### Connecticut Drought Conditions Report

Monthly Update for October 2022

Connecticut Water Planning Council Interagency Drought Workgroup November 3, 2022 Regular Meeting

### **CT Interagency Drought Workgroup**

**Regular Meeting** 

**November 3, 2022** 

1:00 PM - 3:00 PM

VIA Microsoft Teams

### Join on your computer or mobile app

Meeting ID: 247 269 426 452 Passcode: d7hPSg

### Or call in (audio only)

+1 860-840-2075,,375183566# Phone Conference ID: 375 183 566#

### Agenda

- 1. Call to order
- 2. Seating of voting members
- 3. Minutes VOTE
  - a. October 6, 2022
- 4. Business
  - a. Review of hydrologic conditions
    - i. Review October monthly data
    - ii. Review any data available for November month-to-date
  - b. Drought stage recommendations VOTE
  - c. Drought Plan
    - i. Priority level review
    - ii. Items for Water Planning Council
  - d. Next regular meeting December 8, 2022
  - e. Other Business
- 5. Public Comment
- 6. Adjourn

Stage 2 Drought Trigger Summary by Region November 3, 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	124%	114%	121%	Not available	130%	125%	125%	137%	10/31/2022	
Ground Water (2)	Two out of three months below the 25th percentile	≤25% stations meet trigger	30% stations meet trigger	60% stations meet trigger	43% stations meet trigger	≤25% stations meet trigger	40% stations meet trigger	42% stations meet trigger	33% stations meet trigger	10/31/2022	
Streamflow (3)	Two out of three months below the 25th percentile	≤25% stations meet trigger	≤25% stations meet trigger	30% stations meet trigger	≤25% stations meet trigger	10/31/2022					
Reservoirs (4)	Average levels less than 80% of normal	79% of normal	87% of normal	79% of normal	103% of normal	86% of normal	93% of normal	103% of normal	100% of normal	10/31/2022	
Palmer Drought Severity Index (5)	-2.9 to -2.0	-0.05	0.93	0.24	-0.05	-0.05	-0.05	0.93	0.93	10/29/2022	
Crop Moisture Index (6)	-1.9 to -1.0	0.94	1.16	0.99	0.94	0.94	0.94	1.16	1.16	10/29/2022	
VegDRI (seasonal) (7)	Pre-drought stress		Unreliable data - late in growing season								
Fire Danger (8)	Moderate	Low	Low	Low	Low	Low	Low	Low	Low	11/3/2022	
U.S. Drought Monitor (9)	Intensity level D1-D2	D0-D1	D0	D0-D1	N/A	D0	N/A	N/A	N/A	11/3/2022	

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

### 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 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 November 3rd 2022

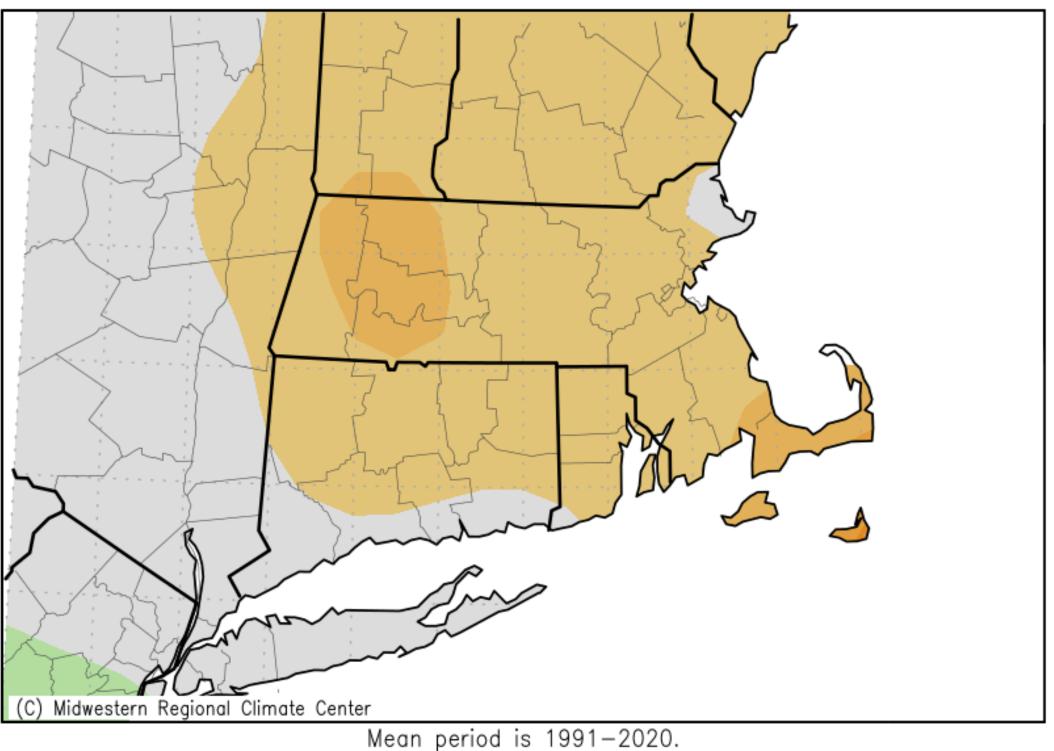
Prepared by: NWS WFO Boston/Norton, MA & NWS WFO Albany, NY



### Boston/Norton MA

WEATHER FORECAST OFFICE

Average Temperature (°F): Departure from Mean October 1, 2022 to October 31, 2022





Midwestern Regional Climate Center

cli-MATE: MRCC Application Tools Environment

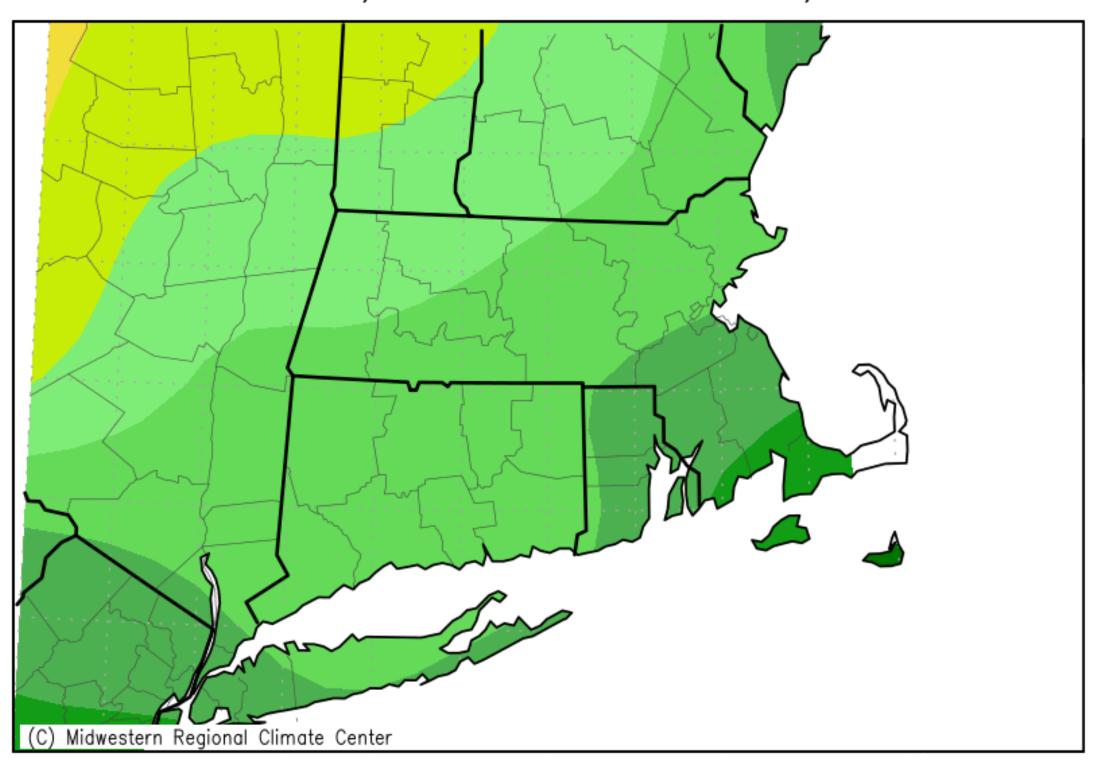
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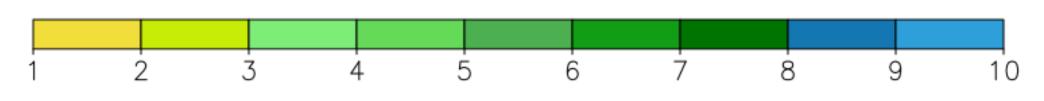


### Boston/Norton MA

WEATHER FORECAST OFFICE

Accumulated Precipitation (in) October 1, 2022 to October 31, 2022





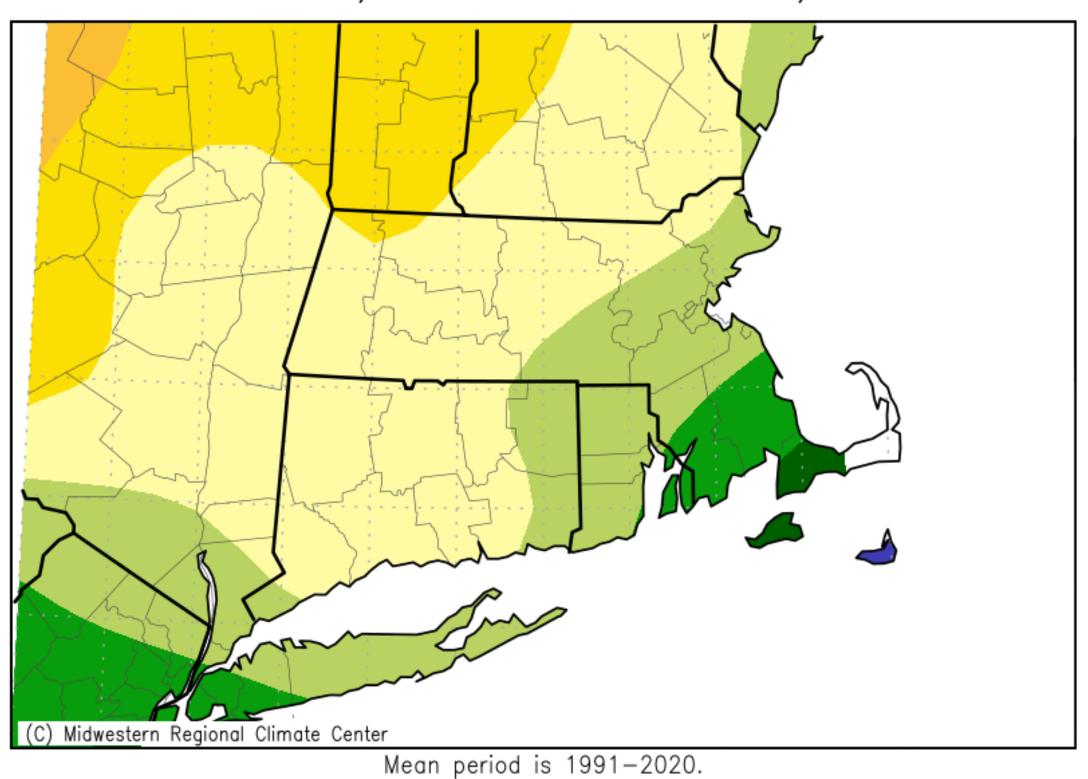
Midwestern Regional Climate Center

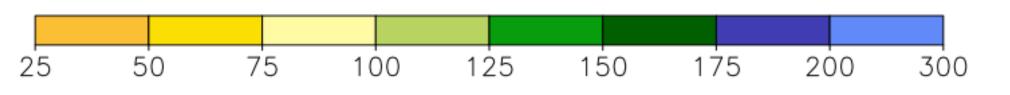
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## Boston/Norton MA WEATHER FORECAST OFFICE

Accumulated Precipitation: Percent of Mean October 1, 2022 to October 31, 2022





Midwestern Regional Climate Center

cli-MATE: MRCC Application Tools Environment

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### Rainfall Tables for 2 and 3 Months



### Boston/Norton MA

WEATHER FORECAST OFFICE

CT 2-month Sep-Oct 22	Rainfall	Departure	Percent	Normal
Litchfield	11.22	1.98	121	9.24
Hartford	10.45	1.28	114	9.17
Tolland	10.88	2.19	125	8.69
Windham	11.81	3.18	137	8.63
Fairfield	10.95	2.13	124	8.82
New Haven	11.16	2.58	130	8.58
Middlesex	M	M	M	9.06
New London	10.67	2.14	125	8.53

CT 3-month Aug-Oct 22	Rainfall	Departure	Percent	Normal
Litchfield	13.27	-0.36	97	13.63
Hartford	13.43	-0.08	99	13.51
Tolland	15.15	2.49	120	12.66
Windham	15.37	2.57	120	12.8
Fairfield	12.29	-0.98	93	13.27
New Haven	14.3	1.77	114	12.53
Middlesex	M	M	M	13.08
New London	13.84	0.84	106	13

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### Rainfall Tables for 5 and 6 Months



# Boston/Norton MA WEATHER FORECAST OFFICE

CT 5-month Jun-Oct 22	Rainfall	Departure	Percent	Normal
Litchfield	18.97	-3.84	83	22.81
Hartford	19.48	-3.22	86	22.7
Tolland	21.1	-0.07	100	21.17
Windham	21.43	0.03	100	21.4
Fairfield	18.75	-3.23	85	21.98
New Haven	19.48	-1.48	93	20.96
Middlesex	M	M	M	22.42
New London	18.35	-2.45	88	20.8

CT 6-month May-Oct 22	Rainfall	Departure	Percent	Normal
Litchfield	23	-4.22	84	27.22
Hartford	21.96	-5.16	81	27.12
Tolland	23.65	-1.62	94	25.27
Windham	22.64	-2.78	89	25.42
Fairfield	22.25	-4.12	84	26.37
New Haven	22.29	-2.91	88	25.2
Middlesex	M	M	M	26.64
New London	20.56	-4	84	24.56

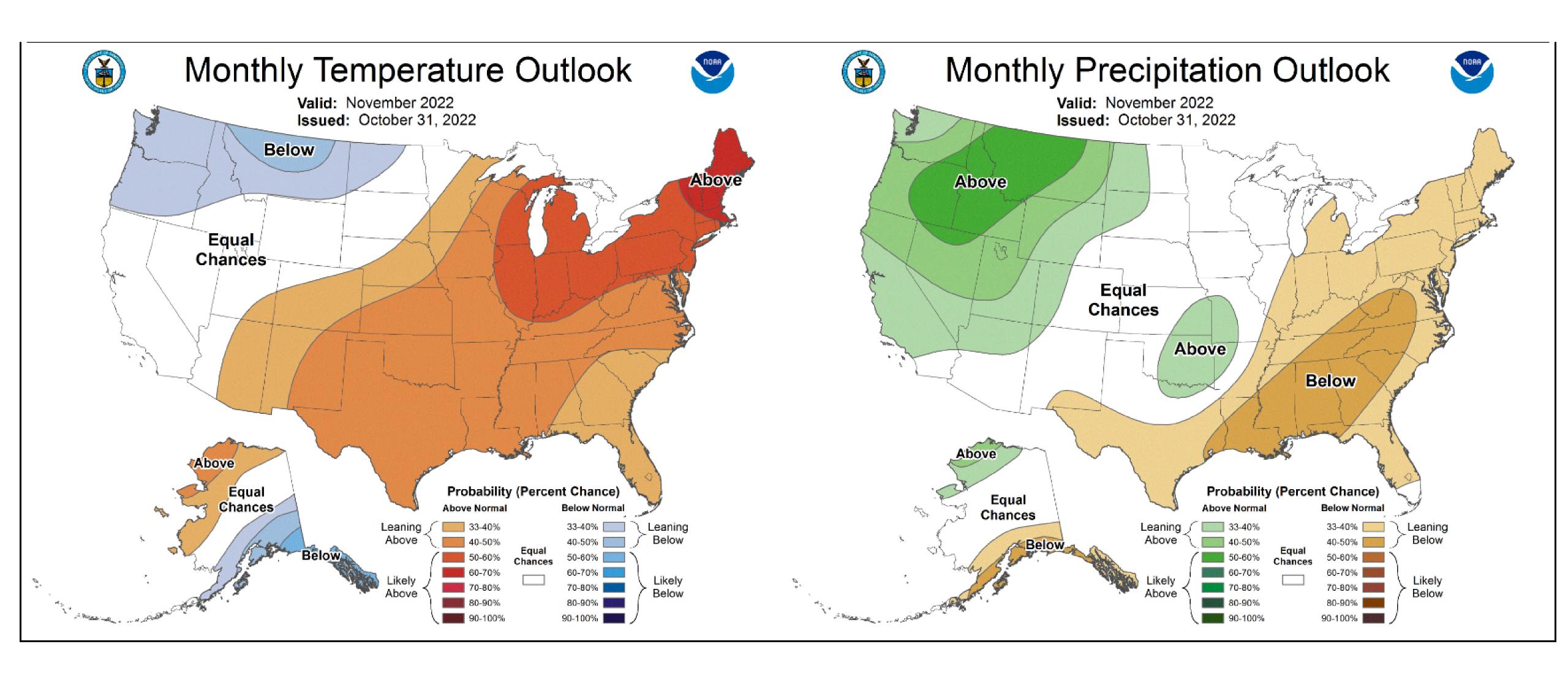
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### CPC Outlook for November

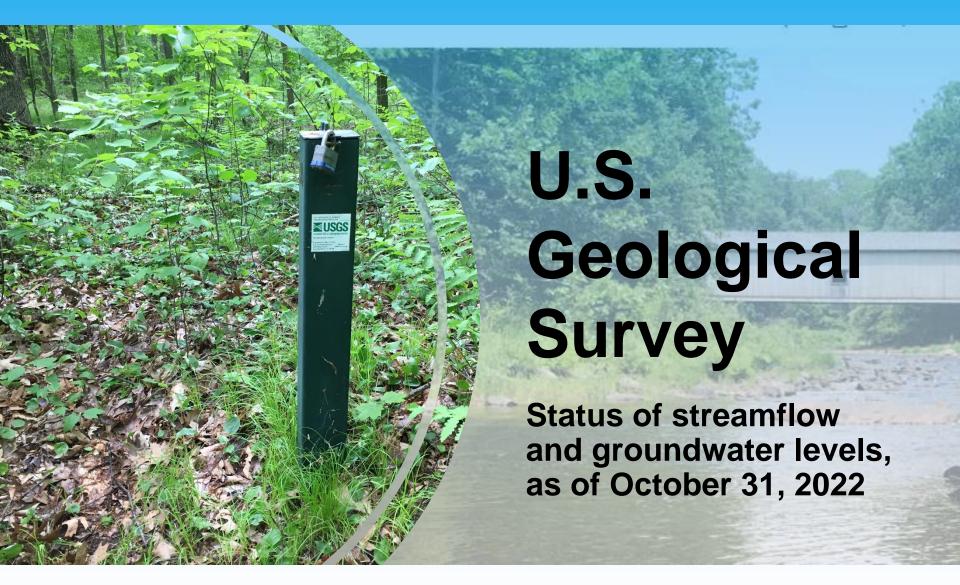


### Boston/Norton MA

WEATHER FORECAST OFFICE



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			Number of wells	Number of wells			
		Number of	below normal	below normal			
		wells	for >=2 out of	for 4 or more	Percent		
		below	the last 3	consecutive	below	Percent	Percent
Name	total	normal	months	months	normal	stage 2	stage 3
Fairfield	11	1	2	0	9.1	18.2	0
Hartford	10	3	3	1	30	30	10
Litchfield	5	2	3	0	40	60	0
Middlesex	7	1	3	0	14.3	42.9	0
New Haven	13	2	3	2	15.4	23.1	15.4
New London	5	1	2	1	20	40	20
Tolland	12	3	5	3	25	41.7	25
Windham	6	2	2	0	33.3	33.3	0

END OF OCTOBER 2022
GROUNDWATER SUMMARY BY
COUNTY



			Number of	Number of			
			streamgages	streamgages			
		Number of	below normal	below normal			
		streamgages	for >=2 out of	for >=4 out of	Percent		
		below	the last 3	the last 5	below	Percent	Percent
Name	total	normal	months	months	normal	stage 2	stage 3
Fairfield	13	1	1	1	7.7	7.7	7.7
Hartford	11	1	2	2	9.1	18.2	18.2
Litchfield	10	0	3	3	0	30	30.0
Middlesex	4	0	0	0	0	0	0.0
New Haven	8	1	1	1	12.5	12.5	12.5
New London	7	0	0	0	0	0	0.0
Tolland	3	0	0	0	0	0	0.0
Windham	10	0	0	0	0	0	0.0

### OCTOBER 2022 STREAMFLOW SUMMARY BY COUNTY



### Surface Reservoir Capacity Measurements and Trends

10/28/2022 Update

### USDM Continues to Improve Several Areas in CT!

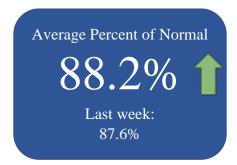
Thirty-four surface water systems measure their reservoir capacities weekly and report the readings to the Drinking Water Section (DWS). The attached table summarizes the most recent measurements in percent full and shows the week-to-week trend of their capacities.

### **Key takeaways**:

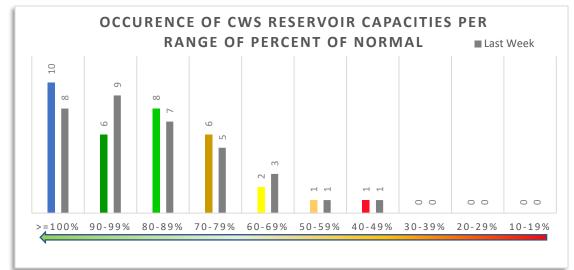
>= 100% of Normal n=34  $\frac{10}{10}$  Change since last week:

State Average
71.1 %

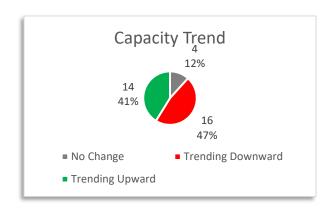
Last week:
70.7%



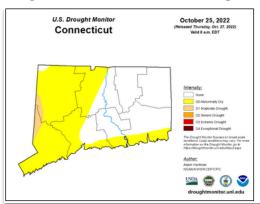
• 3 reservoir systems have reported that they are currently at 100% full (No change since last week).

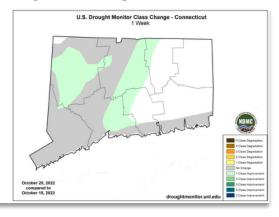


- The gray bars indicate last week's measurements and the colored bar is the current measurement. In non-drought conditions, the graph above would have all of the systems in the >=100% of normal column (n=34).
- 14 system's short-term week to week trend is upward (+1 since last week). 16 systems are trending downward in capacity from their previous measurements (No change since last week). 4 systems have had no change in capacity (-1 last week).

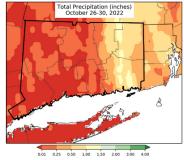


- **Eight systems** have reported they are in the first stage of their drought plan. Several systems are requesting voluntary and mandatory water use conservation.
- One system is in their 2<sup>nd</sup> drought stage.
- **US Drought Monitor**: Continues to make improvement across CT. 1 class improvement in several areas in the state.
- https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CT

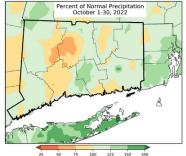


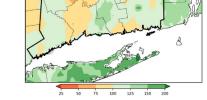


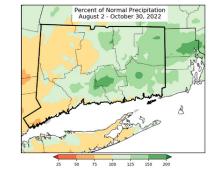
Between October 26<sup>th</sup> and October 30<sup>th</sup>, the entire state received rain ranging from 0.5 to 1.5 inches. (Map 1). Most of the rain was in the Western part of the state. The 30-day Percent of Normal Precipitation map continues to show positive impacts from the recent rains. However, there are still areas of the state are still below normal precipitation (Map 2). The long-term trend over the last 90-days still shows some dryness in eastern CT (Map 3). Streamflow continues to show normal levels across CT. Groundwater can be found here. Groundwater still shows some low measurements in the central and north-western parts of the state.



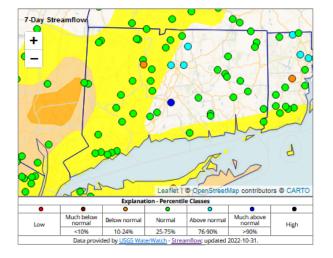
Map 1-7 Day Total Precipitation

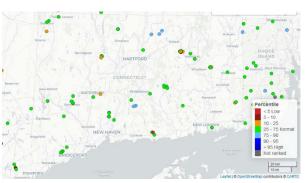






Map 2-30 Day Percent of Normal Precipitation Map 3 - 90 Day Percent of Normal Precipitation





PWSID	PWS Name	Most Recent Reading Date	Percent Full	Current Status	Trend H	Historical Average	Percent of Normal	Previous Date	Previous Percent Fu	II County_Served
CT1030011	Norwalk First Taxing District	10/23/2022	40.00	Drought Alert	<u></u>	70.70	57	10/16/2022	41.60	FAIRFIELD
CT0570011	Aquarion Water Co of CT-Greenwich Syster	10/9/2022	45.30	No Drought Stage	<u> </u>	65.20	69	10/2/2022	53.30	FAIRFIELD
CT1030021	South Norwalk Electric & Water	10/3/2022	44.80	Drought Advisory	<b>↓</b>	60.70	74	9/26/2022	47.90	FAIRFIELD
CT0150011	Aquarion Water Co of CT-Main System	10/9/2022	63.30	No Drought Stage	<u> </u>	81.40	78	10/2/2022	64.60	FAIRFIELD
CT1350011	Aquarion Water Co of CT-Stamford	10/9/2022	55.70	No Drought Stage	<b>↓</b>	67.00	83	10/2/2022	56.40	FAIRFIELD
CT0340011	Danbury Water Department	10/16/2022	68.40	Advisory	<u> </u>	77.50	88	10/9/2022	69.70	FAIRFIELD
CT0090011	Bethel Water Dept	10/23/2022	99.40	No Drought Stage	Ψ	93.90	106	10/16/2022	99.50	FAIRFIELD
CT0473011	CTWC - Northern Reg-Western System	10/20/2022	60.20	No Drought Stage	<b>^</b>	78.30	77	10/13/2022	58.30	HARTFORD
CT0770021	Manchester Water Department	10/23/2022	68.10	Drought Alert	<b>↑</b>	83.70	81	10/16/2022	66.90	HARTFORD
CT0170011	Bristol Water Department	10/23/2022	67.20	Drought Advisory	<u> </u>	80.50	84	10/9/2022	68.10	HARTFORD
CT1310011	Southington Water Department	10/22/2022	54.70	No Drought Stage	<b>↑</b>	63.70	86	10/15/2022	54.10	HARTFORD
CT0890011	New Britain Water Department	10/20/2022	58.70	Drought Alert	<u> </u>	63.60	92	10/13/2022	58.90	HARTFORD
CT0640011	Metropolitan District Commission	10/24/2022	85.60	No Drought Stage	<u> </u>	84.80	101	10/17/2022	86.00	HARTFORD
CT1220011	Aquarion Water Co of CT-Salisbury Sys	10/9/2022	42.30	No Drought Stage	1	90.10	47	10/2/2022	36.40	LITCHFIELD
CT1430011	Torrington Water Company	10/21/2022	49.10	No Drought Stage	<u> </u>	72.70	67	10/14/2022	49.80	LITCHFIELD
CT0980011	Aquarion Water Co of CT-Norfolk System	10/9/2022	85.40	No Drought Stage	<b>↑</b>	97.70	87	10/2/2022	81.80	LITCHFIELD
CT1620011	Winsted Water Works	10/23/2022	88.90	No Drought Stage		95.60	93	10/16/2022	88.90	LITCHFIELD
CT1250011	Sharon Water & Sewer Commission	10/22/2022	100.00	No Drought Stage		96.90	103	10/15/2022	100.00	LITCHFIELD
CT0261031	CTWC - Shoreline Region-Chester System	10/20/2022	88.10	No Drought Stage	1	88.60	99	10/13/2022	84.50	MIDDLESEX
CT0830021	Connecticut Valley Hospital	10/17/2022	97.10	No Drought Stage	<b>↑</b>	92.70	105	10/10/2022	94.70	MIDDLESEX
CT0830011	Middletown Water Department	10/16/2022	76.70	No Drought Stage	<b>^</b>	73.10	105	10/9/2022	75.70	MIDDLESEX
CT1510011	Waterbury Water Department	10/16/2022	61.80	No Drought Stage	<b>↑</b>	85.70	<b>72</b>	10/9/2022	60.10	NEW HAVEN
CT0608011	CTWC - Shoreline Region-Guilford System	10/20/2022	54.00	<b>Drought Advisory</b>	<b>↑</b>	74.20	73	10/13/2022	49.80	NEW HAVEN
CT0800011	Meriden Water Division	10/16/2022	67.80	No Drought Stage	<u> </u>	82.40	82	10/9/2022	68.20	NEW HAVEN
CT0880011	CTWC - Naugatuck Region-Central System	10/20/2022	75.00	No Drought Stage	<u></u>	84.90	88	10/13/2022	75.30	NEW HAVEN
CT0930011	Regional Water Authority	10/16/2022	72.00	No Drought Stage	<b>↑</b>	72.00	100	10/9/2022	71.30	NEW HAVEN
CT1480011	Wallingford Water Department	10/21/2022	88.60	No Drought Stage	<b>↑</b>	76.40	116	10/14/2022	87.30	NEW HAVEN
CT0580011	Jewett City Water Company	10/17/2022	61.30	No Drought Stage	<u> </u>	80.00	77	10/10/2022	62.40	NEW LONDON
CT1370011	Aquarion Water Co of CT-Mystic	10/9/2022	80.80	No Drought Stage	<b>↑</b>	87.90	92	10/2/2022	79.10	NEW LONDON
CT1040011	Norwich Public Utilities	10/22/2022	74.00	Water Supply Advisory	<b>↑</b>	79.40	93	10/15/2022	72.80	NEW LONDON
CT0950011	New London Dept. of Public Utilities	10/23/2022	54.20	Drought Advisory	<u></u>	57.70	94	10/16/2022	54.80	NEW LONDON
CT0590011	Groton Utilities	10/17/2022	87.90	No Drought Stage	<u> </u>	82.30	107	10/10/2022	88.40	NEW LONDON
CT1340011	CTWC - Northern Reg-Stafford System	10/20/2022	100.00	No Drought Stage		97.50	103	10/13/2022	100.00	TOLLAND
CT1630011	Windham Water Works	10/23/2022	100.00	No Drought Stage		100.00	100	10/16/2022	100.00	WINDHAM
			71.07			80.55	88.23		Ave Percent c	f Normal by County
↑ ^ ^	-Increase since last measurement (less than 10% increase) -Increase since last measurement (10% or greater increase) -Decrease since last measurement (less than 10% decrease) -Decrease since last measurement (10% or greater decrease) Same measurement as the previous measurement	e) e)		Number of systems: Greater than or equal to 100% of Between 90% and 99% of Norma Less than 90% of Normal At 100% Full			10 6 18	õ	86 79 103 88	.29 FAIRFIELD .83 HARTFORD .40 LITCHFIELD .00 MIDDLESEX .50 NEW HAVEN .60 NEW LONDON

103.00 TOLLAND

### Water Resources, Fisheries, and Forestry Conditions Report Provided on 11/02/2022 by Doug Hoskins Department of Energy and Environmental Protection

Water Diversion / Resource Concerns –

• Nothing to report.

### Fisheries impacts-

• Nothing to report.

### Fire danger-

• Nothing to report.