Utah Drought Monitor Webinar

The meeting will begin shortly

Thank you to our contributors
Utah Drought Monitor Webinar
April 20, 2021
30-day Temperature

Ave. Temperature dep from Ave (deg F) 3/2Q/2021 - 4/18/2021

Av. Max. Temperature dep from Ave (deg F) 3/2Q/2021 - 4/18/2021

Generated 4/19/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

Agency - Utah Climate Center
Presenter - Jon Meyer
30-day Precipitation
60-day SPI (Roughly covers the “wet” part of our winter)
Growing season is beginning to ramp up:

Time to start looking at vegetation-based drought indices!
Evaporative Demand Drought Index (EDDI)

Cool temperatures have helped limit EDDI in the last month, but high wind events and low humidity has recently driven increasing evaporative demand.

Fire season already off and running?

Agency - Utah Climate Center
Presenter - Jon Meyer
What goes into VegDRI?

1. Palmer Drought Severity Index (PDSI)
2. Standard Precipitation Index (SPI) (36-week)
3. Two variables related to general vegetation conditions – the Percent Average Seasonal Greenness (PASG) and Start of Season Anomaly (SOSA) – are calculated from satellite-based observations and incorporated into the VegDRI.
The Quick Drought Response Index (QuickDRI) is a shorter-term indicator of dryness. It is calculated through the analysis of satellite- and model-based observations of conditions that influence drought.

QuickDRI is designed to provide a snapshot of anomalously dry or wet conditions over the past 4 weeks and serves as an indicator of emerging or rapidly changing drought conditions.
Grace Satellite Soil Moisture

GRACE-Based Surface Soil Moisture
April 19, 2021

GRACE-Based Shallow Groundwater
April 19, 2021

Agency - Utah Climate Center
Presenter - Jon Meyer
Soil Moisture
8” sensor depth
SNOTEL & SCAN combined

SWE losses are largely being absorbed by headwater soils and not significantly impacting runoff

Last 45 Days
Utah

Agency - NRCS Snow Survey
Presenter - Kent Sutcliffe
A few weak storms are expected to pass through the region over the next 7 days.

Total QPF amounts will vary across the state; ranging from nothing up to an inch in some higher mountains.
Weather Prediction Center U.S. Day 3-7 Hazards Outlook

Valid April 22, 2021 - April 26, 2021

● Drought conditions persist
Near normal temperatures favored from April 27 through May 3

Pie charts for Hanksville, UT shown
● Odds favor above normal Precip in the 6-10 day window
● Then dropping off to “normal” in the 8-14 day period
● Pie Charts for Salt Lake City shown
No significant Hazards forecast over the next 2 weeks.

Windy across Eastern Arizona and New Mexico into the Southern Plains
Dry conditions continue to persist throughout Utah, driving seasonal water supply forecasts well below average.

A warm start to April started to drive snowmelt conditions.

Not likely that we’ll achieve average conditions.
Logan - Logan, Nr, State Dam, Abv (LGNU1)

Period: Apr-Jul, Official 50% Forecast (2021-04-01): 66 kaf (59% Average, 68% Median)

ESP is Unregulated and No Precipitation Forecast Included

2021/04/20:
Max 1986: 222.92
Min 1977: 34.12
Average: 111
Median: 97

Observed
Accumulation: 4.22
Observed Total: 4.22
Normal
Accumulation: 9.87
ESP: 59.5
Utah Current Snowpack

Colorado Basin River Forecast Center
Northern Utah High Elevation 9000 Group

04/20/2021 Percent Median: 80% (12.7 / 16.0)
Percent Seasonal Median: 71% (12.7 / 17.9)
3 Day Melt Rate: -0.1 in/day

2020
Median
2021

Created 04/20.17:03 GMT
NOAA/CBRFC, 2021
Green - Flaming Gorge Reservoir (GRNU1)
Period: Apr-Jul, Official 50% Forecast (2021-04-15): 470 kaf (48% Average, 57% Median)
ESP is Unregulated and No Precipitation Forecast included

2021/04/20:
Max 1986: 2224.35
Min 1977: 254.3
Average: 980
Median: 830
Observed
Accumulation: 50.8
Observed Total: 50.8
Normal
Accumulation: 88.9
ESP: 482
Duchesne - Tabiona, Nr (TADU1)

Period: Apr-Jul, Official 50% Forecast (2021-04-01): 57 kaf (53% Average, 61% Median)

ESP is Unregulated and No Precipitation Forecast Included

2021/04/20:
Max 2011: 227.52
Min 1934: 21.48
Average: 108
Median: 94

Observed
Accumulation: 3.67
Observed Total: 3.67
Normal
Accumulation: 6.57
ESP: 55.2
Sevier - Hatch (HATU1)
Period: Apr-Jul, Official 50% Forecast (2021-04-01): 15 kaf (31% Average, 42% Median)
ESP is Regulated and No Precipitation Forecast Included

2021/04/20:
Max 2005: 188.48
Min 2002: 9.25
Average: 48
Median: 36

Observed
Accumulation: 2.21
Observed Total: 2.21
Normal
Accumulation: 4.48
ESP: 12.8
Colorado - Lake Powell, Glen Cyn Dam, At (GLDA3)
Period: Apr-Jul, Official 50% Forecast (2021-04-15): 2700 kaf (38% Average, 42% Median)
ESP is Unregulated and No Precipitation Forecast included

2021/04/20:
Max 1984: 15316.11
Min 2002: 963.96
Average: 7160
Median: 6470
Observed Total: 191
Normal
Accumulation: 704
ESP (wo Obs): 2140
U.S. Drought Monitor
Utah

April 13, 2021
(Released Thursday, Apr. 15, 2021)
Valid 8 a.m. EDT

Intensity:
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Deborah Bathke
National Drought Mitigation Center

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