Drought Impacts and Climate Outlook

Wyoming — Climate Overview

Highlights for the State

Temperature and Precipitation

Temperatures for June were close to $4^{\circ}F$ above normal in the southern third of Wyoming with the northern two-thirds being about $2^{\circ}F$ above normal. A few stations in the northernmost portion of the state were as much as $2^{\circ}F$ below normal.

Precipitation for June was fairly mixed throughout the state. Totals for the month ranged from less than 5% of normal in Sweetwater County, to stations in the northern half of the state that were up to 300% of normal.

Drought conditions are confined to southcentral and southwestern Wyoming with the highest category being D1 (Moderate Drought), which exists in parts of Sweetwater and Carbon counties.

The fire season, so far, has been fairly quiet in Wyoming with the only large forest fire currently active being the Badger Creek fire in southeast Wyoming (21,310 acres). Activity is minimal and containment is expected around 26 July. Near Worland, the Terek Fire is at about 47,000 acres.

June temperatures were above normal for Wyoming. The state, as a whole, ranked as the 28th warmest since 1895. The individual Climate Divisions (CD) ranged from the 18th warmest (CD 10) to the 45th

warmest (CD 1) for the 124-year period.

Precipitation in June for Wyoming was above normal with the southern half of the state being closer to normal. The state, itself, had the 41st wettest June since 1895. CD 1 was the wettest, ranking 16th wettest of the last 124 years. CD 8 was the driest and ranked as the 60th wettest.



With but a few exceptions, July temperatures to date (through the 24th) are above normal across

most of the state. The few exceptions consist of about five stations in Niobrara, Laramie, Johnson, and Sheridan counties.

 \mathbf{J} uly precipitation, so far, has been, for the most part, below normal west of the Divide, and normal to above normal for most areas east of the Divide. Laramie County, the Bighorn Mountains, and Sheridan County would be the exceptions.



Wyoming — Current Drought Conditions



Drought conditions are expanding in southcentral and southwest Wyoming. D1 (Moderate Drought) conditions cover the southwestern and southern parts of Carbon County as well as southeastern Sweetwater County and southwestern Albany County. The latter area is the site of the Badger Creek fire, which is now mostly contained.

Surrounding the D1, D0 (Abnormally Dry) conditions extend all the way to the Utah border in the west, northward into extreme southern Fremont County, and eastward into the southwestern portions of Albany County.

Precipitation in the eastern half of the state has been generally above-normal which should help keep drought conditions from setting in there. The valley areas of the Wind and Bighorn River basins have also received normal to above-normal precipitation.

Remaining areas of the state have received below-normal precipitation in the last 30 days and could be susceptible to D0 conditions, especially the northwest where evaporative demand has been high.

The U.S. Drought Monitor, is a weekly map of drought conditions produced jointly by the National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture, and the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln. The U.S. Drought Monitor website is hosted and maintained by the NDMC. http://droughtmonitor.unl.edu

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Wyoming — Drought Indicators

Evaporative Demand

The Evaporative Demand Drought Index (EDDI) over the 2-Week period ending 18 July is showing high-demand conditions across northwest and southeast Wyoming. High-demand conditions indicate that the atmosphere is "thirsty" and is pulling moisture from the soil and vegetation in greater amounts, leading to a drying effect at the surface.

Looking at conditions over the last four weeks, the EDDI is showing low-demand conditions for the northcentral and northeastern parts of Wyoming. Some areas of high-demand are emerging in the southern tier of the state.

Additional products can be found at: http://www.wrds.uwyo.edu/products and data.html

Do you have drought impacts to report? We need your on-the-ground reports and you can input them here: http://droughtreporter.unl.edu/submitreport/



Water Resources

Reservoirs in Wyoming are still very full with all but three of the large ones being over 85% full.

Reservoir conditions may be viewed online at: http://www.wrds.uwyo.edu/surface_water/teacups.html

Streamflows in Wyoming are running mostly at normal or above normal; however, there are several sites in the southern part of the state that are well-below normal, as are five others in northcentral and northwestern Wyoming.

The map below shows stream conditions in Wyoming as of July 24.



Wyoming — Short- and Long-term Outlooks Weather and Climate Outlooks

For the next two weeks (thru Aug 06), Wyoming looks to have better chances for belownormal temperatures in the eastern parts and above-normal temperatures in the west. Precipitation for the 6- to 10-day timeframe is more likely to be below-normal in the northern parts of the state and above normal for the southwest corner. The signal in the second week has a better probability for below-normal precipitation for the entire state.

Looking ahead to the three-month period of August through October there are increased chances for above-normal temperature statewide. Those chances are highest in the southwest and decrease to the northeast. Precipitation amounts during this period of time



are expected to be above normal for the southwestern threequarters of the state. Moving forward to September through November, there are, again, good chances for above-normal temperatures statewide with the odds being better than 50% in the southwest half of Wyoming and slightly less in the northeast. Precipitation signals for that period are uncertain.

Drought conditions are expected to continue in southcentral Wyoming. With the high evaporative demand being experienced in the northwest

and, to a lesser extent, the southeast, Abnormally Dry conditions could expand into those areas in the coming weeks.

Need a Forecast? Visit your local National Weather Service Weather Forecast Office for the most up-to-date forecast at: http://www.weather.gov

Stay Tuned and In Touch

The next Wyoming Drought Impacts and Climate Outlook will be released in late August. If you need information in the meantime, please reach out to any of the partners listed to the right or contact Tony Bergantino directly at Antonius@uwyo.edu

The Wind River Indian Reservation and Surrounding Area Climate and Drought Summary at: WindRiverRes-Climate-Drought-Summary-Mar2017.html

Heard Around the State

Sweetwater Co., Jul 18: Our well cannot keep up with evaporation & some of the older shrubs have died. Our trees & shrubs get 3-4 gallons of water each week, but only 2 gallons in a normal year.

Carbon Co., Jun 24: On May 28 I observed a tornado, a rare sight, to the east over the Beaver hills. The hayfields are stressed, even though they are irrigated. Ranchers are worried they will be short of hay to feed their livestock.

Weston Co., Jun 16: Our grass is beautiful! Clover blooming. Lots of cactus blooming, lots of mosquitoes. With not too much heat and rather normal T-showers we are set for a great grass year.

Partners

Wyoming State Climate Office

www.wrds.uwyo.edu National Integrated Drought Information System www.drought.gov National Weather Service

Riverton Weather Forecast Office

www.weather.gov/riw/ Cheyenne Weather Forecast Office

www.weather.gov/cys/

High Plains Regional Climate Center

www.hprcc.unl.edu

National Drought Mitigation Center www.drought.unl.edu

USDA Northern Plains Climate Hub and University

of Wyoming Extension

www.climatehubs.oce.usda.gov/northernplains/ Western Water Assessment

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wwa.colorado.edu

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