July Review & Northeast DEWS Discussion

By: Samantha Borisoff, Climatologist
Northeast Regional Climate Center
July Temperatures

From near normal to more than 3°F above normal
## July Temperatures

### Number of Consecutive Days Max Temperature $\geq 100$ for Newark Area, NJ (ThreadEx)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Run Length</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>2022-07-20 through 2022-07-24</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>2010-07-04 through 2010-07-07</td>
</tr>
<tr>
<td>-</td>
<td>4</td>
<td>1993-07-07 through 1993-07-10</td>
</tr>
<tr>
<td>-</td>
<td>4</td>
<td>1953-08-28 through 1953-08-31</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>2011-07-21 through 2011-07-23</td>
</tr>
</tbody>
</table>

Last value also occurred in one or more previous years.

Period of record: 1931-01-01 to 2022-07-27

### Number of Consecutive Days Max Temperature $\geq 95$ for New York-LGA Area, NY (ThreadEx)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Run Length</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>1953-08-28 through 1953-09-02</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>2022-07-20 through 2022-07-24</td>
</tr>
<tr>
<td>-</td>
<td>5</td>
<td>2020-07-18 through 2020-07-22</td>
</tr>
<tr>
<td>-</td>
<td>5</td>
<td>1991-07-17 through 1991-07-21</td>
</tr>
<tr>
<td>-</td>
<td>5</td>
<td>1948-08-25 through 1948-08-29</td>
</tr>
</tbody>
</table>

Period of record: 1939-10-07 to 2022-07-27

### Number of Consecutive Days Min Temperature $\geq 75$ for Philadelphia Area, PA (ThreadEx)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Run Length</th>
<th>Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>2022-07-27</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>1995-07-30</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>2016-08-17</td>
</tr>
<tr>
<td>-</td>
<td>8</td>
<td>1993-07-14</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>1991-07-25</td>
</tr>
</tbody>
</table>

Period of record: 1872-03-05 to 2022-07-27

### Number of Consecutive Days Min Temperature $\geq 75$ for New York-Kennedy Airport Area, NY (ThreadEx)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Run Length</th>
<th>Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>2022-07-25</td>
</tr>
<tr>
<td>-</td>
<td>7</td>
<td>2016-08-17</td>
</tr>
<tr>
<td>-</td>
<td>7</td>
<td>2013-07-17</td>
</tr>
<tr>
<td>-</td>
<td>7</td>
<td>1988-08-16</td>
</tr>
<tr>
<td>-</td>
<td>7</td>
<td>1981-07-13</td>
</tr>
</tbody>
</table>

Period of record: 1948-07-17 to 2022-07-27
July Severe Weather

SPC Filtered Storm Reports for 07/12/22
Map updated at 2341Z on 07/19/22

- TORNADO REPORTS... (0)
- WIND REPORTS/MI...... (291/2)
- HAIL REPORTS/LG...... (56/1)
- TOTAL REPORTS........ (347)

PRELIMINARY DATA ONLY

- High Wind Report (65KT+)
- Large Hail Report (2" dia. +)

Courtesy of NWS GYX

National Weather Service
Storm Prediction Center
Norman, Oklahoma

NRCC

Courtesy of NWS BTV

Courtesy of NWS BGM
July Rainfall
July Precipitation

From less than 25% of normal to more than 200% of normal
Drought Monitor

U.S. Drought Monitor Northeast

June 28, 2022
(Released Thursday, Jun 30, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

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:
Curtis Riganti
National Drought Mitigation Center

droughtmonitor.unl.edu

U.S. Drought Monitor Northeast

July 26, 2022
(Released Thursday, Jul 28, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

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:
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National Drought Mitigation Center

droughtmonitor.unl.edu
Accumulated Precipitation Departure from Normal

Green/black diamonds represent subsequent/missing values

Graph showing accumulated precipitation departure from normal, with lines representing different areas (Portland Area, ME, Boston Area, MA, Providence Area, RI, Rochester Area, NY) and the graph covers data from January to July 2022.
Precipitation
Standardized Precipitation Index
Evap. Demand Drought Index

3-week EDDI categories for July 23, 2022

Drought categories
ED4 | ED3 | ED2 | ED1 | ED0
---|---|---|---|---
100% | 98% | 95% | 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% | 5% | 2% | 0%

Wetness categories
EW0 | EW1 | EW2 | EW3 | EW4
---|---|---|---|---
100% | 98% | 95% | 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% | 5% | 2% | 0%

(EDDI-percentile category breaks: 100% = driest; 0% = wettest)

Generated by NOAA/ESRL/Physical Sciences Laboratory
Soil Moisture

SPoRT–LIS 0–100 cm Soil Moisture percentile valid 28 Jul 2022

**NOTE**
**Experimental**

2 5 10 20 30 70 80 90 95 98
Streamflow

28-Day Streamflow

Explanation - Percentile Classes

<table>
<thead>
<tr>
<th>Low</th>
<th>Much below normal</th>
<th>Below normal</th>
<th>Normal</th>
<th>Above normal</th>
<th>Much above normal</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10%</td>
<td>10-24%</td>
<td>25-75%</td>
<td>76-90%</td>
<td>&gt;90%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data provided by USGS WaterWatch - Streamflow; updated 2022-07-28.
Drought Impacts

Known Water Use Restrictions
Last Update: 7/25/2022

Legend
- County Boundary
- Town Boundary

Drought Condition
- Abnormally Dry
- Moderate Drought
- Severe Drought
- Extreme Drought

Municipality or Water System Status
- Voluntary Restriction
- Mandatory Restriction

Drought conditions based on United States Drought Monitor (https://droughtmonitor.unl.edu/)
Produced by a partnership between: National Drought Mitigation Center, U.S. Department of Agriculture, & National Oceanic and Atmospheric Administration

Disclaimer: The status of water use restrictions is based on information submitted to the New Hampshire Department of Environmental Services and may not be comprehensive.

Dry wells reported: 2021-2022

Total Dry Wells Reported: 32
Current year: 12

Dry Wells by County:
- Cumberland
- York
- Kennebec
- Oxford
- Lincoln
- Franklin
- Piscataquis
- Somerset


https://anrmaps.vermont.gov/websites/droughtreporter/
Drought Impacts

'Linda Borg
The Providence Journal
Published 1:24 p.m. ET July 02, 2022

'This field will not bounce back:' Drought has Rhode Island farmers praying for rain

Rising costs and dry weather making thin profit margin for farmers

Rain did fall, but much more is needed for Maine farmers

Farmers like Bob Spear of Spear Farms are turning to drip irrigation to replace natural rain during Maine's lengthy drought.

Abnormally dry conditions in Cortland County impact local dairy farmer

(Emily Kenny/Spectrum News 1)
Precipitation Forecast

7 Day QPF
Valid: 12Z 07/28/22 - 12Z 08/04/22

Explanation - Forecast precipitation (inches)

Data provided by DOC/NOAA/NWS/NCEP/WPC.
Short-term Outlooks

6-10 Day Precipitation Outlook
2022-08-02 to 2022-08-06

6-10 Day Temperature Outlook
2022-08-02 to 2022-08-06

8-14 Day Precipitation Outlook
2022-08-04 to 2022-08-10

8-14 Day Temperature Outlook
2022-08-04 to 2022-08-10

Data provided by NOAA/WWRP/NCEP/NCDC.

NRCC
Summary

**July-to-date conditions:**
- Above-normal temperatures
- Many areas saw below or near normal precipitation but localized heavy rainfall

**Drought:**
- Drought/dryness expanded and intensified, especially in New England, due to factors such as below-normal rainfall, below-normal streamflow, low soil moisture, and water and ag impacts

**Outlooks:**
- Short-term outlooks: below- or near-normal precipitation and above-normal temperatures; drought likely to persist and possibly intensify?
- August and August-October: below-normal rainfall in August for interior areas; above-normal rainfall for Aug-Oct for about half the region closer to the coast; above-normal temperatures for all
Drought Resources

Northeast Drought Early Warning Update

July 15, 2022

Drought Early Warning Update for the Northeast

Drought Intensifies and Expands as Streamflow Declines and Crops are Stressed

Key Points

- Severe Drought (D2) developed in northeastern Massachusetts and a small portion of southern New Hampshire
- Moderate Drought (D1) expanded in coverage across most of New England and emerged in western New York
- Abnormally Dry conditions (D0) expanded significantly to include most of New England and western and central New York
- Abnormally Dry conditions (D0) also expanded in southeastern New York state - including New York City

Accumulated Precipitation Departure from Normal

https://nedews.nrcc.cornell.edu/
Contact Information

• nrcc@cornell.edu

Upcoming Webinars

• Tuesday, August 30 at 9:30am
  • Atlantic Hurricane Season Update and Outlook

• Thursday, September 29 at 9:30am
  • Seasonal Bird Migration

www.nrcc.cornell.edu