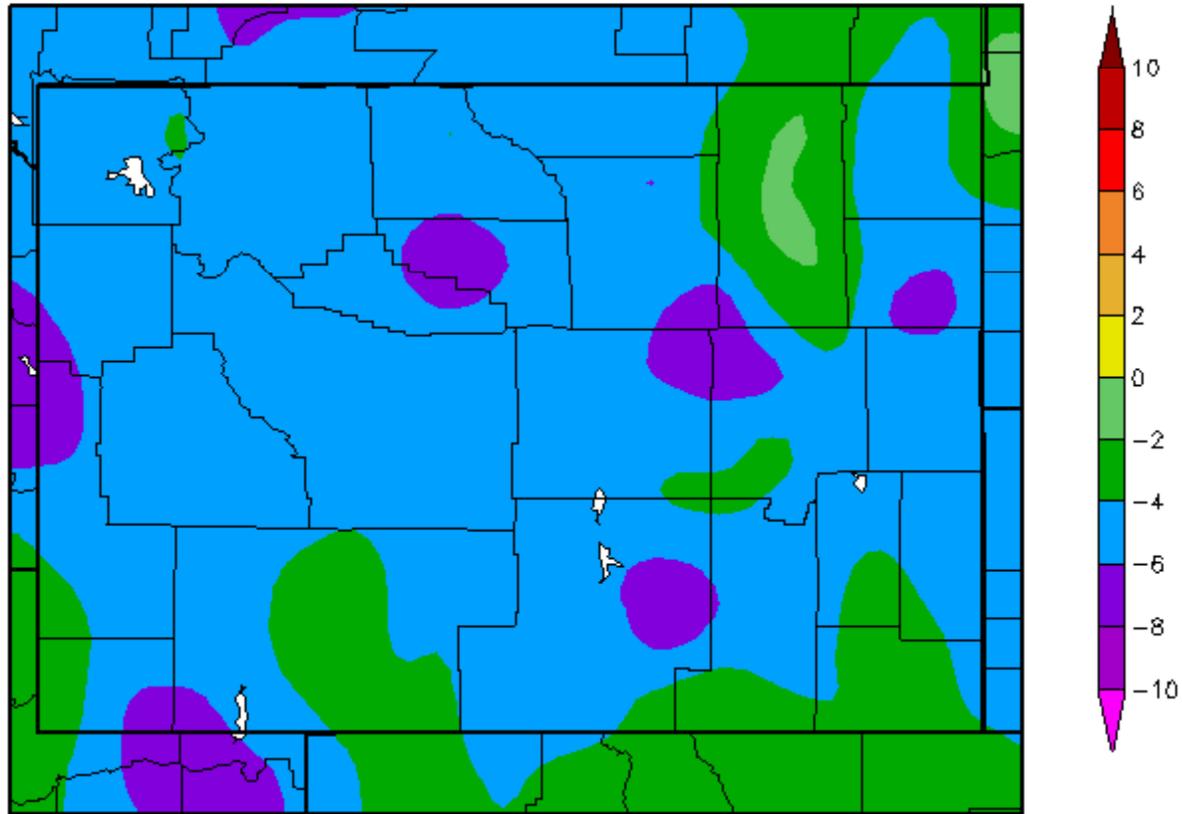


Generated 5/11/2011 at HPRCC using provisional data.

Regional Climate Centers

Temperature Departures: Past 30 Days

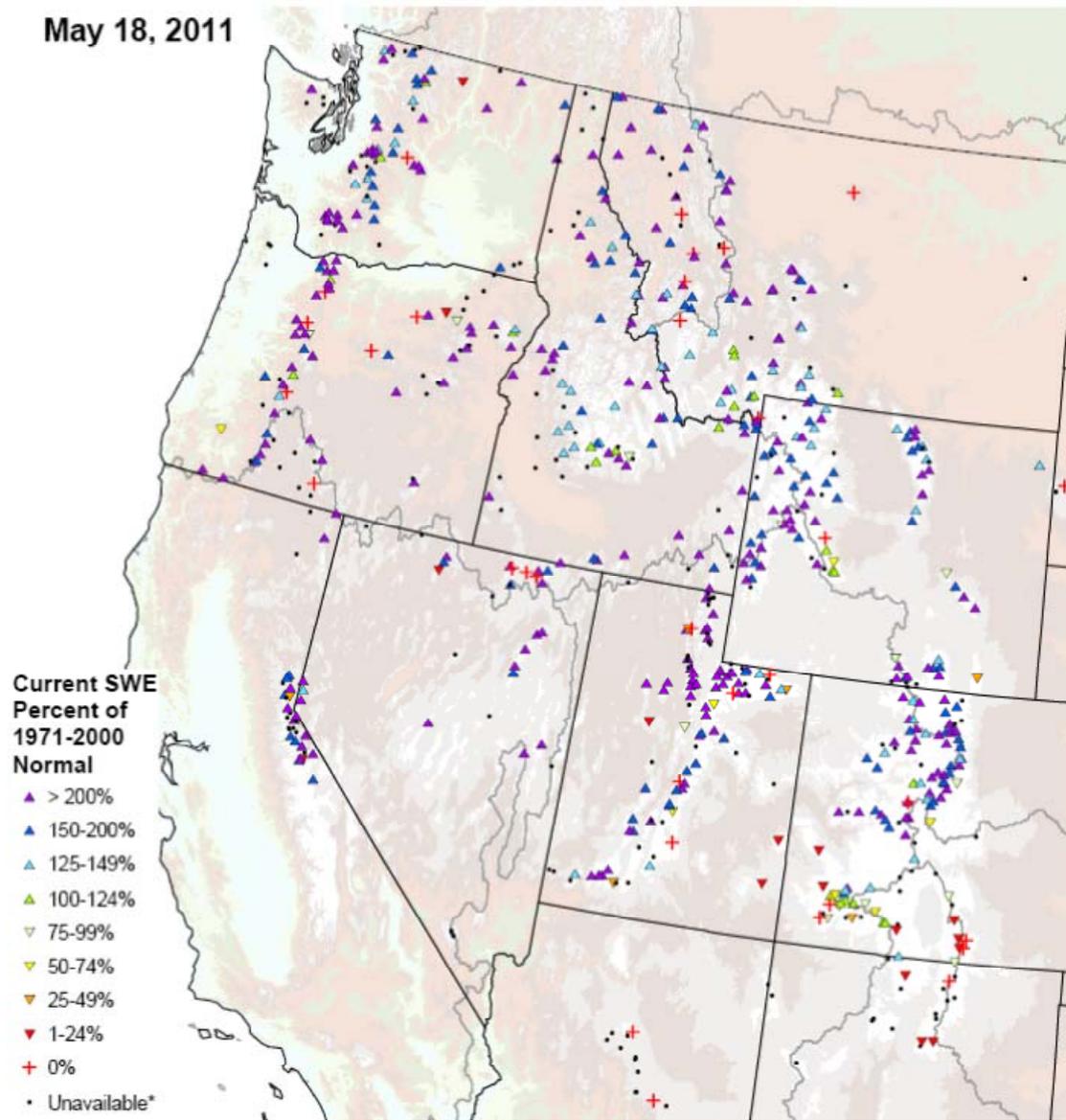
Departure from Normal Temperature (F)
4/18/2011 - 5/17/2011



Generated 5/18/2011 at HPRCC using provisional data.

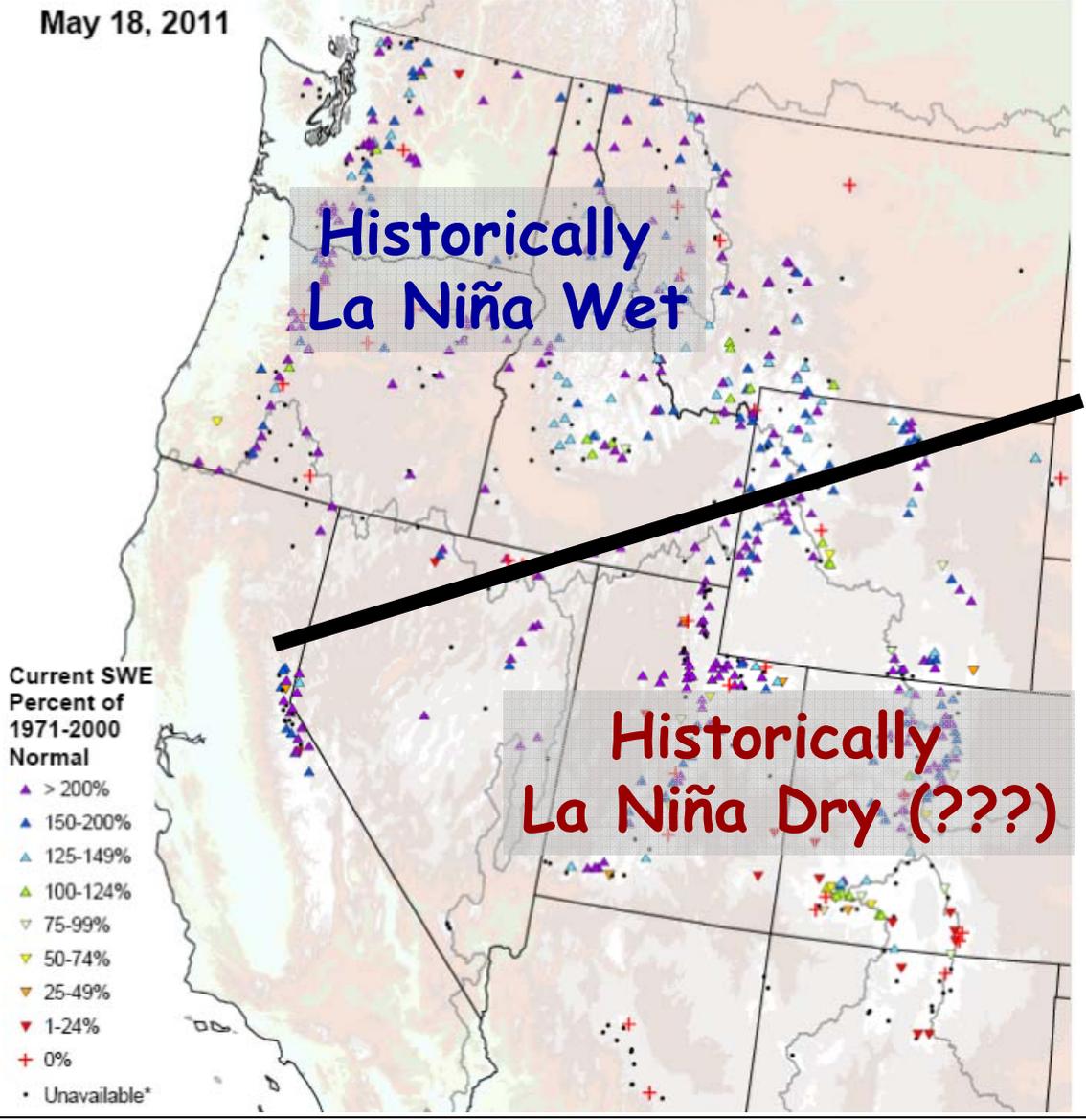
Regional Climate Centers

SNOTEL Current Snow Water Equivalent (SWE) Percent of Normal
May 18, 2011



Courtesy NRCS-NWCC

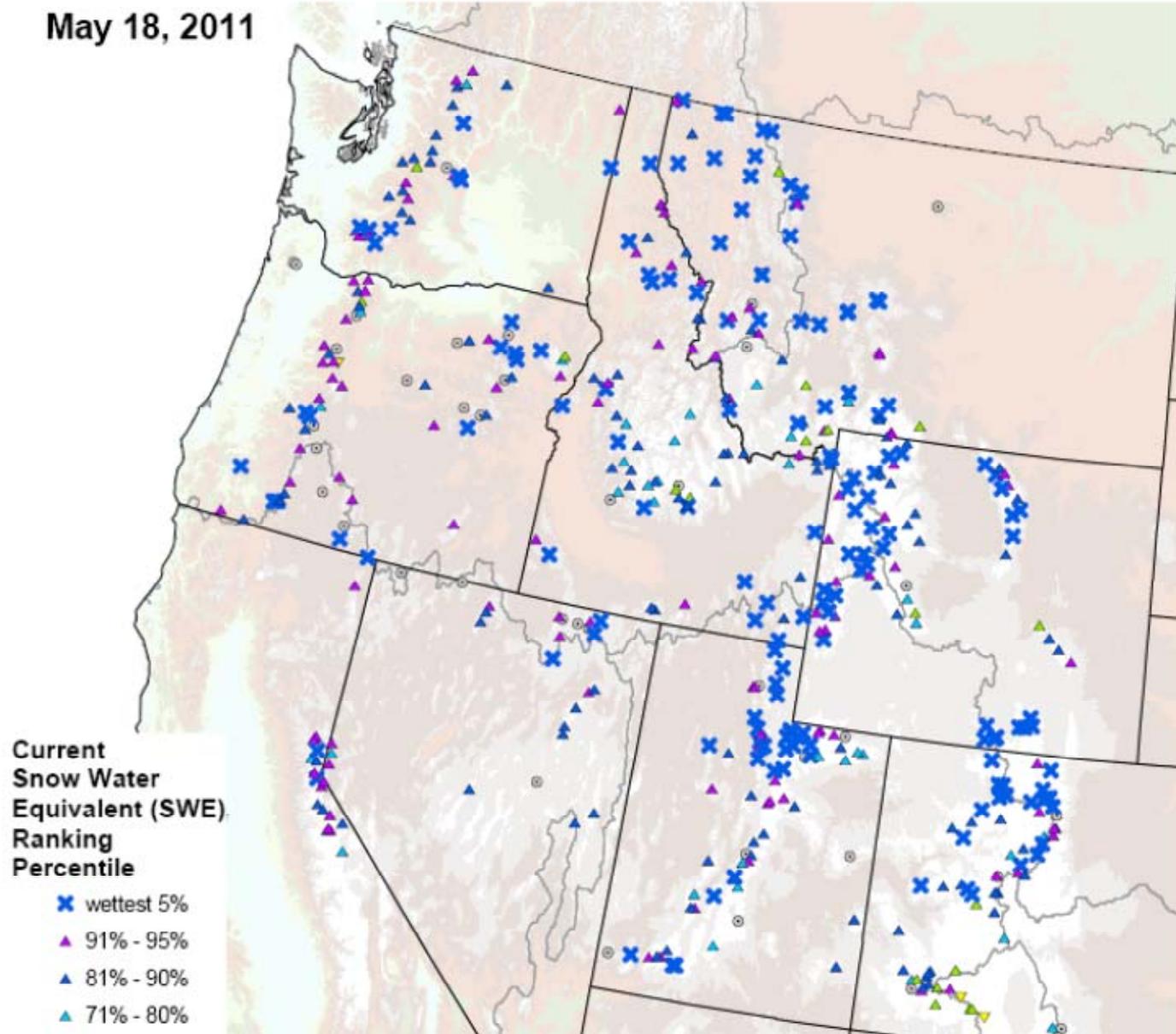
SNOTEL Current Snow Water Equivalent (SWE) Percent of Normal
May 18, 2011



Courtesy NRCS-NWCC

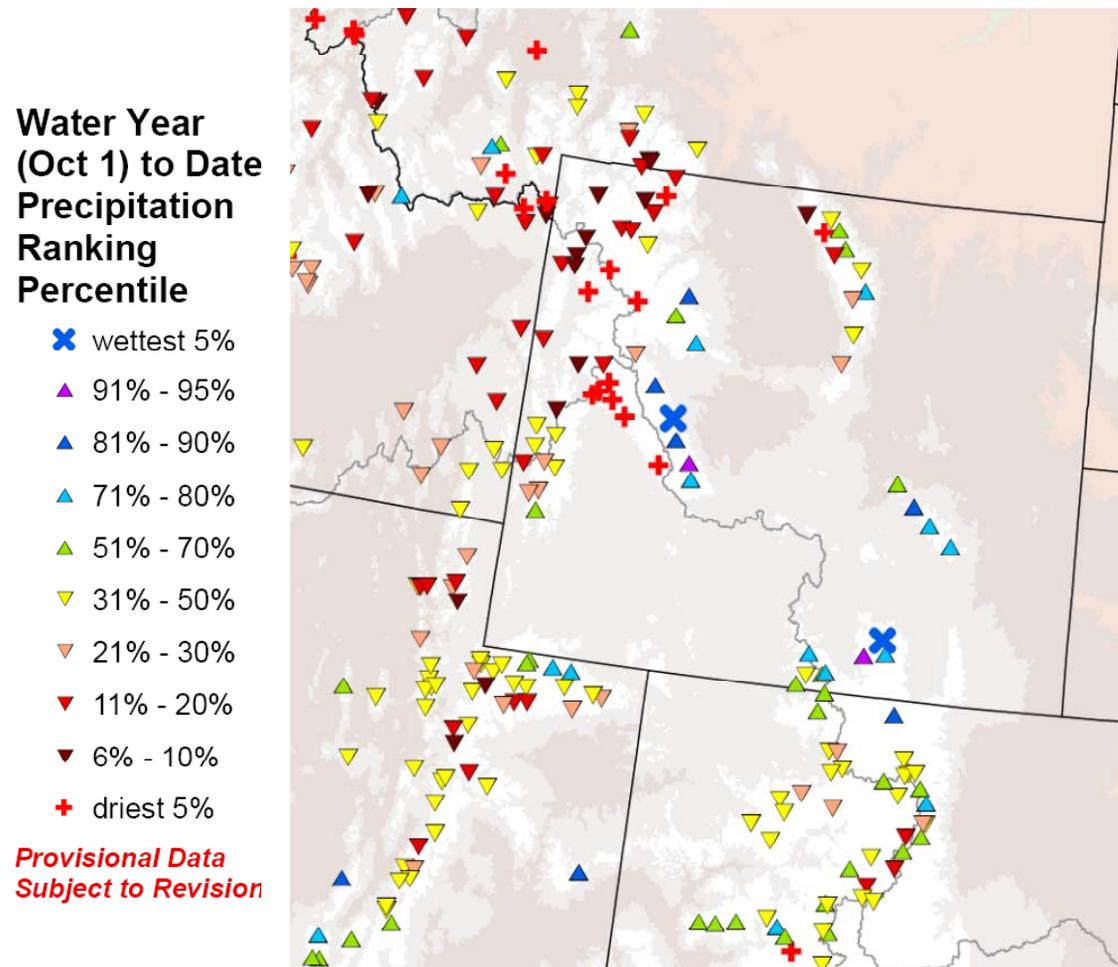
SNOTEL Current Snow Water Equivalent (SWE) Ranking Percentile

May 18, 2011



Courtesy NRCS-NWCC

Water Year Precipitation through May 2010: Many Western Wyoming Sites Rank in Lowest 5%



Courtesy NRCS National Water and Climate Center
<http://www.wcc.nrcs.usda.gov/snow/>

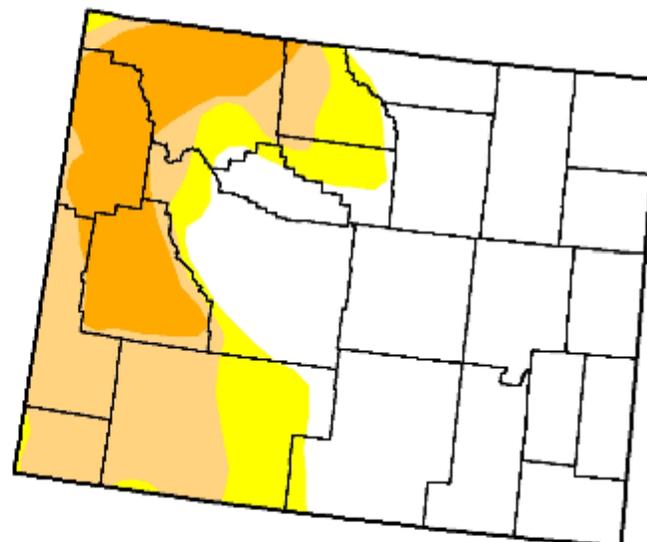
U.S. Drought Monitor

Wyoming

May 25, 2010
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	59.8	40.2	29.6	12.5	0.0	0.0
Last Week (05/18/2010 map)	56.6	43.4	31.7	15.5	0.0	0.0
3 Months Ago (03/02/2010 map)	25.7	74.3	29.1	0.0	0.0	0.0
Start of Calendar Year (01/05/2010 map)	79.3	20.7	0.9	0.0	0.0	0.0
Start of Water Year (10/06/2009 map)	100.0	0.0	0.0	0.0	0.0	0.0
One Year Ago (05/26/2009 map)	86.2	13.8	3.1	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

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



Released Thursday, May 27, 2010

Author: Eric Luebehusen, U.S. Department of Agriculture

U.S. Drought Monitor

Wyoming

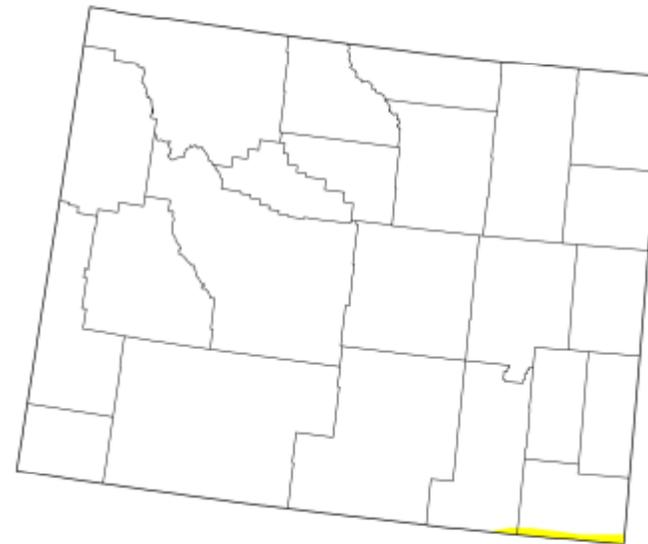
May 10, 2011
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	99.67	0.33	0.00	0.00	0.00	0.00
Last Week (05/03/2011 map)	99.67	0.33	0.00	0.00	0.00	0.00
3 Months Ago (02/08/2011 map)	71.37	28.63	1.02	0.00	0.00	0.00
Start of Calendar Year (12/28/2010 map)	63.16	36.84	4.40	0.00	0.00	0.00
Start of Water Year (09/28/2010 map)	32.23	67.77	8.06	0.00	0.00	0.00
One Year Ago (05/04/2010 map)	28.26	71.74	36.77	15.66	0.00	0.00

Intensity:

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



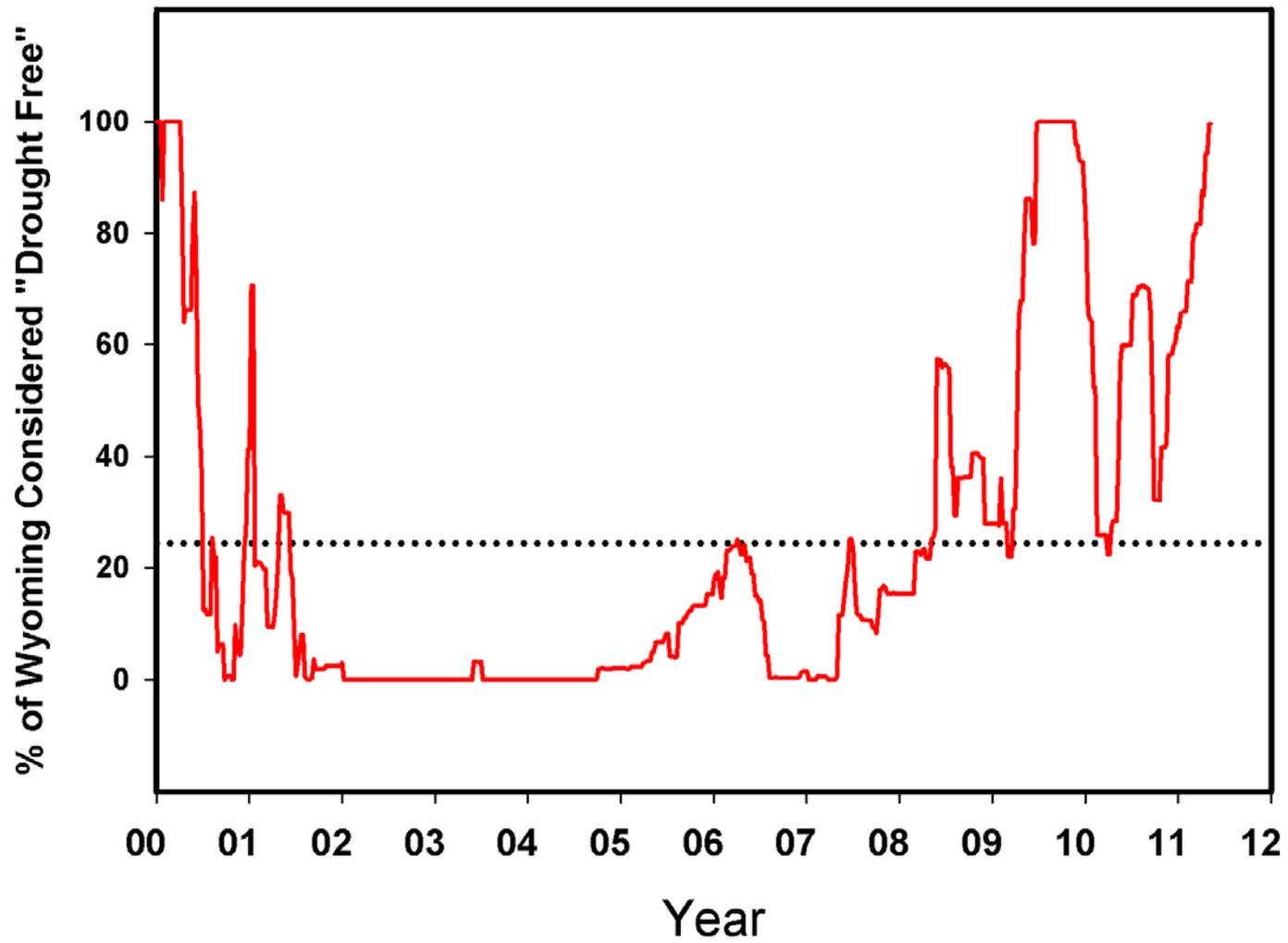
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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



Released Thursday, May 12, 2011
Rich Tinker, NOAA/NWS/NCEP/CPC

"Drought Free" Area By Year: 2000-2011



Online Resources

Water Resources Data System - Windows Internet Explorer

http://www.wrds.uwyo.edu/

File Edit View Favorites Tools Help

Water Resources Data System

UNIVERSITY OF WYOMING UW Home | Wyo Web | About UW | Apply | A-Z Directory | Phone/E-mail | Search UW

WRDS Water Resources Data System

WRDS Homepage
Online Data
Water
Climate
Map Server
Water Library
State Climate Office
Drought
Cooperative Projects
Snowpack
Research Support
Other Water Sites

CoCoRaHS

Water Resources Data System
Dept 3943
1000 E. University Ave.
Laramie, WY 82071

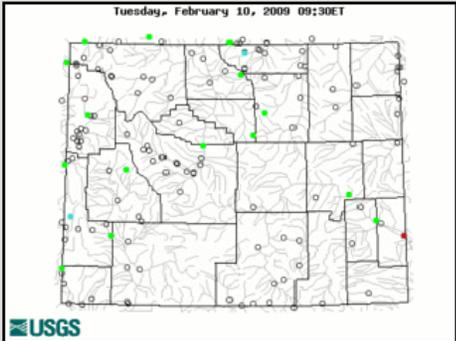
wrds@uwyo.edu
Ph (307) 766-6651
Fax (307) 766-3785

UW Civil Engineering
UNIVERSITY OF WYOMING
New Thinking

Water and Climate Data for the State of Wyoming

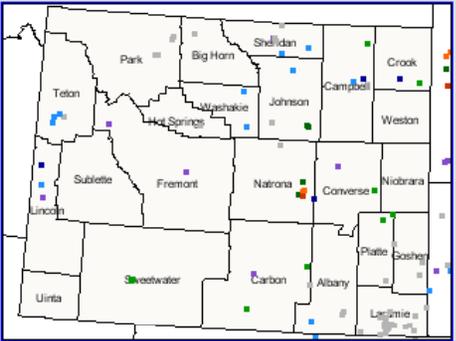
Sponsored by the Wyoming Water Development Office

The Water Resources Data System (WRDS) is a clearinghouse of hydrological and climatological data for the State of Wyoming. WRDS is funded by the [Wyoming Water Development Office](#) and housed within the [Department of Civil and Architectural Engineering](#) at the University of Wyoming. The Wyoming State Climate Office (SCO) is a branch of WRDS, and together we provide a variety of services ranging from the development of enhanced drought-monitoring products to the online dissemination of water resources publications. WRDS and the SCO also support a variety of stakeholder groups by assisting in the development of the [State Water Plan](#) and helping to coordinate long-term monitoring efforts throughout the region.



USGS

Wyoming Streamflow (click map to enlarge)
Updated: Tuesday, 10-Feb-2009 08:01:01 MST



Today's CoCoRaHS Precipitation Reports
Click Map to Enlarge
[Become an Observer](#)

Internet 100%

Wyoming State Water Plan - Windows Internet Explorer

http://waterplan.state.wy.us/plans/statewide/tables/ir_aces.html

Wyoming State Water Plan
Wyoming Water Development Office
6920 Yellowtail Rd
Cheyenne, WY 82002
Phone: 307-777-7626

Home Page News & Information River Basin Plans Basin Advisory Groups Planning Products

Statewide Framework Plan Updated Data Tables

Irrigated Acreage from Most Recent Update

River Basin	Irrigated Lands ² (acres)			
	1973 Total	Total	Surface Water	Ground Water
Bear	59,000	64,000		
Green ¹	332,000	342,000	334,500	7,500
Northeast Wyoming ³	163,000	77,600	59,600	18,000
Platte	553,000	613,000		220
Powder/Tongue ^{1,3}		161,400	161,100	220
Snake/Salt	94,000	99,000		
Wind/Bighorn ⁴	539,000	601,000		
Total	1,738,000	1,947,100		

Values in RED indicate basins updated since previous statewide plan.

1 In the 1973 Framework Plan, Powder/Tongue Basin is included in Northeast Wyoming Basin. Also, the 1973 Wind/Bighorn Basin included the Little Bighorn subbasin, but the Little Bighorn is in the 2002 Powder/Tongue Basin.

2 Current irrigated acreage listed for primary source of supply. Idle lands identified in the Northeast Wyoming and Powder/Tongue basins are not included.

3 Only Green, Northeast, and Powder/Tongue River Basin Plans distinguished between surface water and groundwater irrigated acreage.

4 Current Wind/Bighorn figure is modeled irrigated acreage for full-supply scenario and does not include Popo Agie Basin or Tribal Futures Projects.

[Irrigated Acreage Table from Previous Statewide Plan](#)

Privacy Policy

Other Resources to Support Planning and Policy Related to Drought and Climate Change

WWDO
& WRDS
ONLINE
WATER
RESOURCE
TOOLS

Wyoming Water Development Office
&
Water Resources Data System

The
Wyoming
Water
Library

at the
Water
Resources
Data
System

Sponsored by the Wyoming Water Development Office

ONLINE

PLATTE RIVER BASIN PLAN
EXECUTIVE SUMMARY
Wyoming Water Development Commission
May 2006



WRDS



WATER RESOURCES DATA SYSTEM

<http://www.wrds.uwyo.edu>

http://www.wrds.uwyo.edu/sco/climate_office.html

<http://waterplan.state.wy.us>

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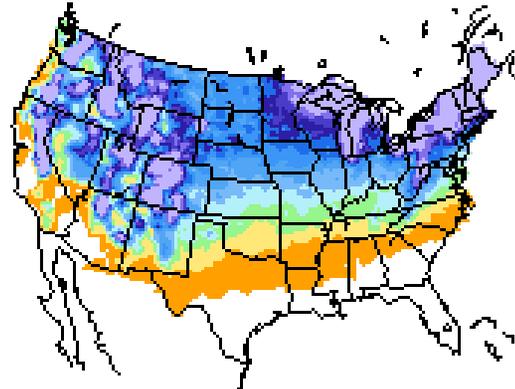
Snowfall (Inches; 1948–2006)

November thru March

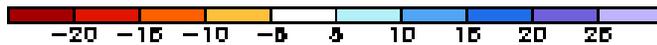
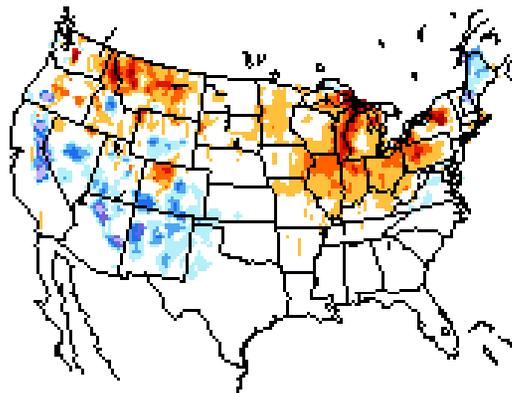
- 10 El Niño Years *
- 11 La Niña Years *
- 38 Neutral Years

* Moderate & Strong events only

Neutral Year Mean



El Niño mean - Neutral mean



La Niña mean - Neutral mean

