

The background of the slide is a close-up photograph of parched, cracked soil. The cracks are deep and irregular, forming a network across the surface. The color of the soil is a warm, golden-brown, and the lighting creates strong shadows within the crevices, emphasizing the texture and the severity of the drought.

# September 2021 Climate Review

**Presented By:**

**National Weather Service**

**Newport/Morehead City, NC**

# September 2021 Highlights



A sundog captured over Jacksonville in early September.

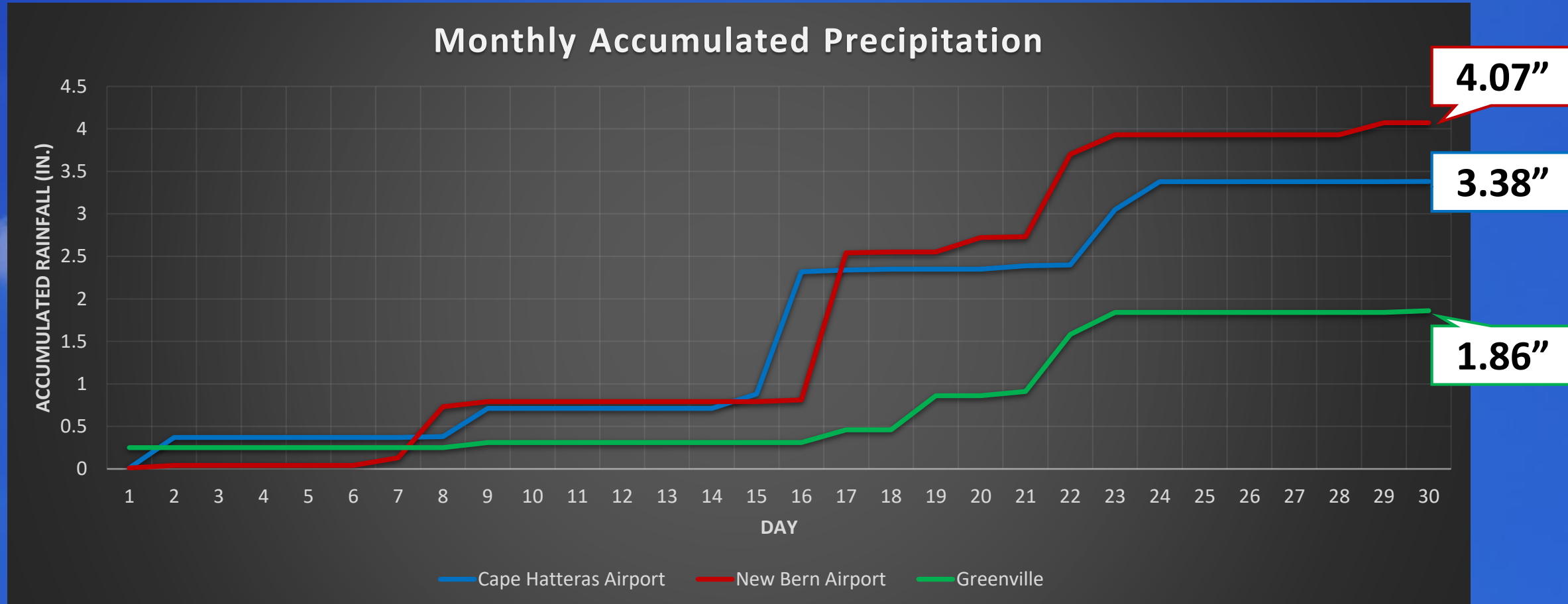
September 2021 saw no direct impacts from tropical cyclones for eastern North Carolina, which contributed to well-below normal rainfall across the area. With few exceptions, most areas saw monthly totals about 4-6 inches below average.

Temperatures across the region were very close to average. The first fall-like airmass intruded into the region late in September introducing lows in the 50s for many.

## Monthly Rankings

|                 | Average Temp             | Total Rainfall          |
|-----------------|--------------------------|-------------------------|
| <b>Hatteras</b> | 25 <sup>th</sup> Warmest | 40 <sup>th</sup> Driest |
| <b>New Bern</b> | 39 <sup>th</sup> Coolest | 31 <sup>st</sup> Driest |

# September 2021 Rainfall

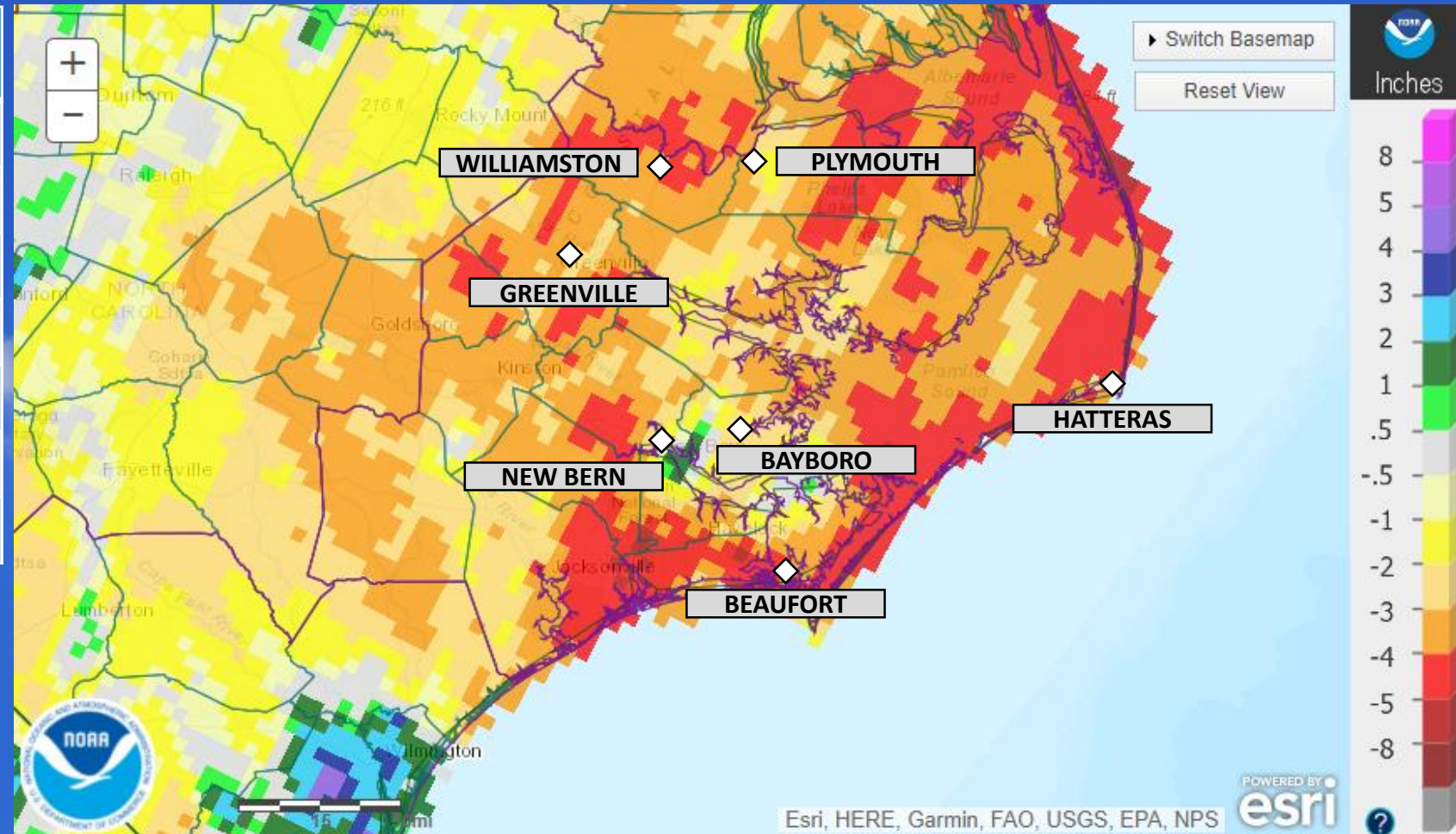


*White diamonds denote missing 24-hour precipitation report. Asterisk denotes total with missing data.*

# September 2021 Rainfall vs. Climate Normal

|             | Observed (In.) | Normal | Difference |
|-------------|----------------|--------|------------|
| Beaufort    | 2.92           | 8.46   | ▼ 5.54     |
| Hatteras    | 3.38           | 7.63   | ▼ 4.25     |
| New Bern    | 4.07           | 6.33   | ▼ 2.26     |
| Greenville  | 1.86           | 7.33   | ▼ 5.47     |
| Williamston | 2.10           | 6.92   | ▼ 4.82     |
| Plymouth    | 1.92           | 6.13   | ▼ 4.21     |
| Bayboro     | 2.74           | 7.14   | ▼ 4.40     |

Red sites have missing data



September 2021 Precipitation: Departure from Normal  
 Analysis from the Advanced Hydrologic Prediction Service

# Wettest and Driest Septembers

|                         | Cape Hatteras | Year Observed | New Bern | Year Observed |
|-------------------------|---------------|---------------|----------|---------------|
| Wettest                 | 20.00"        | 1989          | 19.43"   | 1955          |
| 2 <sup>nd</sup> Wettest | 17.55"        | 1928          | 18.39"   | 2018          |
| 3 <sup>rd</sup> Wettest | 16.43"        | 1955          | 16.79"   | 2010          |
| 4 <sup>th</sup> Wettest | 14.96"        | 1934          | 14.61"   | 1947          |
| 5 <sup>th</sup> Wettest | 14.23"        | 2011          | 13.93"   | 1984          |

|                        | Cape Hatteras | Year Observed | New Bern | Year Observed |
|------------------------|---------------|---------------|----------|---------------|
| 5 <sup>th</sup> Driest | 0.73"         | 1978          | 1.22"    | 1951          |
| 4 <sup>th</sup> Driest | 0.61"         | 1899          | 0.98"    | 1986          |
| 3 <sup>rd</sup> Driest | 0.59"         | 1990          | 0.87"    | 2001          |
| 2 <sup>nd</sup> Driest | 0.56"         | 1900          | 0.71"    | 1943          |
| Driest                 | 0.08"         | 1986          | 0.27"    | 1941          |

# Average Temperatures: September 2021

|             | Average High | Normal High | Difference | Average Low | Normal Low | Difference |
|-------------|--------------|-------------|------------|-------------|------------|------------|
| Beaufort    | 82.7         | 82.4        | ▲ 0.3      | 67.9        | 68.4       | ▼ 0.5      |
| Hatteras    | 83.0         | 83.0        | 0.0        | 69.9        | 70.8       | ▼ 0.9      |
| New Bern    | 83.7         | 83.1        | ▲ 0.6      | 64.5        | 65.2       | ▼ 0.7      |
| Greenville  | 84.5         | 83.1        | ▲ 1.4      | 64.0        | 64.2       | ▼ 0.2      |
| Kinston     | 84.7         | 83.8        | ▲ 0.9      | 63.0        | 64.2       | ▼ 1.2      |
| Williamston | 84.4         | 81.8        | ▲ 2.6      | 62.7        | 64.3       | ▼ 1.6      |
| Plymouth    | 83.0         | 82.7        | ▲ 0.3      | 62.5        | 64.0       | ▼ 1.5      |
| Bayboro     | 83.2         | 83.2        | 0.0        | 61.1        | 63.9       | ▼ 2.8      |

Red sites have missing data

# Warmest and Coolest Septembers By Avg. Temp

|                         | Cape Hatteras | Year Observed | New Bern | Year Observed |
|-------------------------|---------------|---------------|----------|---------------|
| Warmest                 | 81.4°         | 2018          | 79.9°    | 1933          |
| 2 <sup>nd</sup> Warmest | 79.2°         | 1933          | 78.4°    | 2018          |
| 3 <sup>rd</sup> Warmest | 78.5°         | 2016          | 78.3°    | 1945          |
| 4 <sup>th</sup> Warmest | 78.4°         | 1930          | 77.6°    | 1980          |
| 5 <sup>th</sup> Warmest | 78.3°         | 1945          | 77.5°    | 1936          |

|                         | Cape Hatteras | Year Observed | New Bern | Year Observed |
|-------------------------|---------------|---------------|----------|---------------|
| 5 <sup>th</sup> Coolest | 71.6°         | 1918          | 71.0°    | 1966          |
| 4 <sup>th</sup> Coolest | 71.5°         | 1917          | 70.8°    | 2006          |
| 3 <sup>rd</sup> Coolest | 71.5°         | 1981          | 70.7°    | 2001          |
| 2 <sup>nd</sup> Coolest | 70.5°         | 1963          | 68.2°    | 1963          |
| Coolest                 | 68.8°         | 1967          | 67.4°    | 1967          |

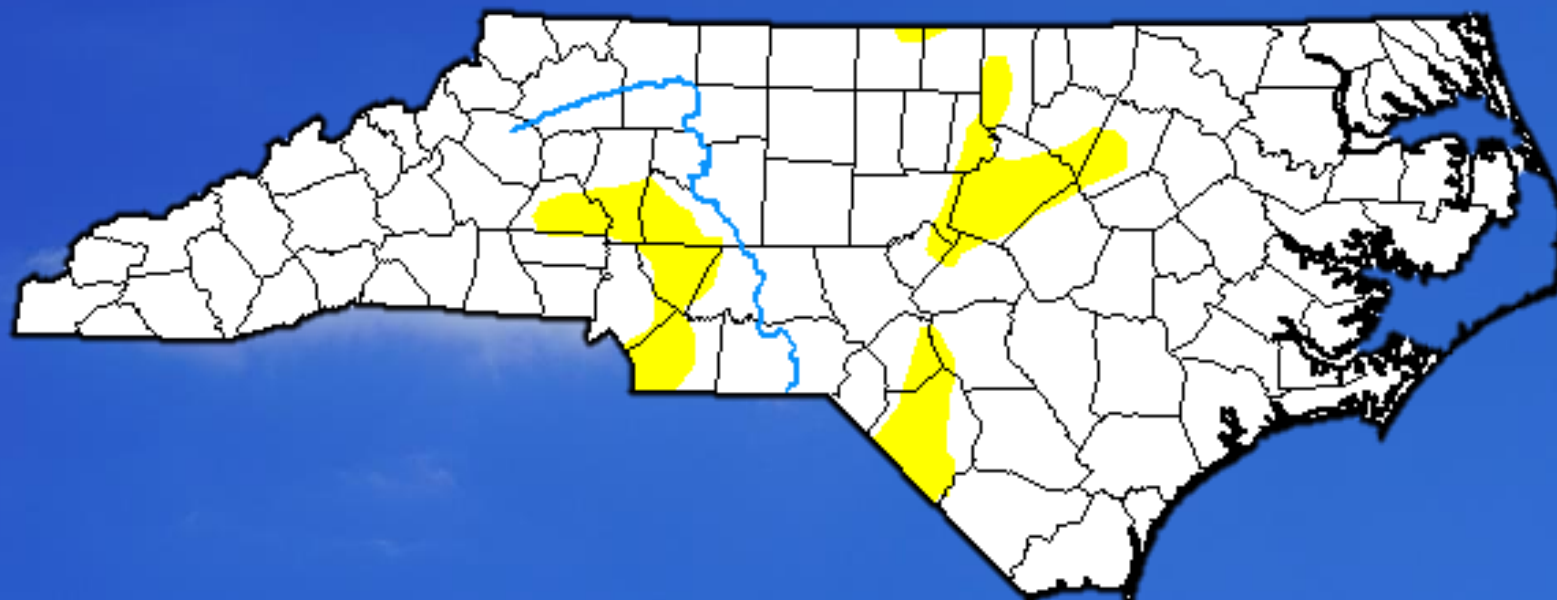
# Temperature Extremes: September 2021

|                    | Max High | Date Obs.                             | Min Low | Date Obs.           |
|--------------------|----------|---------------------------------------|---------|---------------------|
| <b>Beaufort</b>    | 88       | 1 <sup>st</sup>                       | 56      | 27 <sup>th</sup>    |
| <b>Hatteras</b>    | 89       | 15 <sup>th</sup> , 22 <sup>nd</sup>   | 55      | 27 <sup>th</sup>    |
| <b>New Bern</b>    | 90       | 6 <sup>th</sup>                       | 53      | 27 <sup>th</sup>    |
| <b>Greenville</b>  | 91       | 8 <sup>th</sup> , 14-15 <sup>th</sup> | 53      | 27 <sup>th</sup>    |
| <b>Kinston</b>     | 92       | 1 <sup>st</sup>                       | 51      | 27 <sup>th</sup>    |
| <b>Williamston</b> | 93       | 1 <sup>st</sup>                       | 51      | 27 <sup>th</sup>    |
| <b>Plymouth</b>    | 90       | 1 <sup>st</sup>                       | 51      | 27 <sup>th</sup>    |
| <b>Bayboro</b>     | 91       | 1 <sup>st</sup>                       | 49      | 27-28 <sup>th</sup> |

Red sites have missing data



# Drought Monitor: North Carolina



**September 28, 2021**  
 (Released Thursday, Sep. 30, 2021)  
 Valid 8 a.m. EDT

*Drought Conditions (Percent Area)*

|  | None   | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4   |
|--|--------|-------|-------|-------|-------|------|
| <b>Current</b>                                     | 91.27  | 8.73  | 0.00  | 0.00  | 0.00  | 0.00 |
| <b>Last Week</b><br><i>09-21-2021</i>              | 77.77  | 22.23 | 0.00  | 0.00  | 0.00  | 0.00 |
| <b>3 Months Ago</b><br><i>06-29-2021</i>           | 45.20  | 54.80 | 4.54  | 0.00  | 0.00  | 0.00 |
| <b>Start of Calendar Year</b><br><i>12-29-2020</i> | 100.00 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |
| <b>Start of Water Year</b><br><i>09-29-2020</i>    | 100.00 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |
| <b>One Year Ago</b><br><i>09-29-2020</i>           | 100.00 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |

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:

Brian Fuchs  
 National Drought Mitigation Center



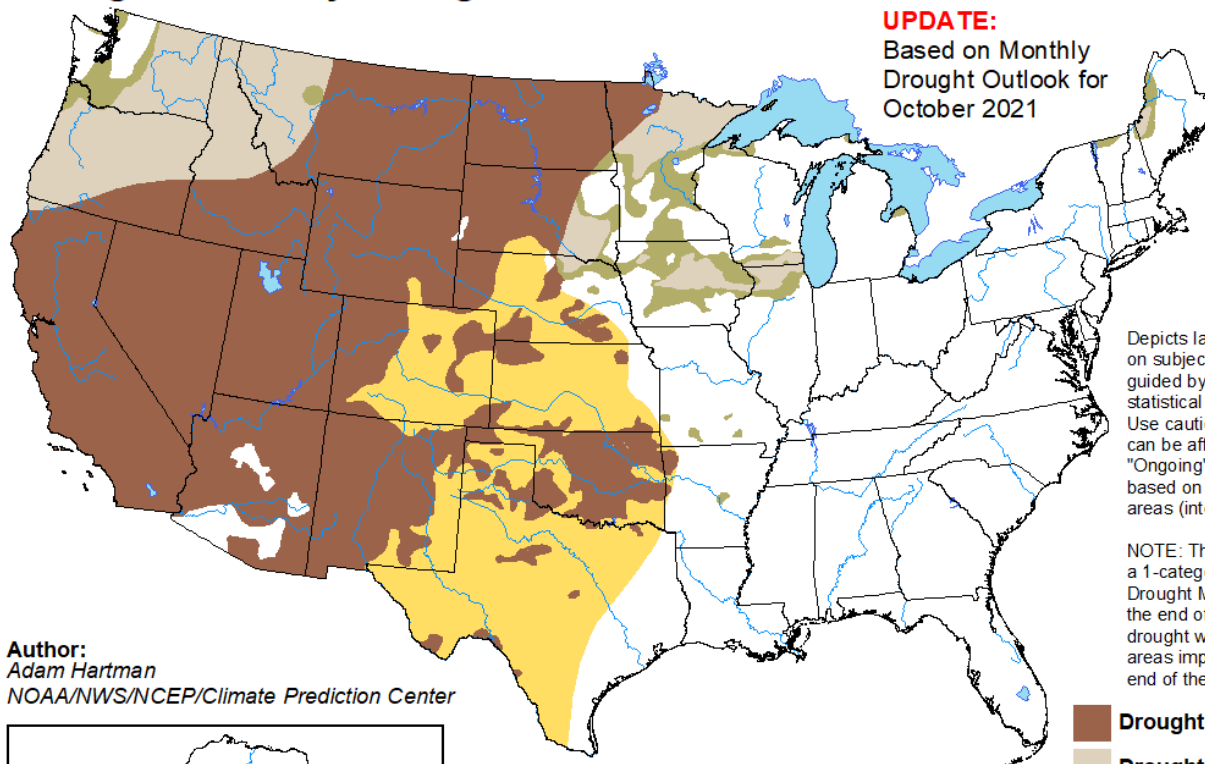
[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

# Monthly Drought Outlook

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for October 1 - December 31, 2021  
Released September 30, 2021

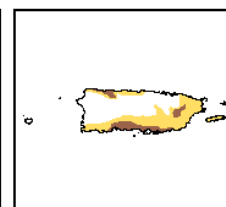
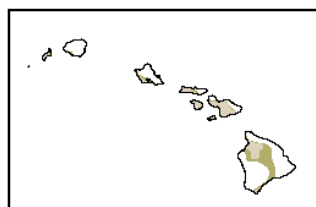
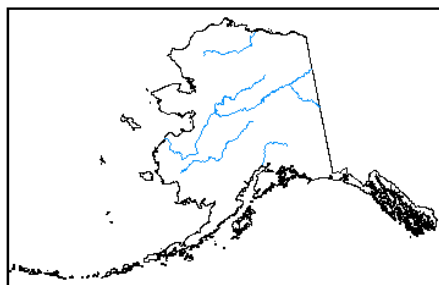
**UPDATE:**  
Based on Monthly  
Drought Outlook for  
October 2021







Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:  
Adam Hartman  
NOAA/NWS/NCEP/Climate Prediction Center



-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/3eZ73>