The National Integrated Drought Information System

Snowpack Monitoring for Streamflow Forecasting and Drought Planning Workshop

Lander, WY
August 27, 2015

Chad McNutt, NOAA/NIDIS
Casper, WY
NIDIS Goals

• Goals:
  – Provide a better understanding of how and why droughts affect society, the economy and the environment.
  – Improve accessibility, dissemination and use of early warning information for drought risk management.

• How?
  – Build off of a network of Regional Drought Early Warning Systems (DEWS) to create a National Drought Early Warning System
NIDIS Regional Drought Early Warning Systems

Coming Winter 2015
What is Drought Early Warning?

Provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.

.....as with rainbows each person experiences their own drought
-Kelly Redmond
Components of Drought Early Warning Systems (DEWS)

- Drought assessments
- Climate outlook forums
- Education and outreach webinars – risk management
- Engaging the preparedness community
- Builds capacity to utilize existing products
Intensification, Persistence, Improvement

January 2011

April 2011

July 2011

October 2011

January 2012

April 2012

July 2012

October 2012

January 2013

April 2013

July 2013

October 2013
Drought Assessment Groups

States
• Arizona
• Hawaii
• Texas
• New Mexico
• Alabama
• Colorado
• North Carolina
• Florida

River Basins
• South Dakota
• Oklahoma
• Upper Colorado
• Apalachicola-Chattahoochee-Flint

Tribes
• Navajo Nation
Above Normal Temperatures and Variable Precipitation During Early Spring

The main story regarding climate conditions during the past couple of months in the Wind River Region is a continuation of above normal temperatures. Since mid-March, temperatures have been running about 2-3°F above normal for most of the reservation and 3-4°F above normal to the south and west of the reservation (see map below left). Temperatures have been above normal for this region since last fall, which continued into March and April as every station listed in the table at the top of page 2 reported above normal temperatures. In fact, combined March and April average temperatures ranked 8th warmest at Diversion Dam, 7th warmest at Lander, and 8th warmest at Riverton. The first half of May, however, has been running a bit cooler than normal in the Wind River Region. Precipitation during the past two months has varied across the area, as it has been wetter to the south and west and drier to the north and east (see map below right).

During the months of March and April, precipitation was mostly near normal for stations in the region with the exception of Boysen Dam, which only received 66 percent of normal precipitation and ranked as the 15th driest for this period (see data table at the top of page 2).

![Maps produced by High Plains Regional Climate Center: http://www.hprcc.edu/maps/current/](image)

Abnormally Dry Conditions Noted In Parts Of The Wind River Region

The Wind River Region has been wet enough to stave off drought conditions during the past year, but growing precipitation deficits and long-term above normal temperatures to the south of the area have allowed drought to develop in southwestern Wyoming (see map below left). Moderate drought (D1) has been present in that area since mid-February, and a small pocket of severe drought (D2) was introduced by the Drought Monitor during late March. Dryness has expanded northward and eastward to include parts of the northern and western Wind River Basin and the southwest corner of the reservation, which are now in the abnormally dry (D1) Drought Monitor category (see map below right).

U.S. Drought Monitor of Wyoming (left) and the Wind River Indian Reservation and Surrounding Area (right) - May 12, 2015

![Map](image)
Great Plains and Midwest Climate Outlook
August 20, 2015

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Upper Missouri Basin Climate/Drought Early Warning Webinar: El Niño

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Interesting things about the webinars

- Decision-makers get involved and participate in the discussion at limited cost. Hear other perspectives
- Interact directly with the experts
- Test new products; users provide direct feedback
Assessments

From Too Much to Too Little:
How the central U.S. drought of 2012 evolved out of one of the most devastating floods on record in 2011

An Interpretation of the Origins of the 2012 Central Great Plains Drought

Assessment Report

NOAA Drought Task Force
Narrative Team
Lead: Martin Heerling
Co-Leads: Siegfried Schubert & Kingtse Mo

20 March 2013
MR Niño Assessment

The La Niña and El Niño Weather Patterns...

In the Past

Today
Expanded Plains Snow and Soil Condition Network
National Soil Moisture Network
Thanks