Drought Conditions Report

December 10, 2020

Connecticut Water Planning Council
Interagency Drought Workgroup

Stage 2 Drought Trigger Summary by Region -- December 10, 2020										
	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	105% of normal	106% of normal	100% of normal	96% of normal	110% of normal	113% of normal	107% of normal	103% of normal	11/30/2020
Ground Water (2)	Two out of three months below the 25th percentile	18% stations meet trigger	70% stations meet trigger	60% stations meet trigger	83% stations meet trigger	23% stations meet trigger	100% stations meet trigger	67% stations meet trigger	83% stations meet trigger	11/30/2020
Streamflow (3)	Two out of three months below the 25th percentile	7% stations meet trigger	45% stations meet trigger	30% stations meet trigger	50% stations meet trigger	14% stations meet trigger	100% stations meet trigger	33% stations meet trigger	50% stations meet trigger	11/30/2020
Reservoirs (4)	Average levels less than 80% of normal	83% of normal	81% of normal	101% of normal	97% of normal	86% of normal	83% of normal	100% of normal	100% of normal	12/5/2020
Palmer Drought Severity Index (5)	-2.0 to -2.99	1.25	1.62	1.41	1.25	1.25	1.25	1.62	1.62	12/5/2020
Crop Moisture Index (6)	-1.0 to –1.99	3.97	4.38	3.90	3.97	3.97	3.97	4.38	4.38	12/5/2020
VegDRI (seasonal) (7)	Pre-drought stress	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Fire Danger (8)	Moderate	Low	Low	Low	Low	Low	Low	Low	Low	12/4/2020
U.S. Drought Monitor (9)	Intensity level D1-D2	N/A	D0	D0	D0	D0	D0	D0	D0	12/8/2020

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 localities)

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 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.

(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.

Stage 3 Drought Trigger Summary by Region -- December 10, 2020										
	Stage 3 Trigger	**Fairfield**	**Hartford**	**Litchfield**	**Middlesex**	**New Haven**	**New London**	**Tolland**	**Windham**	**Data of Record**
Precipitation (1)	Three-month total below 65% of normal	96% of normal	90% of normal	91% of normal	84% of normal	96% of normal	86% of normal	89% of normal	80% of normal	11/30/2020
Ground Water (2)	Four consecutive months below the 25th percentile	9% stations meet trigger	30% stations meet trigger	40% stations meet trigger	50% stations meet trigger	8% stations meet trigger	40% stations meet trigger	0% stations meet trigger	83% stations meet trigger	11/30/2020
Streamflow (3)	Four out of five months below the 25th percentile	7% stations meet trigger	36% stations meet trigger	20% stations meet trigger	25% stations meet trigger	0% stations meet trigger	20% stations meet trigger	0% stations meet trigger	30% stations meet trigger	11/30/2020
Reservoirs (4)	Average levels less than 70% of normal	83% of normal	81% of normal	101% of normal	97% of normal	86% of normal	83% of normal	100% of normal	100% of normal	12/5/2020
Palmer Drought Severity Index (5)	-3.0 to -3.99	1.25	1.62	1.41	1.25	1.25	1.25	1.62	1.62	12/5/2020
Crop Moisture Index (6)	-2.0 to -2.99	3.97	4.38	3.90	3.97	3.97	3.97	4.38	4.38	12/5/2020
VegDRI (seasonal) (7)	Moderate drought conidtions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Fire Danger (8)	High	Low	Low	Low	Low	Low	Low	Low	Low	12/4/2020
U.S. Drought Monitor (9)	Intensity level D2-D3	N/A	D0	D0	D0	D0	D0	D0	D0	12/8/2020

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 localities)

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 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.

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(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.

Lindquist, Eric

From: Glowacki, Douglas
Sent: Thursday, December 10, 2020 10:22 AM
To: Lindquist, Eric
Subject: 7-Day Precipitation Forecast

Good Morning Eric,

After a very wet week last week, we are looking at another wet week next week (say that five times fast). The GFS model is forecasting at least two storm events next week. The first should be this Sunday with around 1/2" of rainfall as a cold front moves across the state. The next storm is forecast for next Thursday and could be a significant rain/snow event with around 2.5" of liquid precipitation. The total liquid precipitation is currently forecast to range between 2" - 3" statewide. This is well above the normal of less than an inch for the same period.

Please let me know if you need more information.

Sincerely,
Doug Glowacki

Connecticut Precipitation
National Weather Service Offices
Boston/Norton MA, Albany NY, Upton NY
Preliminary Precipitation Data (inches) by County
Precipitation Data Through November 2020
Includes CoCoRaHS data

CT 1 Month November 2020	Rainfall	Departure	Percent	Normal
Litchfield	3.86	-0.40	91	4.26
Hartford	3.56	-0.91	80	4.47
Tolland	3.89	-0.61	86	4.50
Windham	4.42	-0.02	100	4.44
Fairfield	3.99	-0.31	93	4.30
New Haven	4.17	0.01	100	4.16
Middlesex	4.29	-0.05	99	4.34
New London	4.73	0.23	105	4.50

CT 2 month Oct-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	9.09	0.00	100	9.09
Hartford	9.97	0.60	106	9.37
Tolland	9.89	0.63	107	9.26
Windham	9.20	0.24	103	8.96
Fairfield	9.32	0.48	105	8.84
New Haven	9.66	0.86	110	8.80
Middlesex	9.29	-0.42	96	9.71
New London	9.92	1.14	113	8.79

CT 3 month Sep-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	12.31	-1.19	91	13.50
Hartford	12.21	-1.43	90	13.64
Tolland	11.70	-1.49	89	13.19
Windham	10.48	-2.59	80	13.07
Fairfield	12.55	-0.57	96	13.12
New Haven	12.29	-0.45	96	12.74
Middlesex	11.30	-2.10	84	13.40
New London	11.23	-1.79	86	13.02

CT 4 month Aug-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	16.15	-1.75	90	17.90
Hartford	14.75	-3.23	82	17.98
Tolland	14.34	-2.82	84	17.16
Windham	12.94	-4.30	75	17.24
Fairfield	15.82	-1.74	90	17.56
New Haven	15.38	-1.31	92	16.69
Middlesex	14.61	-2.81	84	17.42
New London	13.44	-4.05	77	17.49

CT 5 month Jul-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	19.46	-3.02	87	22.48
Hartford	16.71	-5.84	74	22.55
Tolland	17.10	-3.99	81	21.09
Windham	15.44	-6.06	72	21.50
Fairfield	21.71	-0.12	99	21.83
New Haven	18.97	-1.75	92	20.72
Middlesex	18.11	-3.69	83	21.80
New London	15.64	-5.57	74	21.21

CT 6 month Jun-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	21.64	-5.44	80	27.08
Hartford	18.39	-8.79	68	27.18
Tolland	19.53	-6.14	76	25.67
Windham	18.41	-7.43	71	25.84
Fairfield	23.60	-2.67	90	26.27
New Haven	21.47	-3.65	85	25.12
Middlesex	19.63	-7.13	73	26.76
New London	18.36	-6.92	73	25.28

CT 7 month May-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	24.90	-6.59	79	31.49
Hartford	21.26	-10.34	67	31.59
Tolland	22.65	-7.11	76	29.77
Windham	22.12	-7.74	74	29.86
Fairfield	26.06	-4.59	85	30.65
New Haven	24.36	-5.00	83	29.36
Middlesex	23.03	-7.95	74	30.98
New London	22.06	-6.99	76	29.05

CT 12 month Dec 19-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	46.22	-4.50	91	50.72
Hartford	43.54	-7.30	86	50.84
Tolland	44.64	-5.42	89	50.06
Windham	44.23	-5.94	88	50.17
Fairfield	47.78	-2.43	95	50.21
New Haven	47.60	-1.09	98	48.69
Middlesex	47.25	-3.91	92	51.16
New London	43.72	-6.18	88	49.89

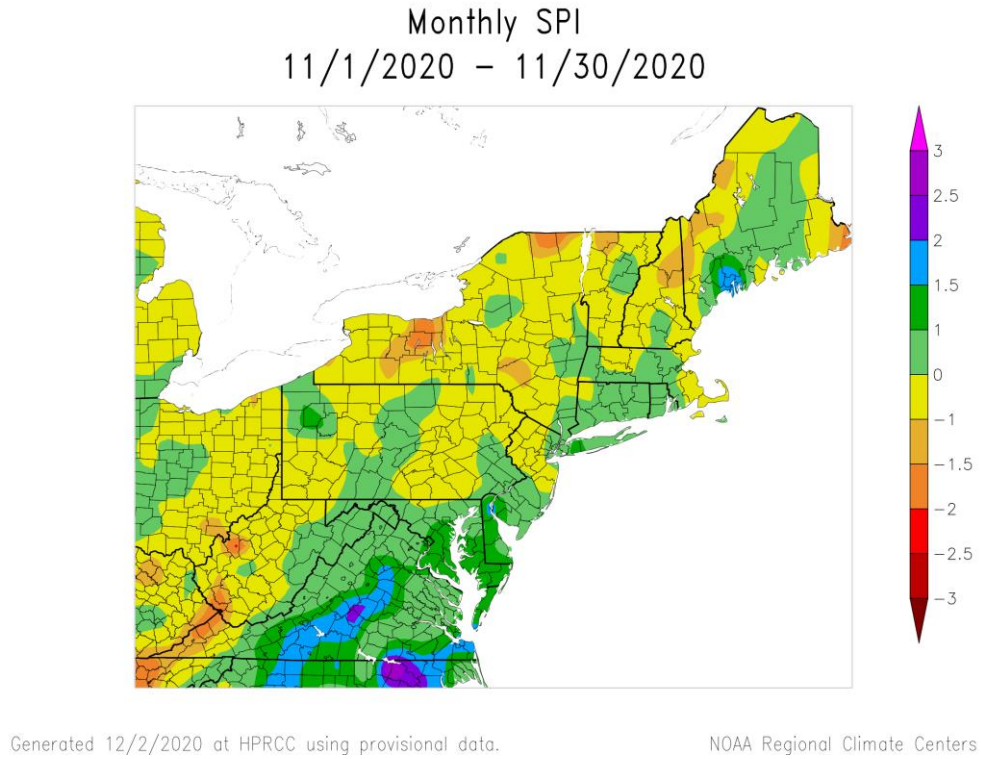
CT 24 month Dec 18-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	97.77	-3.67	96	101.44
Hartford	96.11	-5.58	95	101.69
Tolland	101.06	0.93	101	100.13
Windham	99.36	-0.99	99	100.35
Fairfield	103.95	3.53	104	100.42
New Haven	103.38	6.01	106	97.38
Middlesex	101.85	-0.47	100	102.32
New London	102.45	2.67	103	99.79

CT 36 month Dec 17-Nov 20	Rainfall	Departure	Percent	Normal
Litchfield	162.02	9.86	106	152.16
Hartford	157.66	5.13	103	152.53
Tolland	162.00	11.81	108	150.19
Windham	164.94	14.42	110	150.52
Fairfield	167.00	16.37	111	150.63
New Haven	164.03	17.97	112	146.06
Middlesex	165.41	11.93	108	153.48
New London	163.73	14.05	109	149.68

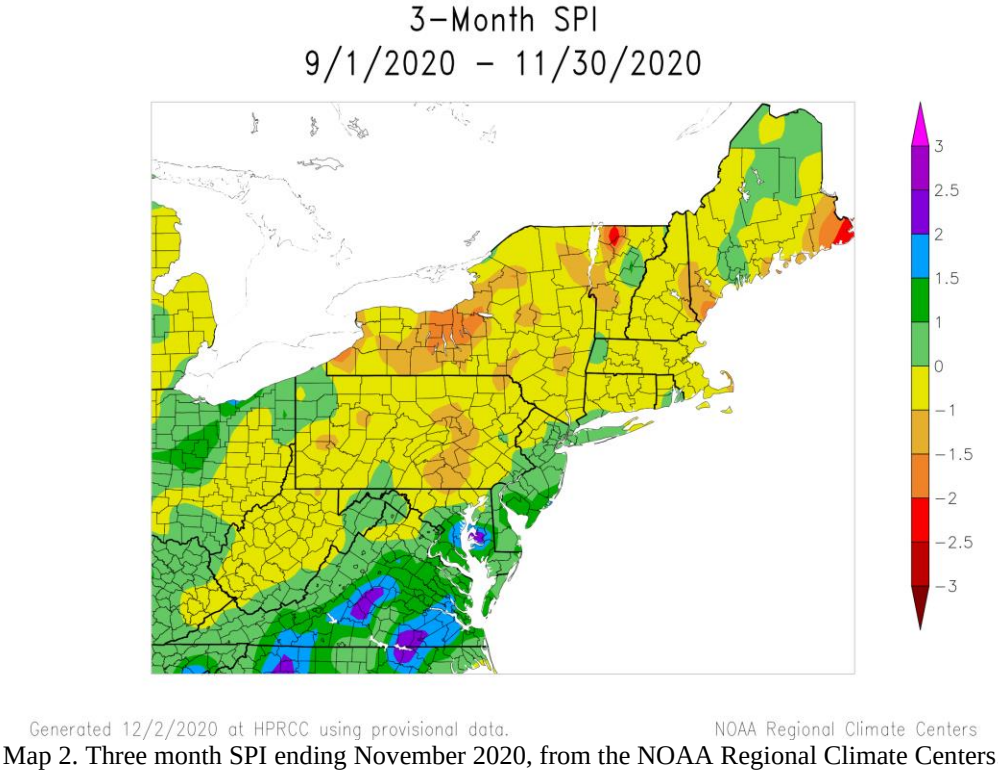
County-based monthly precipitation totals are calculated using an average of all available full-month precipitation totals within that County from the following networks: Community Collaborative Rain, Hail and Snow network (CoCoRaHS), Cooperative Weather Observer Program (Coop), and Automated Surface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

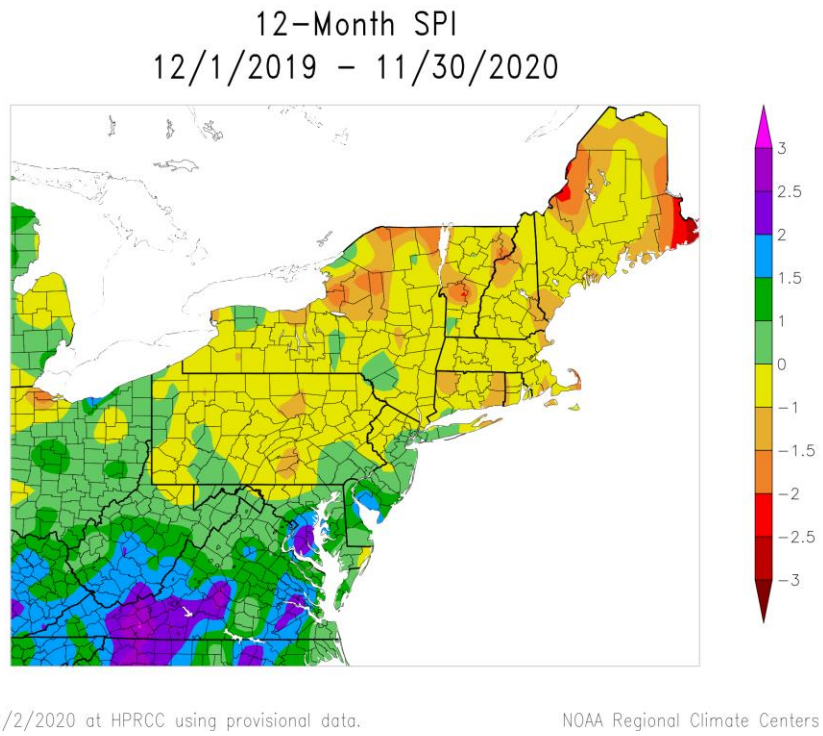
County-based monthly normals were calculated using 30-year precipitation normals from NOAA/National Centers for Environmental Information (NCEI) for the period of 1981-2010. Monthly normals from 42 stations (consisting of Coop and ASOS stations) were grouped by County to calculate a single monthly normal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



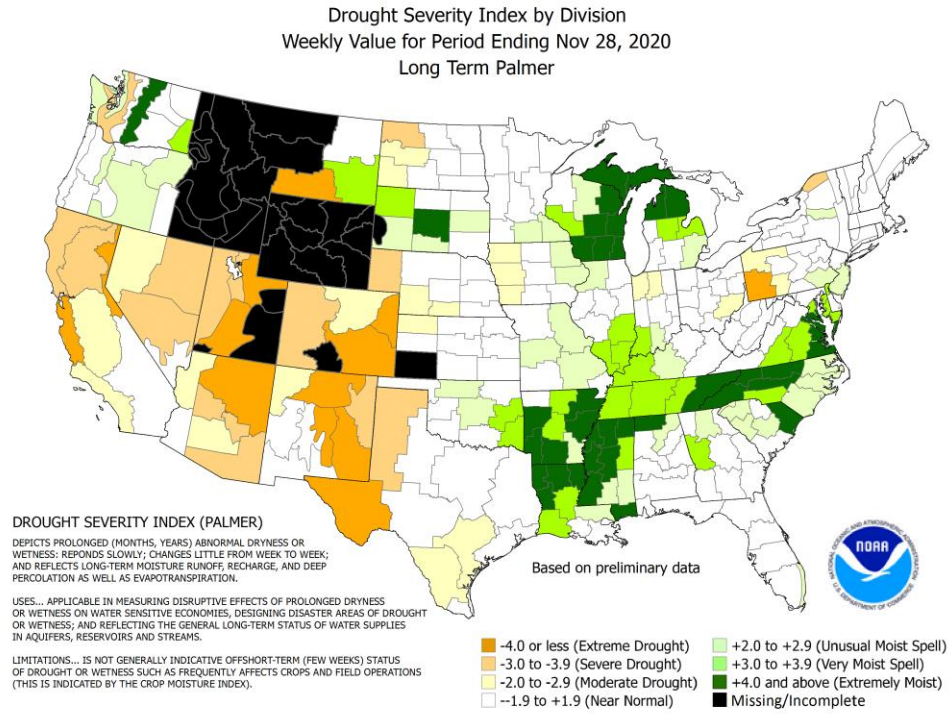
Map 1. November 2020 SPI, from NOAA Regional Climate Centers.\



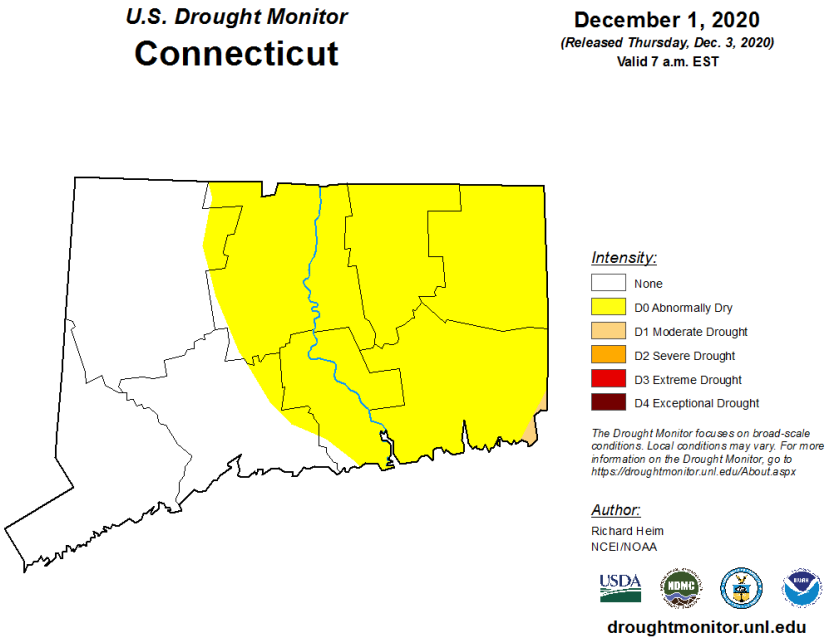
Map 2. Three month SPI ending November 2020, from the NOAA Regional Climate Centers.



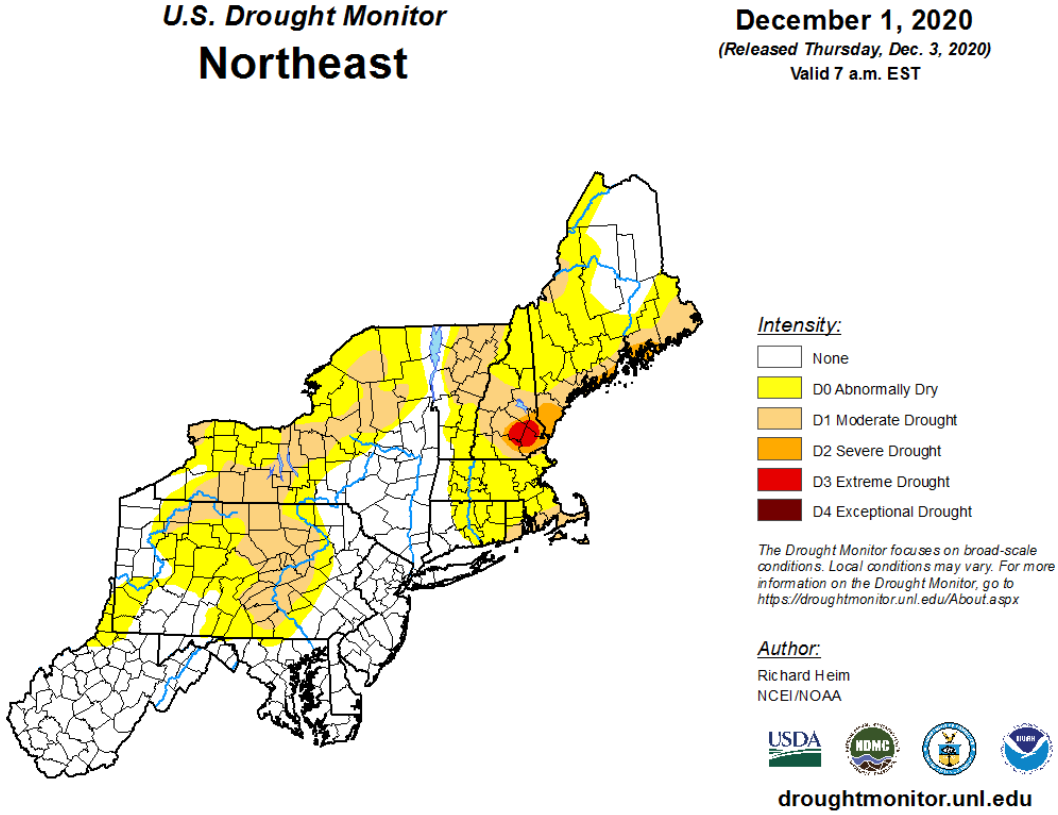
Map 3. Twelve month SPI ending November 2020, from the NOAA Regional Climate Centers.



Map 4. Palmer Drought Index from the Climate Prediction Center as of 11/28/20. CT Palmer Drought Index values: Northwest -0.39 (Near Normal), Central -0.37 (Near Normal), Coastal -0.73 (Near Normal).



Map 5. U.S. Drought Monitor zoom-in on CT, effective 12/1/2020.



Map 6. U.S. Drought Monitor for Northeast US, effective 12/1/2020.

Provisional data, subject to revision

U.S. Geological Survey

Status of streamflow and groundwater levels, as of November 30, 2020

USGS

Provisional data, subject to revision

County	Number of wells	Number of wells below normal for 2 or more consecutive months	Number of wells below normal for 4 or more consecutive months	Percent stage 2	Percent stage 3	Sites back to normal range*
Fairfield	11	2	1	18.2	9.1	
Hartford	10	7	3	70	30	2
Litchfield	5	3	2	60	40	
Middlesex	7	5	3	83.3	50	1
New Haven	13	3	1	23.1	7.7	
New London	5	5	2	100	40	1
Tolland	12	8	0	66.7	0	1
Windham	6	5	5	83.3	83.3	

END OF OCTOBER 2020 GROUNDWATER SUMMARY BY COUNTY

*These are sites that changed from > = 2 consecutive months below normal last month to the normal range for November. Reset to 2/3 months below normal (stage 2) regardless of how many consecutive months they were below normal.

USGS

Provisional data, subject to revision

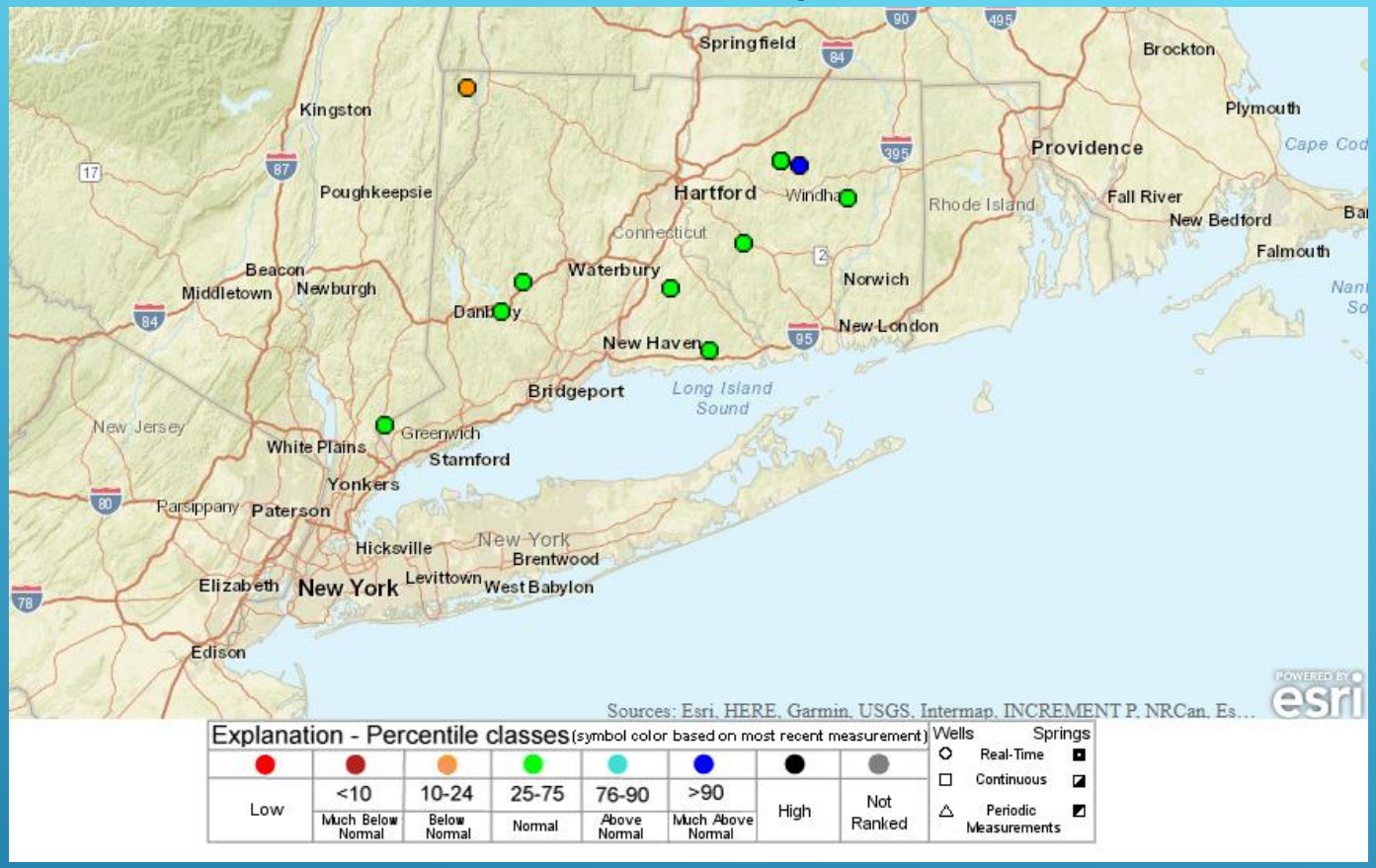
County	Number of gages	Number of gages below normal for 2 or more consecutive months	Number of gages below normal for 4 or more out of 5 consecutive months	Percent stage 2	Percent stage 3	Sites back to normal*
Fairfield	14	1	1	7.1	7.1	1
Hartford	11	5	4	45.5	36.4	4
Litchfield	10	3	2	30	20	2
Middlesex	4	2	1	50	25	2
New Haven	7	1	0	14.3	0	1
New London	5	5	1	100	20	4
Tolland	3	1	0	33.3	0	1
Windham	10	5	3	50	30	3

NOVEMBER STREAMFLOW SUMMARY BY COUNTY

*These are sites that changed from > = 2 consecutive months below normal last month to the normal range for November. Not reflected in the percentages above because the standard for stage 2 or 3 is 2/3 months below normal or 4/5 months below normal, therefore for any of these sites, the status was set the same as in October.

USGS

Provisional data, subject to revision



STATUS OF CONTINUOUS RECORD WELLS AS OF 12-7-2020

NOTE: RAINFALL SINCE 11-23-20 APPROX. 3-7 IN.

USGS

PWSID	PWS Name	Most Recent Reading Date	Percent Full	Current Status	Trend	Historical Average	Percent of Normal	Previous Date	Previous Percent Full	County_Served
CT0570011	Aquarion Water Co of CT-Greenwich System	11/29/2020	38.40	**Drought Warning**	↑	66.70	58	11/22/2020	37.70	FAIRFIELD
CT1030021	South Norwalk Electric & Water	12/7/2020	55.50	No Drought Stage	↑↑	78.30	71	11/30/2020	41.50	FAIRFIELD
CT1350011	Aquarion Water Co of CT-Stamford	11/29/2020	54.40	No Drought Stage	↑	68.20	80	11/22/2020	53.20	FAIRFIELD
CT0340011	Danbury Water Department	11/29/2020	66.60	No Drought Stage	↓	80.30	83	11/22/2020	66.90	FAIRFIELD
CT0150011	Aquarion Water Co of CT-Main System	11/29/2020	69.20	No Drought Stage	↑	83.80	83	11/22/2020	67.20	FAIRFIELD
CT1030011	Norwalk First Taxing District	12/6/2020	93.10	No Drought Stage	↑↑	91.10	102	11/29/2020	68.20	FAIRFIELD
CT0090011	Bethel Water Dept	11/29/2020	100.00	No Drought Stage	--	96.10	104	11/22/2020	100.00	FAIRFIELD
CT1310011	Southington Water Department	12/5/2020	31.90	No Drought Stage	--	82.10	39	11/28/2020	31.90	HARTFORD
CT0170011	Bristol Water Department	12/6/2020	68.80	**Emergency Phase -1**	↑↑	89.90	77	11/29/2020	54.30	HARTFORD
CT0890011	New Britain Water Department	11/25/2020	56.10	**Drought Watch**	↑	64.60	87	11/19/2020	55.60	HARTFORD
CT0473011	CTWC - Northern Reg-Western System	12/3/2020	77.00	No Drought Stage	↑	87.50	88	11/26/2020	71.40	HARTFORD
CT0770021	Manchester Water Department	12/6/2020	91.00	No Drought Stage	↑↑	96.40	94	11/29/2020	75.60	HARTFORD
CT0640011	Metropolitan District Commission	11/30/2020	83.90	No Drought Stage	↑	84.60	99	11/23/2020	83.00	HARTFORD
CT0980011	Aquarion Water Co of CT-Norfolk System	11/29/2020	93.40	No Drought Stage	↓	99.50	94	11/22/2020	100.00	LITCHFIELD
CT1620011	Winsted Water Works	12/6/2020	100.00	No Drought Stage	--	98.80	101	11/29/2020	100.00	LITCHFIELD
CT1250011	Sharon Water & Sewer Commission	12/5/2020	100.00	No Drought Stage	--	97.70	102	11/28/2020	100.00	LITCHFIELD
CT1220011	Aquarion Water Co of CT-Salisbury Sys	11/29/2020	100.00	No Drought Stage	--	95.90	104	11/22/2020	100.00	LITCHFIELD
CT1430011	Torrington Water Company	12/4/2020	85.10	No Drought Stage	↑↑	80.40	106	11/27/2020	73.80	LITCHFIELD
CT0830011	Middletown Water Department	11/29/2020	63.00	**Approaching Trigger Level**	↑	74.00	85	11/22/2020	55.80	MIDDLESEX
CT0261031	CTWC - Shoreline Region-Chester System	12/3/2020	99.70	No Drought Stage	↑↑	97.40	102	11/26/2020	83.60	MIDDLESEX
CT0830021	Connecticut Valley Hospital	11/30/2020	100.00	No Drought Stage	↑	94.90	105	11/23/2020	94.80	MIDDLESEX
CT0608011	CTWC - Shoreline Region-Guilford System	12/3/2020	60.00	No Drought Stage	↑	87.00	69	11/26/2020	52.60	NEW HAVEN
CT0800011	Meriden Water Division	11/30/2020	70.20	No Drought Stage	↑	85.90	82	11/23/2020	62.70	NEW HAVEN
CT1510011	Waterbury Water Department	11/29/2020	75.20	No Drought Stage	↑	89.50	84	11/22/2020	68.50	NEW HAVEN
CT0930011	Regional Water Authority	11/29/2020	66.50	No Drought Stage	↑	73.50	90	11/22/2020	63.30	NEW HAVEN
CT1480011	Wallingford Water Department	12/4/2020	78.00	No Drought Stage	↑	82.80	94	11/20/2020	72.10	NEW HAVEN
CT0880011	CTWC - Naugatuck Region-Central System	12/3/2020	89.30	No Drought Stage	↑↑	92.60	97	11/26/2020	78.00	NEW HAVEN
CT0580011	Jewett City Water Company	11/23/2020	52.70	No Drought Stage	↑	84.70	62	11/16/2020	50.80	NEW LONDON
CT0950011	New London Dept. of Public Utilities	12/6/2020	49.70	No Drought Stage	↑	67.40	74	11/29/2020	44.90	NEW LONDON
CT0590011	Groton Utilities	11/30/2020	69.50	No Drought Stage	↑	83.40	83	11/23/2020	69.10	NEW LONDON
CT1370011	Aquarion Water Co of CT-Mystic	11/29/2020	91.70	No Drought Stage	↑↑	95.50	96	11/22/2020	66.90	NEW LONDON
CT1040011	Norwich Public Utilities	12/5/2020	88.50	No Drought Stage	↑↑	90.00	98	11/28/2020	76.20	NEW LONDON
CT1340011	CTWC - Northern Reg-Stafford System	12/3/2020	100.00	No Drought Stage	--	99.80	100	11/26/2020	100.00	TOLLAND
CT1630011	Windham Water Works	11/29/2020	100.00	No Drought Stage	--	100.00	100	11/22/2020	100.00	WINDHAM
			77.01			86.48	89.05			

↑	-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

Number of systems:	
Greater than or equal to 100% of Normal	10
Between 90% and 99% of Normal	8
Less than 90% of Normal	16
At 100% Full	7

Ave Percent of Normal by County

83.00	FAIRFIELD
80.67	HARTFORD
101.40	LITCHFIELD
97.33	MIDDLESEX
86.00	NEW HAVEN
82.60	NEW LONDON
100.00	TOLLAND
100.00	WINDHAM

Department of Agriculture – Drought Status Report

Parameter	Reported Conditions			
	As of 11/5/2020		Current Conditions (12/10/2020)	
	Report Date	Status	Report Date	Status
Palmer Drought Severity Index (map)	10/31/2020	Now reporting normal for the entire state	12/5/2020	Still reporting normal for the entire state
Palmer drought severity index (data)	10/31/2020	Northwest: -1.18 Central: -1.07 Coastal: -1.44	12/5/2020	Northwest: 1.41 Central: 1.62 Coastal: 0.88
Precipitation needed to end drought (in.)	10/31/2020	Northwest: 2.74 Central: 2.48 Coastal: 3.66	12/5/2020	Not reported
Crop Moisture (current map)	10/31/2020	Northwest is now abnormally moist, rest of the state showing normal.	12/5/2020	Now showing entire state as excessively wet.
Topsoil moisture (current map)	11/1/2020	Improved, now showing 3% of the state as short-very short on moisture in top 6 inches of soil.	12/6/2020	No data reported
Topsoil moisture (current vs. 5 yr. mean)	11/1/2020	Improved, now shows 3% short-very short, compared to a 5 year mean of 30% - this says we are wetter than the 5 yr mean.	12/6/2020	No data reported
Veg DRI (% of CT land area shown as pre-drought, moderate, severe or extreme)	11/1/2020	Improved, % of land mass shown as near normal is now 42.3%.	12/6/2020	Out of season, no VegDRI data reported outside of growing season.
Drought Monitor Report for CT	11/3/2020	The drought monitor shows marked improvement over the last month, with the % of the state in extreme drought now at 0%, and the % of the state showing no drought conditions now at 31.3% (this was 0% as of October 6th).	12/8/2020	The drought monitor continues to show improvement over the last month, with the % of the state showing no drought conditions now at 43.1% (this was 0% as of October 6th).
NASS Crop Progress Report (New England)	11/1/2020	Shows marked improvement, with 77% adequate for topsoil, 68% adequate for subsoil.	11/29/2020	Last report from season, reported 78% adequate for topsoil, 75% adequate for subsoil.

Summary: Data from all of these indicators shows improved conditions throughout the state over the last month.

Explanatory notes:

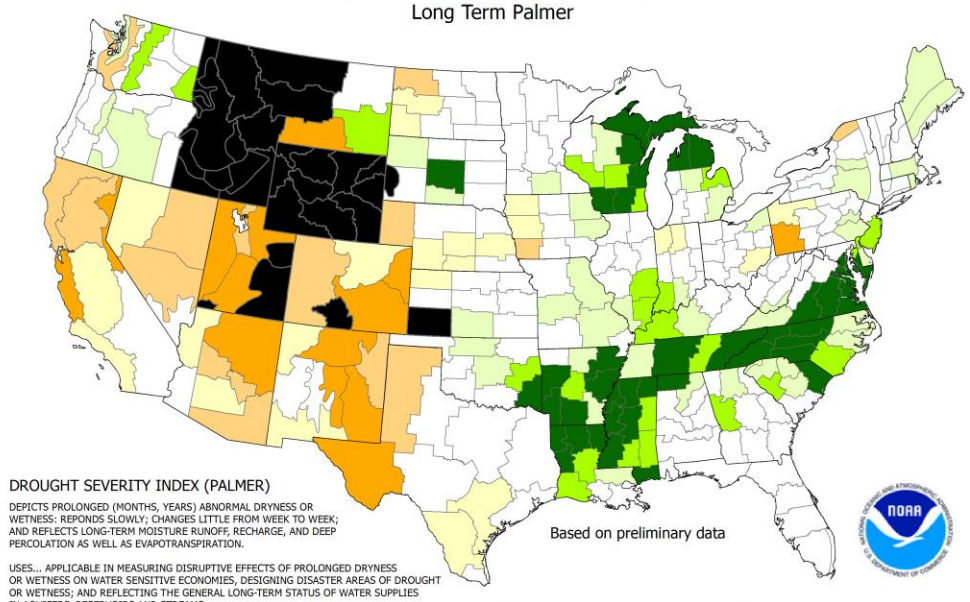
Palmer Drought Severity Index: The Palmer Drought Severity Index (PDSI) uses readily available temperature and precipitation data to estimate relative dryness. It is a standardized index that generally spans -10 (dry) to +10 (wet). Maps of operational agencies like NOAA typically show a range of -4 to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

Drought Severity Index by Division
Weekly Value for Period Ending Dec 05, 2020
Long Term Palmer



DROUGHT SEVERITY INDEX (PALMER)

DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS: REPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.

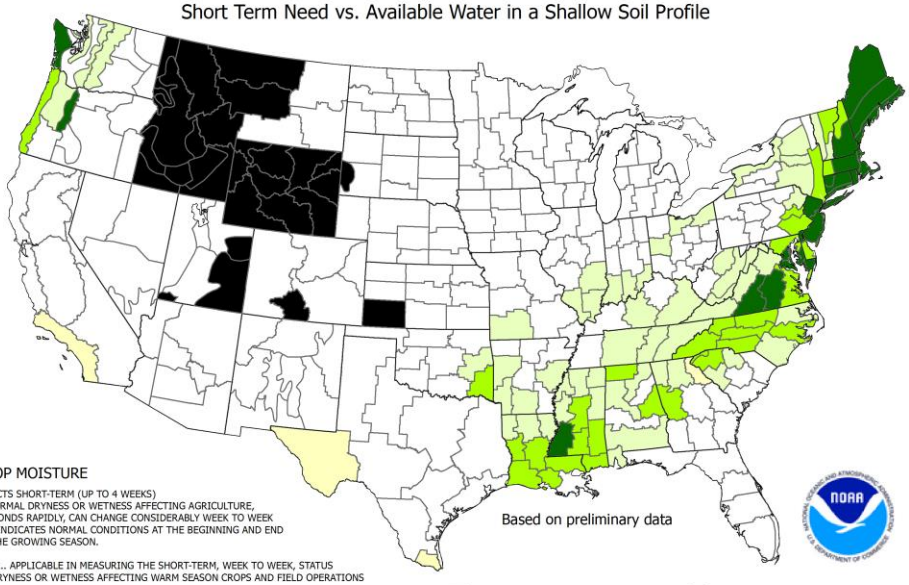
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-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

- -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 Dec 05, 2020
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

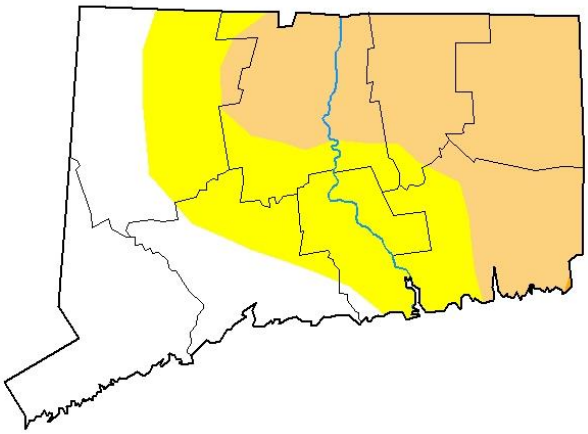
LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A SHALLOW SOIL PROFILE,OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F.IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

Based on preliminary data

- -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

U.S. Drought Monitor

Connecticut



November 3, 2020

(Released Thursday, Nov. 5, 2020)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.30	68.70	38.35	0.04	0.00	0.00
Last Week *10-27-2020*	0.00	100.00	68.70	38.35	0.04	0.00
3 Months Ago *08-04-2020*	23.12	76.88	39.53	0.00	0.00	0.00
Start of Calendar Year *12-31-2019*	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year *09-29-2020*	0.00	100.00	70.03	57.60	24.09	0.00
One Year Ago *11-05-2019*	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

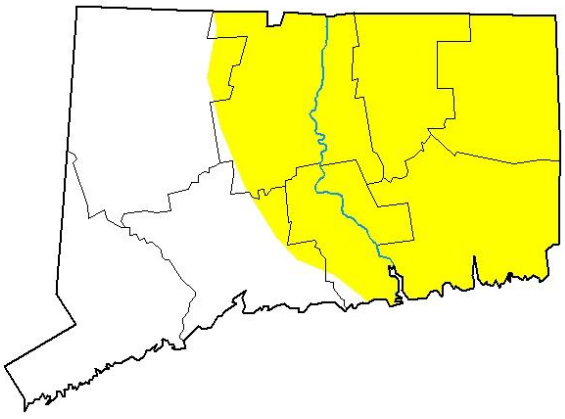
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
David Miskus
NOAA/NWS/NCEP/CPC

droughtmonitor.unl.edu

U.S. Drought Monitor

Connecticut



December 8, 2020

(Released Thursday, Dec. 10, 2020)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	43.14	56.86	0.00	0.00	0.00	0.00
Last Week *12-01-2020*	43.14	56.86	0.30	0.00	0.00	0.00
3 Months Ago *09-08-2020*	13.43	86.57	58.18	32.29	0.00	0.00
Start of Calendar Year *12-31-2019*	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year *09-29-2020*	0.00	100.00	70.03	57.60	24.09	0.00
One Year Ago *12-10-2019*	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

Author:
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droughtmonitor.unl.edu

Lindquist, Eric

From: Trowbridge, Philip
Sent: Wednesday, December 9, 2020 4:53 PM
To: Wittchen, Bruce; Lindquist, Eric
Cc: Hoskins, Douglas
Subject: Re: CT Interagency Drought Workgroup: 12/10 agenda

Hi Eric and Bruce,

Here is an update on DEEP's indicators for the IDW. Doug Hoskins will attend the meeting tomorrow for DEEP. Thank you.

Quantitative Indicators
Fire Danger

- Fire danger is low

Qualitative/Auxiliary Indicators
Fisheries Issues

- Nothing to report

Water Diversions/Well-Field Pumping Issues

- Nothing to report

From: Wittchen, Bruce <Bruce.Wittchen@ct.gov>
Sent: Wednesday, December 9, 2020 4:11 PM
To: Lindquist, Eric <Eric.K.Lindquist@ct.gov>; Aarrestad, Peter <Peter.Aarrestad@ct.gov>; Anderson, Stephen <Stephen.Anderson@ct.gov>; Baran, Robert <Robert.Baran@ct.gov>; Belk, Nicole <nicole.belk@noaa.gov>; Bellucci, Christopher <Christopher.Bellucci@ct.gov>; Bergeron, Brenda <Brenda.Bergeron@ct.gov>; Betkoski, John <John.Betkoski@ct.gov>; Cohen, Jason <Jason.Cohen@ct.gov>; Dumais, Kenneth <Kenneth.Dumais@ct.gov>; Dunham, Alan <alan.dunham@noaa.gov>; Fitting, Corinne <Corinne.Fitting@ct.gov>; Foreman, William <William.Foreman@ct.gov>; Furbush, Nancy <Nancy.Furbush@noaa.gov>; Glowacki, Douglas <Douglas.Glowacki@ct.gov>; Grady, Kevin <Kevin.Grady@ct.gov>; Harkey, Steven <Steven.Harkey@ct.gov>; Heft, Martin <Martin.Heft@ct.gov>; Hochholzer, Helene <Helene.Hochholzer@ct.gov>; Hoskins, Douglas <Douglas.Hoskins@ct.gov>; Hurlburt, Bryan <Bryan.Hurlburt@ct.gov>; jmullane@usgs.gov <jmullane@usgs.gov>; Kenny, Robert <Robert.Kenny@ct.gov>; King-Corbin, Linda <Linda.King-Corbin@ct.gov>; Lucchina, Gail <Gail.Lucchina@ct.gov>; Mathieu, Lori <Lori.Mathieu@ct.gov>; Mcauliffe, Elizabeth <Elizabeth.Mcauliffe@ct.gov>; Morley, Dan D. <Daniel.Morley@ct.gov>; Morrison, Jon <jmorriso@usgs.gov>; Nguyen, Quat <Quat.Nguyen@ct.gov>; Pafford, Matthew <Matthew.Pafford@ct.gov>; Pedemonti, Cathy <Cathy.Pedemonti@ct.gov>; Perry, Jennifer <Jennifer.Perry@ct.gov>; Reeves, Sylvia <Sylvia.Reeves@ct.gov>; Sargent, Timothy <tcsargen@usgs.gov>; Smith, Jaime <Jaime.Smith@ct.gov>; Smith, Laverne <Laverne.Smith@ct.gov>; Starn, Jeffrey <jjstarn@usgs.gov>; Stevens, Graham <Graham.Stevens@ct.gov>; Stewart, Rita <Rita.Stewart@ct.gov>; Szul, Maria <Maria.Szul@ct.gov>; Tetreault, Ryan <Ryan.Tetreault@ct.gov>; Trowbridge, Philip <Philip.Trowbridge@ct.gov>; Westergard, Britt <Britt.Westergard@noaa.gov>; Wingfield, Betsey <Betsey.Wingfield@ct.gov>
Cc: Kathleen Crawley <Kathleen.Crawley@doa.ri.gov>; Rao, Vandana (EEA) <vandana.rao@mass.gov>
Subject: CT Interagency Drought Workgroup: 12/10 agenda

Hi everyone – Attached is an agenda for Thursday's CT Interagency Drought Work Group and it is also available below and at https://egov.ct.gov/PMC/Agenda/Download/9791. We're late compiling the data but keep an eye out for an email from Eric on Thursday.