

NWS Form E-5
(04-2006)
(PRES. BY NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

HYDROLOGIC SERVICE AREA (HSA)
Boston/Norton MA

REPORT FOR:
MONTH YEAR
June 2022

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

TO: Hydrologic Information Center, W/OS31
NOAA's National Weather Service
1325 East West Highway
Silver Spring, MD 20910-3283

SIGNATURE
Robert W. Megnia
Meteorologist
DATE
July 5th 2022

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.

....Drought conditions continue and worsen for portions of southern New England

June 2022 liquid equivalent precipitation varied across southern New England. The northwest half of the region received 1 to 3 inches of precipitation which was 1 to 2+ inches below normal. The southeastern half of southern New England received 3 to 5 inches of precipitation. Departures in the southeastern half of southern New England ranged from an inch below to an inch above normal. June temperatures were very close to normal across the vast majority of southern New England with departures fairly close to 0.

No freshwater flooding occurred within NWS Boston/Norton's Hydrologic Service Area. More details for major climate sites in southern New England are included in Table 1. In addition to precipitation details, temperature departures from normal are provided.

<i>Location</i>	<i>June Precipitation (Inches)</i>	<i>Precipitation Departure from Normal (Inches)</i>	<i>Temperature Departure from Normal (Degrees F)</i>
<i>Boston</i>	2.33	-1.56	-0.1
<i>Worcester</i>	3.16	-1.06	0.5
<i>Providence</i>	4.99	1.18	0.2
<i>Hartford</i>	2.59	-1.69	-0.2

Table 1. June 2022 precipitation and departure from normal and temperature departure from normal. Details are for major climate sites within southern New England. Information is preliminary.

Drought Conditions Worsen Across Southern New England

Below normal precipitation across most of southern New England during the month of June resulted in a continuation of below to much below normal stream flows for many streams and rivers across southern New England. In addition to low stream flows, the lack of precipitation in southern New England resulted in below normal soil moisture and below normal ground water at several ground water wells across RI and a few in MA. These dry conditions combined with substantial 60 and 90 day precipitation deficits led to all of RI, portions of NE CT, and most of MA rising to D1, moderate drought conditions, on the US drought monitor on June 28th. Plymouth, Barnstable, and Dukes counties in MA were in D0, abnormally dry conditions on the USDM. June 28th USDM is depicted in Map 3.

State Drought Declarations

MA:

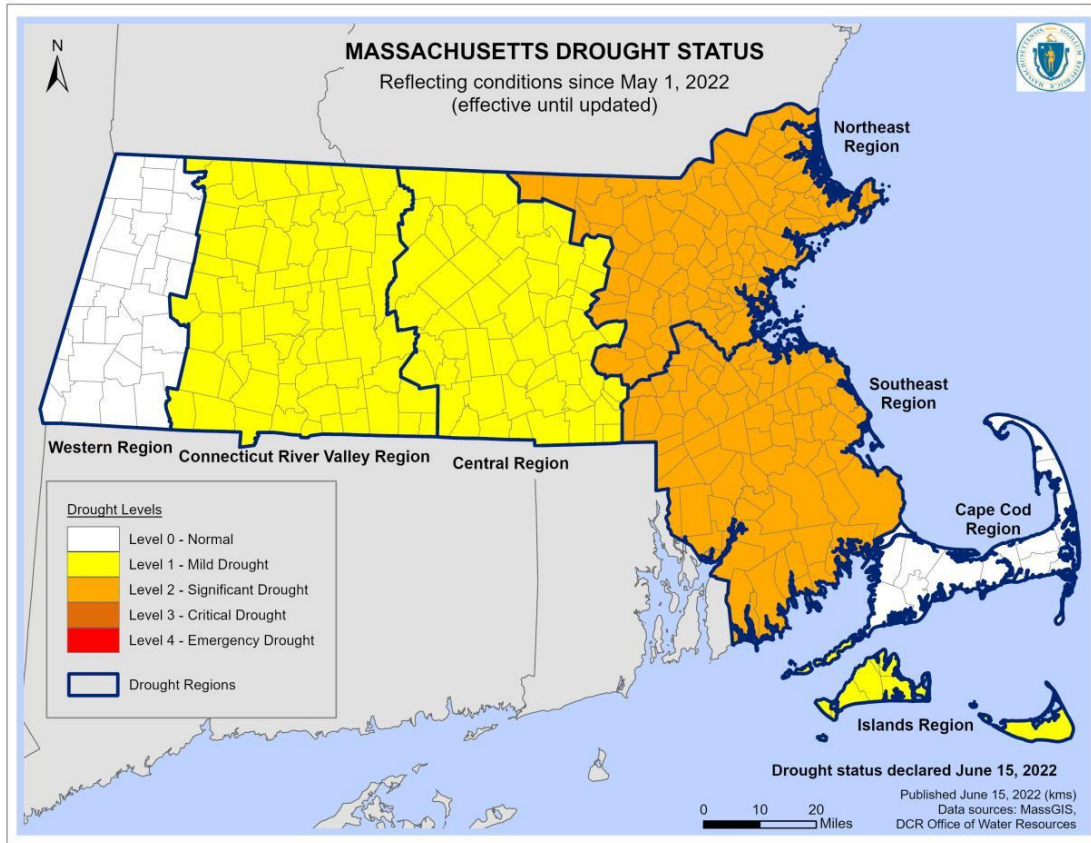
On June 9th 2022, the MA Drought Management Task Force convened to provide drought declaration recommendations to The MA Secretary of Energy and Environmental Affairs (EEA). On June 15th 2022, the MA Secretary of EEA declared a Level 2-Significant Drought for the Northeast and Southeast Drought Regions of the Commonwealth. A Level 1-Mild Drought was declared across the Central and CT River Valley Drought Regions, as well as the Islands Drought Region. Cape Cod and The Western Drought regions remained under Normal conditions. The June 2022 Hydrologic Conditions Report for MA can be accessed via this link <https://www.mass.gov/doc/2022-june-hydrologic-conditions/download>. Map 1 further depicts the Drought Regions in MA and with the associated Drought Level. According to EEA and the Massachusetts Drought Management Plan, a Level 2-Significant Drought warrants the convening of an inter-agency Mission Group to more closely coordinate on drought assessments, impacts and response within the government. A Level 1-Mild Drought places emphasis on water conservation through education, communication, and planning. Details from MA Drought Management Task Force meetings are available at this link: <https://www.mass.gov/service-details/drought-management-task-force-meetings>

CT:

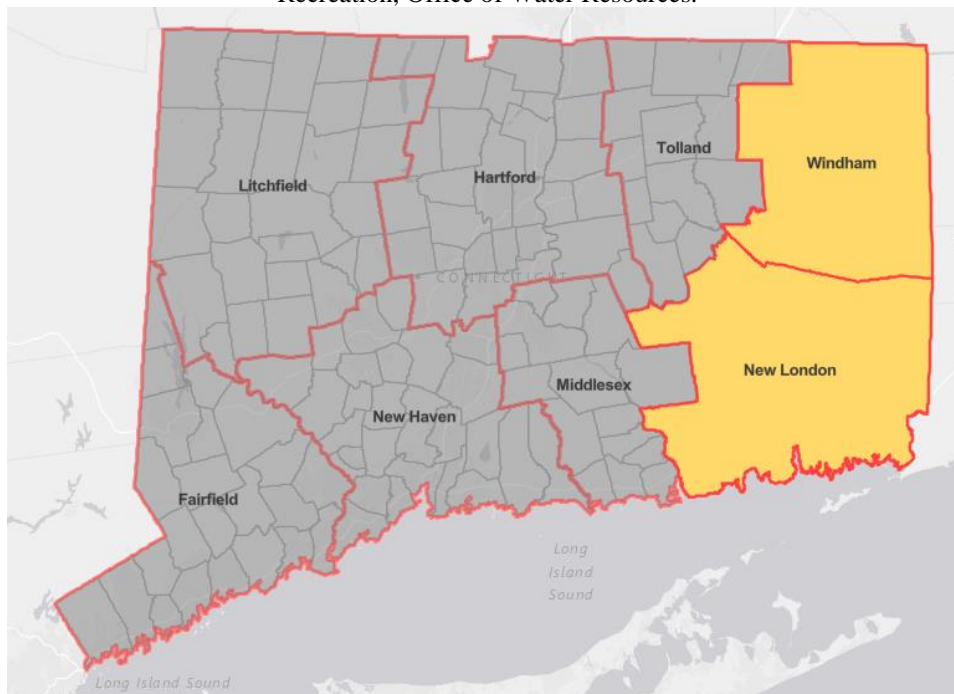
The Connecticut Interagency Drought Workgroup (IDW) convened on *June 2nd* to assess conditions in the State. A Stage 1 notice is now in effect for Windham and New London Counties. “Stage 1” in [Connecticut’s Drought Preparedness and Response Plan](#) is a “preliminary preparedness stage that serves to alert the parties who should be prepared to respond to potentially worsening drought conditions. Map 2 further depicts the Stage 1 area. More details are available at the [Connecticut Drought Information Center](#).

Streamflow and Groundwater

USGS stream gages across the northwestern half of southern New England were running below to much below normal for this time of year. Across the southeastern half of southern New England, most USGS stream gages were near normal with a few gages running below normal. Ground water was running near normal across most of MA and CT while RI had levels ranging from normal to much below normal.



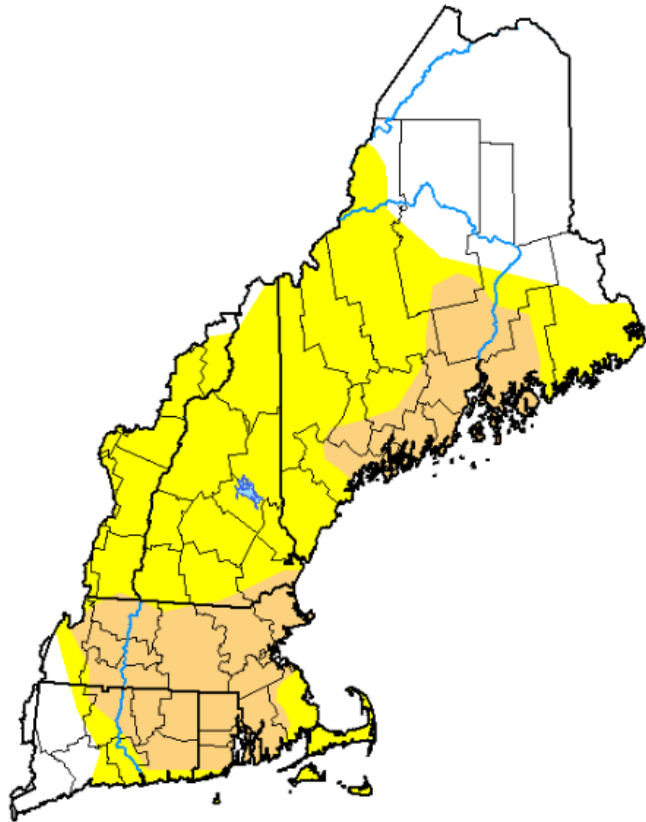
Map 1: Massachusetts Drought Status for June 2022, retroactive to May 1st. Map from the MA Department of Conservation and Recreation, Office of Water Resources.



Map 2: Connecticut Drought Status as of June 2nd, 2022. Windham and New London Counties (yellow) are under a Stage 1 notice. Normal conditions continue elsewhere.

U.S. Drought Monitor New England Watershed

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



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	26.36	73.64	25.32	0.00	0.00	0.00
Last Week 06-21-2022	59.14	40.86	8.07	0.00	0.00	0.00
3 Months Ago 03-29-2022	74.37	25.63	4.04	2.28	0.00	0.00
Start of Calendar Year 01-04-2022	81.86	18.14	6.91	2.88	0.00	0.00
Start of Water Year 09-28-2021	76.65	23.35	8.91	2.70	0.00	0.00
One Year Ago 06-29-2021	23.10	76.90	51.84	11.92	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>

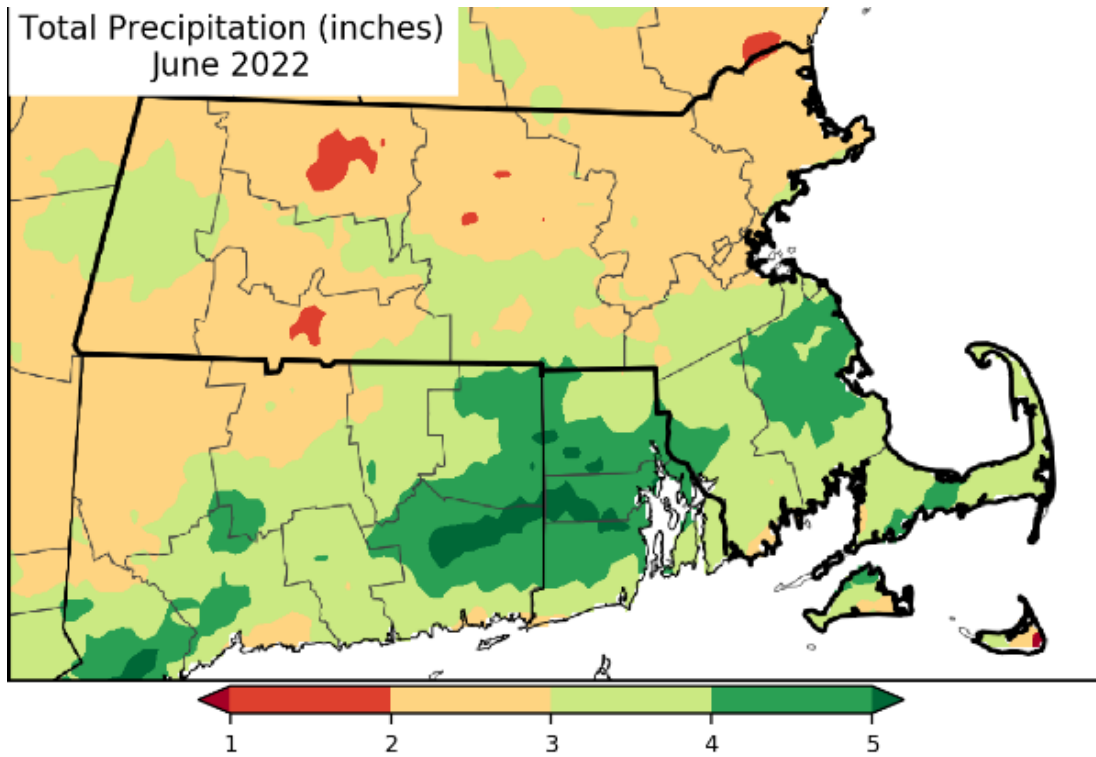
Author:

Curtis Riganti
National Drought Mitigation Center

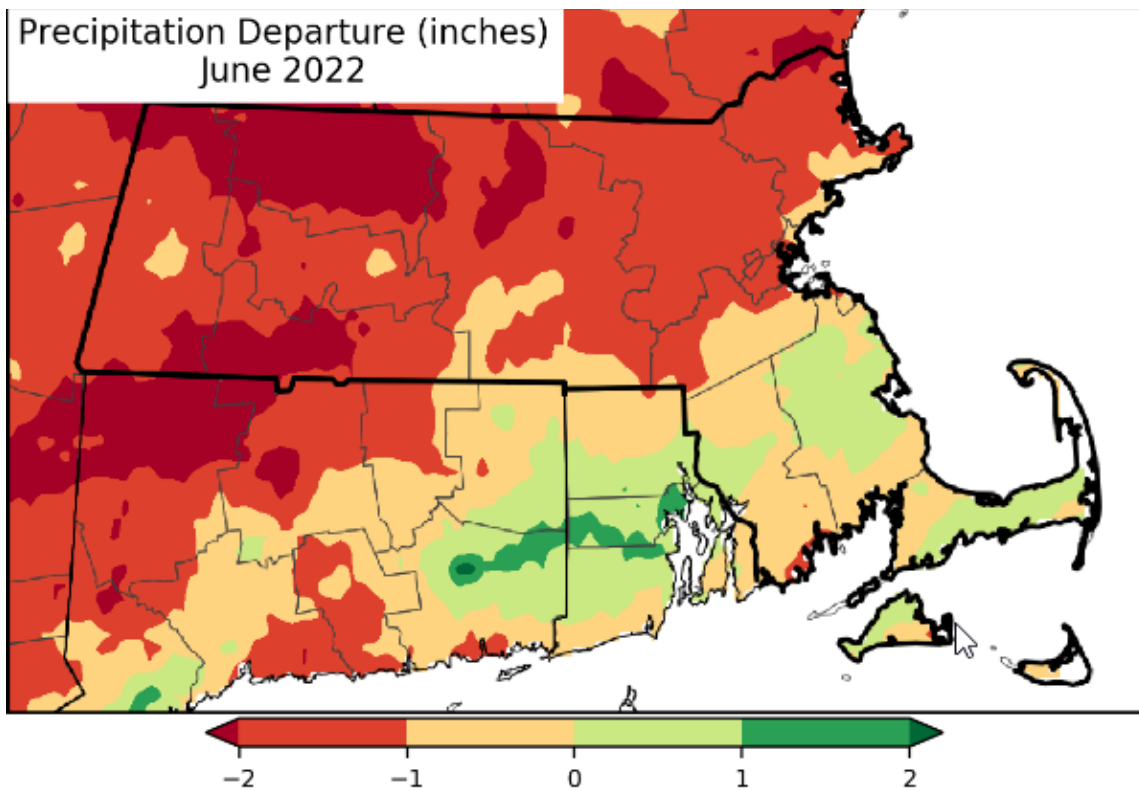


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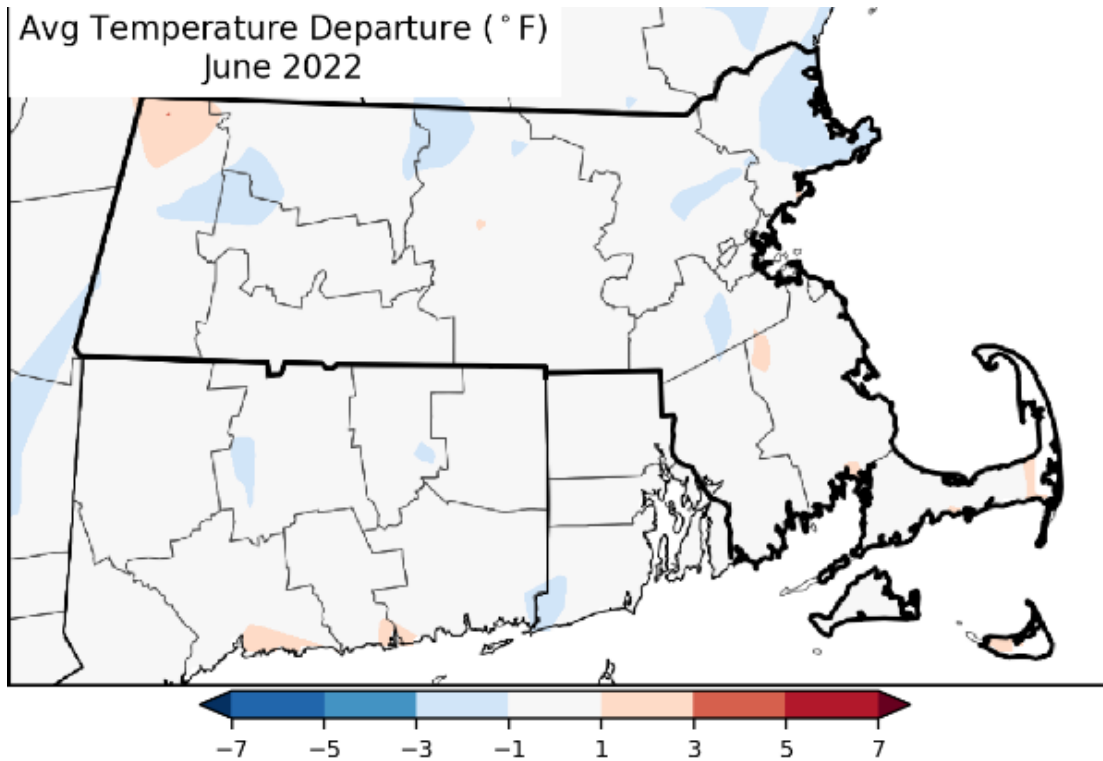
Map 3: US Drought Monitor New England from June 28th



Map 4: June 2022 liquid equivalent precipitation for southern New England. From the Northeast Regional Climate Center.



Map 5. June 2022 precipitation 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 2022.
From the Northeast Regional Climate Center.