

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	
		MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH YEAR May 2023
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 June 6th 2023	

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.

Flooding During May– May 03-04 2023

A period of excessive rainfall during the first week of May combined with tidal influences allowed The Connecticut River at Middle Haddam to briefly reach flood stage on the evening of May 3rd. There were no significant impacts from this minor flood event. Additional details on this flood event are provided in table 1.

Location				Observed Data				
				Observed time FS was reached		Observed Crest		
NWSLI	River	Forecast Point	Flood Stage (FS) (ft)	Date mm/dd/yy	Time (Z) hh:mm	Obs Crest (ft)	Date mm/dd/yy	Time (Z) hh:mm
MHDC3	Connecticut River	Middle Haddam	7.0	05/03/23	15:15	7.5	05/04/23	5:00

Table 1. Observed river flooding data from 05/03-05/04 minor flood event

...Abnormally dry conditions improve for portions of southern New England during May 2023...

After a stretch of dry weather during the first half of spring, substantial rainfall in southern New England during the month of May resulted in improvements on the US Drought Monitor. Southern RI was upgraded from D1 (moderate drought) to D0 (abnormally dry). Most of CT and RI were removed from the USDM all together with the exception of southeastern CT, southeastern MA, and Berkshire County in MA where D0 (abnormally dry) conditions reside. More details can be seen in the latest rendition of the USDM below (Map 4).

May Precipitation

Liquid precipitation ranged from slightly below to well above normal across southern New England during May 2023. The region received anywhere from to 3 to 5+ inches of rainfall. Rhode Island and Bristol and Essex

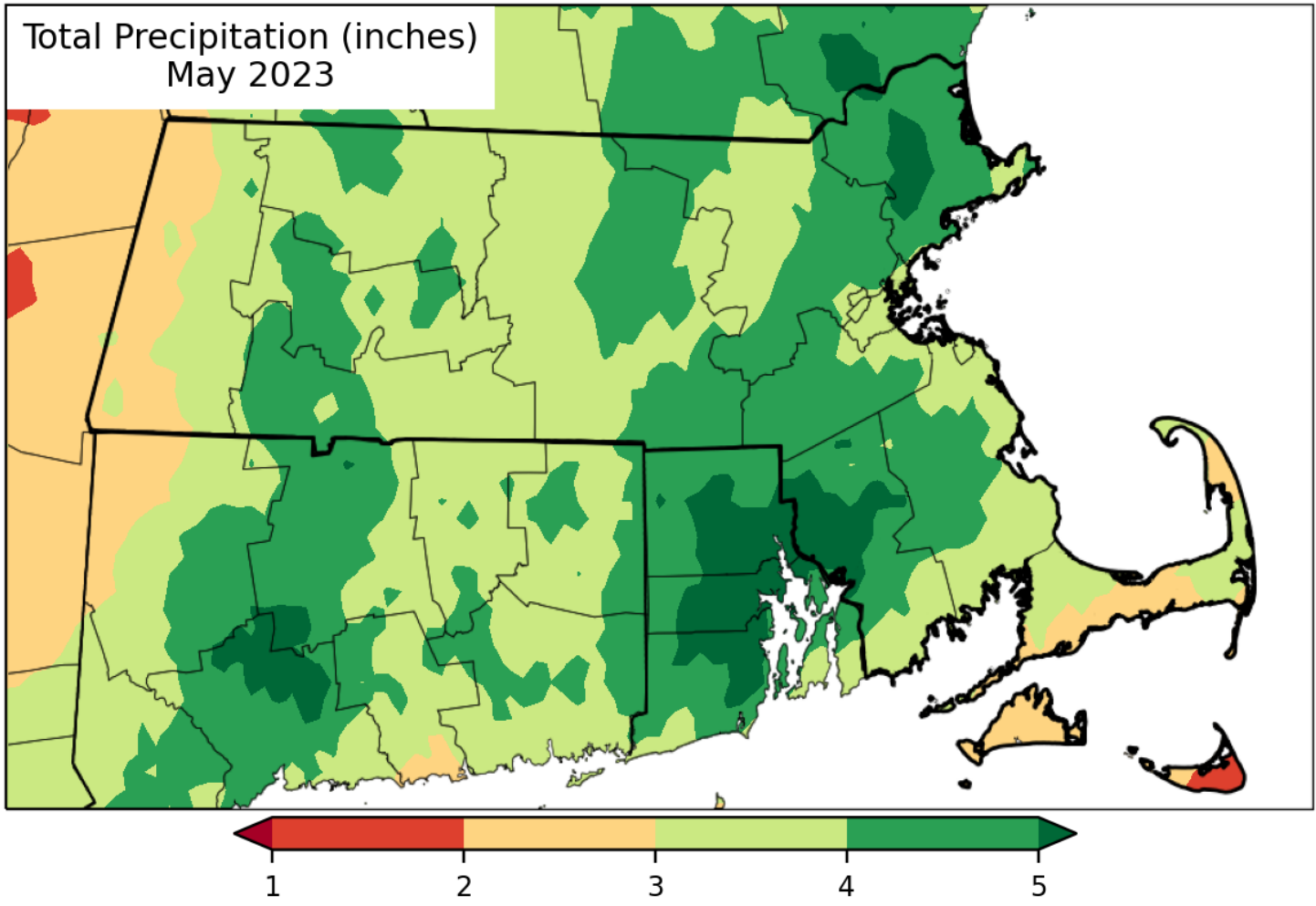
Counties in MA received the highest rainfall this month. Observed rainfall reached or exceeded 5 inches over portions of these areas. Rainfall amounts were more modest across the rest of the region ranging from 2 to 4 inches with the greatest deficits over Berkshire County in MA and The Cape/Islands Region in MA. Most of the region received rainfall amounts that were within 1 inch of the climatological normal. Rhode Island, northeast MA, and portions of southwest CT were the exceptions where monthly precipitation departures exceeded 1 inch. Temperatures across southern New England were generally near to slightly below normal for the month of May. The exception was The Cape/Islands region where temperatures ranged from 3 to 7 degrees above normal. See maps 1-3 below for further details.

<i>Location</i>	<i>May Precipitation (Inches)</i>	<i>Precipitation Departure from Normal (Inches)</i>	<i>Temperature Departure from Normal (Degrees F)</i>
<i>Boston</i>	2.25	-1.0	+1.7
<i>Worcester</i>	2.54	-1.02	+1.2
<i>Providence</i>	3.5	+0.13	-2.0
<i>Hartford</i>	3.0	-0.79	-0.9

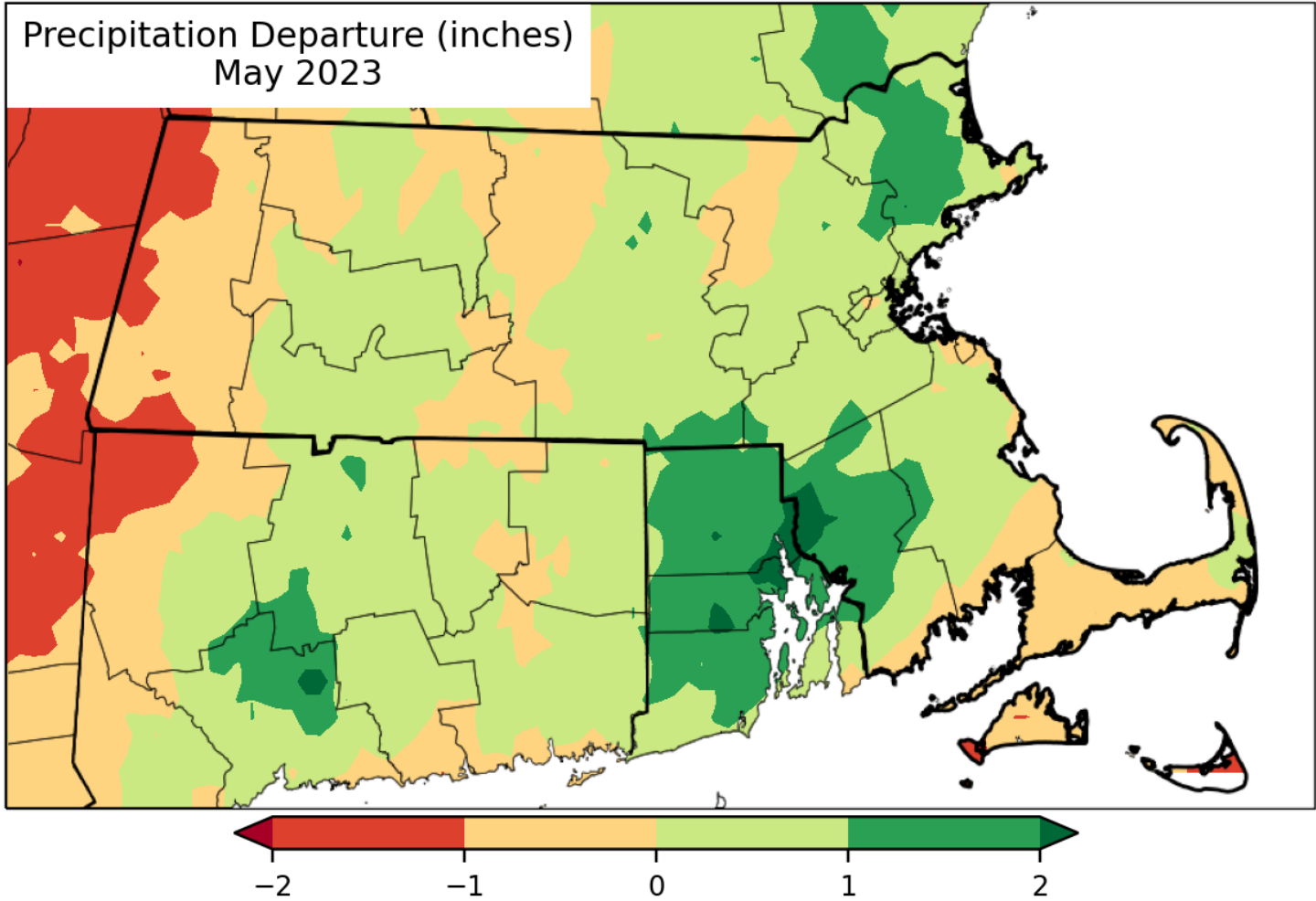
Table 2. May 2023 precipitation, precipitation departure from normal, and temperature departure from normal. Details are for major climate sites in southern New England. All May information is preliminary.

Streamflow and Groundwater

As of June 6th 2023, observed streamflow levels across southern New England were mainly in the below to much below normal range with only a handful of gages in the normal range. Most of the streamflow gages running near normal were located across eastern MA. These observations matched closely with 7 day average streamflow levels which were also mainly below to much below normal. 14 day average streamflow levels across southern New England were essentially a split between gages running either at or below normal. Longer term streamflow values (28 days) revealed mostly near normal levels with roughly 25 percent of gages running below normal. Groundwater levels across southern New England were mainly in the near to above or well above normal range with only a handful of ground water wells reporting below normal levels. Two groundwater wells in western MA and CT were running much below normal.

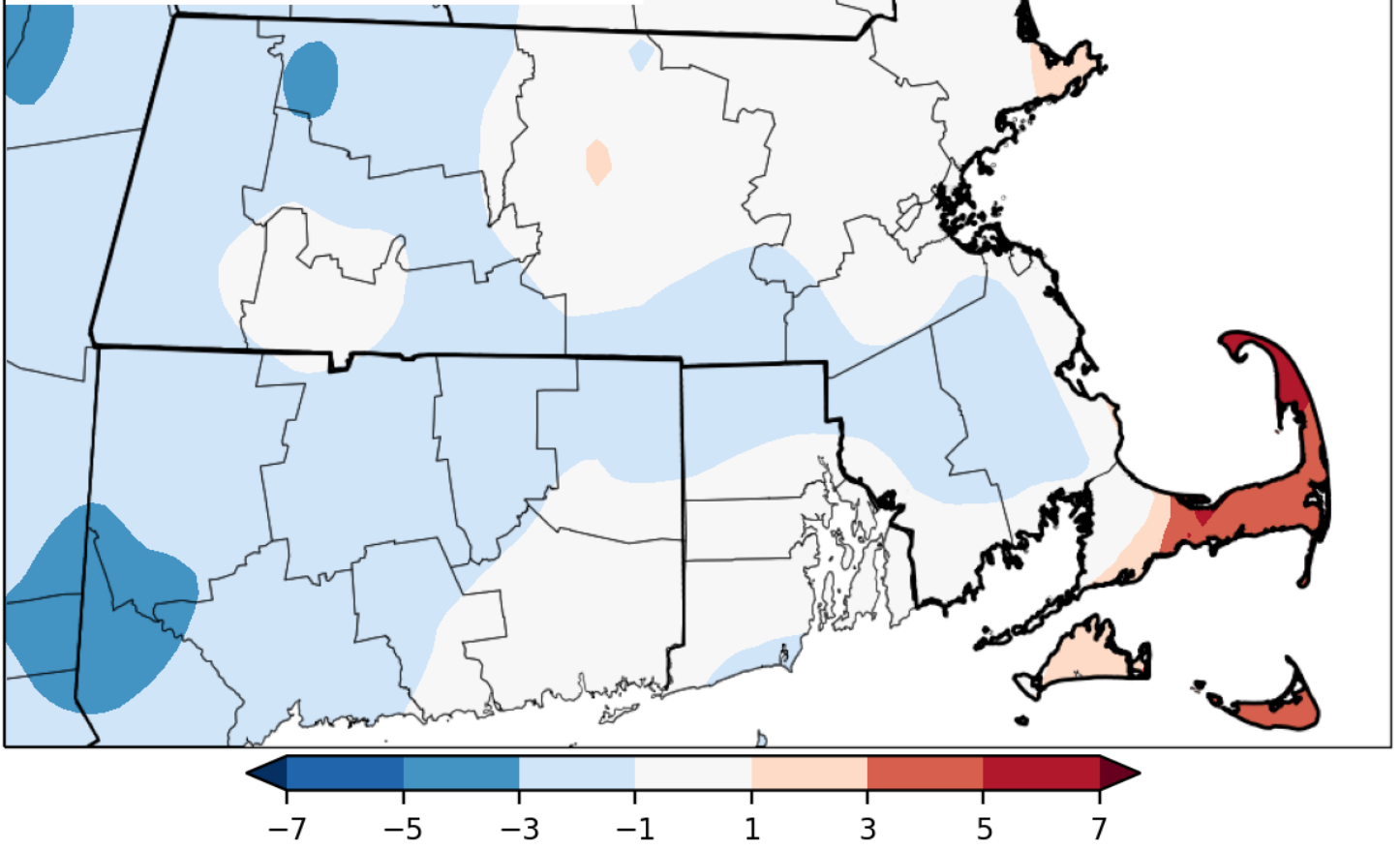


Map 1: May 2023 liquid equivalent precipitation for southern New England. (Northeast Regional Climate Center)



Map 2. May 2023 precipitation departure from normal for southern New England. (Northeast Regional Climate Center).

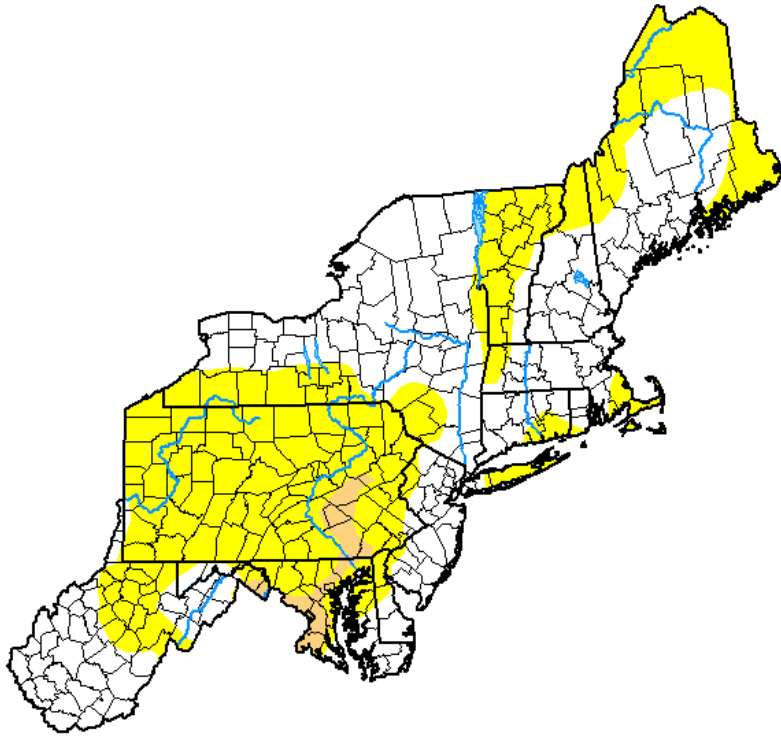
Avg Temperature Departure (° F)
May 2023



Map 3. Average temperature departure from normal for southern New England for May 2023.
From the Northeast Regional Climate Center.

U.S. Drought Monitor Northeast

May 30, 2023
(Released Thursday, Jun. 1, 2023)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	50.39	49.61	2.35	0.00	0.00	0.00
Last Week 05-23-2023	86.86	13.14	0.40	0.00	0.00	0.00
3 Months Ago 02-28-2023	94.27	5.73	0.00	0.00	0.00	0.00
Start of Calendar Year 01-03-2023	90.64	9.36	0.21	0.00	0.00	0.00
Start of Water Year 09-27-2022	69.23	30.77	12.95	3.83	0.14	0.00
One Year Ago 05-31-2022	88.12	11.88	2.70	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>

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droughtmonitor.unl.edu

Map 4. Northeast US Drought Monitor as of May 30th 2023.