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11-1-2017

2017 November - Tennessee Monthly Climate Report

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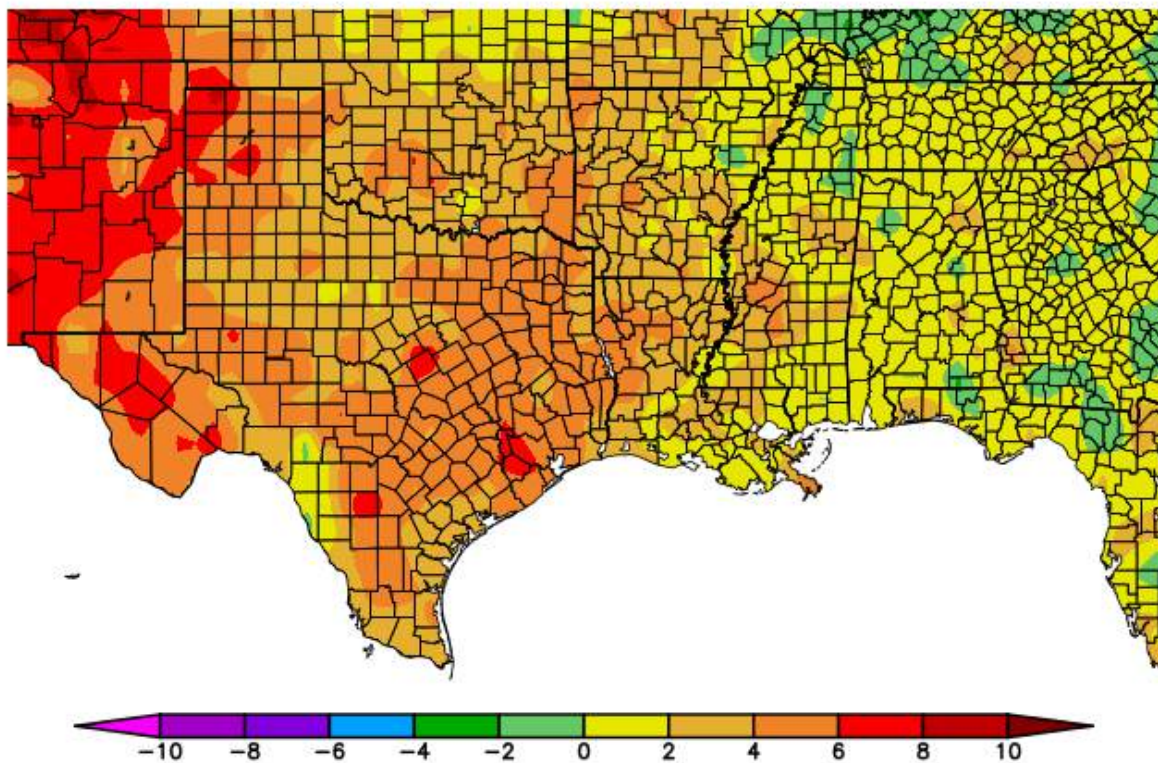
Tennessee Monthly Climate Summary, November 2017

Dr. Andrew Joyner
Mr. Wil Tollefson
East Tennessee State University

Monthly Temp Summary (Graph & Brief Text)

For the month of November, temperatures across the state were 1-2 degrees above average. Warmer than average temperatures were experienced the first and third weeks of November, with temperatures the second week of the month below average.

Departure from Normal Temperature (F) 11/1/2017 – 11/30/2017



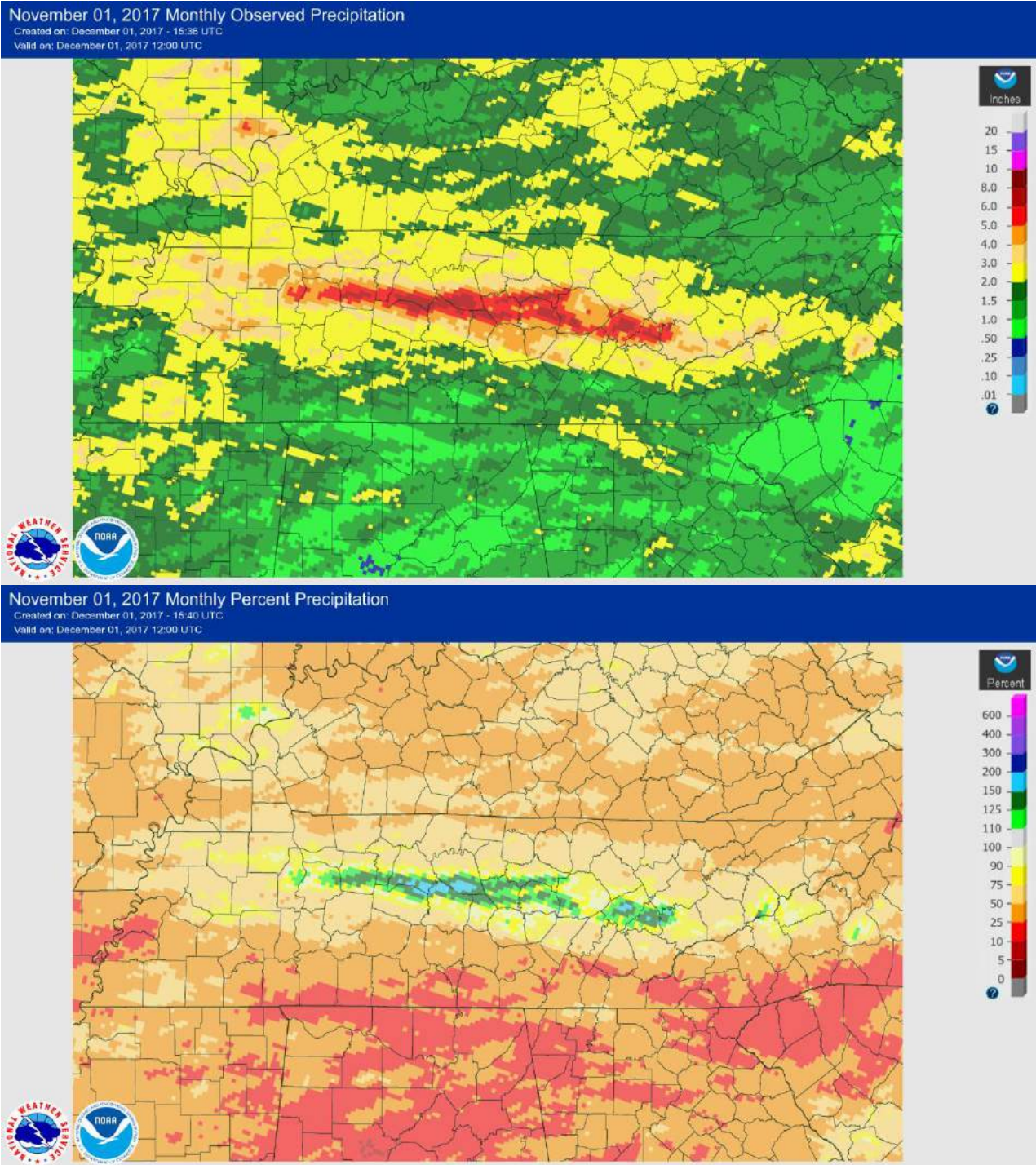
Generated 12/1/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

Monthly Precipitation Summary:

November was a dry month for most of the state, with the exception of a small band that roughly follows the I-40 corridor through middle and eastern Tennessee. In that narrow band, heavy precipitation developed from a training thunderstorm event overnight from the 6th -7th of November, with storm totals of 4-6 inches in some parts of Davidson, Rutherford, Wilson, and Williamson Counties; that event also produced some wind damage reports. That event resulted in some locations reporting up to 200% of the normal rainfall total for the month. But outside of

that narrow band, the rest of the state experienced below average precipitation, with about half the state receiving less than 50% of normal rainfall. The only other notable state-wide precipitation event occurred with a strong frontal passage on the 18th that brought more severe weather than rainfall, however it did produce some light mountain snowfall as it exited the state.



Tennessee Top Ten for November:

Warmest Temperatures of the Month:

Name	Station Type	County	Highest Max Temperature
MEMPHIS INTERNATIONAL AP	WBAN	Shelby	83
MEMPHIS WFO	WBAN	Shelby	82
NASHVILLE INTL AP	WBAN	Davidson	82
NASHVILLE BERRY FIELD	COOP	Davidson	82
GERMANTOWN 4SE	COOP	Shelby	82
LEWISBURG EXP STA	COOP	Marshall	81
JACKSON EXP STA	COOP	Madison	81
WOODBURY 1 WNW	COOP	Cannon	81
SEVIERVILLE	COOP	Sevier	81
SPARTA WASTEWATER PLANT	COOP	White	81
LEBANON	COOP	Wilson	81

Warmest Stations of the Month:

Name	Station Type	County	Mean Avg Temperature
MEMPHIS INTERNATIONAL AP	WBAN	Shelby	54.9
SHILOH NMP TENNESSEE	RAWS	Hardin	53.6
CHATTANOOGA LOVELL FIELD AP	WBAN	Hamilton	53.4
GERMANTOWN 4SE	COOP	Shelby	53.2
MEMPHIS WFO	WBAN	Shelby	52.6
INDIAN GRAVE TENNESSEE	RAWS	Blount	52.5
LEWISBURG TOWER TENNESSEE	RAWS	Marshall	52.5
ROCK ISLAND STATE PARK	COOP	White	52.5
NASHVILLE INTL AP	WBAN	Davidson	52.1
CAMDEN TOWER TENNESSEE	RAWS	Benton	52.1

Coldest Temperatures of the Month:

Name	Station Type	County	Lowest Min Temperature
MT LECONTE	COOP	Sevier	12
LEWISBURG EXP STA	COOP	Marshall	18
ALLARDT	COOP	Fentress	19
CROSSVILLE EXP STN	COOP	Cumberland	19
CROSSVILLE 7 NW	WBAN	Cumberland	19
COALMONT	COOP	Grundy	19
FALL CREEK FALLS SP	COOP	Van Buren	19
DECATURVILLE	COOP	Decatur	20
NEWFOUND GAP	COOP	Sevier	20
JAMESTOWN	COOP	Fentress	20
WOODBURY 1 WNW	COOP	Cannon	20
SMITHVILLE 2 SE	COOP	DeKalb	20
TAZEWELL	COOP	Claiborne	20

Coolest Stations of the Month:

Name	Station Type	County	Mean Avg Temperature
MT LECONTE	COOP	Sevier	37.4
NEWFOUND GAP	COOP	Sevier	43.4
ROAN MOUNTAIN 3SW	COOP	Carter	44.6
TAZEWELL	COOP	Claiborne	45.0
CROSSVILLE EXP STN	COOP	Cumberland	46.2
CROSSVILLE 7 NW	WBAN	Cumberland	46.7
NORRIS	COOP	Anderson	46.8
ERWIN 1 W	COOP	Unicoi	46.9
NEWCOMB	COOP	Campbell	47.0
JAMESTOWN	COOP	Fentress	47.1

Wettest Stations of the Month:

Name	Station Type	County	Total Precipitation
MURFREESBORO 5 N	COOP	Rutherford	10.78
DICKSON	COOP	Dickson	7.82
KINGSTON	COOP	Roane	5.89
SMITHVILLE 2 SE	COOP	DeKalb	5.65
UNION CITY	COOP	Obion	5.61
PARIS 2 SE	COOP	Henry	5.55
SPARTA WASTEWATER PLANT	COOP	White	5.18
FAIRVIEW BOWIE NATURE CENTER	COOP	Williamson	4.60
CAMDEN	COOP	Benton	4.49
NASHVILLE INTL AP	WBAN	Davidson	4.46

Driest Stations of the Month:

Name	Station Type	County	Total Precipitation
BRISTOL TRI CITY AP	WBAN	Sullivan	1.10
BETHPAGE 1 S	COOP	Sumner	1.12
BYRDSTOWN	COOP	Pickett	1.24
PULASKI WASTEWATER PLANT	COOP	Giles	1.35
TAZEWELL	COOP	Claiborne	1.36
LYNCHBURG	COOP	Moore	1.38
SELMER	COOP	McNairy	1.46
ROAN MOUNTAIN 3SW	COOP	Carter	1.47
ROGERSVILLE 1 NE	COOP	Hawkins	1.48
ELIZABETHTON	COOP	Carter	1.60

Snowiest Stations of the Month:

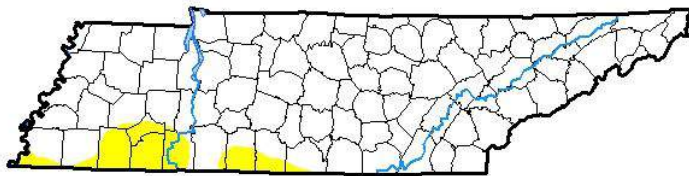
Name	Station Type	County	Total Snowfall
MT LECONTE	COOP	Sevier	2.0
NEWFOUND GAP	COOP	Sevier	0.5
ROAN MOUNTAIN 3SW	COOP	Carter	T

Drought Monitor:

Due to the dry month experienced by most of the state, D0 drought conditions began to move into various areas, primarily along the southern border encroaching from moderate drought (D1) conditions in Mississippi. A moderate to extreme drought currently taking place in Arkansas appears to be spreading eastward towards the Mississippi River. Western Tennessee will be watched closely in the coming month to observe if drought conditions from MS and AR will spread into Tennessee.

U.S. Drought Monitor Tennessee

November 28, 2017
(Released Thursday, Nov. 30, 2017)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	92.64	7.36	0.00	0.00	0.00	0.00
Last Week <i>11-21-2017</i>	97.24	2.76	0.00	0.00	0.00	0.00
3 Months Ago <i>08-29-2017</i>	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year <i>01-03-2017</i>	22.96	77.04	37.78	13.03	1.83	0.00
Start of Water Year <i>09-26-2017</i>	92.57	7.43	0.00	0.00	0.00	0.00
One Year Ago <i>11-29-2016</i>	0.00	100.00	100.00	99.08	60.43	13.60

Intensity:

- 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. See accompanying text summary for forecast statements.

Author:

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Western Regional Climate Center

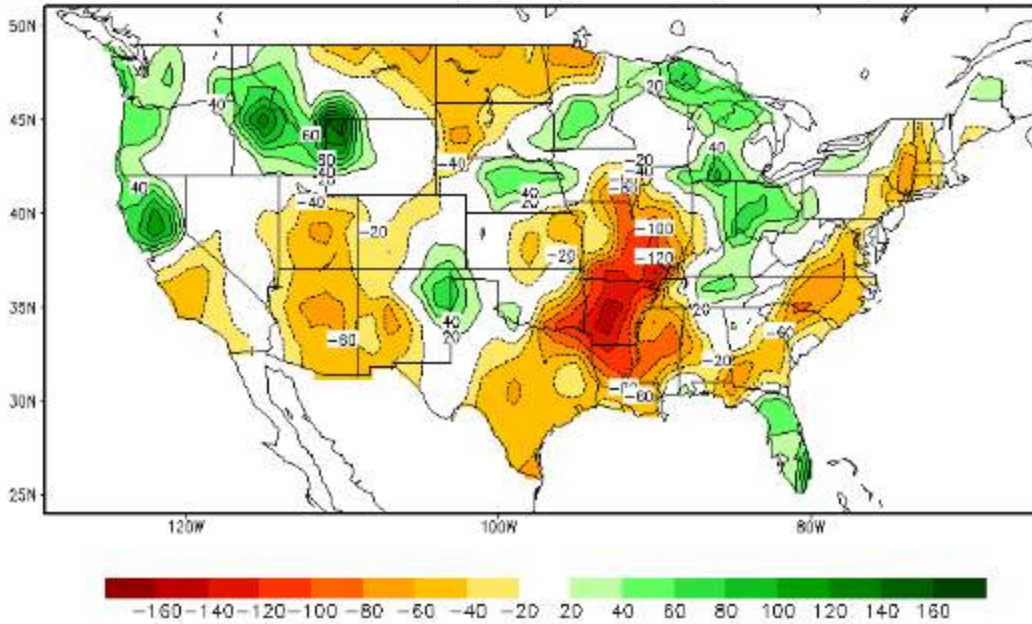


<http://droughtmonitor.unl.edu/>

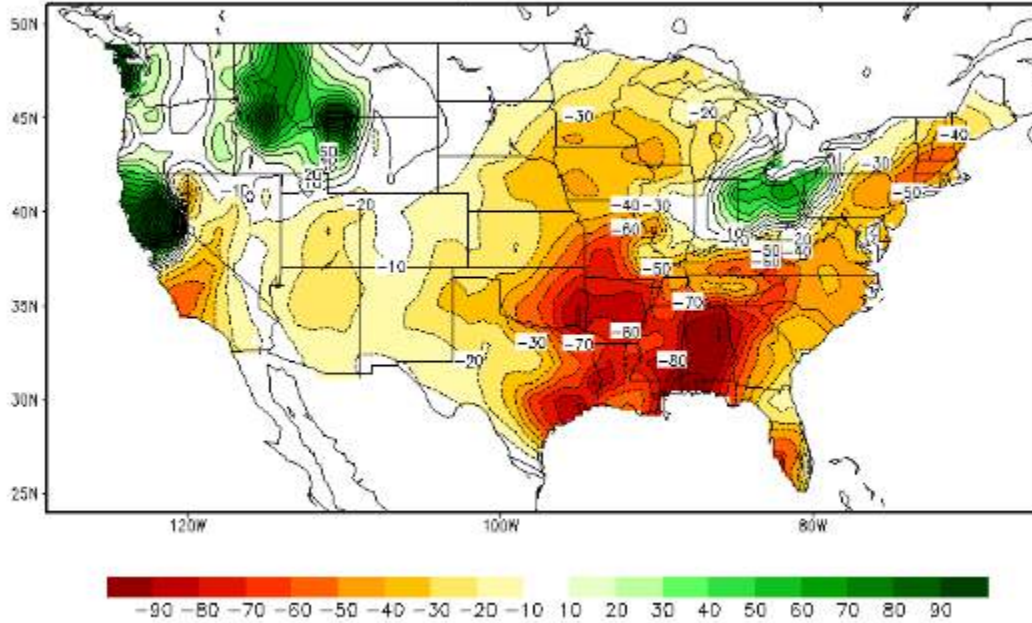
Soil Moisture:

Soil moisture anomalies were largely based on precipitation patterns since temperatures for the month were within ± 2 degrees of normal. The extreme precipitation band from the first week of the month allowed parts of central Tennessee to observe some above normal soil moisture conditions; however, all locations in the state saw a decreasing (drying) trend in soil moisture anomalies over the month of November. Again, this will mean drought conditions must be closely monitored as we head into December.

Soil Moisture Anomaly (mm) Last day of NOV, 2017



Calculated Soil Moisture Anomaly Change
NOV 30, 2017 from OCT.31



Streamflow:

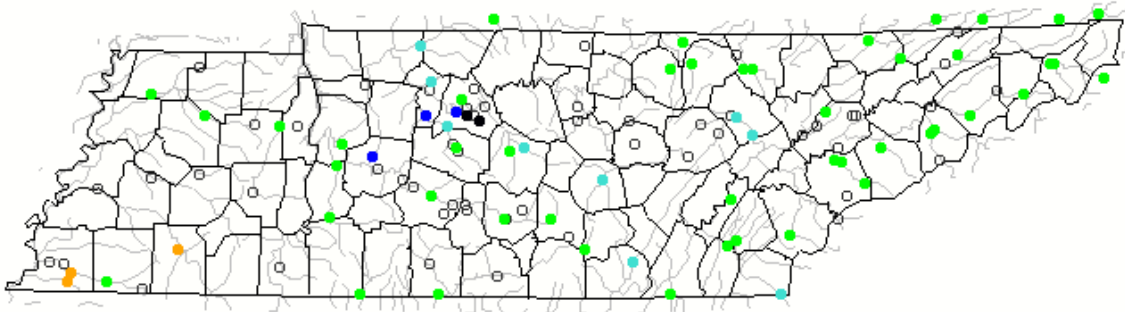
Monthly streamflow patterns also reflected the effects of the heavy precipitation band across central Tennessee, with the only stations reporting above normal flows in the same areas that saw more than 100% normal rainfall. The effects of the D0 drought conditions were also noticeable in the southwest parts of the state, where a few stations had below normal flows.

[Map](#) | [HUC Map](#) | [Map \(HCDN\)](#) | [Web Map](#)

Map of monthly streamflow compared to historical streamflow for the month of the year (Tennessee)

Tennessee ▼ or Water-Resources Regions ▼

November 2017



Search USGS streamgage 🔍

Choose a data retrieval option and select a location on the map

List of all stations Single station Nearest stations Peak flow

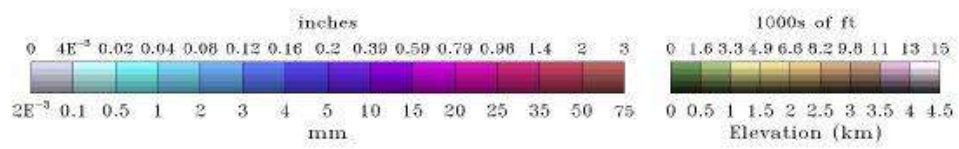
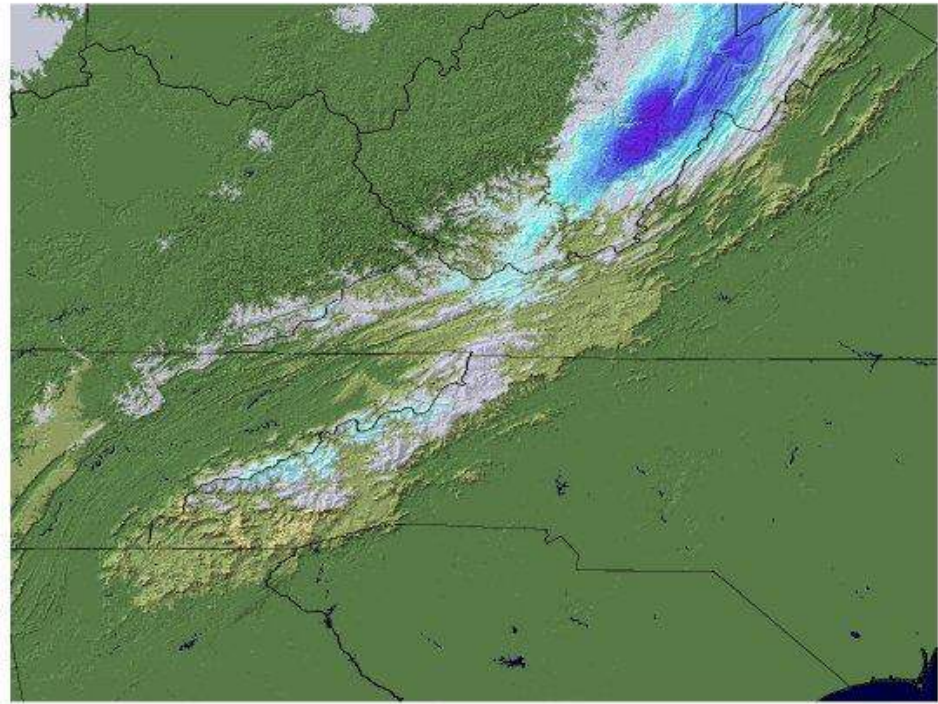
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

Snowpack, crop conditions, fire danger, misc.:

Snow Event: The Upper Cumberland Plateau and higher East Tennessee Mountains received minor snow amounts from the strong frontal passage on the 18-19th of November with maximum totals of ~2 inches at the highest elevations (e.g., Mount LeConte).

Scaled Snow Precipitation

24-Hour Total Ending 2017-11-20 06 UTC



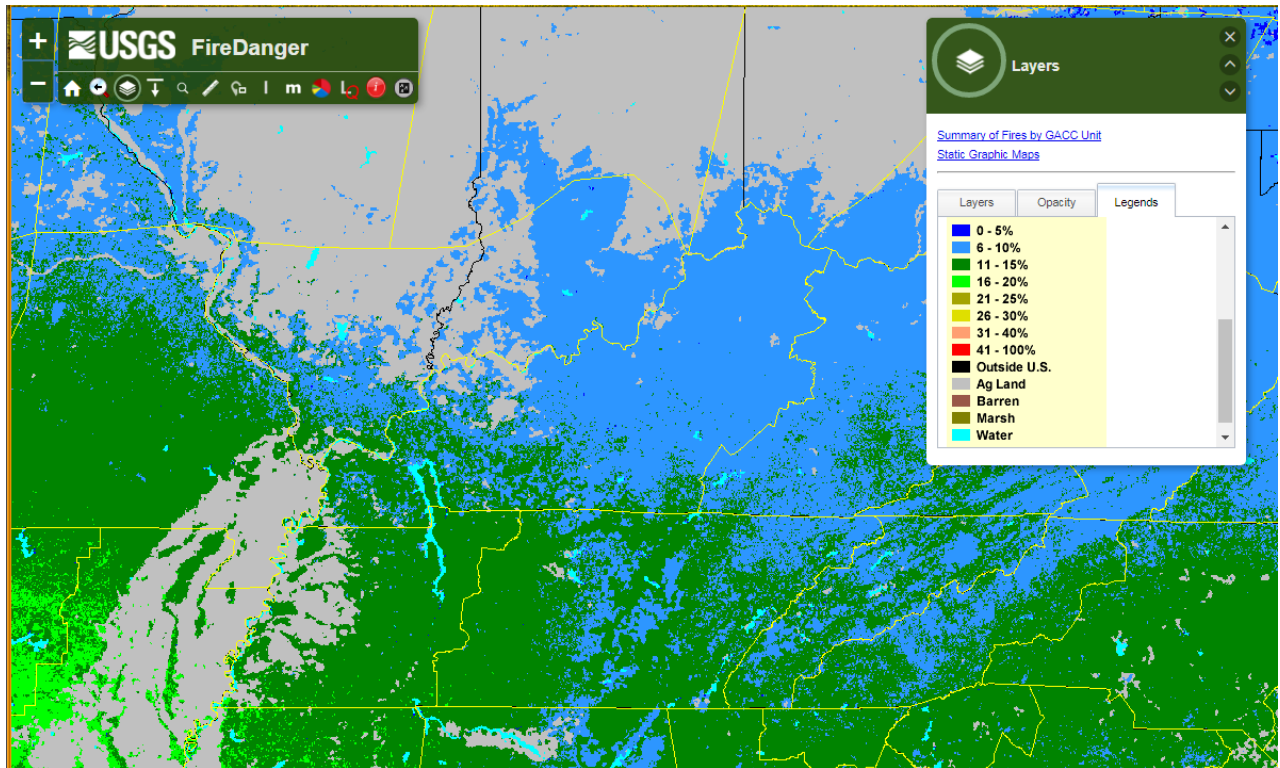


(Snow and rime at Sam's Gap at the TN/North Carolina border on I-26 on Sunday Morning Nov 19th; Photo courtesy Joseph Harris).

Crop Conditions from USDA: Rains from the end of October caused delayed harvests, and heavy rains caused localized flooding in Middle Tennessee resulting in sporadic crop damage. Dry conditions the second half of the month allowed field harvests to continue. By the end of the month, 100% of the corn crop had been harvested, soybean and cotton crops were both over 90% harvested, and 91% of winter wheat had been planted. Drier than normal conditions did affect cattle producers as they had to start hay feeding a little earlier than normal.

Fire Danger: There were some small brush fires observed in the second half of the month across Tennessee, notably in Carter County (Cherokee National Forest), and brush fires along I-40 in Dickson and Davidson Counties. A fire at the intersection of I-24/I-65 in Nashville led to the temporary closing of some traffic lanes.

Large fire probability (percent chance estimate, given a source for ignition that a fire will grow to 100+ acres):



Storm of the month:

This month had two notable events: the heavy precipitation event across central Tennessee during the overnight period of the 6th to the 7th, and the strong frontal passage on the 18th/19th. The even on the 6th and 7th caused 1 injury when high winds blew a mobile home off its foundation in McMinn County.

The frontal passage on the 18th into the 19th brought a strong squall-line across the state and produced 3 tornadoes in Middle Tennessee (two in Davidson County and one in Trousdale County) and numerous high wind damage reports. There were no injuries reported with the tornadoes, but one injury occurred when a driver collided with a downed tree from straight-line winds.



(Tornado damage in Gladeville (Rural Hill tornado); image from Wilson County Emergency Management Agency)

November Storm reports:

Storm Reports from November 6th and 7th:

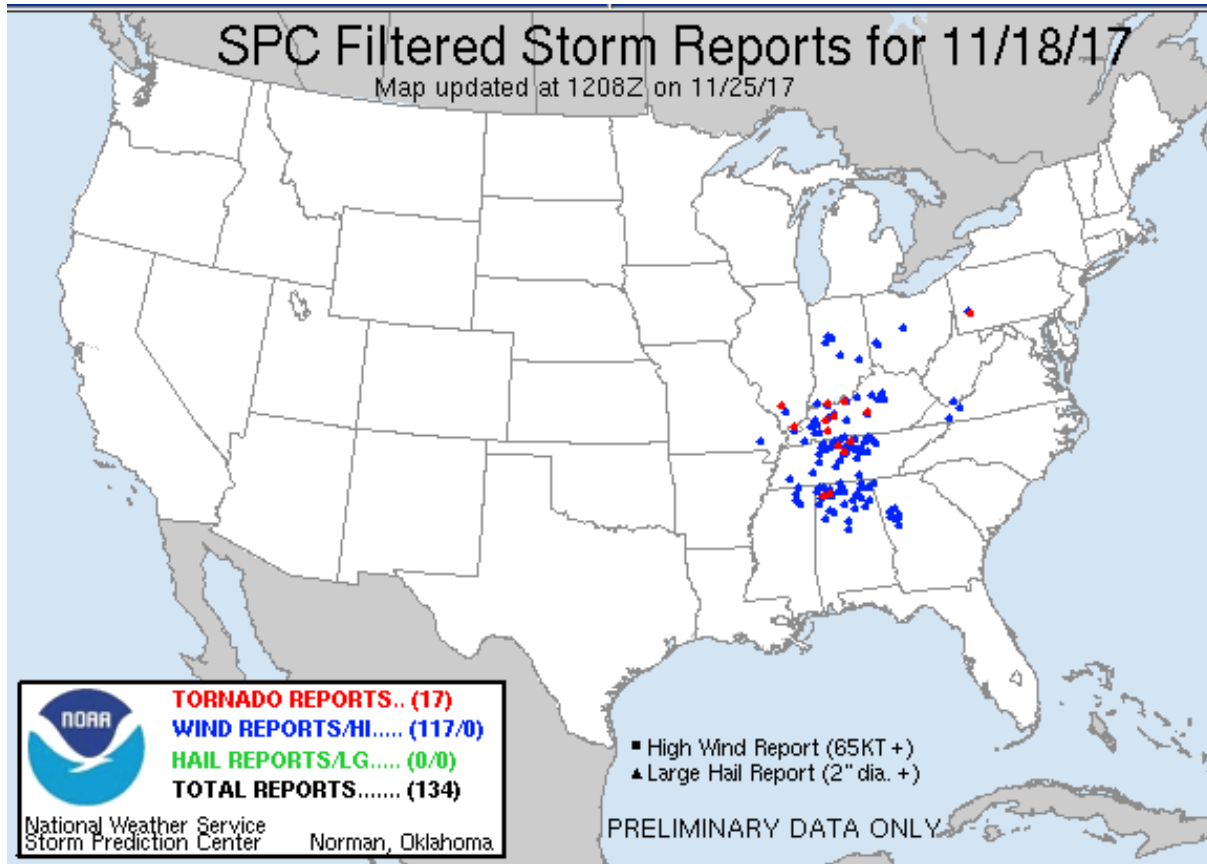
Wind Reports 6th

Time	Speed	Location	County	State	Lat	Lon	Comments
0336	UNK	3 NW FAIRVIEW	WILLIAMSON	TN	3601	8717	A REPORT OF ONE TREE DOWN. IT WAS CLEARED FAIRLY QUICKLY. (OHX)
0406	UNK	5 NW FRANKLIN	WILLIAMSON	TN	3598	8690	REPORT OF A TREE DOWN. TIME ESTIMATED VIA RADAR. (OHX)
0413	UNK	FRANKLIN	WILLIAMSON	TN	3593	8684	REPORT OF TWO TREES DOWN. ONE AT GALERIA MALL ... AND THE OTHER ONE AT OLD NATCHEZ TRACE AND NATCHEZ ROAD. TIME ESTIMATED VIA RADAR. (OHX)

Wind Reports 7th

Time	Speed	Location	County	State	Lat	Lon	Comments
1430	UNK	RICEVILLE	MCMINN	TN	3538	8470	*** 1 INJ *** SINGLE WIDE MOBILE HOME BLOWN OFF OF FOUNDATION ON COUNTY ROAD 100. TIME ESTIMATED. (MRX)
1430	UNK	ENGLEWOOD	MCMINN	TN	3542	8449	TREES AND POWER LINES DOWN NEAR COUNTY ROAD 561 AND PINE STREET. TIME ESTIMATED. (MRX)

Storm Reports from November 18th:



Tornadoes:

Time	F_Scale	Location	County	Lat	Lon	Comments
2229	EF-1	8 SW RIDGETOP	DAVIDSON	36.32	-86.89	AN EF-1 TORNADO BEGAN JUST SOUTH OF I-24 WITH WEAK DAMAGE JUST WEST OF JOELTON MOSTLY TO TREES AND OUTBUILDINGS ON CLARKSVILLE PIKE. THE TORNADO CROSSED I-24 AND INTENS (OHX)
2247	EF-1	5 SW RURAL HILL	DAVIDSON	36.07	-86.57	AN EF-1 TORNADO BEGAN IN FAR SE DAVIDSON COUNTY WITH WEAK TREE AND ROOF DAMAGE ON HAMPTON DR BEFORE CROSSING PERCY PRIEST LAKE INTO FAR NW RUTHERFORD COUNTY. THE TORNAD (OHX)
2304	EF-0	6 WNW HARTSVILLE	TROUSDALE	36.41	-86.26	AN EF-0 TORNADO TOUCHED DOWN JUST EAST OF HWY 231 IN TROUSDALE COUNTY CAUSING WEAK TREE DAMAGE BEFORE INTENSIFYING ON WALNUT GROVE ROAD AND SULPHUR COLLEGE ROAD WHERE D (OHX)

Wind Reports:

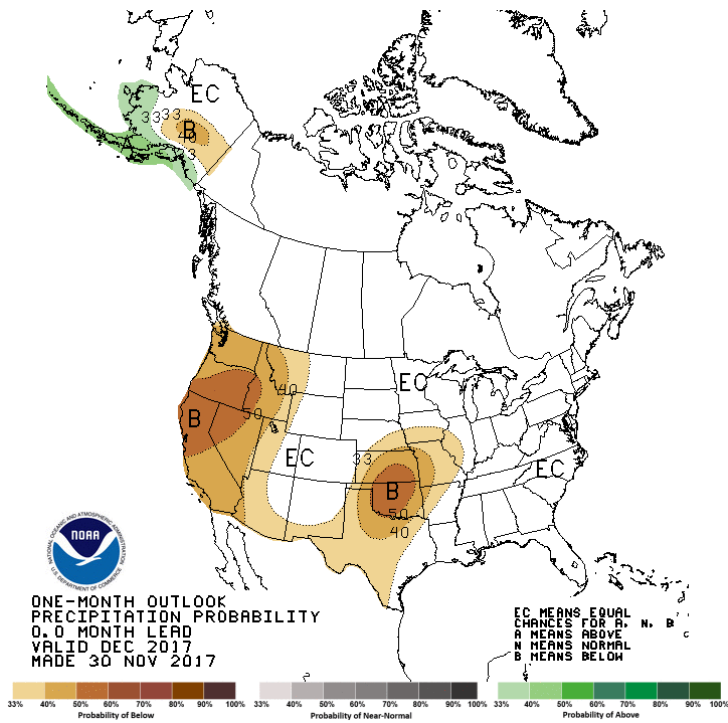
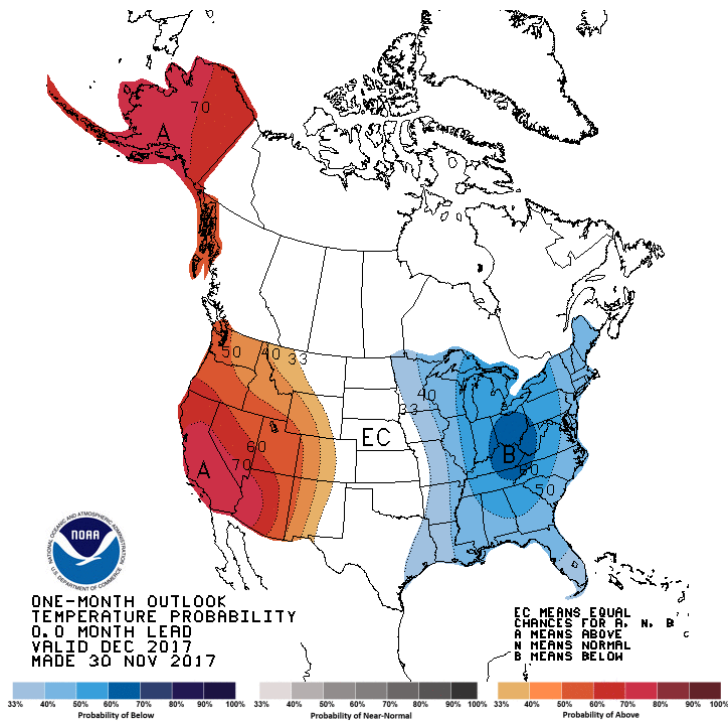
Time	Location	County	Lat	Lon	Comments
2339	2 ESE WOODBURY	CANNON	35.81	-86.04	TREES DOWN ON MCMINNVILLE HIGHWAY. (OHX)
2204	9 WNW ASHLAND CITY	CHEATHAM	36.32	-87.22	LARGE TREES DOWN BLOCKING CHEATHAM DAM ROAD (OHX)
2223	7 ENE ASHLAND CITY	CHEATHAM	36.32	-86.94	TSPOTTER REPORT OF MULTIPLE TREES AND POWER LINES DOWN ON OLD CLARKSVILLE PIKE. (OHX)
2345	CELINA	CLAY	36.55	-85.5	SEVERAL TREES DOWN THROUGHOUT THE COUNTY. (OHX)
2230	8 SW RIDGETOP	DAVIDSON	36.32	-86.87	SIX TREES BLOWN DOWN IN YARD OF HOME AT 3429 BINKLEY ROAD IN JOELTON (OHX)
2345	5 NW SMITHVILLE	DE KALB	36.01	-85.88	TREES DOWN ON HICKMAN ROAD. (OHX)
2200	4 WNW BATH SPRINGS	DECATUR	35.46	-88.15	GREENHOUSE SUPPORTS SNAPPED AND FLATTENED STRUCTURE. (MEG)
2149	2 N VANLEER	DICKSON	36.27	-87.44	NUMEROUS TREES DOWN ACROSS NORTHERN DICKSON COUNTY. (OHX)
0016	1 SW WINCHESTER	FRANKLIN	35.18	-86.11	TREE REPORTED DOWN ALONG 4TH AVENUE SW IN THE WINCHESTER AREA. (HUN)
2100	3 S WHITEVILLE	HARDEMAN	35.28	-89.15	SEVERAL TREES DOWN ON BISHOP ROAD. (MEG)
2133	5 E ERIN	HOUSTON	36.32	-87.61	DAMAGE TO SEVERAL BUILDINGS...SOME ROADS WASHED OUT...AND A LOT OF TREES DOWN ACROSS EASTERN PORTIONS OF THE COUNTY. MOST DAMAGE OCCURED ON TOM STANFILL LOOP AND BETHAN (OHX)
2124	2 NNE WAVERLY	HUMPHREYS	36.12	-87.77	TREES DOWN ON HIGHWAY 13. (OHX)
2350	3 E GAINESBORO	JACKSON	36.36	-85.6	TREES BLOCKING YORK HIGHWAY AND DODSON BRANCH HIGHWAY. (OHX)
2312	LAFAYETTE	MACON	36.52	-86.03	A FEW TREES AND POWER LINES DOWN ACROSS MACON COUNTY (OHX)
2245	3 S COLUMBIA	MAURY	35.58	-87.05	TREE AND POWER LINE DOWN BLOCKING BOTH LANES OF CAMPBELLSVILLE PIKE IN COLUMBIA (OHX)
2149	10 NE CUMBERLAND CITY	MONTGOMERY	36.47	-87.5	AN 80-FOOT TREE FELL AND DAMAGED AN AMATEUR RADIO TOWER. (OHX)
0006	LIVINGSTON	OVERTON	36.39	-85.33	NUMEROUS POWER LINES DOWN WITH POWER OUTAGES ACROSS OVERTON COUNTY (OHX)
0020	8 NE MONTEREY	OVERTON	36.23	-85.16	*** 1 INJ *** TREE AND POWER LINES DOWN BLOCKING ROAD AT 1903 HANGING

					LIMB HIGHWAY. ONE INJURY TO DRIVER OF A VEHICLE HITTING TREE. (OHX)
2145	3 NNE LOBELVILLE	PERRY	35.78	-87.77	LARGE TREE DOWN ON LOBELVILLE HIGHWAY AND AT GILMER BRIDGE ROAD AND LOST CREEK ROAD. (OHX)
2347	8 W BAXTER	PUTNAM	36.14	-85.79	A FEW POWER POLES AND POWER LINES WERE KNOCKED DOWN ACROSS PUTNAM COUNTY FROM BUFFALO VALLEY TO MONTEREY (OHX)
2215	3 ESE CEDAR HILL	ROBERTSON	36.54	-86.96	TREE DOWN AND BARN DAMAGED AT 4475 CARTER ROAD (OHX)
2228	CROSS PLAINS	ROBERTSON	36.54	-86.68	TREES REPORTEDLY DOWN IN CROSS PLAINS (OHX)
2255	1 W LA VERGNE	RUTHERFORD	36	-86.59	A TREE AND A FENCE WERE BLOWN DOWN NEAR MASON ROAD AT INGRAM BLVD. NO OTHER DAMAGE WAS FOUND IN THE AREA. (OHX)
2332	3 N ALEXANDRIA	SMITH	36.12	-86.04	PORCH AND PART OF THE ROOF BLOWN OFF A HOME AT 57 MCGINNIS LANE IN BRUSH CREEK (OHX)
2246	1 N PORTLAND	SUMNER	36.6	-86.52	TSPOTTER REPORT OF A SNAPPED BRADFORD PEAR TREE ON NORTH SIDE OF PORTLAND (OHX)
2254	3 SW GALLATIN	SUMNER	36.34	-86.49	LARGE TREES DOWN IN FAIRVUE PLANTATION (OHX)
2306	3 WNW HARTSVILLE	TROUSDALE	36.41	-86.21	TREES AND FENCES DOWN ON CRENSHAW ROAD. POSSIBLE TORNADO. (OHX)
0006	7 W SPARTA	WHITE	35.95	-85.6	TREES WERE BLOWN DOWN AND AN OUTBUILDING DAMAGED ON OLD SMITHVILLE HIGHWAY SOUTH NEAR CASSVILLE ELEMENTARY SCHOOL (OHX)
2242	7 NE SPRING HILL	WILLIAMSON	35.82	-86.85	AN INTERSTATE SIGN WAS BLOWN DOWN ON I-840 JUST WEST OF I-65 (OHX)
2254	1 NE GREEN HILL	WILSON	36.25	-86.56	TREE DOWN IN SHUTES BRANCH RECREATION AREA. (OHX)
2301	3 ESE RURAL HILL	WILSON	36.09	-86.46	A SHED WAS LIFTED AND THROWN INTO A VEHICLE. (OHX)
2314	2 ESE LEBANON	WILSON	36.2	-86.3	TREE DOWN ON CAR AT 413 SOUTH MAPLE STREET IN LEBANON (OHX)
2327	1 E WATERTOWN	WILSON	36.1	-86.13	TREE DOWN AT 135 VICKERS AVENUE (OHX)

CPC Outlooks for December:

Climate Prediction Center 1-month outlook: There is a good chance that December temperatures will be below average for Tennessee, especially for East Tennessee, as a forecasted shift in weather patterns will bring a deep trough to the eastern US in the second week of the month. However, there are equal chances for precipitation patterns, meaning normal precipitation amounts are expected. The Climate Prediction Center does not include any forecasted drought condition for December. Although with equal chances for normal or below

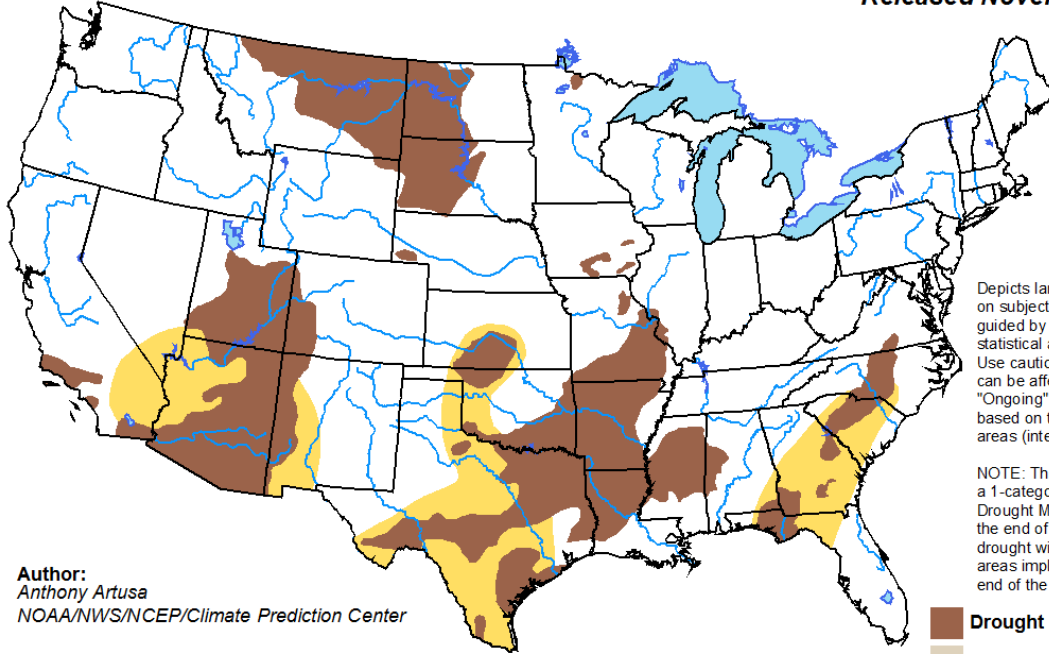
normal precipitation for the month coupled with the drying trend experienced in November, we will need to keep an eye on the situation, especially in western and southern parts of the state, as drought may expand into Tennessee from Arkansas and Mississippi/Alabama.



U.S. Monthly Drought Outlook

Drought Tendency During the Valid Period





Valid for December 2017
Released November 30, 2017

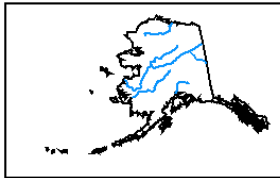


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Anthony Artusa
NOAA/NWS/NCEP/Climate Prediction Center

-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/3eZGd>