

Drought Conditions Report

June 2, 2022

Connecticut Water Planning Council
Interagency Drought Workgroup

CT Interagency Drought Workgroup

Regular Meeting

June 2, 2022

2:00 PM - 3:30 PM

VIA ZOOM

<https://us05web.zoom.us/j/81128755360?pwd=bDJRU2JzOE0vY2RQNUtuYThsWUR0UT09>

Meeting ID: 811 2875 5360

Passcode: 57hD8v

Agenda

1. Call to order
2. Seating of voting members
3. Minutes – [May 5, 2022](#)
4. Business
 - a. Review of Hydrologic Conditions
 - b. [CT Water Planning Council topical work group recommendations](#) regarding the CT Drought Preparedness & Response Plan and its implementation
 - i. Proposed language revisions
 - ii. Agency revisions
 - c. Next Meeting – July 7, 2022
 - d. Other
5. Public Comment
6. Adjourn

Stage 2 Drought Trigger Summary by Region -- June 2, 2022

	Stage 2 Trigger	Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	Data of Record
Precipitation (1)	Two-month total below 65% of normal	99% of normal	92% of normal	120% of normal	81% of normal	94% of normal	70% of normal	85% of normal	60% of normal	5/31/2022
Ground Water (2)	Two out of three months below the 25th percentile	≤25% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	43% stations meet trigger	≤25% stations meet trigger	40% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	5/31/2022
Streamflow (3)	Two out of three months below the 25th percentile	≤25% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	≤25% stations meet trigger	5/31/2022
Reservoirs (4)	Average levels less than 80% of normal	102% of normal	102% of normal	99% of normal	103% of normal	101% of normal	101% of normal	100% of normal	100% of normal	5/20/2022
Palmer Drought Severity Index (5)	-2.9 to -2.0	-1.42 ≤ ≤ -0.54	-0.54 ≤ ≤ 1.48	1.48	-1.42 ≤ ≤ -0.54	-1.42 ≤ ≤ -0.54	-1.42 ≤ ≤ -0.54	-0.54	-0.54	5/28/2022
Crop Moisture Index (6)	-1.9 to -1.0	-0.01 ≤ ≤ 0.01	-0.01 ≤ ≤ 0.50	0.50	-0.01 ≤ ≤ 0.01	-0.01 ≤ ≤ 0.01	-0.01 ≤ ≤ 0.01	-0.01	-0.01	5/28/2022
VegDRI (seasonal) (7)	Pre-drought stress	Near Normal	Near Normal	Near Normal	Near Normal	Near Normal	Partially meets threshold	Near Normal	Near Normal	5/29/2022
Fire Danger (8)	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	6/2/2022
U.S. Drought Monitor (9)	Intensity level D1-D2	NA	D0	NA	D0-D1	D0	D0-D1	D0-D1	D0-D1	6/2/2022

Key:	Drought trigger met across the majority of region	Region partially meets drought trigger or is near trigger threshold (judgement call needed)	Drought trigger not met across the majority of region (conditions can be worse in specific areas)
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Methodology:

(1) Based on monthly precipitation averaged by region, calculated by National Weather Service (NWS).

(2) Based on monthly assessment of groundwater stations by region, calculated by United States Geological Survey (USGS). Region is identified as meeting trigger when ≥65% of stations in the region meet the threshold. Region is identified as not meeting trigger when ≤25% of stations in the region meet the threshold. Region is identified as partially meeting trigger when greater than 25% and less than 65% of stations in the region meet the threshold.

(3) Based on monthly assessment of stream gauge stations by region, calculated by USGS. Region is identified as meeting trigger when ≥65% of stations in the region meet the threshold. Region is identified as not meeting trigger when ≤25% of stations in the region meet the threshold. Region is identified as partially meeting trigger when greater than 25% and less than 65% of stations in the region meet the threshold.

(4) Based on latest available reservoir status reports obtained from public water suppliers and compiled by CT Department of Public Health Drinking Water Section.

(5) Calculated by Climate Prediction Center (CPC) for each State Climate Division and extrapolated to county. Northwestern Climate Division reflective of Litchfield county. Central Climate Division reflective of Hartford, Tolland, Windham counties. Blend of Central Climate Division and Coastal Climate Division for Fairfield, New Haven, Middlesex, New London counties.

(6) Calculated by CPC for each State Climate Division and extrapolated to county. Northwestern Climate Division reflective of Fairfield county, Central Climate Division reflective of Hartford, Tolland, Windham counties. Blend of Central Climate Division and Coastal Climate Division for Fairfield, New Haven, Middlesex, New London counties.

(7) Based on visual assessment of geographic extent of each VegDri drought designation in each region, calculated by the National Drought Mitigation Center in collaboration with USGS.

(8) Based on daily forest fire danger report from CT DEEP Bureau of Natural Resources, Division of Forestry.

(9) Based on analysis of most recent edition of the U.S. Drought Monitor, produced by the National Drought Mitigation Center.



CT Interagency Drought Workgroup NWS Update

Thursday June 2 2022

Prepared by: NWS WFO Boston/Norton, MA

May 2022 Rainfall

Driest area Northeast CT

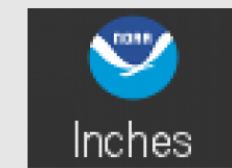
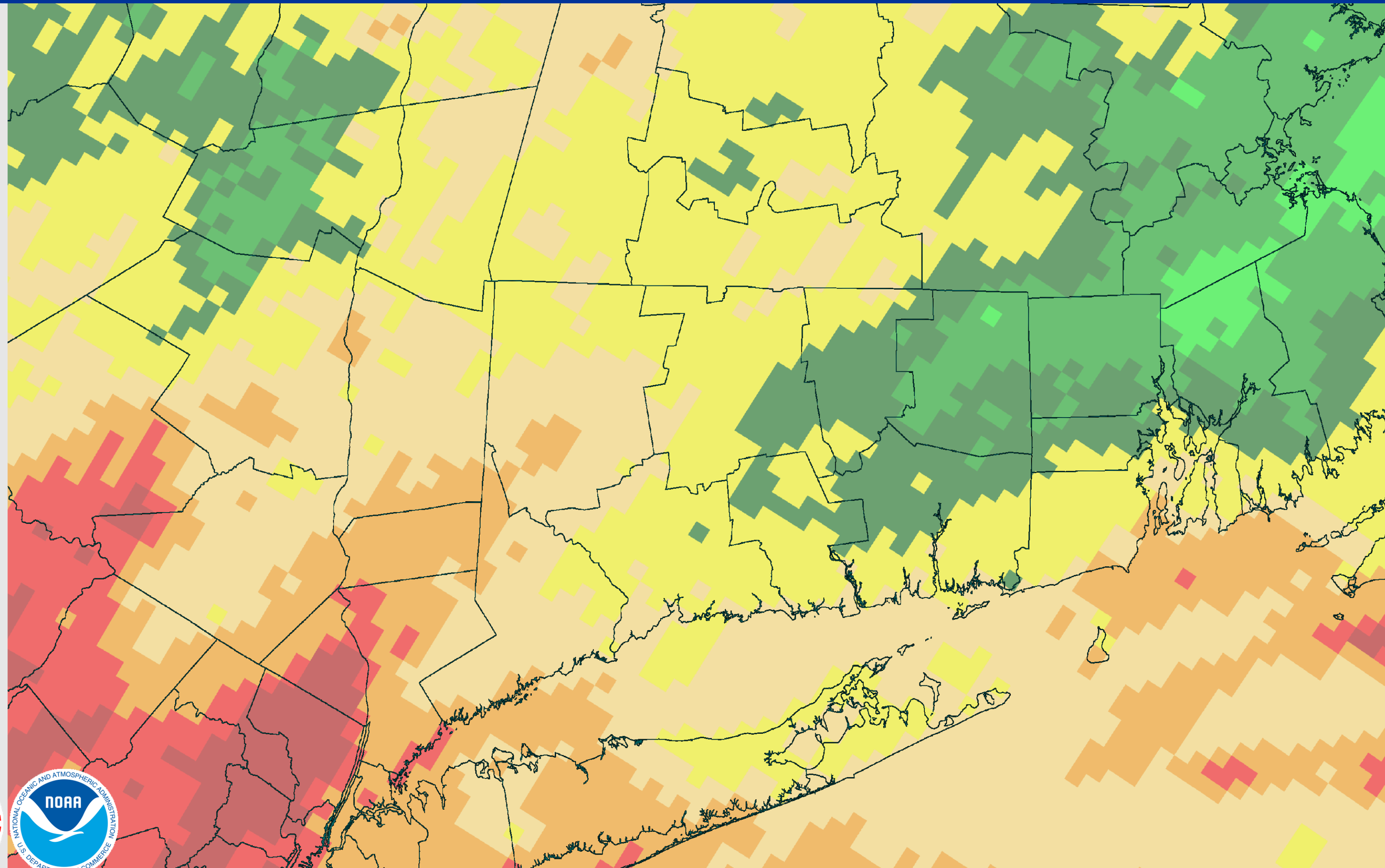


Boston/Norton MA
WEATHER FORECAST OFFICE

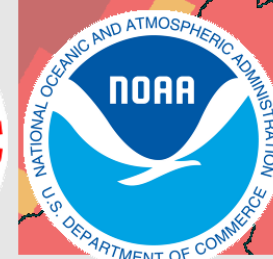
May 31, 2022 Month to Date Observed Precipitation

Created on: June 01, 2022 - 12:26 UTC

Valid on: May 31, 2022 12:00 UTC



20
15
10
8.0
6.0
5.0
4.0
3.0
2.0
1.5
1.0
.50
.25
.10
.01
?



May 2022 Percent of Normal Rainfall

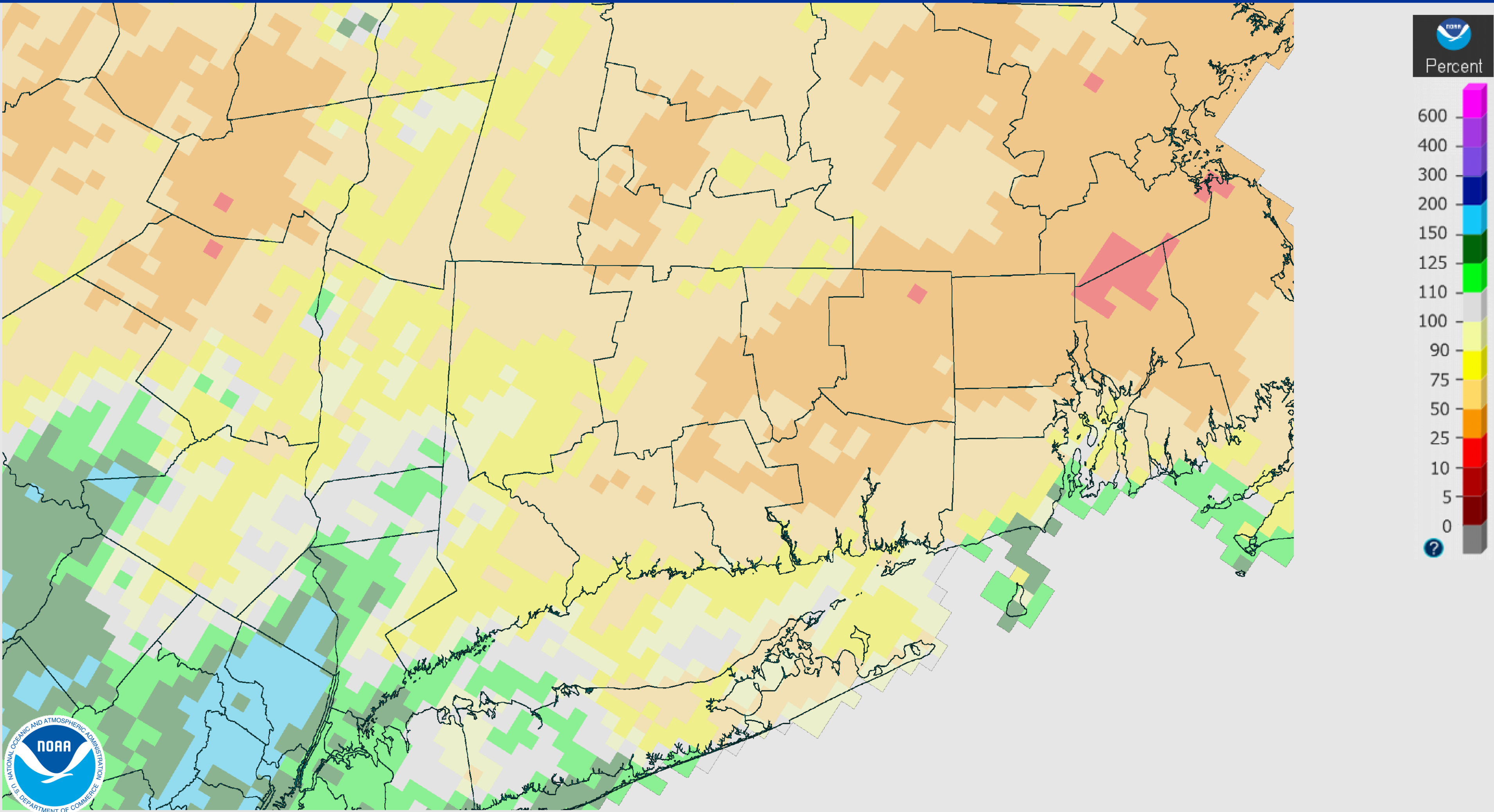


Boston/Norton MA
WEATHER FORECAST OFFICE

Driest area Northeast CT

May 31, 2022 Month to Date Percent Precipitation

Created on: June 01, 2022 - 13:25 UTC
Valid on: May 31, 2022 12:00 UTC



90-Day Percent of Normal Rainfall

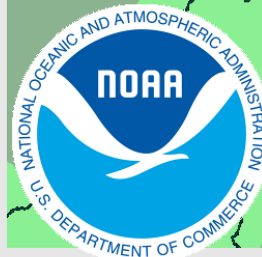
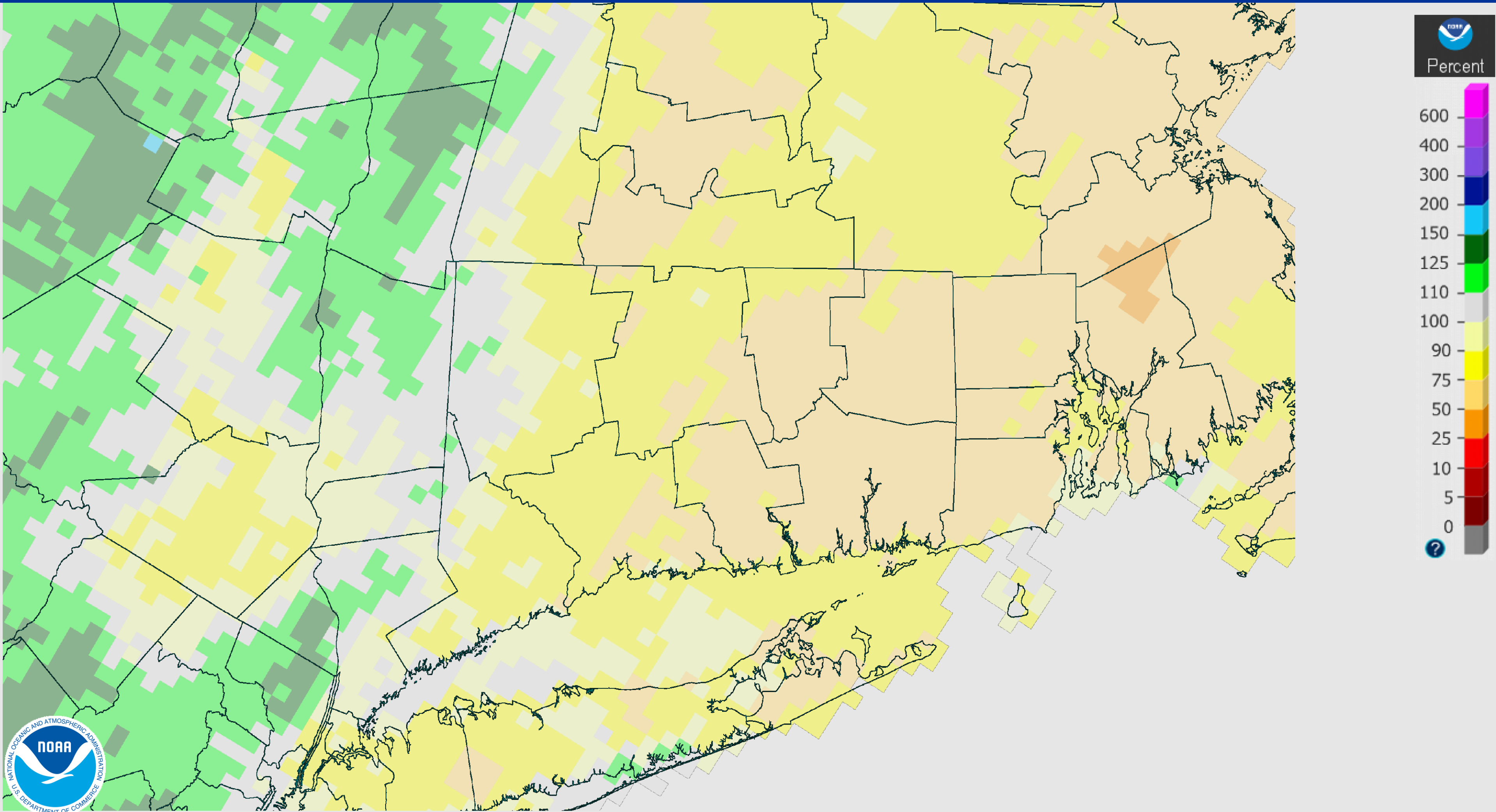


Boston/Norton MA
WEATHER FORECAST OFFICE

May 31, 2022 90-Day Percent Precipitation

Created on: June 01, 2022 - 13:27 UTC

Valid on: May 31, 2022 12:00 UTC



Precip Tables for 2 and 3 Months



Boston/Norton MA
WEATHER FORECAST OFFICE

CT 2 month Apr-May 22	Rainfall	Departure	Percent	Normal
Litchfield	10.37	1.76	120	8.61
Hartford	8.01	-0.72	92	8.73
Tolland	7.42	-1.29	85	8.71
Windham	5.20	-3.41	60	8.61
Fairfield	8.74	-0.09	99	8.83
New Haven	8.10	-0.51	94	8.61
Middlesex	7.01	-1.63	81	8.64
New London	5.84	-2.48	70	8.32

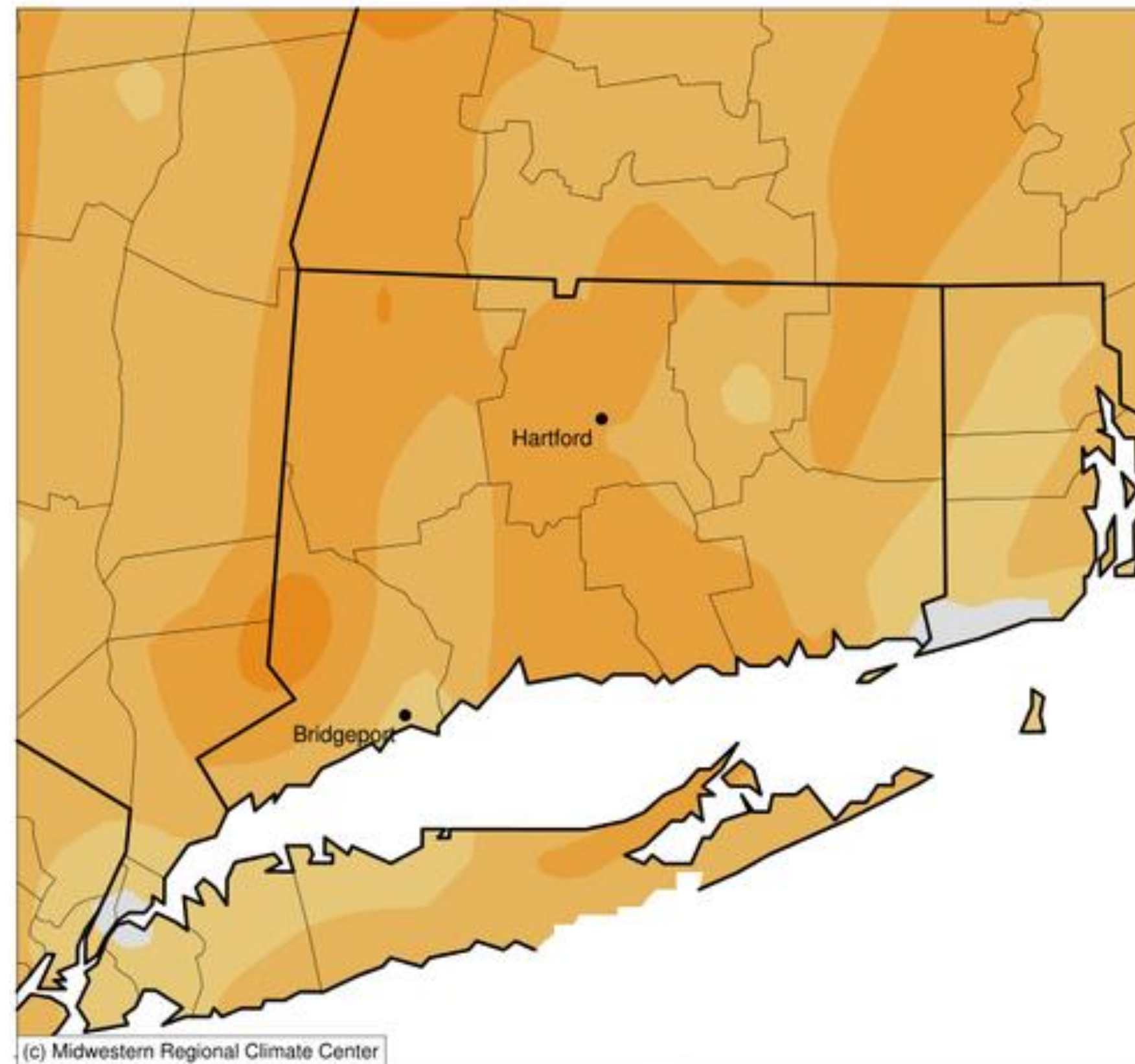
CT 3 month Mar-May 22	Rainfall	Departure	Percent	Normal
Litchfield	13.32	0.56	104	12.76
Hartford	10.76	-2.07	84	12.83
Tolland	10.40	-2.65	80	13.05
Windham	7.94	-5.12	61	13.06
Fairfield	11.50	-1.69	87	13.19
New Haven	11.16	-1.80	86	12.96
Middlesex	10.11	-2.88	78	12.99
New London	8.91	-4.28	68	13.19

May 2022 Temperature Details



Boston/Norton MA
WEATHER FORECAST OFFICE

Average Temperature (°F): Departure from 1991-2020 Normals
May 01, 2022 to May 31, 2022



0 1 2 3 4 5 6 7
Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwest Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 6/1/2022 8:29:36 AM CDT

Temperatures averaged 2.5 to 4 degrees above normal for most of the State

Preliminary Details:

Hartford/BDL had its 8th warmest May on record
3.9 degrees above normal
Records go back to 1905

Bridgeport tied for its 13th warmest May on record
1.1 degrees above normal
Records go back to 1948

New Haven had its warmest May on record
4.2 degrees above normal
Records go back to 1948

CPC Outlook for June/July/August



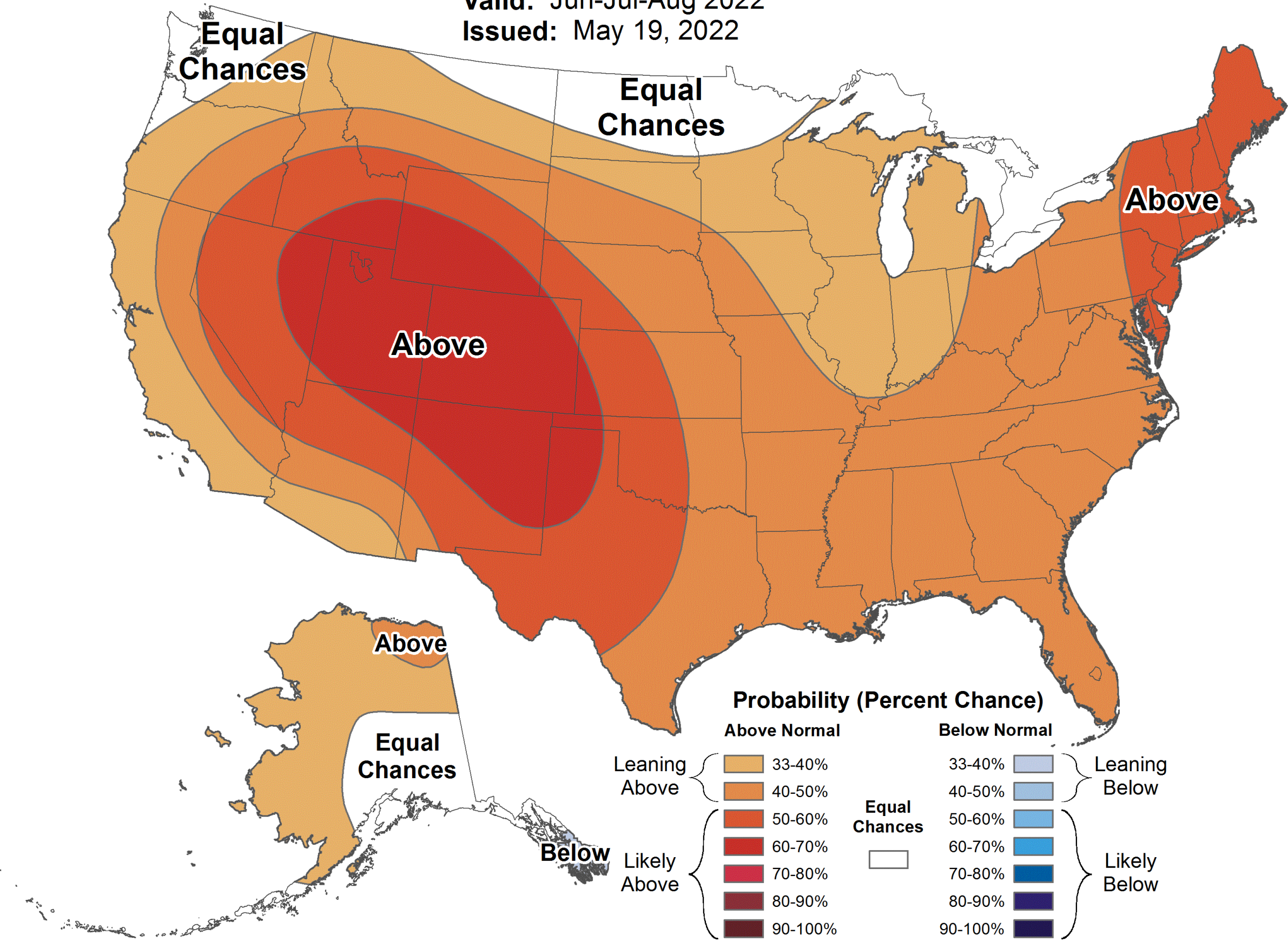
Boston/Norton MA
WEATHER FORECAST OFFICE



Seasonal Temperature Outlook



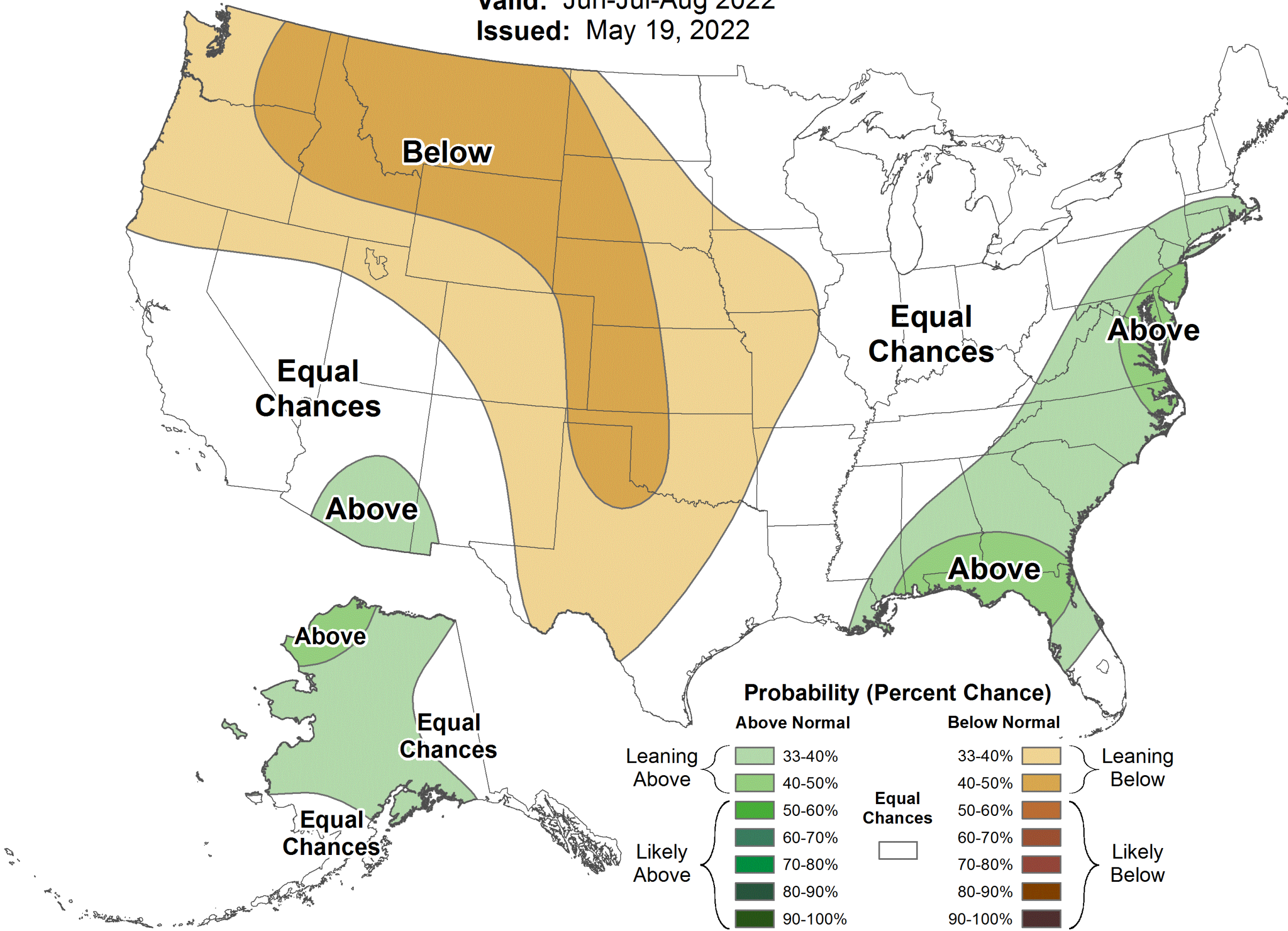
Valid: Jun-Jul-Aug 2022
Issued: May 19, 2022



Seasonal Precipitation Outlook



Valid: Jun-Jul-Aug 2022
Issued: May 19, 2022



Connecticut Precipitation
National Weather Service Offices
Boston/Norton MA, Albany NY, Upton NY
Preliminary Precipitation Data (inches) by County
Precipitation Data Through May 2022
Includes CoCoRaHS data

CT 1 Month May 2022	Rainfall	Departure	Percent	Normal
Litchfield	4.09	-0.32	93	4.41
Hartford	2.52	-1.90	57	4.42
Tolland	2.41	-1.69	59	4.10
Windham	1.27	-2.75	32	4.02
Fairfield	3.42	-0.97	78	4.39
New Haven	2.79	-1.45	66	4.24
Middlesex	2.45	-1.77	58	4.22
New London	2.37	-1.39	63	3.76

CT 2 month Apr-May 22	Rainfall	Departure	Percent	Normal
Litchfield	10.37	1.76	120	8.61
Hartford	8.01	-0.72	92	8.73
Tolland	7.42	-1.29	85	8.71
Windham	5.20	-3.41	60	8.61
Fairfield	8.74	-0.09	99	8.83
New Haven	8.10	-0.51	94	8.61
Middlesex	7.01	-1.63	81	8.64
New London	5.84	-2.48	70	8.32

CT 3 month Mar-May 22	Rainfall	Departure	Percent	Normal
Litchfield	13.32	0.56	104	12.76
Hartford	10.76	-2.07	84	12.83
Tolland	10.40	-2.65	80	13.05
Windham	7.94	-5.12	61	13.06
Fairfield	11.50	-1.69	87	13.19
New Haven	11.16	-1.80	86	12.96
Middlesex	10.11	-2.88	78	12.99
New London	8.91	-4.28	68	13.19

CT 4 month Feb-May 22	Rainfall	Departure	Percent	Normal
Litchfield	17.95	1.86	112	16.09
Hartford	15.28	-0.82	95	16.10
Tolland	15.13	-1.27	92	16.40
Windham	14.05	-2.30	86	16.35
Fairfield	15.05	-1.23	92	16.28
New Haven	15.28	-0.83	95	16.11
Middlesex	15.72	-0.61	96	16.33
New London	14.23	-2.36	86	16.59

CT 5 month Jan-May 22	Rainfall	Departure	Percent	Normal
Litchfield	20.55	0.90	105	19.65
Hartford	17.85	-1.88	90	19.73
Tolland	18.48	-1.75	91	20.23
Windham	17.86	-2.23	89	20.09
Fairfield	18.28	-1.59	92	19.87
New Haven	18.53	-1.14	94	19.67
Middlesex	19.26	-0.82	96	20.08
New London	18.05	-2.27	89	20.32

CT 6 month Dec21-May 22	Rainfall	Departure	Percent	Normal
Litchfield	23.40	-0.24	99	23.64
Hartford	20.53	-3.14	87	23.67
Tolland	21.33	-3.07	87	24.40
Windham	20.36	-3.98	84	24.34
Fairfield	19.99	-3.95	83	23.94
New Haven	20.34	-3.22	86	23.56
Middlesex	21.25	-3.15	87	24.40
New London	19.84	-4.77	81	24.61

CT 7 month Nov 21-May 22	Rainfall	Departure	Percent	Normal
Litchfield	25.83	-2.07	93	27.90
Hartford	22.63	-5.50	80	28.13
Tolland	23.15	-5.75	80	28.90
Windham	22.90	-5.87	80	28.78
Fairfield	21.47	-6.77	76	28.24
New Haven	22.09	-5.63	80	27.72
Middlesex	22.94	-5.80	80	28.74
New London	22.08	-7.03	76	29.11

CT 12 month Jun 21-May 22	Rainfall	Departure	Percent	Normal
Litchfield	59.22	8.50	117	50.72
Hartford	56.98	6.14	112	50.84
Tolland	60.73	10.67	121	50.06
Windham	54.71	4.54	109	50.17
Fairfield	51.64	1.43	103	50.21
New Haven	52.14	3.45	107	48.69
Middlesex	53.66	2.50	105	51.16
New London	48.49	-1.40	97	49.89

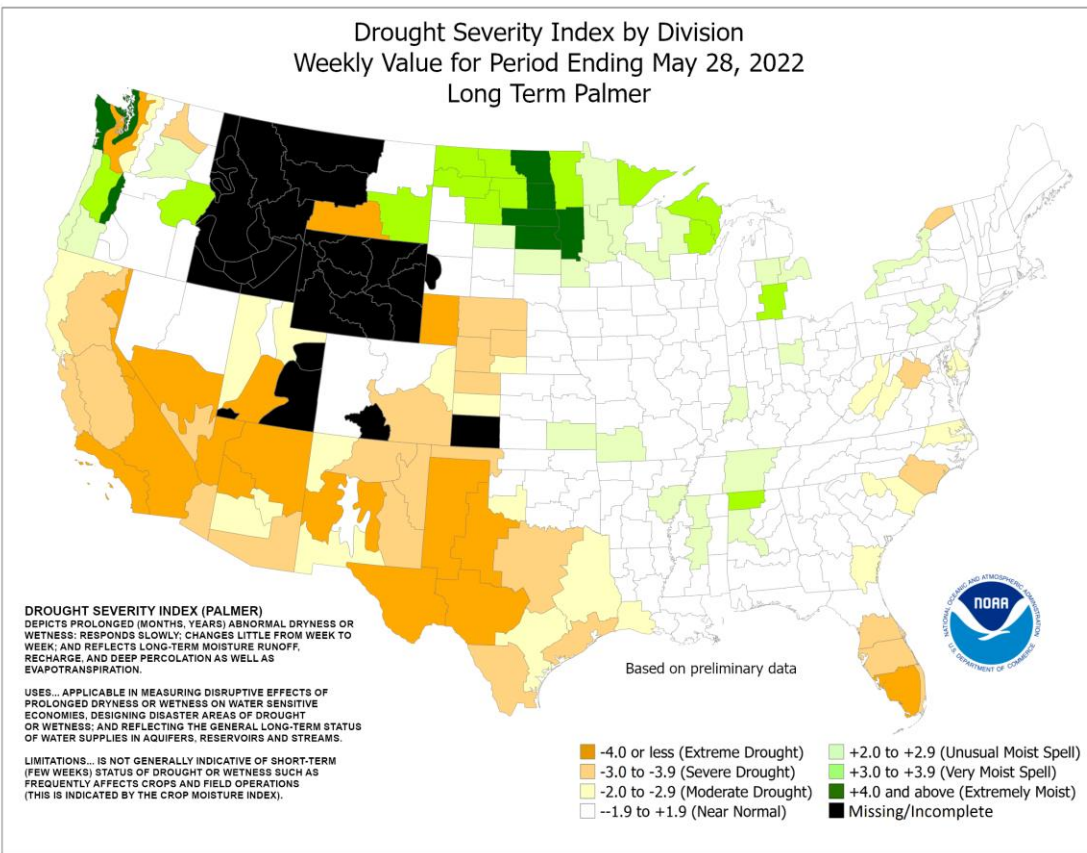
CT 24 month Jun 20-May 22	Rainfall	Departure	Percent	Normal
Litchfield	105.02	3.58	104	101.44
Hartford	100.62	-1.07	99	101.69
Tolland	105.82	5.70	106	100.13
Windham	101.44	1.10	101	100.35
Fairfield	98.25	-2.17	98	100.42
New Haven	98.91	1.53	102	97.38
Middlesex	100.18	-2.14	98	102.32
New London	93.47	-6.32	94	99.79

CT 36 month Jun 19-May 22	Rainfall	Departure	Percent	Normal
Litchfield	152.16	0.00	100	152.16
Hartford	148.54	-3.99	97	152.53
Tolland	157.10	6.91	105	150.19
Windham	152.31	1.79	101	150.52
Fairfield	147.55	-3.08	98	150.63
New Haven	149.04	2.97	102	146.06
Middlesex	152.42	-1.06	99	153.48
New London	148.17	-1.50	99	149.68

County-based monthly precipitation totals are calculated using an average of all available full-month precipitation totals within that County from the following networks: Community Collaborative Rain, Hail and Snow network (CoCoRaHS), Cooperative Weather Observer Program (Coop), and Automated Surface Observing Systems (ASOS) data.

Coop and ASOS sites are part of National Weather Service networks. CoCoRaHS is a community-based network of volunteers that report precipitation.

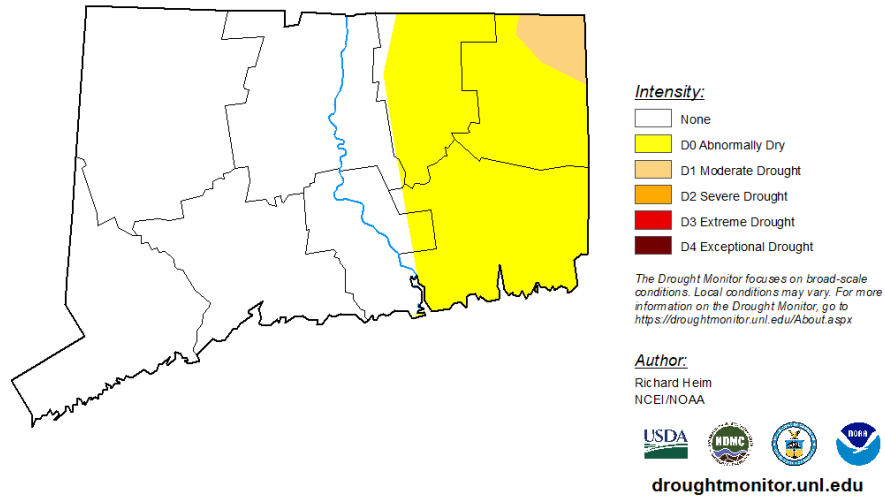
County-based monthly normals were calculated using 30-year precipitation normals from NOAA/National Centers for Environmental Information (NCEI) for the period of 1981-2010. Monthly normals from 42 stations (consisting of Coop and ASOS stations) were grouped by County to calculate a single monthly normal for each County.



Map 1. Palmer Drought Index from the Climate Prediction Center as of 5/28/2022. CT Palmer Drought Index values: Northwest +1.48 (Near Normal), Central -0.54 (Near Normal), Coastal -1.42 (Near Normal).

U.S. Drought Monitor
Connecticut

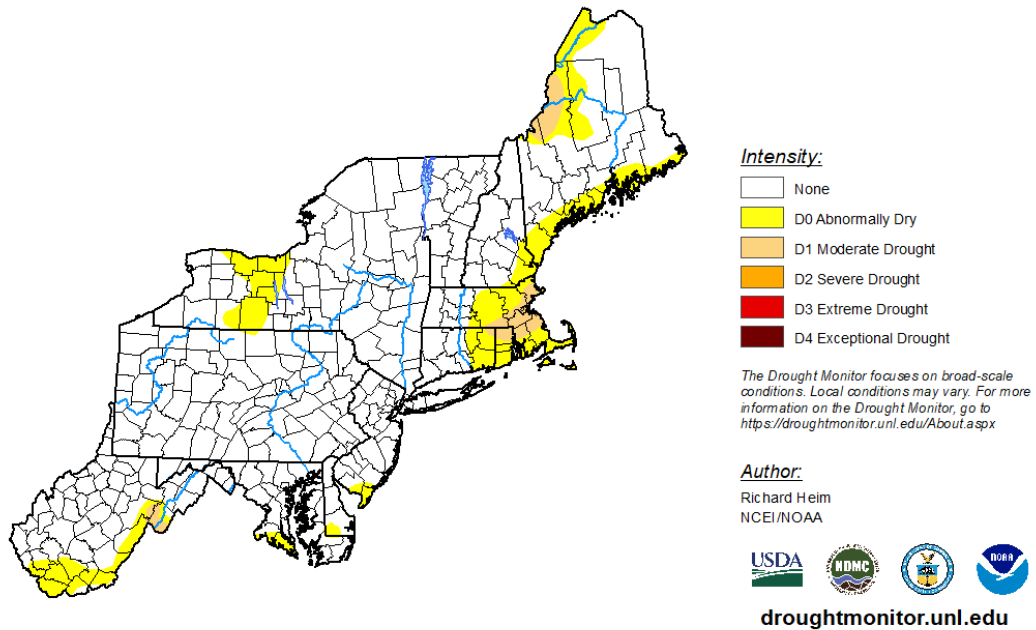
May 24, 2022
(Released Thursday, May. 26, 2022)
Valid 8 a.m. EDT



Map 2. U.S. Drought Monitor zoom-in on CT, effective 5/24/2022.

U.S. Drought Monitor
Northeast

May 24, 2022
(Released Thursday, May. 26, 2022)
Valid 8 a.m. EDT



Map 3. U.S. Drought Monitor for Northeast US, effective 5/24/2022.



U.S. Geological Survey

**Status of streamflow
and groundwater levels,
as of May 31, 2022**



Provisional data: subject to review and revision

Name	total	Number of wells below normal	Number of wells below normal for 2 or more consecutive months	Number of wells below normal for 3 or more consecutive months	Percent below normal	Percent stage 2	Percent stage 3
Fairfield	11	4	1	1	36.4	9.1	9.1
Hartford	10	5	1	0	50	10	0
Litchfield	5	2	0	0	40	0	0
Middlesex	7	5	3	0	71.4	42.9	0
New Haven	13	3	0	0	23.1	0	0
New London	5	5	2	0	100	40	0
Tolland	12	7	2	0	58.3	16.7	0
Windham	6	5	1	0	83.3	16.7	0

END OF MAY 2022 GROUNDWATER SUMMARY BY COUNTY



Provisional data: subject to review and revision

Name	total	Number of streamgages below normal	Number of streamgages below normal for 2 or more consecutive months	Number of streamgages below normal for 3 or more consecutive months	Percent below normal	Percent stage 2	Percent stage 3
Fairfield	13	1	0	0	7.7	0	0
Hartford	11	0	0	0	0	0	0
Litchfield	10	0	0	0	0	0	0
Middlesex	4	2	0	0	50	0	0
New Haven	8	0	0	0	0	0	0
New London	7	4	1	0	57.1	14.3	0
Tolland	3	1	0	0	33.3	0	0
Windham	10	9	0	0	90	0	0

MAY 2022 STREAMFLOW SUMMARY BY COUNTY



Provisional data: subject to review and revision

Surface Reservoir Capacity Measurements and Trends

5/20/2022 Update

USDM adds D0-abnormally dry to CT due to dryness eastern CT!

Thirty-four surface water systems measure their reservoir capacities weekly and report the readings to the Drinking Water Section (DWS). The attached table summarizes the most recent measurements in percent full and shows the week-to-week trend of their capacities.

Key takeaways:

$\geq 100\%$ of Normal $n=34$

31

Change since last week:

+1

State Average

98.5 %

Last week:

98.8%

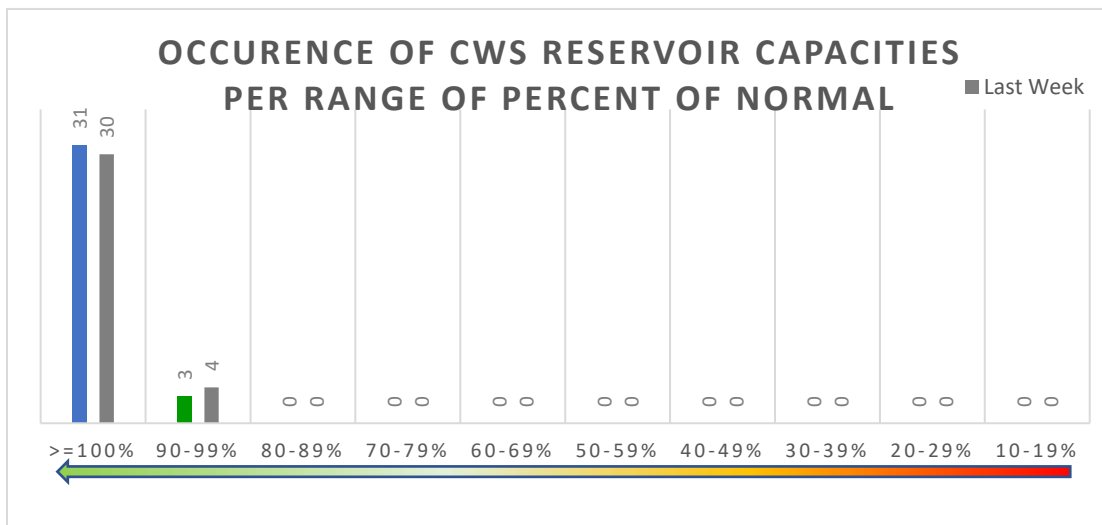
Average Percent of Normal

101.4%

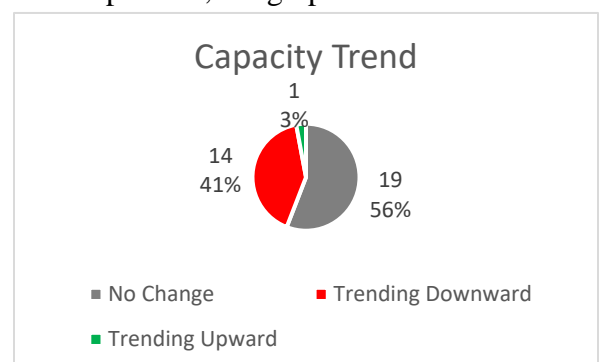
Last week:

101.6%

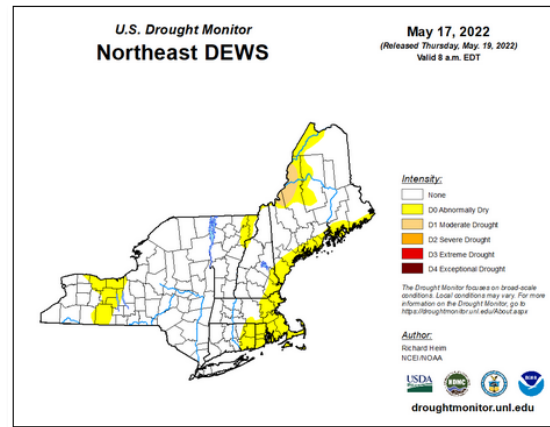
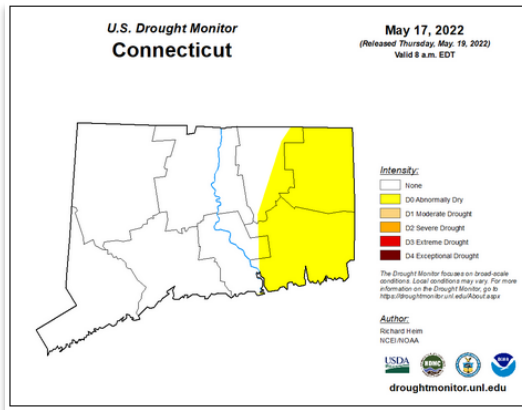
- 18 reservoir systems have reported that they are currently at 100% full (0 change since last week).



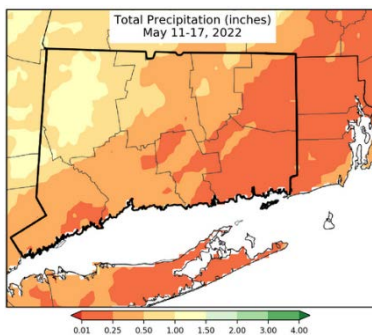
- The gray bars indicate last week's measurements. Under normal capacities, the graph above would have all of the systems in the $\geq 100\%$ of normal column ($n=34$).
- 1 system's short-term week to week trend is upward (-1 since last week).** 14 systems are trending downward in capacity from their previous measurements (+2 from last week). 19 systems have had no change in capacity (-1 since last week).
- No systems under a drought stage!**



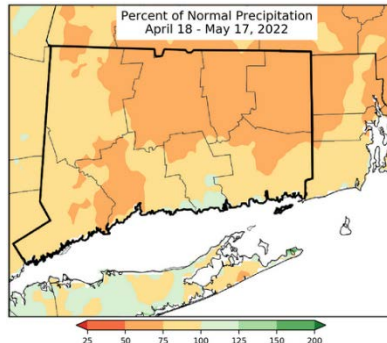
- US Drought Monitor: –D0-abnormally dry has been added to eastern CT since last week.
<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CT>



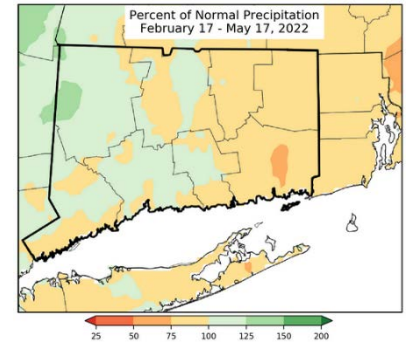
- Between May 11-17 low amounts of rain have fallen in eastern CT. The entire state ranged >.01 to 1.5 inches of precipitation falling (Map 1). The 30-day Percent of Normal Precipitation map shows dry conditions throughout the state (Map 2). For the last 90-days, the state has remained the same with the Percent of Normal between 75 to 150% (Map 3). Eastern CT shows long term deficits. Streamflows and groundwater show below normal conditions throughout the state.



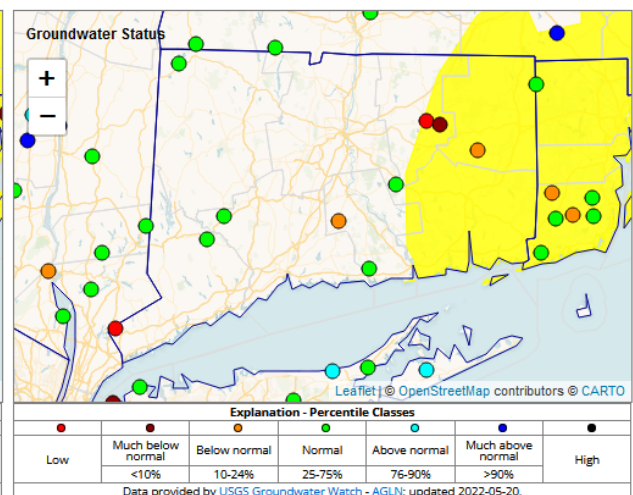
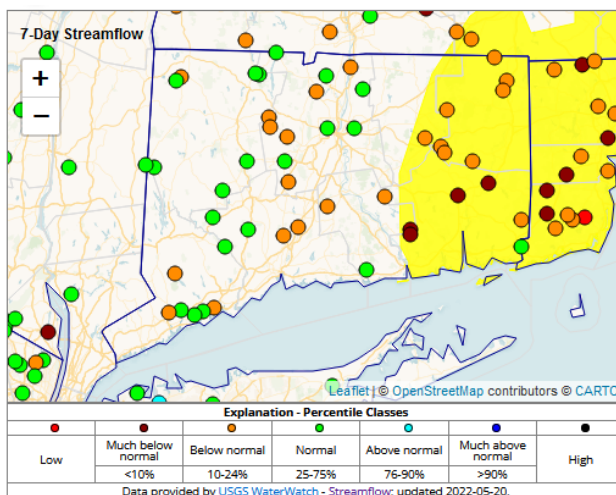
Map 1- 7 Day Total Precipitation



Map 2- 30 Day Percent of Normal Precipitation



Map 3 – 90 Day Percent of Normal Precipitation



PWSID	PWS Name	Most Recent Reading Date	Percent Full	Current Status	Trend	Historical Average	Percent of Normal	Previous Date	Previous Percent Full	County_Served
CT1030011	Norwalk First Taxing District	5/15/2022	94.70	No Drought Stage	--	97.40	97	5/8/2022	94.70	FAIRFIELD
CT0090011	Bethel Water Dept	5/15/2022	100.00	No Drought Stage	--	97.90	102	5/8/2022	100.00	FAIRFIELD
CT0570011	Aquarion Water Co of CT-Greenwich Syster	4/24/2022	99.40	No Drought Stage	↓	97.30	102	4/17/2022	99.60	FAIRFIELD
CT0150011	Aquarion Water Co of CT-Main System	4/24/2022	99.90	No Drought Stage	↓	98.20	102	4/17/2022	100.00	FAIRFIELD
CT1030021	South Norwalk Electric & Water	5/16/2022	100.00	No Drought Stage	--	97.40	103	5/9/2022	100.00	FAIRFIELD
CT0340011	Danbury Water Department	5/10/2022	100.00	No Drought Stage	--	96.00	104	5/1/2022	100.00	FAIRFIELD
CT1350011	Aquarion Water Co of CT-Stamford	4/24/2022	99.90	No Drought Stage	↓	94.50	106	4/17/2022	100.00	FAIRFIELD
CT0770021	Manchester Water Department	5/15/2022	100.00	No Drought Stage	--	100.20	100	5/8/2022	100.00	HARTFORD
CT0170011	Bristol Water Department	5/15/2022	98.40	No Drought Stage	↓	97.40	101	5/1/2022	98.80	HARTFORD
CT0473011	CTWC - Northern Reg-Western System	5/12/2022	98.10	No Drought Stage	↓	96.60	102	5/5/2022	100.00	HARTFORD
CT0640011	Metropolitan District Commission	5/16/2022	99.70	No Drought Stage	↓	96.90	103	5/9/2022	99.90	HARTFORD
CT1310011	Southington Water Department	5/14/2022	100.00	No Drought Stage	--	97.20	103	5/7/2022	100.00	HARTFORD
CT0890011	New Britain Water Department	5/12/2022	94.90	No Drought Stage	↓	91.30	104	5/5/2022	96.20	HARTFORD
CT1430011	Torrington Water Company	5/13/2022	87.30	No Drought Stage	--	94.90	92	5/6/2022	87.30	LITCHFIELD
CT1620011	Winsted Water Works	5/15/2022	100.00	No Drought Stage	--	99.90	100	5/8/2022	100.00	LITCHFIELD
CT0980011	Aquarion Water Co of CT-Norfolk System	4/24/2022	100.00	No Drought Stage	--	99.80	100	4/17/2022	100.00	LITCHFIELD
CT1220011	Aquarion Water Co of CT-Salisbury Sys	4/24/2022	100.00	No Drought Stage	--	99.40	101	4/17/2022	100.00	LITCHFIELD
CT1250011	Sharon Water & Sewer Commission	5/7/2022	100.00	No Drought Stage	--	95.10	105	4/30/2022	100.00	LITCHFIELD
CT0261031	CTWC - Shoreline Region-Chester System	5/12/2022	98.70	No Drought Stage	↓	97.40	101	5/5/2022	99.70	MIDDLESEX
CT0830011	Middletown Water Department	5/8/2022	100.00	No Drought Stage	--	97.50	103	5/1/2022	100.00	MIDDLESEX
CT0830021	Connecticut Valley Hospital	5/9/2022	100.00	No Drought Stage	--	95.30	105	5/2/2022	100.00	MIDDLESEX
CT1510011	Waterbury Water Department	5/8/2022	97.30	No Drought Stage	↓	97.90	99	5/5/2022	98.80	NEW HAVEN
CT0608011	CTWC - Shoreline Region-Guilford System	5/12/2022	100.00	No Drought Stage	--	99.60	100	5/5/2022	100.00	NEW HAVEN
CT0800011	Meriden Water Division	5/1/2022	96.30	No Drought Stage	↓	96.20	100	4/24/2022	96.70	NEW HAVEN
CT0880011	CTWC - Naugatuck Region-Central System	5/12/2022	100.00	No Drought Stage	--	98.90	101	5/5/2022	100.00	NEW HAVEN
CT0930011	Regional Water Authority	5/15/2022	97.80	No Drought Stage	↓	95.40	102	5/8/2022	98.20	NEW HAVEN
CT1480011	Wallingford Water Department	5/13/2022	95.60	No Drought Stage	↓	92.50	103	4/29/2022	97.20	NEW HAVEN
CT0580011	Jewett City Water Company	5/9/2022	100.00	No Drought Stage	--	99.80	100	5/2/2022	100.00	NEW LONDON
CT0590011	Groton Utilities	5/9/2022	99.40	No Drought Stage	↓	98.70	101	5/2/2022	99.50	NEW LONDON
CT1040011	Norwich Public Utilities	5/14/2022	100.00	No Drought Stage	--	99.30	101	5/7/2022	100.00	NEW LONDON
CT1370011	Aquarion Water Co of CT-Mystic	4/24/2022	100.00	No Drought Stage	--	99.30	101	4/17/2022	100.00	NEW LONDON
CT0950011	New London Dept. of Public Utilities	5/15/2022	91.40	No Drought Stage	↓	88.70	103	5/8/2022	92.60	NEW LONDON
CT1340011	CTWC - Northern Reg-Stafford System	5/12/2022	100.00	No Drought Stage	↑	99.90	100	5/5/2022	99.20	TOLLAND
CT1630011	Windham Water Works	5/15/2022	100.00	No Drought Stage	--	100.00	100	5/8/2022	100.00	WINDHAM

		98.49	97.17	101.36	Ave Percent of Normal by County	
↑	-Increase since last measurement (less than 10% increase)	Number of systems: Greater than or equal to 100% of Normal Between 90% and 99% of Normal Less than 90% of Normal At 100% Full			102.29	FAIRFIELD
↑↑	-Increase since last measurement (10% or greater increase)		31		102.17	HARTFORD
↓	-Decrease since last measurement (less than 10% decrease)		3		99.60	LITCHFIELD
↓↓	-Decrease since last measurement (10% or greater decrease)		0		103.00	MIDDLESEX
--	- Same measurement as the previous measurement		18		100.83	NEW HAVEN
					101.20	NEW LONDON
					100.00	TOLLAND

Water Resources, Fisheries, and Forestry Conditions Report
Provided on 6/1/2022 by Doug Hoskins
Department of Energy and Environmental Protection

Status of water resources –

- Our DEEP stream observers have noted low flows in the eastern part of the state consistent with the USGS gage readings. No comments from any water diversion permittees or calls of concern from the general public.

Fisheries impacts-

- Nothing to report

Fire danger-

- The calendar driven Spring Fire Season is over, so far 74 fires at 269 acres officially recorded, but that is not all the fires CT has had this year. We did have a few larger fires influencing the number this spring (160 acre fire and 21 acre fire). We don't capture all of the statistics, and people are still entering data. Things have somewhat moderated with full green up/leaf out, but if we continue with limited rain in the forecast, we may find ourselves seeing summer drought fires earlier than later, which would include fires that are harder to extinguish because they get into the ground. Currently the Fire Danger is Moderate.

Department of Agriculture – Drought Status Report

Parameter	Reported Conditions			
	As of 5/3/22		As of 6/2/22	
	Report Date	Status	Report Date	Status
Palmer Drought Severity Index (map)	4/30/22	Most of the state showing near normal conditions. Litchfield County experiencing a moist spell.	5/28/22	Entire state shows near normal conditions.
Palmer drought severity index (data)	4/30/22	Northwest: 2.72 Central: 1.27 Coastal: -0.66	5/28/22	Northwest: 1.48 Central: -0.54 Coastal: -1.42
Precipitation needed to end drought (in.)	5/5/22	Northwest: 0 Central: 0 Coastal: 1.39	5/28/22	Northwest: 0 Central: 1.23 Coastal: 3.77
Crop Moisture (current map)	4/30/22	Northwest CT shows abnormally moist. Most of the state shows slightly dry/favorably moist.	5/28/22	Entire state shows favorably dry, with NW CT showing slightly more crop moisture.
Topsoil moisture (current map)	5/1/22	Shows that 8% of land area as short-very short in topsoil moisture	5/29/22	Favorable conditions- map shows 5% of CT land area as short-very short in topsoil moisture.
Topsoil moisture (current vs. 5 yr. mean)	5/1/22	Shows that we are drier than the 5-year mean on 4% of land area short-very short	5/29/22	Map shows 3% less topsoil area in CT as short-very short vs the 5-year mean.
Veg DRI (% of CT land area shown as pre-drought, moderate, severe or extreme)	5/1/22	Shows about 3.6% of the state in pre-drought or higher	5/29/22	87% of cropland is near normal 6% of cropland is in “pre-drought stress” 1.5% is in moderate drought or higher
Drought Monitor Report for CT	5/3/22	The state continues to show 100% of the state in no-drought conditions	5/31/22	As of 5/31, 47.8% of the state was abnormally dry, mostly in Eastern CT. 21.2% of the state was in “Moderate Drought”, all within Eastern CT.
NASS Crop Progress Report (New England)	5/1/22	Shows 65% of land area in New England has adequate or better topsoil moisture and 88% of land area has adequate or better subsoil moisture.	5/3/22	Shows 55% of topsoil moisture as adequate and 45% as surplus. Subsoil this week was 76% subsoil was adequate, 22% was surplus, and 2% was short.

Summary: Data from all of these indicators showed slightly dry conditions in eastern CT heading into June 1, with some relief expected from 6/1 - 6/3. Farmers took advantage of 3 days of favorable field conditions this week in most of the state.

Explanatory notes:

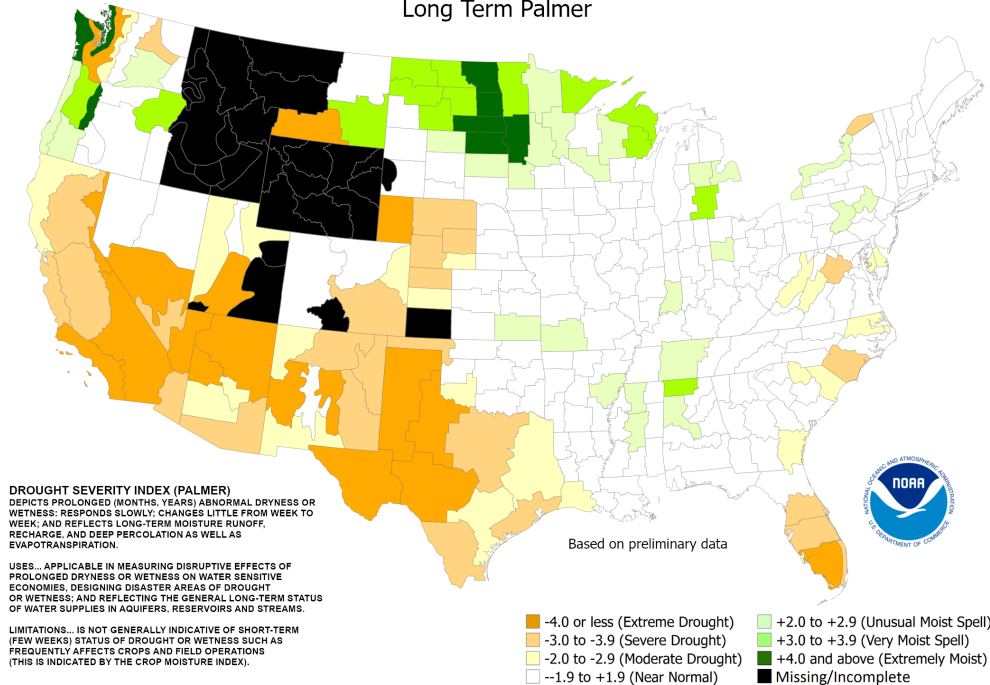
Palmer Drought Severity Index: The Palmer Drought Severity Index (PDSI) uses readily available temperature and precipitation data to estimate relative dryness. It is a standardized index that generally spans -10 (dry) to +10 (wet). Maps of operational agencies like NOAA typically show a range of -4 to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

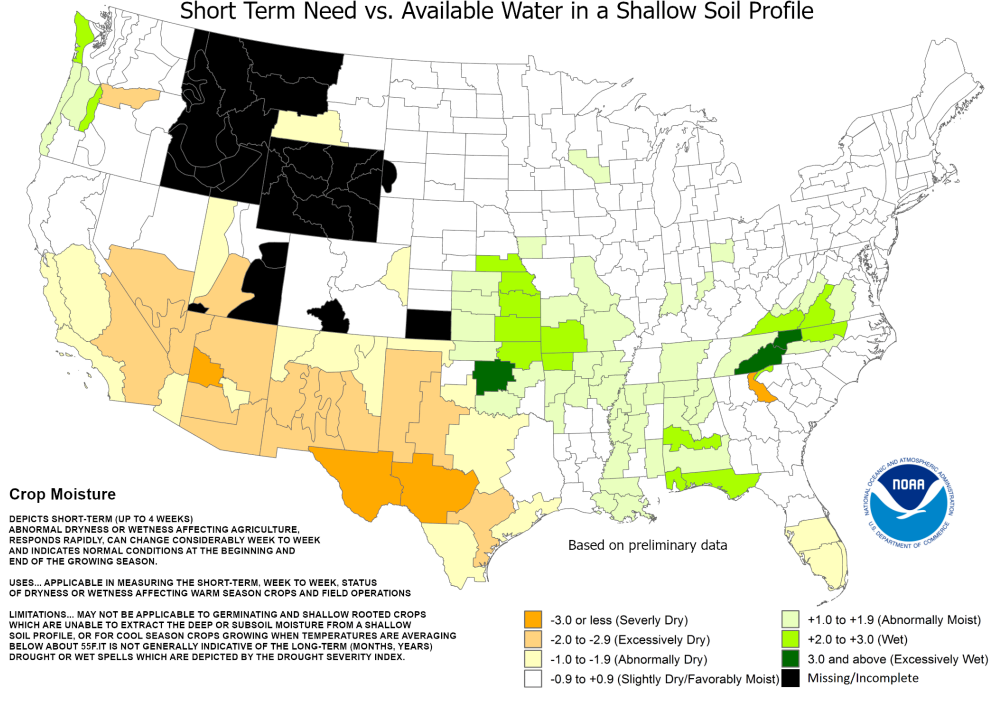
Topsoil moisture: Topsoil Moisture Monitoring maps are based on United States Department of Agriculture state reports of topsoil moisture conditions. Means are calculated from historical weekly data published by USDA/NASS using the closest date to the equivalent date for the year. Results are based on the short and very short percentages 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://vegdrv.unl.edu/Home/VegDRITables.aspx?CT>.

Drought Severity Index by Division Weekly Value for Period Ending May 28, 2022 Long Term Palmer



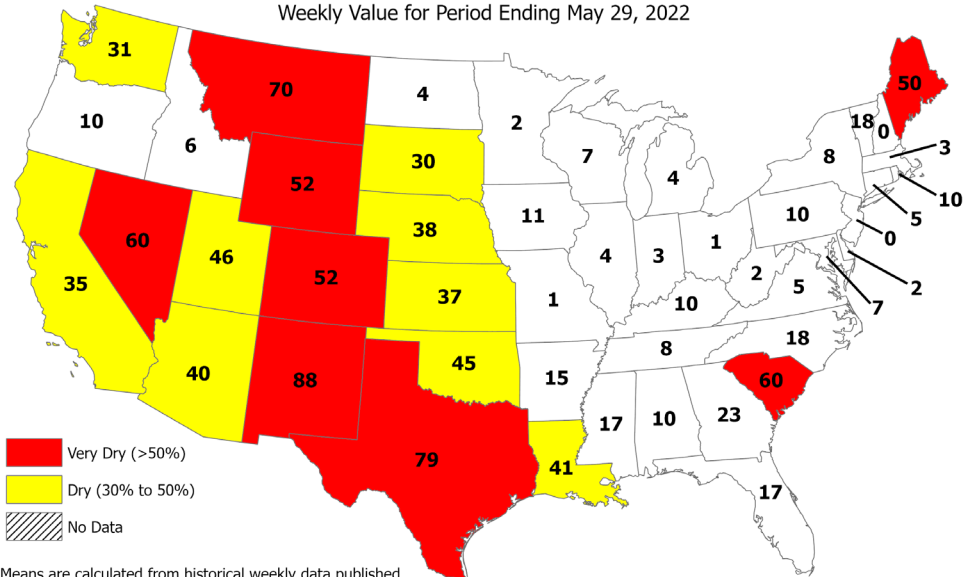
Crop Moisture Index by Division Weekly Value for Period Ending May 28, 2022 Short Term Need vs. Available Water in a Shallow Soil Profile



USDA Topsoil Moisture by Short-Very Short

Percent of State Area

Weekly Value for Period Ending May 29, 2022



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

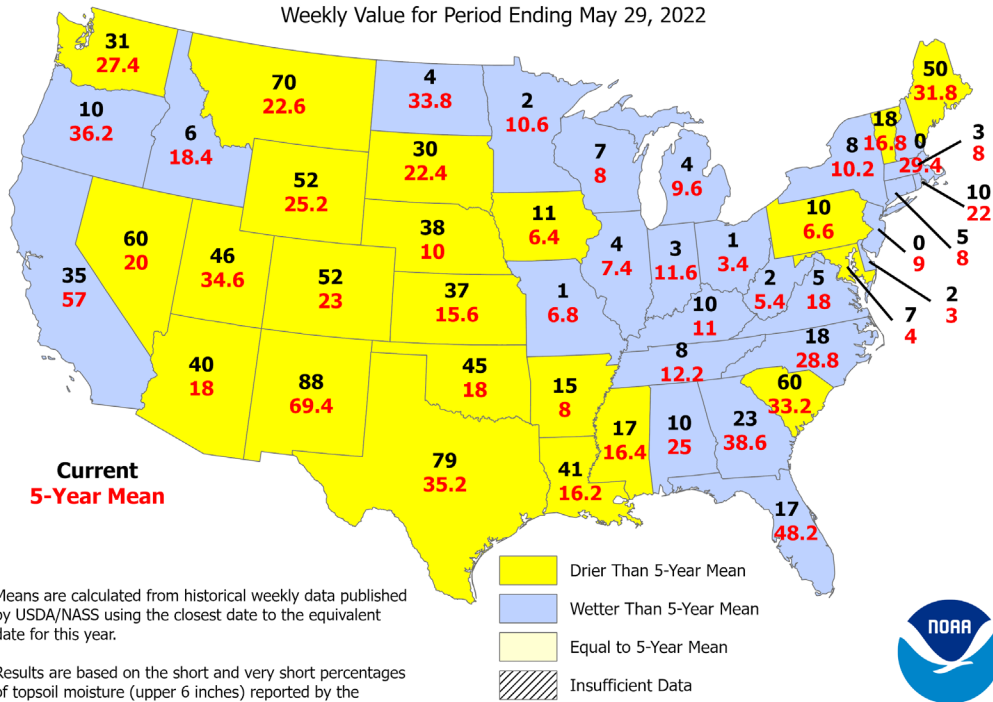
Results are based on the short and very short percentages of topsoil moisture (upper 6 inches) reported by the USDA. Reports are based on subjective observations.



USDA Topsoil Moisture by Short-Very Short

Current Vs. 5-Year Mean

Weekly Value for Period Ending May 29, 2022



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

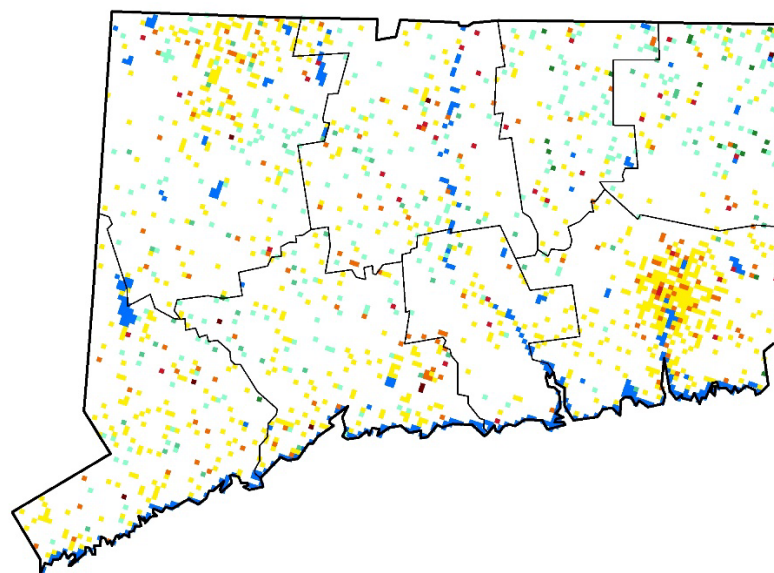
Results are based on the short and very short percentages of topsoil moisture (upper 6 inches) reported by the USDA. Reports are based on subjective observations.



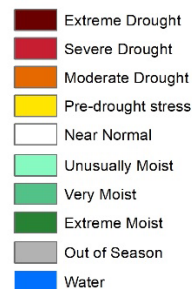
Vegetation Drought Response Index

Complete: Connecticut

May 29, 2022



Vegetation Condition



U.S. Drought Monitor Connecticut

May 31, 2022

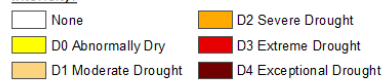
(Released Thursday, Jun. 2, 2022)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	52.20	47.80	21.21	0.00	0.00	0.00
Last Week 05-24-2022	67.77	32.23	2.09	0.00	0.00	0.00
3 Months Ago 03-01-2022	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2022	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 09-28-2021	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago 06-01-2021	100.00	0.00	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>

Author:

Curtis Riganti
National Drought Mitigation Center



droughtmonitor.unl.edu

