

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA) <b>Boston/Norton MA</b>	
		<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>	REPORT FOR: MONTH                      YEAR <b>June                              2021</b>
TO:                      Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE Nicole M. Belk Senior Service Hydrologist	
		DATE <b>July 21<sup>st</sup> 2021</b>	

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

An X inside this box indicates that no flooding occurred within this hydrologic service area.

June 2021 rainfall was below normal across southern New England. Rainfall totals ranged from 1 to 3 inches across most of the region, which was 1 to 3 inches below normal. Thunderstorms brought a few pockets of higher 3 to 4 inch totals, which were mainly noted in the vicinity of the MA Turnpike, as well as the MA South Shore. These higher totals were 0.5 inch to around 1 inch below normal. Temperatures averaged 2 to over 6 degrees above normal. At the 4 major climate sites in NWS Boston/Norton's area, this was one of the top 3 hottest Junes on record.

More details for major climate sites in southern New England are included in Table 1. Maps 4 and 5 show rainfall and rainfall departure from normal for May. Map 6 depicts temperature departure from normal.

State Drought Declarations were in place in MA. No State Drought Declarations were in place in RI and CT.

<i>Location</i>	<i>June Rainfall (Inches)</i>	<i>Precipitation Departure from Normal (Inches)</i>	<i>Temperature Departure from Normal (Degrees F)</i>	<i>Ranking for Hottest June on Record</i>
<b>Boston</b>	2.57	-1.32	+6.4	#1 Hottest
<b>Worcester</b>	1.41	-2.81	+4.8	#2
<b>Providence</b>	2.85	-0.96	+3.8	#2
<b>Hartford</b>	2.74	-1.54	+3.3	#3 (Tie w/2005)

Table 1. June 2021 rainfall and departure from normal, as well as temperature departure from normal and ranking for hottest June on record, for major climate sites within southern New England. Information is preliminary.

## **Flooding During June**

There were 2 localized flood events during the month of June.

During June 4<sup>th</sup>, showers and thunderstorms brought heavy rainfall of 3 to 5 inches within 3 hours in a small section of north central CT, inclusive of northern Marlborough, northwest Hebron and southeast Glastonbury. Localized flash flooding occurred in Marlborough, where floodwaters from local drainage and the Foot Sawmill

Brook swept down Stony Brook Drive. These floodwaters were also reported to have inundated a home on Stony Brook Drive, and isolated other homes. In addition, poor drainage flooding occurred at a fire station in Marlborough due to the combination of heavy rainfall and a clogged storm drain.

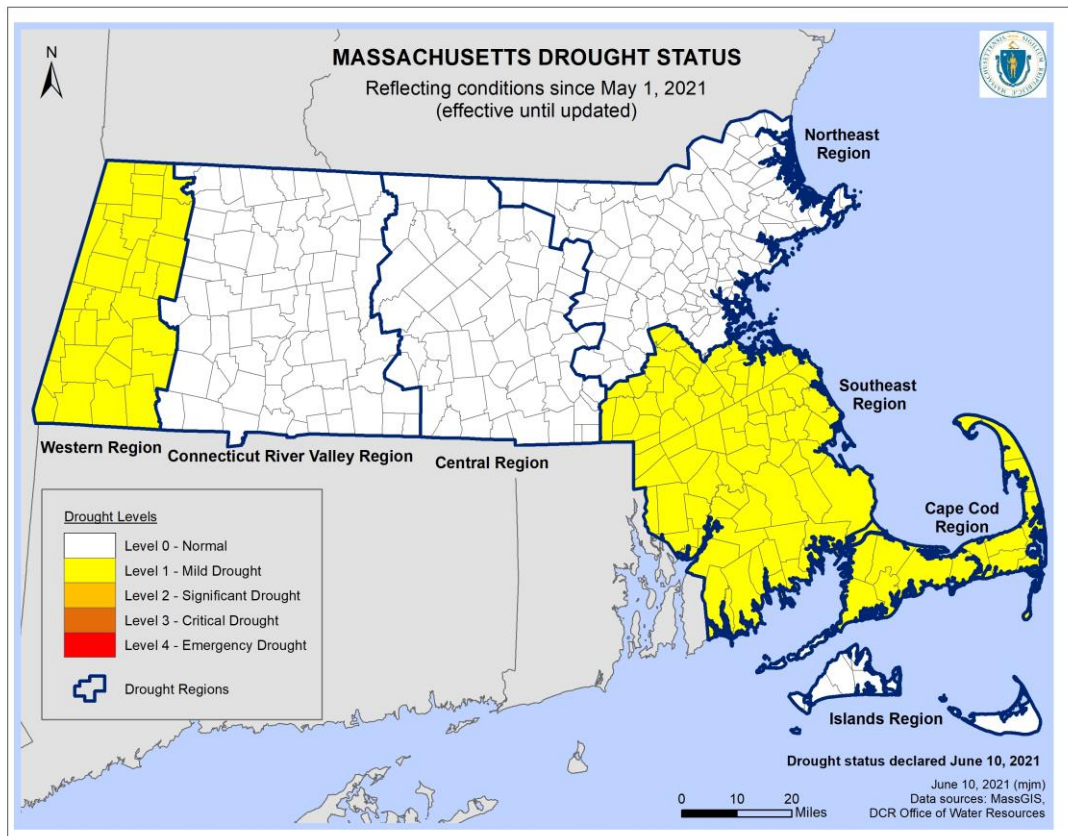
During the afternoon of June 8<sup>th</sup>, localized flooding occurred in the Methuen MA area due to thunderstorms crossing through that area. On Pilgrim Circle, floodwaters were up to the headlights of vehicles, and on Independence Drive a car was stuck in standing floodwaters.

### MA State Drought Declaration Update

The MA Drought Management Task Force (DMTF) convened on June 8<sup>th</sup> to review conditions from May and early June. Due to a deterioration in groundwater conditions in the Southeast Drought Region, the MA Energy and Environmental Affairs (EEA) Secretary announced a degradation to a Level 1-Mild Drought in that area. A Level 1- Mild Drought remained in place across the Western and Cape Cod Regions. However, based on improving conditions in the Connecticut River Valley and Central Drought Regions, the Drought Level there was improved from a Level 1 to Level 0 (Normal Conditions). Normal Conditions were also in place across the Northeast and Islands Drought Regions. These updates are also available on Map 1.

### U.S. Drought Monitor

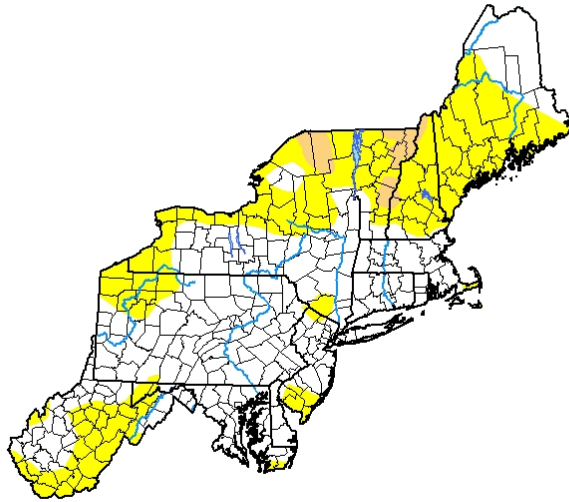
On the June 1st rendition of the US Drought Monitor (Map 2), the only locales highlighted with a Drought Classification in southern New England were Cape Cod and Nantucket. In those areas, Abnormally Dry (D0) conditions were in place. On the June 29th rendition of the US Drought Monitor (Map 3), northwest MA, Nantucket and Martha’s Vineyard, and western Cape Cod were under Abnormally Dry Conditions. The outer Cape was under D1, or Moderate Drought Conditions. The remainder of the region had normal conditions.



Map 1. MA Drought Declarations from June 10<sup>th</sup> 2021, retroactive to May 1 2021. Map from MA DCR, Office of Water Resources.

## U.S. Drought Monitor Northeast Climate Region

**June 1, 2021**  
(Released Thursday, Jun. 3, 2021)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	59.43	40.06	2.82	0.00	0.00	0.00
<b>Last Week</b> 05-25-2021	52.15	47.34	2.82	0.00	0.00	0.00
<b>3 Months Ago</b> 03-02-2021	81.42	18.06	3.88	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12-29-2020	77.20	22.28	3.61	0.00	0.00	0.00
<b>Start of Water Year</b> 09-29-2020	29.69	69.80	45.08	26.13	3.87	0.00
<b>One Year Ago</b> 06-02-2020	90.77	8.71	0.00	0.00	0.00	0.00

Intensity:



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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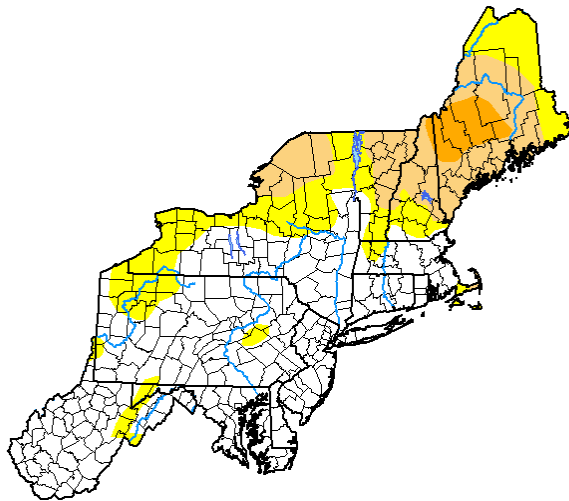


[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Map 2. U.S. Drought Monitor Map valid June 1<sup>st</sup>, 2021.

## U.S. Drought Monitor Northeast Climate Region

**June 29, 2021**  
(Released Thursday, Jul. 1, 2021)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	58.59	41.41	20.05	3.51	0.00	0.00
<b>Last Week</b> 06-22-2021	58.57	41.43	19.45	1.11	0.00	0.00
<b>3 Months Ago</b> 03-30-2021	62.96	37.04	8.69	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12-29-2020	77.60	22.40	3.63	0.00	0.00	0.00
<b>Start of Water Year</b> 09-29-2020	29.84	70.16	45.31	26.26	3.89	0.00
<b>One Year Ago</b> 06-30-2020	54.44	45.56	14.23	0.00	0.00	0.00

Intensity:



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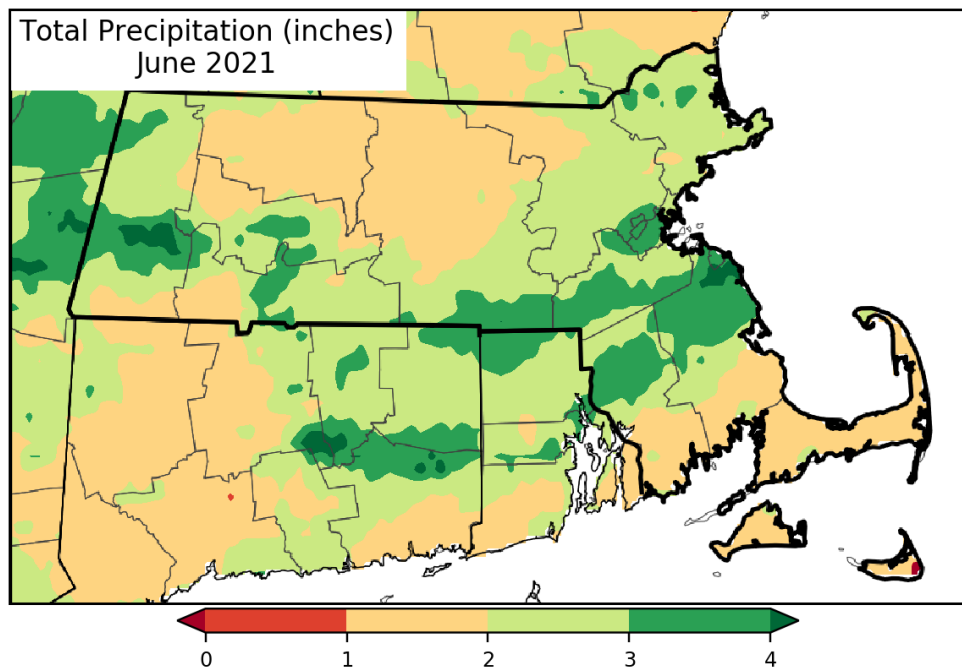


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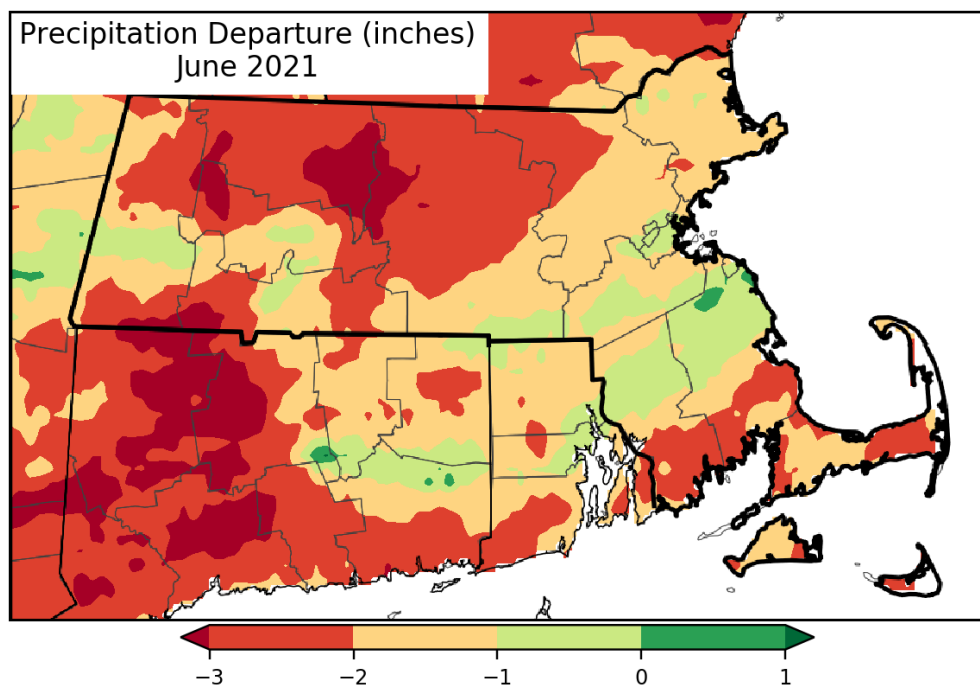
Map 3. US Drought Monitor Map valid June 29<sup>th</sup> 2021.

### Streamflow and Groundwater:

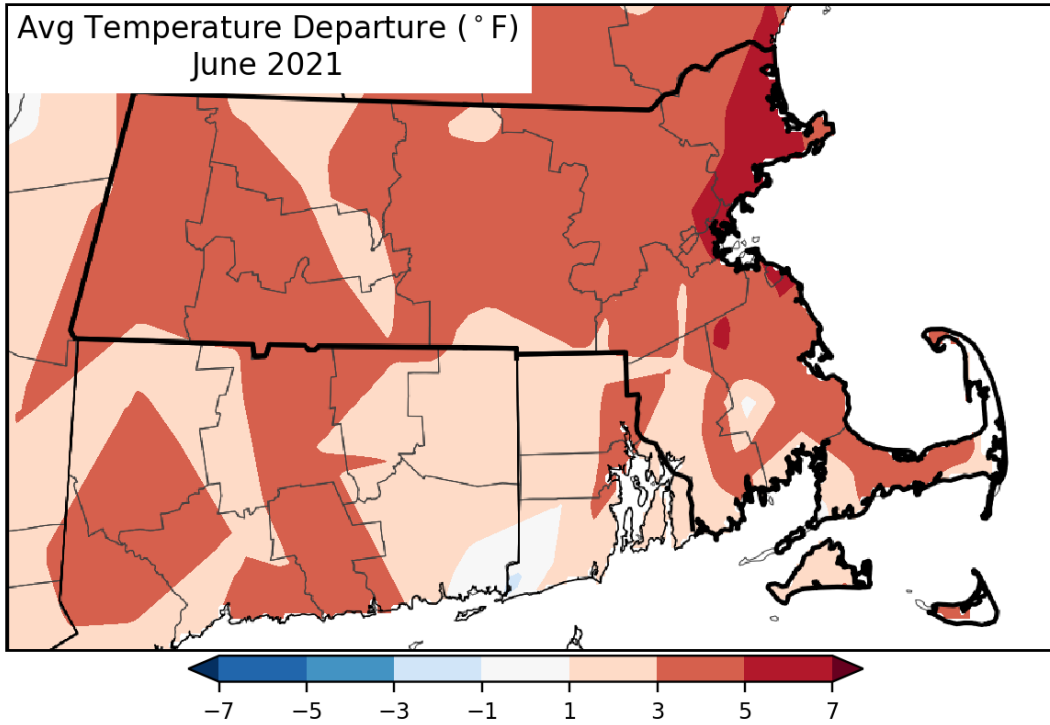
Streamflows varied during the month, but overall averaged normal to below normal during June. Groundwater conditions during June varied across the region, with some wells below normal, and some above normal. Most wells were within the normal range at the end of June.



Map 4: June 2021 rainfall for southern New England. From the Northeast Regional Climate Center.



Map 5. June 2021 rainfall departure from normal for southern New England. From the Northeast Regional Climate Center.



Map 6. Average temperature departure from normal across southern New England for June 2021.  
From the Northeast Regional Climate Center.