

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
Rodney M. Chai
Meteorologist
DATE
October 9th 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 improving across southern New England....

September 2022 liquid equivalent precipitation averaged above normal for most of southern New England, with the exception of Eastern MA. Eastern MA saw the least rainfall in September, with 2-5 inches of rainfall. This was below to near normal rainfall. For the remainder of the region, including the western two-thirds of MA, all of RI and CT, 5-8 inches of rain fell. This was 1-5 inches above normal. Temperatures were close to normal across southern New England. 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.

<i>Location</i>	<i>September Precipitation (Inches)</i>	<i>Precipitation Departure from Normal (Inches)</i>	<i>Temperature Departure from Normal (Degrees F)</i>
<i>Boston</i>	2.60	-0.96	-0.4
<i>Worcester</i>	6.14	+1.90	0.0
<i>Providence</i>	5.95	+1.78	-0.4
<i>Hartford</i>	6.08	+1.69	+0.3

Table 1. Sep 2022 precipitation, departure from normal and temperature departure from normal. Details are for major climate sites in southern New England. All September information is preliminary.

Drought conditions improving across southern New England

September rains have resulted in some recovery for both streamflow and groundwater levels, with the improvement in the former more pronounced than the latter. With the exception of northeast MA and Cape Cod, all regions across southern New England have seen an improvement in drought conditions according to the U.S. Drought Monitor (USDM). Compared to the start of September, central MA, northern RI and northern CT improved two categories from D2-Severe Drought to D0-Abnormally Dry. Much of western and north central MA improved one category from either D3-Extreme Drought to D2-Severe Drought or D2-Severe Drought to D1-Moderate Drought. Northeast MA and the Outer Cape saw the least improvement, with most of those regions remaining in either D2-Severe Drought or D3-Extreme Drought. Map 3 provides the USDM maps across New England as of October 4th.

State Drought Declarations

MA:

On October 6th, the MA [Drought Management Task Force](#) (DMTF), which is composed of state and federal officials, and other entities, convened to discuss drought conditions within the Commonwealth. On October 7th, MA Energy and Environmental Affairs Secretary Bethany Card announced that thanks to recent rainfall, drought conditions have improved in all regions of the state. She also made the following declarations: The Western Region has been upgraded to Level 0-Normal Conditions; the Connecticut River Valley, Central Region, and Southeast Regions have been upgraded to Level 1-Mild Drought; and, the Northeast and Cape Cod Regions have been upgraded and will join the Islands Region as a Level 2-Significant Drought. This declaration will remain in effect till the next declaration in November.

Outlined in the [Massachusetts Drought Management Plan](#), a Level 2-Significant Drought of higher warrants the convening of an inter-agency Mission Group to more closely coordinate on drought assessments, impacts and response within the government, in addition to detailed monitoring of drought conditions, and technical outreach and assistance to the affected municipalities. The declarations were the result of recommendations made by the MA DMTF. Details from MA DMTF meetings can be found here: <https://www.mass.gov/service-details/drought-management-task-force-meetings>

CT:

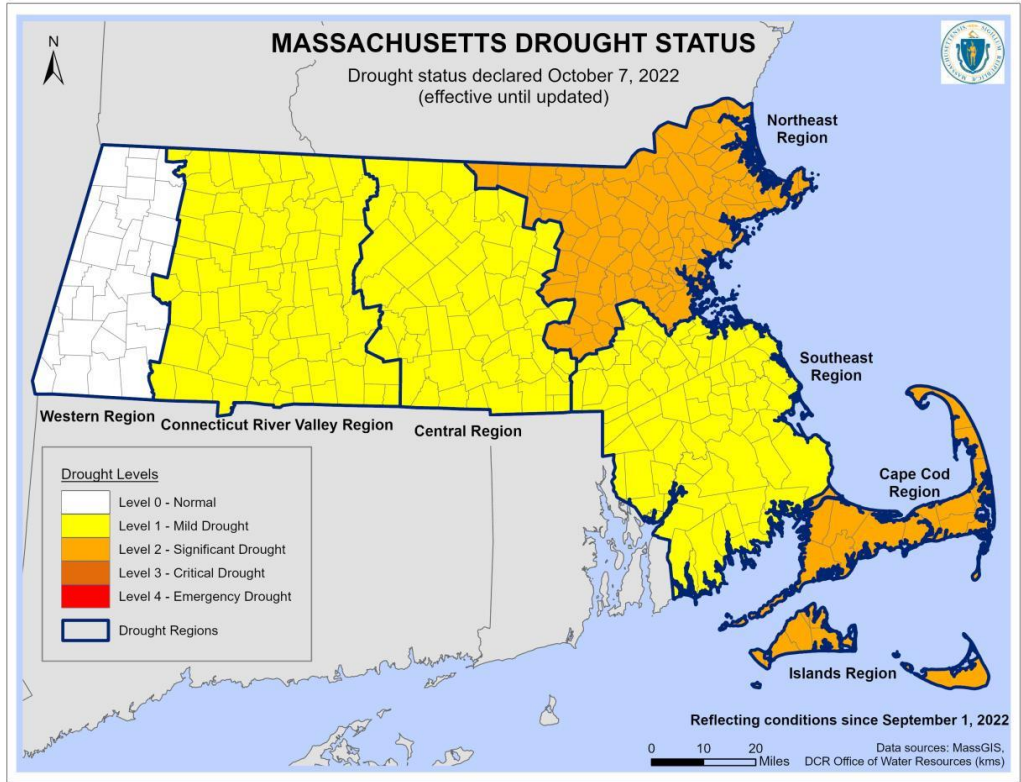
The [Connecticut Interagency Drought Workgroup](#) (IDW) convened on October 6th to assess drought conditions in the State. On October 6th, Governor Ned Lamont approved the IDW's recommendations, reducing the drought advisory that he declared in August for New London and Windham counties from a Stage 3 drought level to Stage 2. This change brings all eight of Connecticut's counties to a Stage 2 drought level. "While recent rainfall over the past couple of weeks have brought some relief to Connecticut, particularly in New London and Windham counties, we are still seeing precipitation levels that remain slightly below normal," Governor Lamont said. "As we enter fall, conditions are looking better than they were this summer, but we still urge everyone to be mindful of their water usage. I am hopeful that in the coming weeks our precipitation levels will be back to normal." The Connecticut IDW plans to meet again in November to evaluate conditions. More details can be found at the [Connecticut Drought Information Center](#).

RI:

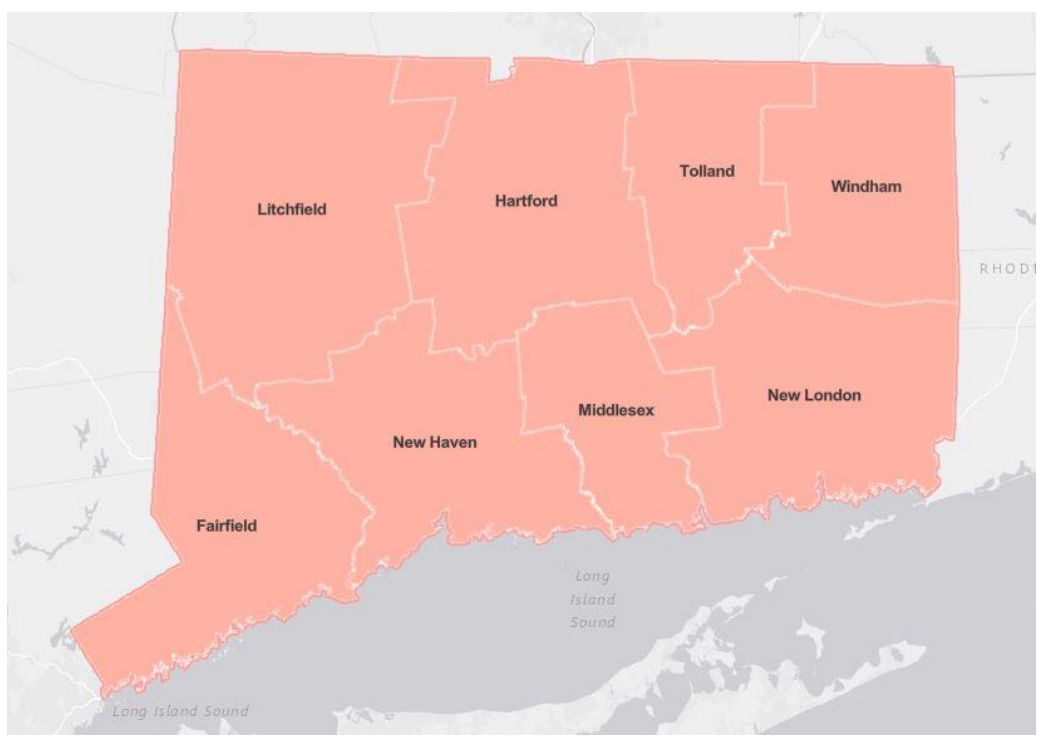
Following the Drought Steering Committee meeting, Governor Dan McKee declared a statewide "Drought Advisory" on August 9, 2022. The RI Water Resources Board continues to monitor conditions closely, including briefing members of the RI Drought Steering Committee on a regular basis. The next meeting is on October 18, 2022. The [Rhode Island Drought Monitoring Dashboard](#) contains more information. Monthly conditions reports and updates to Drought Levels are available [here](#).

Streamflow and Groundwater

September rains have resulted in some recovery for both streamflow and groundwater. Most USGS stream gages in southern New England were running near to above normal for this time of year. Only about 20% of stream gages were running below normal. The vast majority of gages running below normal were focused across northern Massachusetts as well as Cape Cod. About half of all ground water gages were running near normal, while the other half were running much below to below normal.



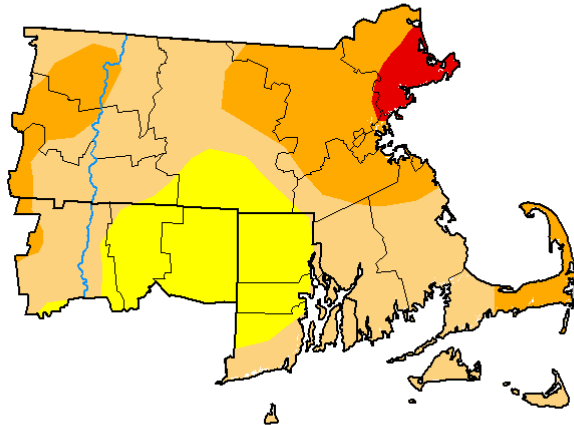
Map 1: Massachusetts Drought Status for September 2022, retroactive to September 1st. Map from the MA Department of Conservation and Recreation, Office of Water Resources.



Map 2: Connecticut Drought Status as of October 6th, 2022. All of CT are currently in Stage 2 drought.

U.S. Drought Monitor Boston/Norton, MA WFO

October 4, 2022
(Released Thursday, Oct. 6, 2022)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	77.81	30.35	2.81	0.00
Last Week 09-27-2022	0.00	100.00	82.14	30.35	2.81	0.00
3 Months Ago 07-05-2022	0.31	99.69	84.25	0.00	0.00	0.00
Start of Calendar Year 01-04-2022	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 09-27-2022	0.00	100.00	82.14	30.35	2.81	0.00
One Year Ago 10-05-2021	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>

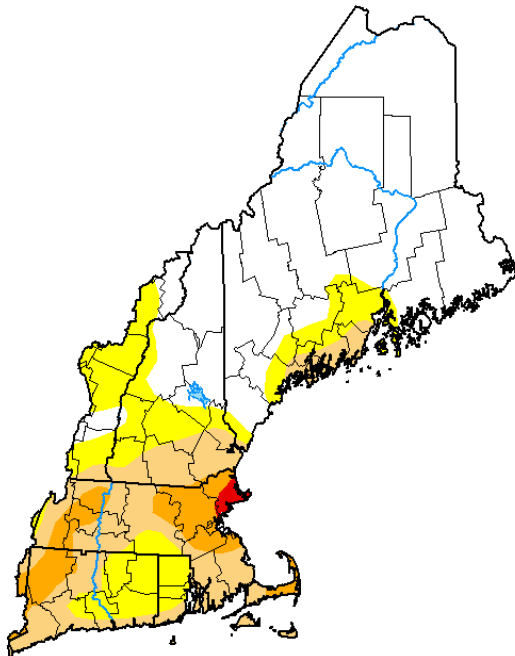
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U.S. Drought Monitor New England Watershed

October 4, 2022
(Released Thursday, Oct. 6, 2022)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	57.58	42.42	23.98	7.09	0.47	0.00
Last Week 09-27-2022	57.71	42.29	25.67	7.96	0.47	0.00
3 Months Ago 07-05-2022	18.16	81.84	43.46	0.00	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 09-27-2022	57.71	42.29	25.67	7.96	0.47	0.00
One Year Ago 10-05-2021	76.69	23.31	8.91	2.70	0.00	0.00

Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

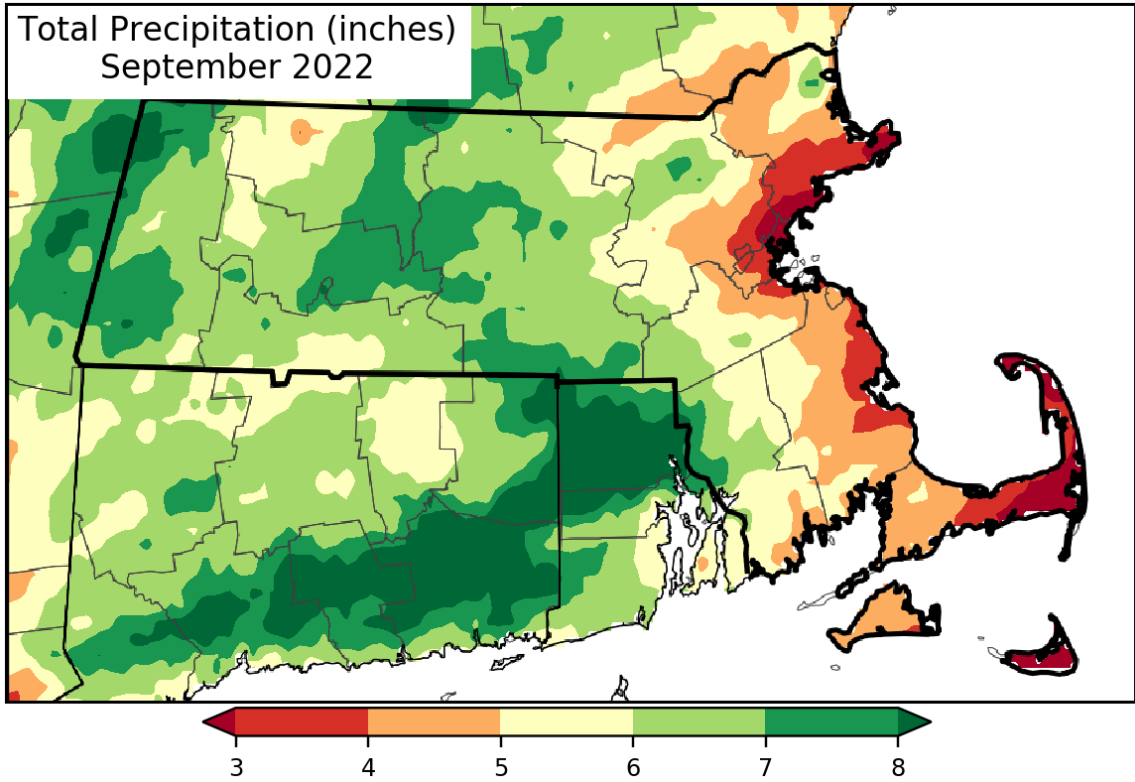
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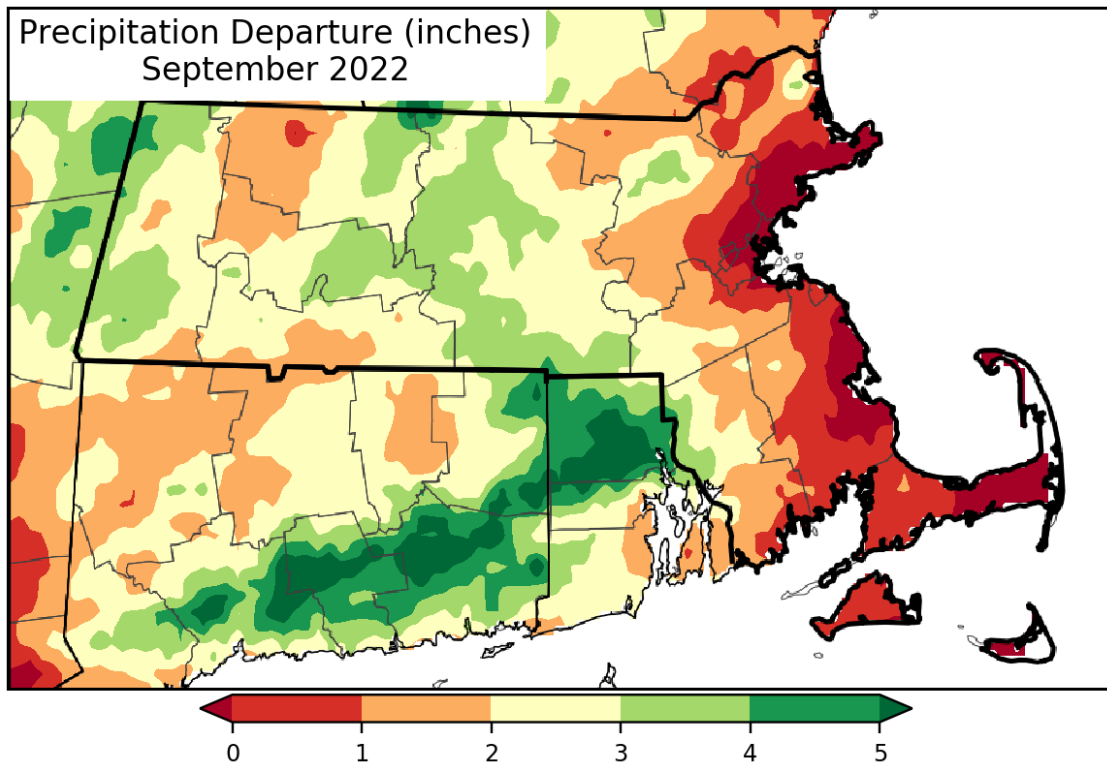


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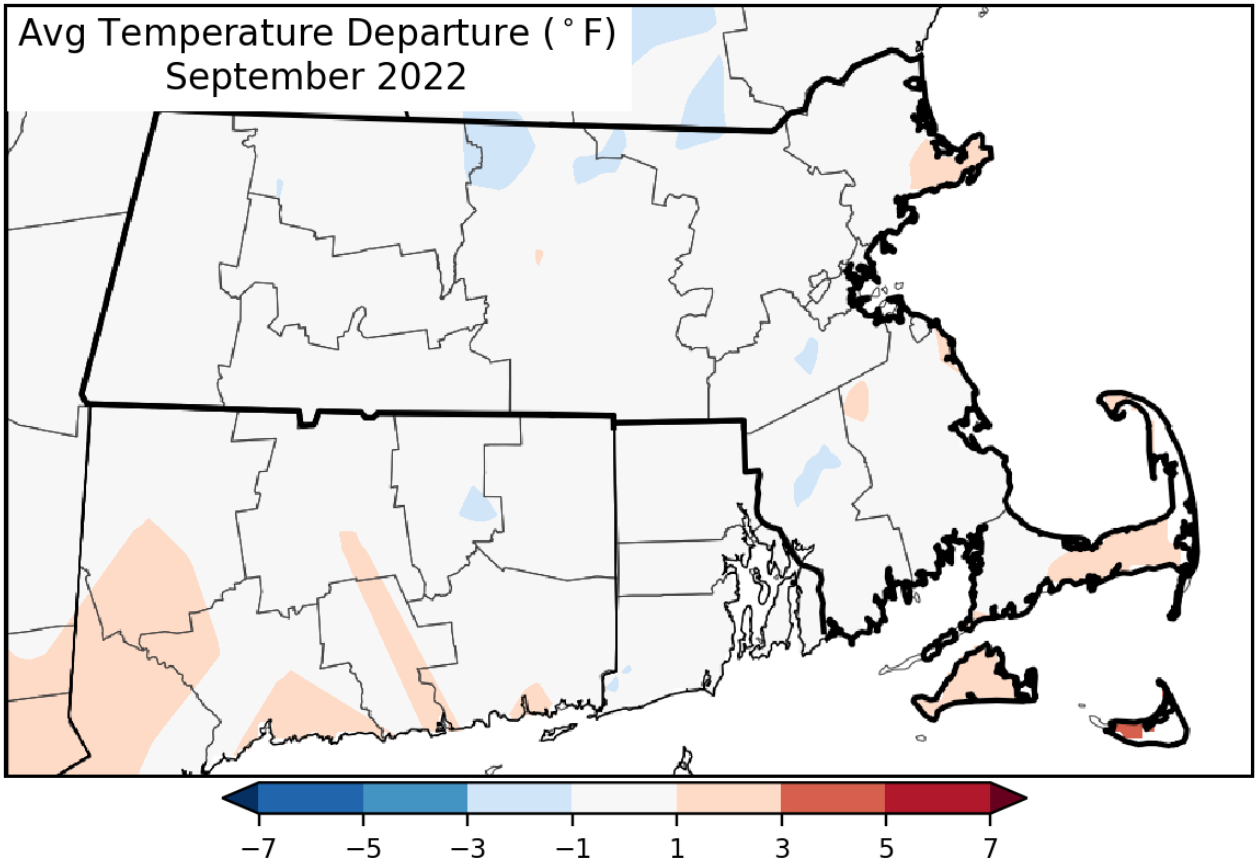
Map 3: US Drought Monitor for NWS Boston (top) and New England (bottom), effective October 4th.



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



Map 5. September 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 September 2022.
From the Northeast Regional Climate Center.