Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly

Thank you to our contributors
Utah Water Assessment & Conditions Monitoring Webinar

April 19, 2022
Max Temperature departure from average (1-month & 2-week)
Precipitation % of average (1-month & 2-week)

Agency - Utah Climate Center
Presenter - Jon Meyer
SNOTEL/SCAN 2-week Precipitation
30-day, 90-day, 6-month Standardized Precipitation Index (SPI)
Evaporative Demand Drought Index (EDDI)
1-month difference in column relative soil moisture (%)

Agency - Utah Climate Center
Presenter - Jon Meyer
Vegetation Drought Response Index (Veg-DRI)
CPC April Outlooks (yet to be updated for May)

Monthly Temperature Outlook
Valid: April 2022
Issued: March 31, 2022

Monthly Precipitation Outlook
Valid: April 2022
Issued: March 31, 2022

Agency - Utah Climate Center
Presenter - Jon Meyer
Snowpack

- 77% of normal SWE (statewide)
- Central & Northern Utah faring better than rest of state
- % normal values less meaningful now that we’re in melt phase

Agency - NRCS Snow Survey
Presenter - Kent Sutcliffe
Soil Moisture

- Statewide soil moisture % saturation is slightly above normal, well above last year’s historically dry soils
- Recent upticks relate to early melt
- Below normal values for Raft Mtns may be a data anomaly

机关 - NRCS Snow Survey
阐述人 - Kent Sutcliffe
New Reservoir App is live on

https://water.utah.gov/

Anyone can download or navigate this map

Thank you to the many agencies that collect reservoir data
Water Resources encourages all Utahns and sectors to do their part to conserve Utah’s most precious resource, water, by embracing a water-wise ethic to safeguard the future of Utah.
Total Reservoir Capacity 44%
Deviation from Median -17.99%

Statewide Reservoir Storage (Apr-19-2022)
Reservoir Levels

Overall storage:
(Excluding Fontenelle, Flaming Gorge, and Lake Powell)
Current: 61% 64%
Last year: 72% 74%

Reservoir change:
Pineview: -25% -16%
Willard Bay: -25% -19%
Jordanelle: -18% -17%
Strawberry: -8% -7%
Starvation: -7% -6%
Scofield: -23% -21%
Lake Powell: -13% -12%
Utah Lake: -16% -16%

March 1 April 17
- Pleasant conditions return Wed-Thu, with slightly above normal temperatures.
- Bulk of precipitation will occur on Friday through Saturday
  - Modest mountain snow and valley rain.
- High pressure and dry conditions return by Tuesday of next week. Strength of the high pressure remains uncertain at this time.
Climate Prediction Center 8 to 14 Day Outlooks - Temperature

8-14 Day Temperature Outlook

Valid: April 26 - May 2, 2022
Issued: April 18, 2022

Agency - National Weather Service Weather Forecast Office
Presenter - Paul Miller
Climate Prediction Center U.S. Week-2 Hazards Outlook

Risk of Hazardous Temperatures
Valid: 04/26/2022-05/02/2022

Risk of Heavy Precipitation
Valid: 04/26/2022-05/02/2022

Agency - National Weather Service Weather Forecast Office
Presenter - Paul Miller
First half of April has been generally cooler and wetter across northern areas, particularly in the Bear and Weber Basins.

Forecasts across Utah range from 35% to 85% of average.

<table>
<thead>
<tr>
<th>River Basin</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bear River Basin</td>
<td>40-85%</td>
</tr>
<tr>
<td>Weber River Basin</td>
<td>45-75%</td>
</tr>
<tr>
<td>Six Creeks River Basin</td>
<td>40-75%</td>
</tr>
<tr>
<td>Provo River Basin and Utah Lake</td>
<td>40-80%</td>
</tr>
<tr>
<td>Sevier River Basin</td>
<td>35-75%</td>
</tr>
</tbody>
</table>
Utah Water Supply Forecasts - Overview

50% exceedance forecast ('normal' precip/temp scenario)

- April 1 Forecast for April-July Volume
- April-July Forecast Streamflow Volumes are in percent of 1991-2020 average
- 10% declines in forecasts from Mar. 1

Median value of the... individual forecasts (in % of average) ...by Forecast Group.

<table>
<thead>
<tr>
<th>Forecast Group</th>
<th>Median Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weber</td>
<td>55%</td>
</tr>
<tr>
<td>Bear</td>
<td>50%</td>
</tr>
<tr>
<td>Six Creeks</td>
<td>65%</td>
</tr>
<tr>
<td>Provo / Utah Lake</td>
<td>60%</td>
</tr>
<tr>
<td>Sevier</td>
<td>65%</td>
</tr>
<tr>
<td>Duchesne</td>
<td>75%</td>
</tr>
<tr>
<td>Virgin</td>
<td>50%</td>
</tr>
</tbody>
</table>
Utah Water Supply Forecasts - Probabilistic Forecast Range

Outside of the Duchesne River Basin few points are forecast to have average runoff even at the 10% exceedance level.

Forecasts are based on:
- current conditions
- soil moisture
- snowpack
- streamflow
- future weather (precip/temp)
- can include 7 day specific forecast
- 30 years (1981-2020) of historical weather → 30 scenarios

Interpretation:
- 50% exceedance
  - 15/30 scenarios > this value
  - 15/30 scenarios < this value
- 90% exceedance
  - 3/30 scenarios <= this value
- 10% exceedance
  - 3/30 scenarios >= this value

90% exceedance forecast range:
- Weber 20% - 60% of Normal
- Provo 35% - 65%
- Duchesne 30% - 70%

10% exceedance forecast range:
- Weber 55% - 100% of Normal
- Provo 60% - 105%
- Duchesne 100% - 130%
Logan - Logan, Nr, State Dam, Abv (LGNU1)
Period: Apr-Jul, Official 50% Forecast (2022-04-01): 55 kaf (52% Average, 60% Median)
ESP is Unregulated and No Precipitation Forecast Included

2022/04/18:
Max 1986: 222.92
Min 1977: 34.12
Average: 106
Median: 91
Observed Accumulation: 4.08
Observed Total: 4.08
Normal Accumulation: 8.61
ESP: 59
Weber - Oakley, Nr (OAWU1)

Period: Apr-Jul, Official 50% Forecast (2022-04-01): 76 kaf (68% Average, 78% Median)

ESP is Unregulated and No Precipitation Forecast Included

2022/04/18:
Max 1907: 254.23
Min 1934: 35.47
Average: 111
Median: 97
Observed Accumulation: 4.49
Observed Total: 4.49
Normal Accumulation: 6.33
ESP: 82.3
Duchesne - Tabiona, Nr (TADU1)
Period: Apr-Jul, Official 50% Forecast (2022-04-01): 75 kaf (73% Average, 85% Median)
ESP is Unregulated and No Precipitation Forecast Included

2022/04/18:
Max 2011: 227.62
Min 1934: 21.48
Average: 103
Median: 88
Observed Accumulation: 3.87
Observed Total: 3.87
Normal Accumulation: 5.84
ESP: 80.1
Clear Ck - Sevier, Nr, Diversions, Abv (CCDU1)

Period: Apr-Jul, Official 50% Forecast (2022-04-01): 13.3 kaf (72% Average, 98% Median)

ESP is Unregulated and No Precipitation Forecast Included

2022/04/18:
Max 1984: 56.16
Min 1959: 3.99
Average: 18.5
Median: 13.6
Observed Accumulation: 1.33
Observed Total: 1.33
Normal Accumulation: 2.08
ESP: 13.1
U.S. Drought Monitor
Utah

April 12, 2022
(Released Thursday, Apr. 14, 2022)
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

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droughtmonitor.unl.edu