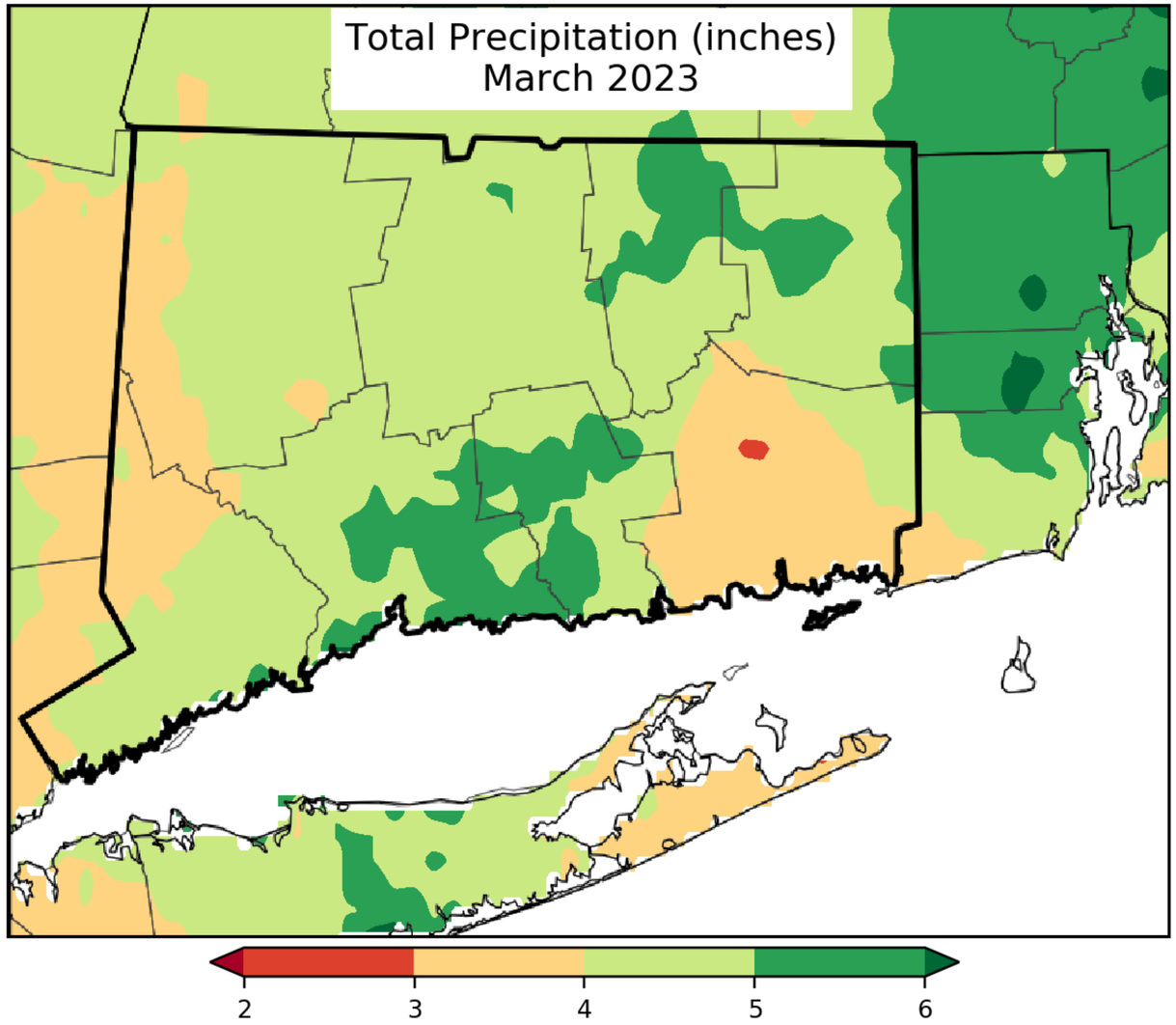
CT Interagency Drought Workgroup NWS Update

Thursday, April 6th 2023

Prepared by: NWS WFO Boston, MA

March 2023 Recap – Precip Totals

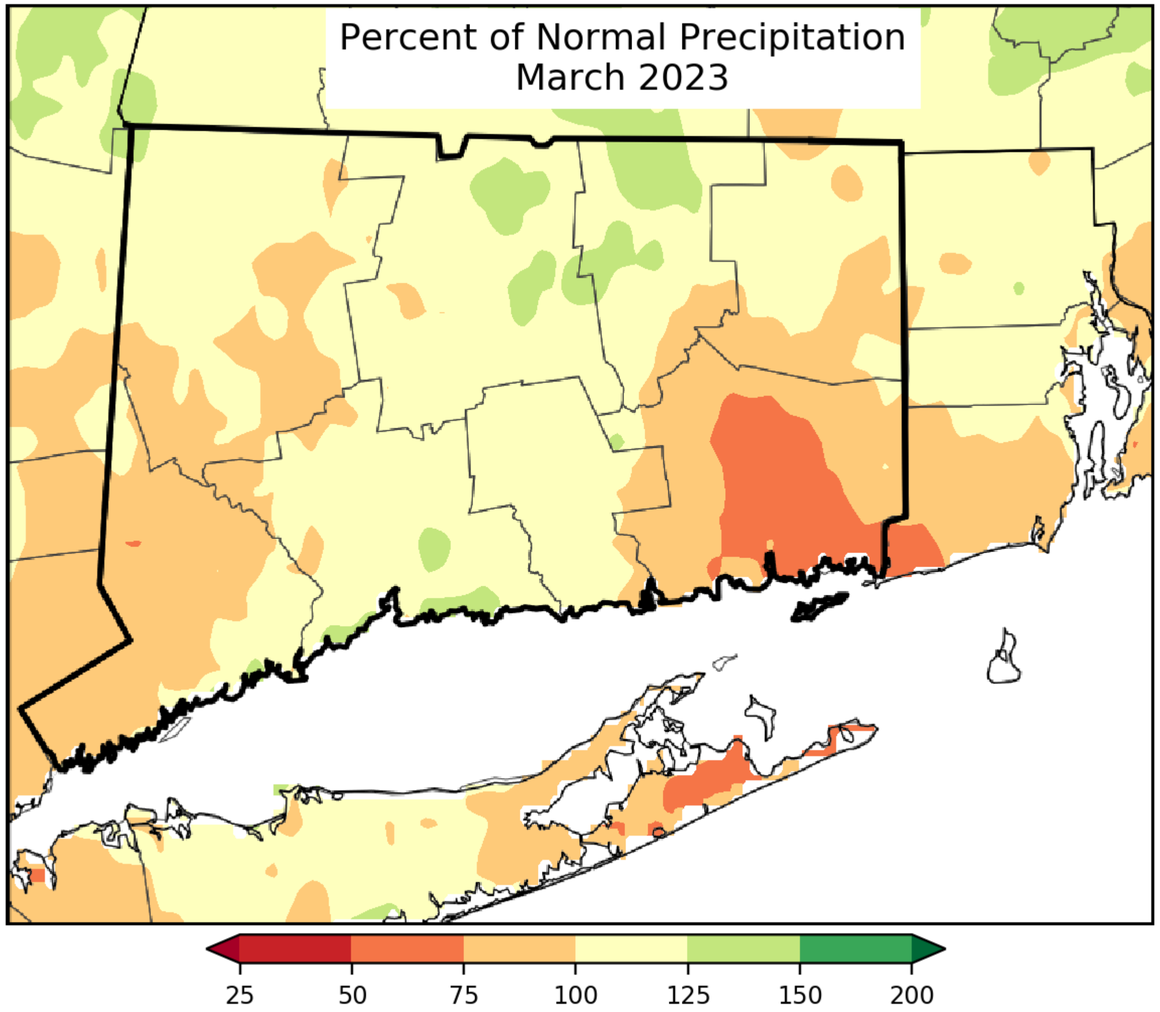
Boston, MA
WEATHER FORECAST OFFICE



CT 1-Month March 2023	Rainfall	Departure	Percent	Normal
Litchfield	3.96	-0.20	95	4.16
Hartford	4.20	0.09	102	4.11
Tolland	4.36	0.02	101	4.34
Windham	4.24	-0.21	95	4.45
Fairfield	3.88	-0.48	89	4.36
New Haven	4.59	0.24	106	4.35
Middlesex	5.27	0.92	121	4.35
New London	3.73	-1.14	77	4.87

30-Day Percent of Normal Precip

Boston, MA
WEATHER FORECAST OFFICE



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New London	3.73	-1.14	77	4.87

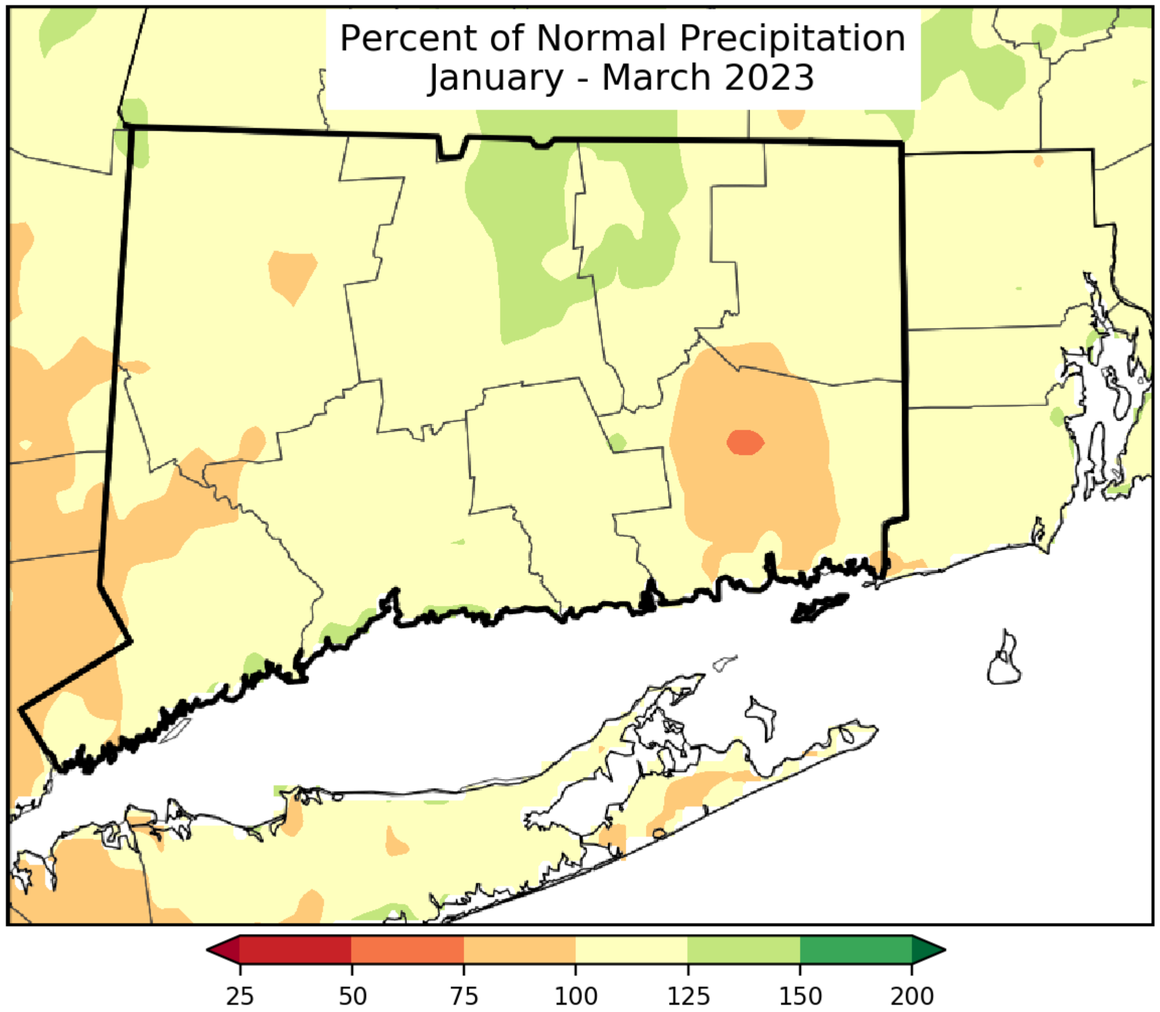
60-Day Percent of Normal Precip

Boston, MA
WEATHER FORECAST OFFICE

CT 2-month Feb 23-Mar 23	Rainfall	Departure	Percent	Normal
Litchfield	5.55	-1.93	74	7.48
Hartford	5.67	-1.71	77	7.38
Tolland	5.89	-1.80	77	7.69
Windham	5.58	-2.16	72	7.74
Fairfield	4.89	-2.57	66	7.46
New Haven	5.70	-1.80	76	7.50
Middlesex	6.46	-1.23	84	7.69
New London	5.19	-3.08	63	8.27

90-Day Percent of Normal Precip

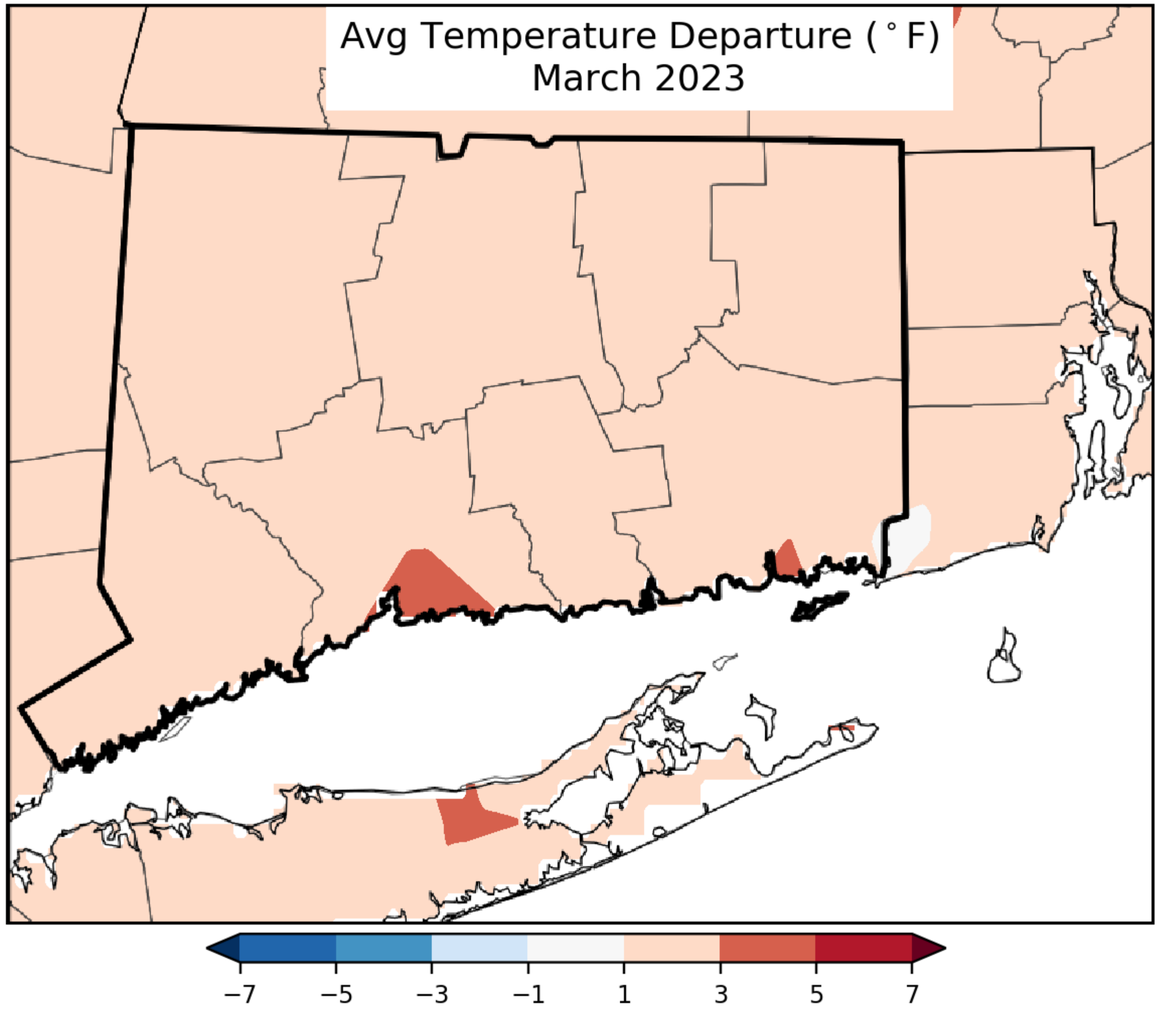
Boston, MA
WEATHER FORECAST OFFICE



CT 3-month Jan 23-Mar 23	Rainfall	Departure	Percent	Normal
Litchfield	11.39	0.35	103	11.04
Hartford	11.99	0.99	109	11.00
Tolland	12.20	0.68	106	11.52
Windham	12.10	0.62	105	11.48
Fairfield	10.45	-0.59	95	11.04
New Haven	12.11	1.05	110	11.06
Middlesex	13.51	2.07	118	11.44
New London	11.94	-0.06	100	12.00

March 2023 – 30-day Temp Departure

Boston, MA
WEATHER FORECAST OFFICE



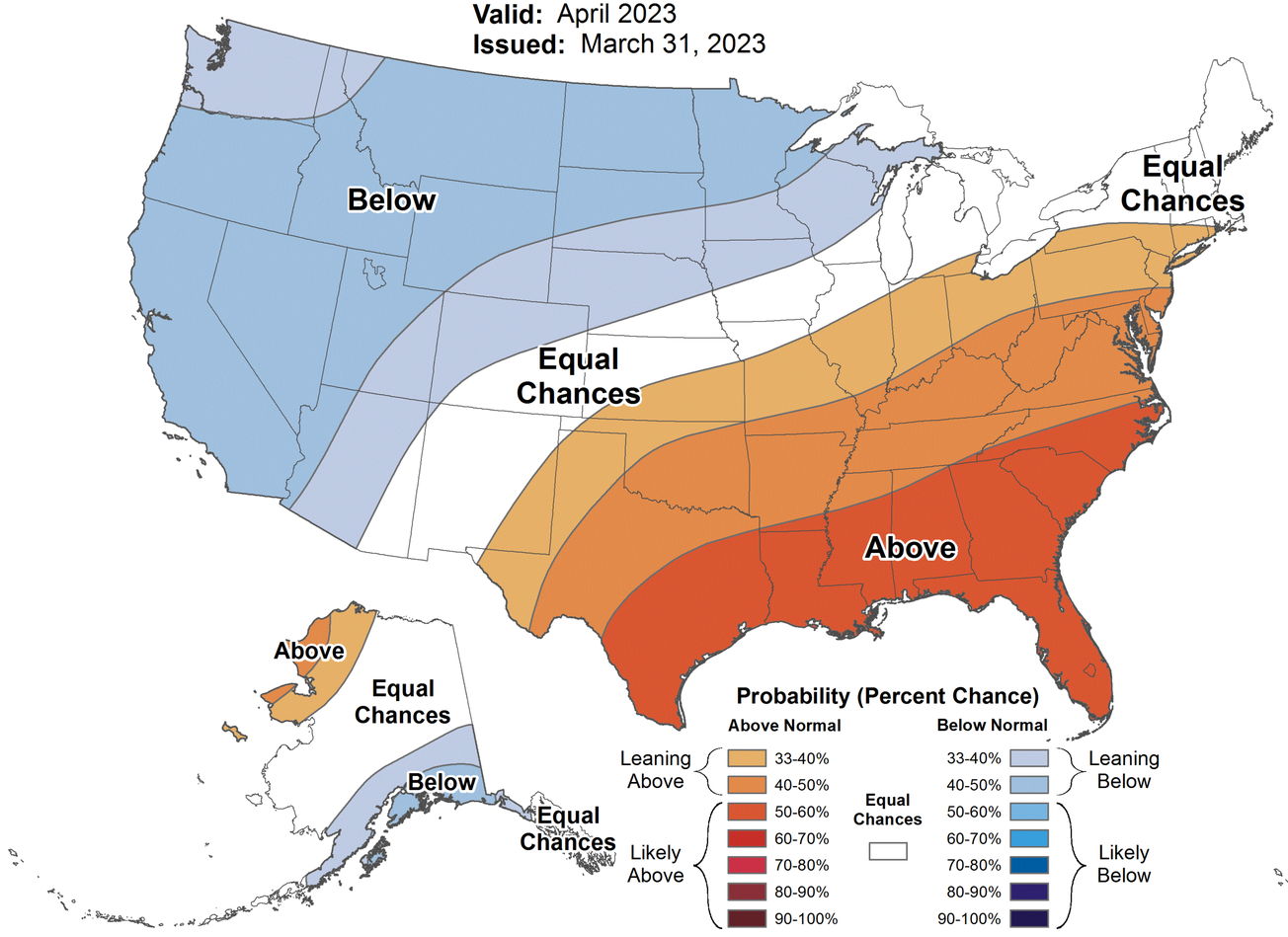
CT: 30-Day Temperatures have averaged 1 to 3 degrees above normal

CPC Outlook for April 2023

Boston, MA
WEATHER FORECAST OFFICE

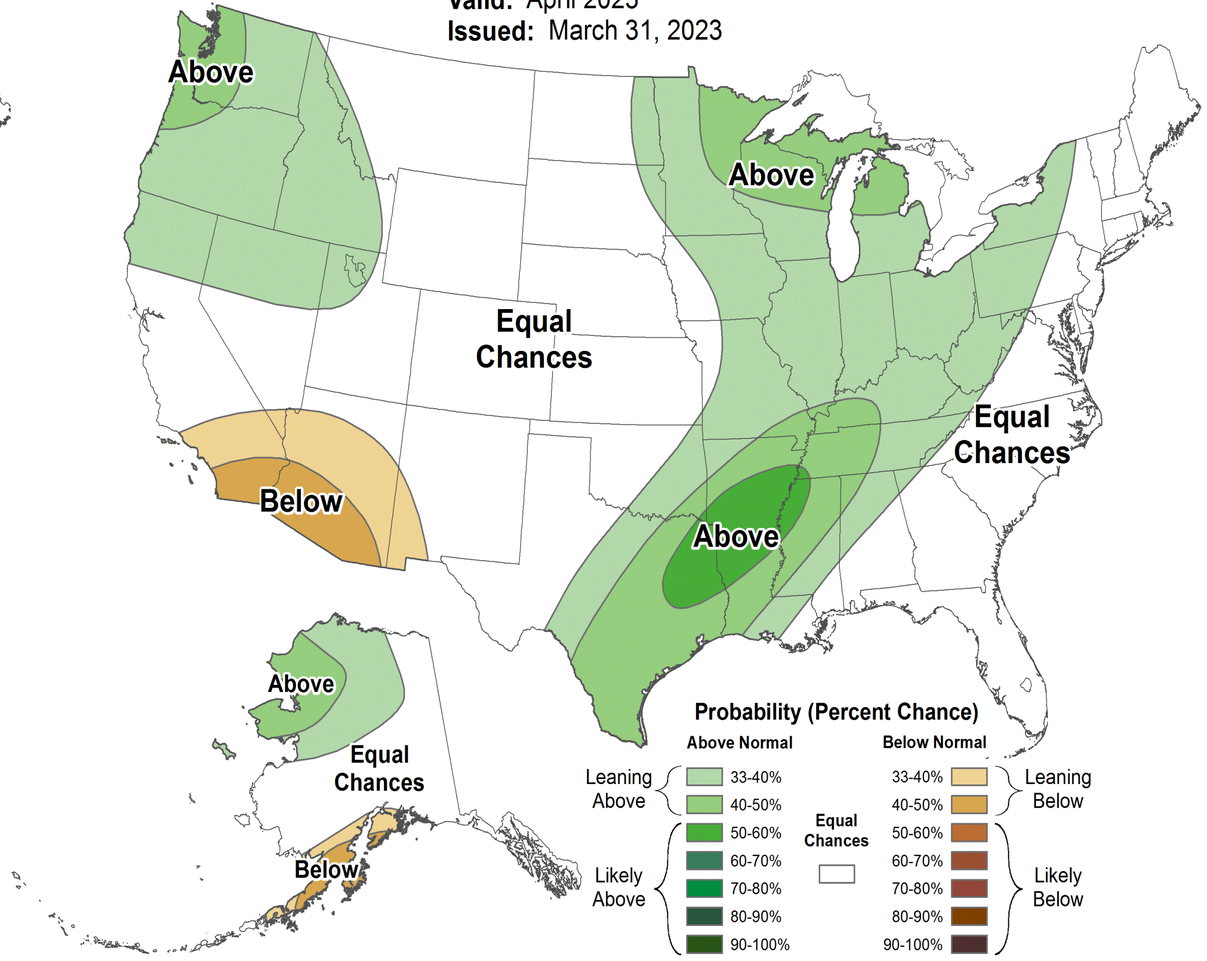
Monthly Temperature Outlook

Valid: April 2023
Issued: March 31, 2023



Monthly Precipitation Outlook

Valid: April 2023
Issued: March 31, 2023



Department of Agriculture – Drought Status Report

Parameter	Reported Conditions			
	As of 1/3/23		As of 4/5	
	Report Date	Status	Report Date	Status
Palmer Drought Severity Index (map)	12/31/22	Entire state showing an unusual moist spell.	4/1/23	Northwest CT experiencing moist spell. Rest of state appears normal.
Palmer drought severity index (data)	12/31/22	Northwest: 2.03 Central: 2.08 Coastal: 0.45	4/1/23	Northwest: 2.19 Central: 1.63 Coastal: 0.42
Precipitation needed to end drought (in.)	12/31/22	Northwest: 0 Central: 0 Coastal: 0	4/1/23	Northwest: 0 Central: 0 Coastal: 0
Crop Moisture (current map)	12/31/22	Entire state shows abnormally moist.	4/1/23	Entire state shows abnormally moist.
Topsoil moisture (current map)	1/1/23	No data available.	4/1/23	No data available.
Topsoil moisture (current vs. 5 yr. mean)	1/1/23	No data available.	4/1/23	No data available.
Veg DRI (% of CT land area shown as pre-drought, moderate, severe or extreme)	1/1/23	No data available.	4/1/23	No data available.
Drought Monitor Report for CT	12/27/22	Western CT showing abnormally dry.	3/28/23	No data available.
NASS Crop Progress Report (New England)	11/27/22	According to the National Agricultural Statistics Service in New England, there were 5 days suitable for fieldwork for the week ending Sunday, November 27, 2022. Topsoil moisture supplies were 0 percent very short, 3 percent short, 97 percent adequate, and 0 percent surplus. Subsoil moisture supplies were 0 percent very short, 3 percent short, 97 percent adequate, and 0 percent surplus.	4/2/23	According to the National Agricultural Statistics Service in New England, there were 3.0 days suitable for fieldwork for the week ending Sunday, April 2, 2023. Topsoil moisture supplies were 0 percent very short, 0 percent short, 75 percent adequate, and 25 percent surplus. Subsoil moisture supplies were 0 percent very short, 0 percent short, 40 percent adequate, and 60 percent surplus.

Summary: Data from all of these indicators showed no drought conditions present in the state at the beginning of April, 2023.

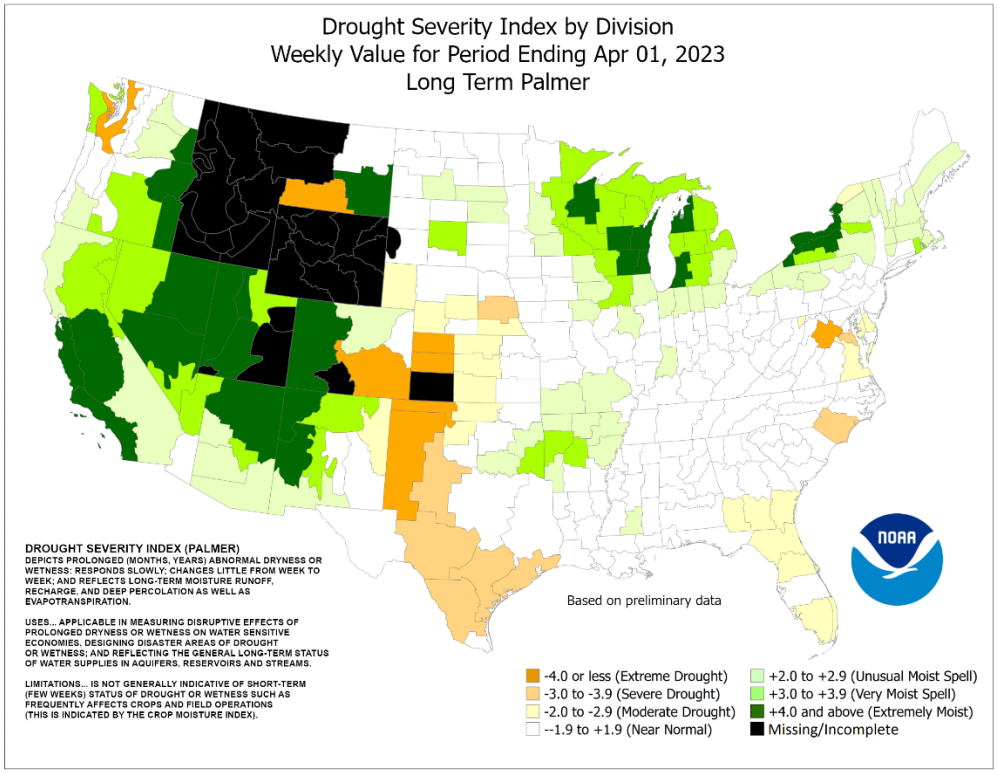
mbExplanatory notes:

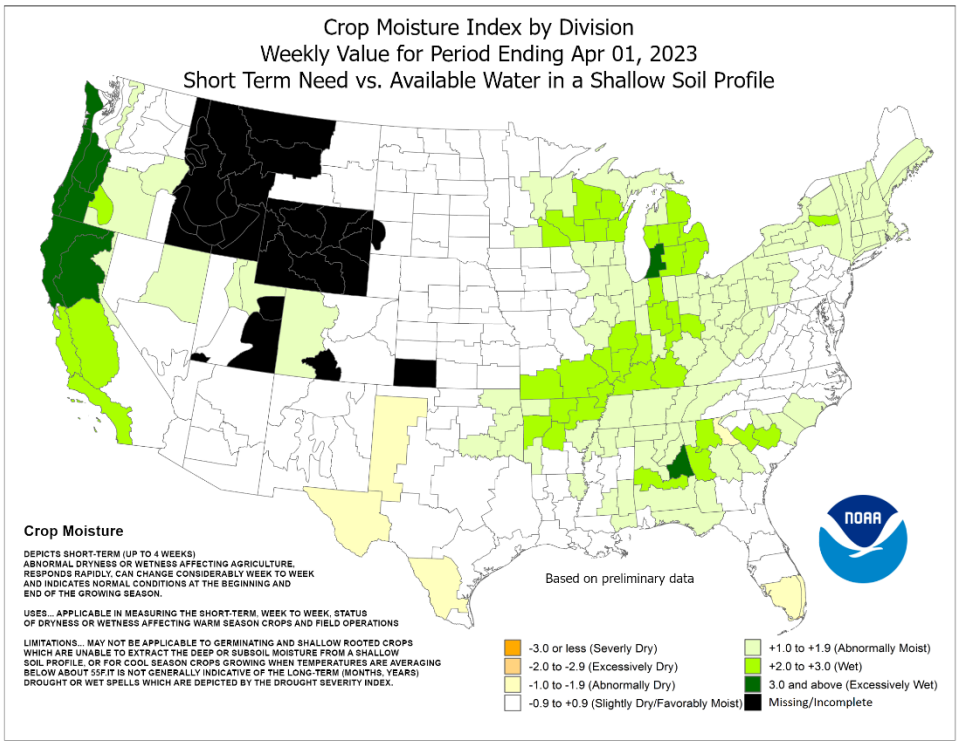
Palmer Drought Severity Index: The Palmer Drought Severity Index (PDSI) uses readily available temperature and precipitation data to estimate relative dryness. It is a standardized index that generally spans -10 (dry) to +10 (wet). Maps of operational agencies like NOAA typically show a range of -4 to +4, but more extreme values are possible.

Crop moisture index: The CMI gives the short-term or current status of purely agricultural drought or moisture surplus and can change rapidly from week to week. The CMI index indicates general conditions and not local variations caused by isolated rain. Input to the calculations include the weekly precipitation total and average temperature, division constants (water capacity of the soil, etc.) and previous history of the indices.

Topsoil moisture: Topsoil Moisture Monitoring maps are based on United States Department of Agriculture state reports of topsoil moisture conditions. Means are calculated from historical weekly data published by USDA/NASS using the closest date to the equivalent date for the year. Results are based on the short and very short %ages of topsoil moisture (upper 6 inches) reported by the USDA. Reports are based on subjective observations.

Vegetation Drought Response Index: VegDRI calculations integrate satellite-based observations of vegetation conditions, climate data, and other biophysical information such as land cover/land use type, soil characteristics, and ecological setting. The VegDRI maps that are produced deliver continuous geographic coverage over large areas, and have inherently finer spatial detail (1-km2 resolution) than other commonly available drought indicators such as the U.S. Drought Monitor. The state statistics table is located here: https://vegdri.unl.edu/Home/VegDRITables.aspx?CT.

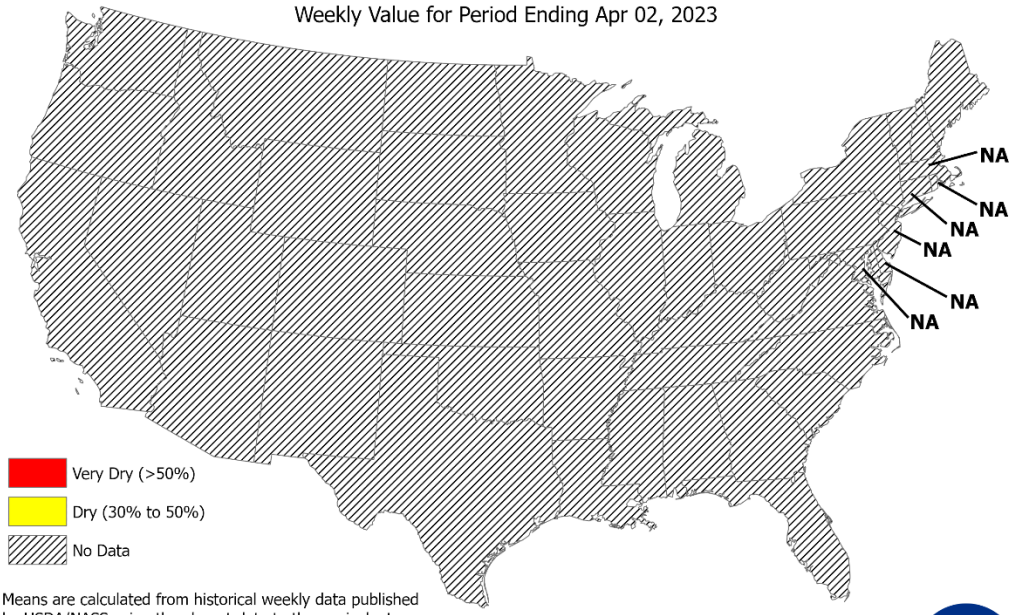

Drought Severity Index by Division
Weekly Value for Period Ending Apr 01, 2023
Long Term Palmer
DROUGHT SEVERITY INDEX (PALMER)
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS: RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.
LIMITATIONS... IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
Based on preliminary data
NOAA
-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
--1.9 to +1.9 (Near Normal)
+2.0 to +2.9 (Unusual Moist Spell)
+3.0 to +3.9 (Very Moist Spell)
+4.0 and above (Extremely Moist)
Missing/Incomplete


Crop Moisture Index by Division
Weekly Value for Period Ending Apr 01, 2023
Short Term Need vs. Available Water in a Shallow Soil Profile
Crop Moisture
DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.
USES... APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS
LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A SHALLOW SOIL PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F.IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.
Based on preliminary data
NOAA
-3.0 or less (Severly Dry)
-2.0 to -2.9 (Excessively Dry)
-1.0 to -1.9 (Abnormally Dry)
-0.9 to +0.9 (Slightly Dry/Favorably Moist)
+1.0 to +1.9 (Abnormally Moist)
+2.0 to +3.0 (Wet)
3.0 and above (Excessively Wet)
Missing/Incomplete

USDA Topsoil Moisture by Short-Very Short

Percent of State Area

Weekly Value for Period Ending Apr 02, 2023



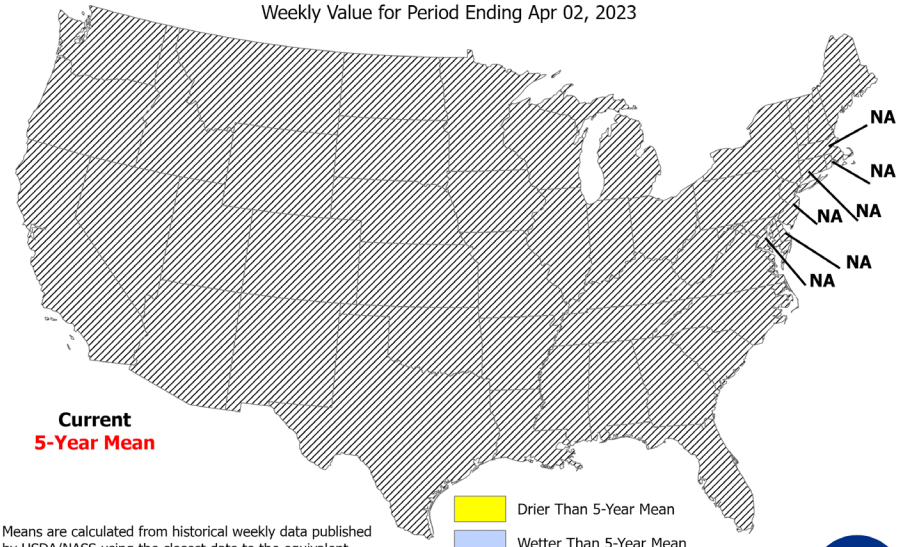
Means are calculated from historical weekly data published by USDA/NASS using the closest date to the equivalent date for this year.

Results are based on the short and very short percentages of topsoil moisture (upper 6 inches) reported by the USDA. Reports are based on subjective observations.

USDA Topsoil Moisture by Short-Very Short

Current Vs. 5-Year Mean

Weekly Value for Period Ending Apr 02, 2023



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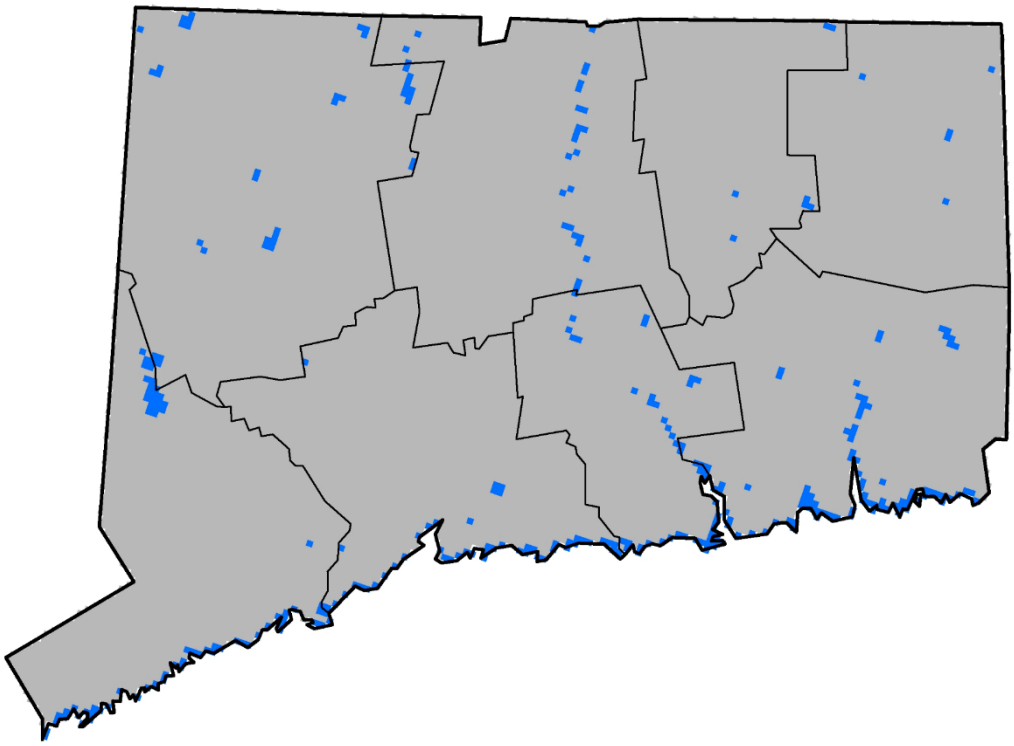
Vegetation Drought Response Index

March 26, 2023

Complete: Connecticut



Vegetation Condition

- Extreme Drought
- Severe Drought
- Moderate Drought
- Pre-drought stress
- Near Normal
- Unusually Moist
- Very Moist
- Extreme Moist
- Out of Season
- Water

NDMC National Drought Mitigation Center University of Nebraska

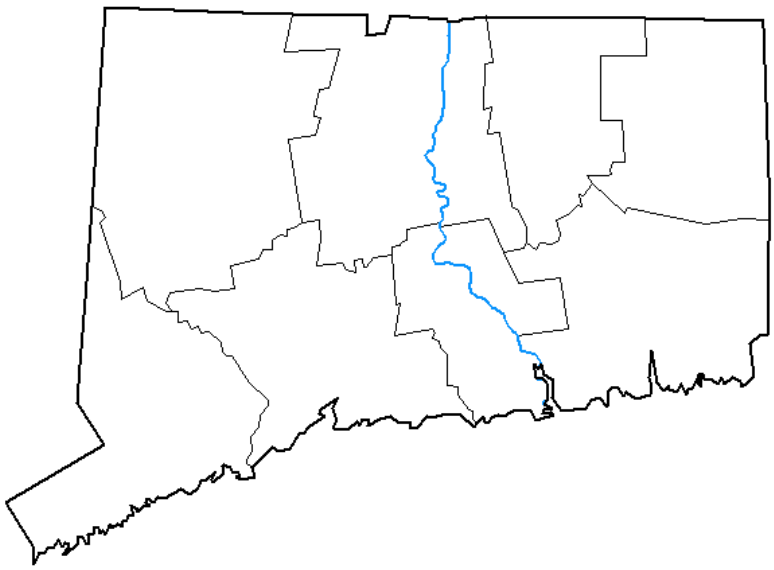
USGS science for a changing world

HPRCC

RMA

U.S. Drought Monitor

Connecticut



March 28, 2023

(Released Thursday, Mar. 30, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week *03-21-2023*	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago *12-27-2022*	53.82	46.18	0.00	0.00	0.00	0.00
Start of Calendar Year *01-03-2023*	53.82	46.18	0.00	0.00	0.00	0.00
Start of Water Year *09-27-2022*	0.00	100.00	70.06	28.07	0.00	0.00
One Year Ago *03-29-2022*	96.27	3.73	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:
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National Drought Mitigation Center

droughtmonitor.unl.edu

SAVE THE DATE!

Preparing for Drought in Connecticut

CONNECTICUT STATE WATER PLAN

April 12, 2023 12 to 1 p.m.

Climate change is resulting in changes in precipitation with severe rainfall events but also extended time between storms. This results in flooding, often followed by drought. This workshop will give an overview the Connecticut Drought Preparedness and Response Plan, including who is involved and how we monitor drought conditions. It will also include discussion on how municipalities can better prepare for drought.

This will be a **VIRTUAL** workshop. Registration info and agenda will be coming soon. The State Water Plan is an initiative of the Connecticut Water Planning Council. This workshop is hosted by the State Water Plan Outreach and Education Subgroup.