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2019 March - Tennessee Monthly Climate Report

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March 2019 Tennessee Climate Summary

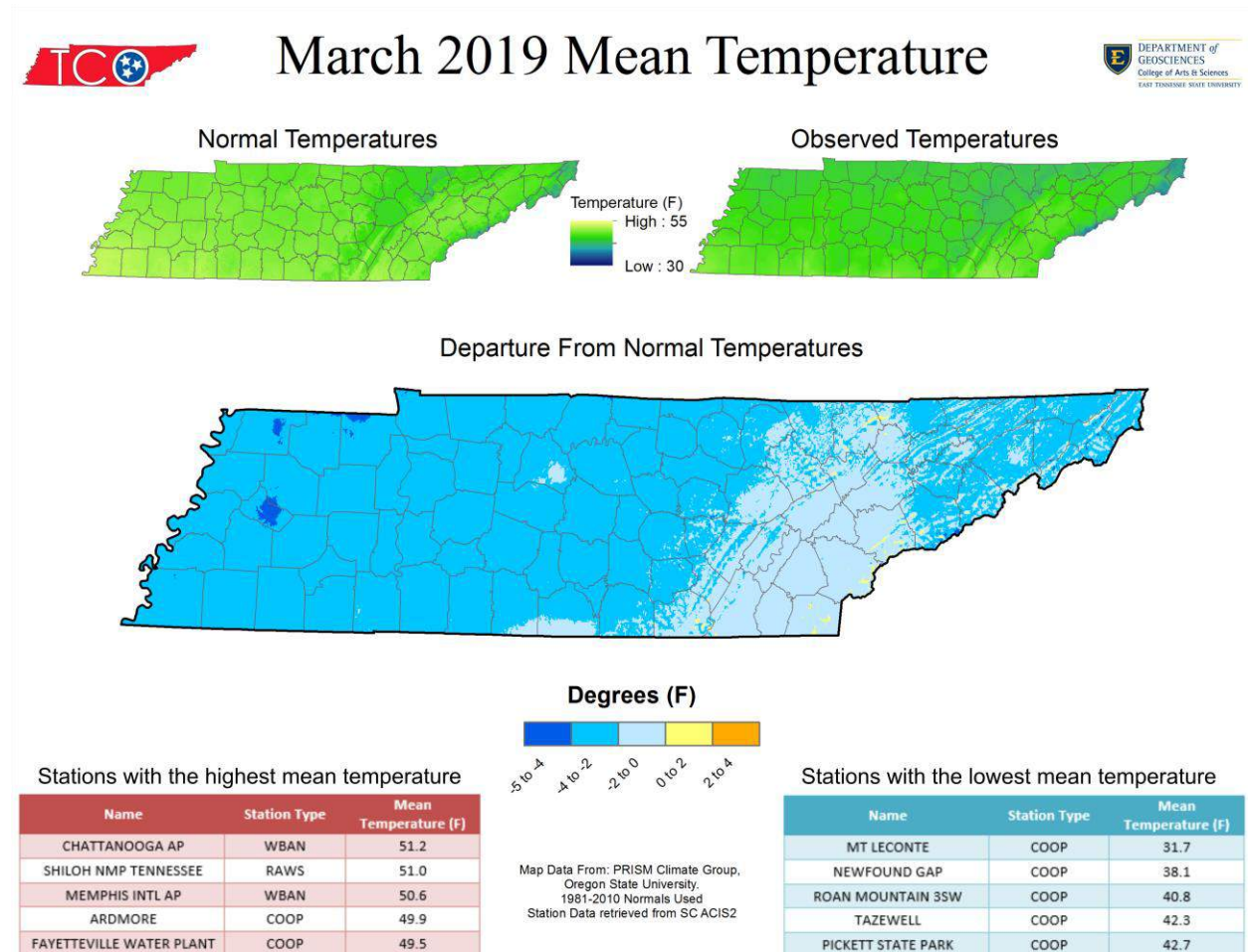
Tennessee Climate Office * East Tennessee State University

Prepared by William Tollefson and Dr. Andrew Joyner

With contributions by Climate Data Representatives at University of Tennessee-Martin, Vanderbilt University, and University of Tennessee-Institute of Agriculture

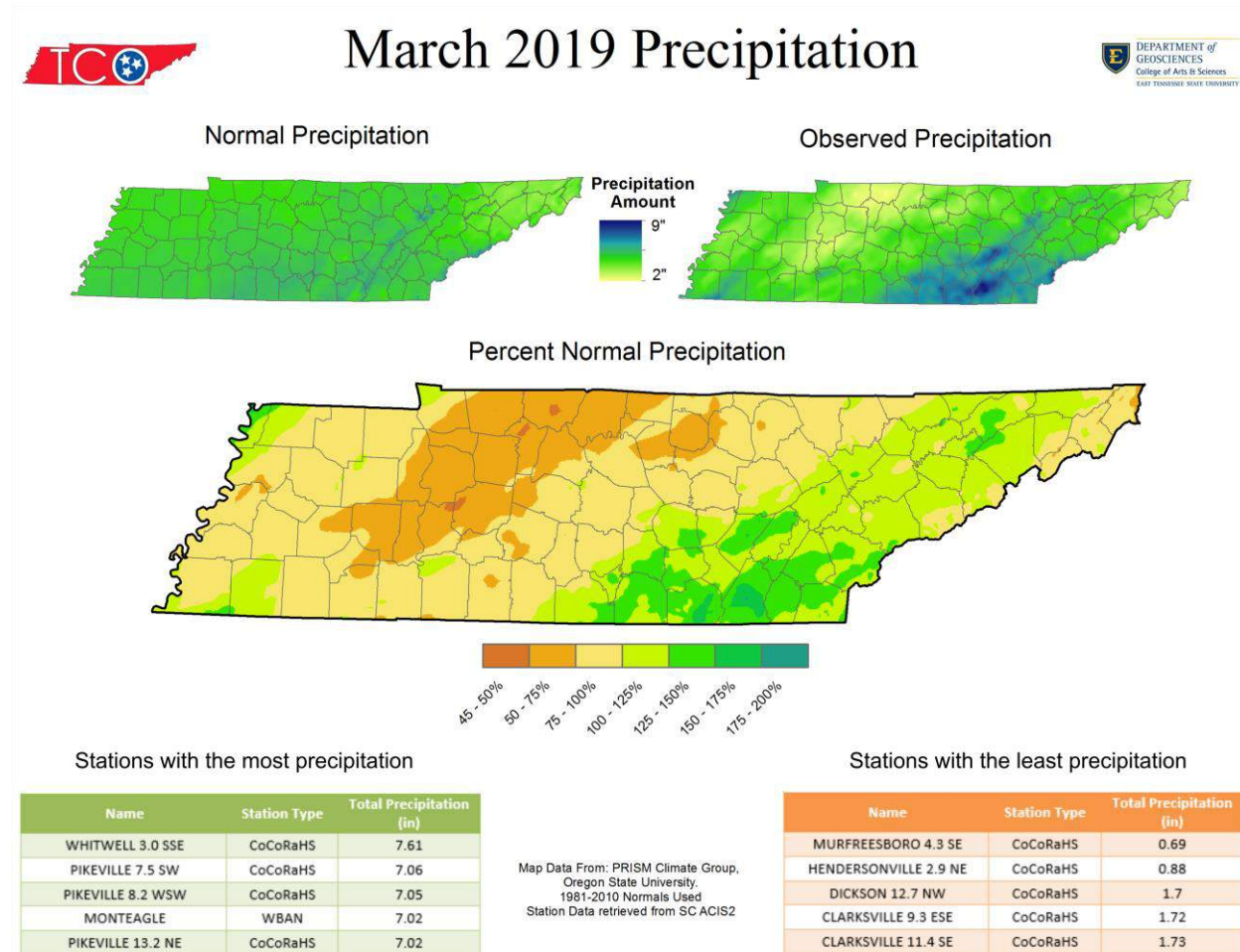
Monthly Temperature Summary:

Mean temperatures were mostly below average across the state this month. This monthly average represented week-to-week conditions fairly well, except for a few very warm days at the end of the month. March started on a particularly cold spell in West Tennessee, with temperatures from February 28th to March 6th nine to twelve degrees below normal! Then each of the following week's temperatures were close-to-normal or cooler-than-normal without clear regional patterns.



Monthly Precipitation Summary:

Precipitation was mostly below normal across the state, except in parts of East Tennessee, extreme northwest Tennessee, and parts of Fayette and Shelby Counties in southwest Tennessee. For the first two weeks of the month the eastern half of the state recorded above normal precipitation, with 2-3 inches of rainfall common, especially in the southern Tennessee Valley. Then from the 14th to the 20th, above normal rainfall was confined to West Tennessee, followed by a dry week across the entire state at the end of the month. This short-term dry trend was a welcome relief from last month's record-setting precipitation.



Top Tenn (warmest, coldest, wettest, driest stations of the month):

Hottest Stations (highest max temp):

Name	Station Type	Max Temperature (F)
SAVANNAH 6 SW	COOP	81
CAMDEN TOWER	RAWS	80
GERMANTOWN 4SE	COOP	80
DECATURVILLE	COOP	80
SHILOH NMP TENNESSEE	RAWS	79
JACKSON EXP STA	COOP	79
MILAN EXP STN	COOP	79
KNOXVILLE AP	WBAN	78
LEXINGTON	COOP	78
WOODBURY 1 WNW	COOP	78
NEWPORT 1 NW	COOP	78
HUNTINGDON WATER PLANT	COOP	78
DOVER 1 W	COOP	78
CLARKSVILLE WWTP	COOP	78
CAMDEN	COOP	78
MOUSETAIL LANDING STATE PARK	COOP	78
SELMER	COOP	78
BOLIVAR WATER WORKS	COOP	78

Coldest Stations (lowest min temp):

Name	Station Type	Lowest Temperature (F)
MT LECONTE	COOP	-2
NEWFOUND GAP	COOP	5
PICKETT STATE PARK	COOP	5
BETHPAGE 1 S	COOP	9
WHITE HOUSE	COOP	10
BIG SOUTH TENNESSEE	RAWS	11
INDIAN GRAVE TENNESSEE	RAWS	11
JAMESTOWN	COOP	11
CROSSVILLE 7 NW	WBAN	12
SPRINGFIELD EXP STATION	COOP	12

Warmest Stations (highest mean temps):

Name	Station Type	Mean Temperature (F)
CHATTANOOGA AP	WBAN	51.2
SHILOH NMP TENNESSEE	RAWS	51.0
MEMPHIS INTL AP	WBAN	50.6
ARDMORE	COOP	49.9
FAYETTEVILLE WATER PLANT	COOP	49.5
MC MINNVILLE	COOP	49.2
OAK RIDGE ASOS	WBAN	49.1
MEMPHIS WFO	WBAN	49.0
NASHVILLE INTL AP	WBAN	49.0
CLEVELAND FILTER PLANT	COOP	49.0
CHATTANOOGA AP	WBAN	50.7

Coollest Stations (lowest mean temps):

Name	Station Type	Mean Temperature (F)
MT LECONTE	COOP	31.7
NEWFOUND GAP	COOP	38.1
ROAN MOUNTAIN 3SW	COOP	40.8
TAZEWELL	COOP	42.3
PICKETT STATE PARK	COOP	42.7
JAMESTOWN	COOP	42.8
ONEIDA	COOP	43.1
COALMONT	COOP	43.3
CROSSVILLE 7 NW	WBAN	43.8
SMITHVILLE 2 SE	COOP	44.0

Wettest Stations (highest rainfall totals):

Name	Station Type	Total Precipitation (in)
WHITWELL 3.0 SSE	CoCoRaHS	7.61
PIKEVILLE 7.5 SW	CoCoRaHS	7.06
PIKEVILLE 8.2 WSW	CoCoRaHS	7.05
MONTEAGLE	WBAN	7.02
PIKEVILLE 13.2 NE	CoCoRaHS	7.02
SPRING CITY	COOP	6.98
TULLAHOMA 4NE	COOP	6.77
FAYETTEVILLE WATER PLANT	COOP	6.63
COALMONT	COOP	6.59
ROCKWOOD 2	COOP	6.58

Driest Stations (lowest rainfall totals):

Name	Station Type	Total Precipitation (in)
MURFREESBORO 4.3 SE	CoCoRaHS	0.69
HENDERSONVILLE 2.9 NE	CoCoRaHS	0.88
DICKSON 12.7 NW	CoCoRaHS	1.7
CLARKSVILLE 9.3 ESE	CoCoRaHS	1.72
CLARKSVILLE 11.4 SE	CoCoRaHS	1.73
SPRINGFIELD 1.8 WSW	CoCoRaHS	1.89
CLARKSVILLE 13.5 SSE	CoCoRaHS	1.89
CARTHAGE	COOP	1.97
CEDAR HILL 2.6 N	CoCoRaHS	1.98
MURFREESBORO 3.2 WSW	CoCoRaHS	2.00

Snowiest Stations (total monthly snowfall):

Name	Station Type	Total Snowfall (in)
MT LECONTE	COOP	1.5
NEWFOUND GAP	COOP	0.5
CLARKSVILLE NO.2	COOP	0.1
BEERSHEBA SPRINGS 2.1 ENE	CoCoRaHS	0.1

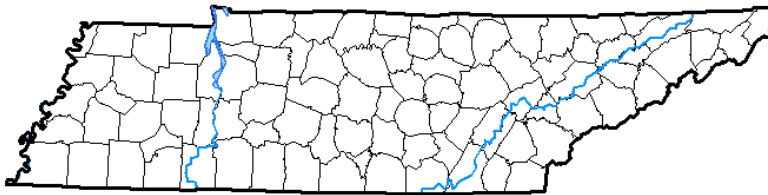
An additional 58 weather stations (WBAN, COOP, and CoCoRaHS) reported trace amounts of snow during March.

Drought Monitor:




Below normal precipitation was observed in many areas of the state, particularly in northern Middle Tennessee where precipitation was only 50-75% of normal for the month; however, due to the extreme surplus of moisture last month, there were no areas of drought concern in Tennessee during March.

U.S. Drought Monitor Tennessee

March 26, 2019
(Released Thursday, Mar. 28, 2019)
Valid 8 a.m. EDT



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:

Eric Luebehusen
U.S. Department of Agriculture

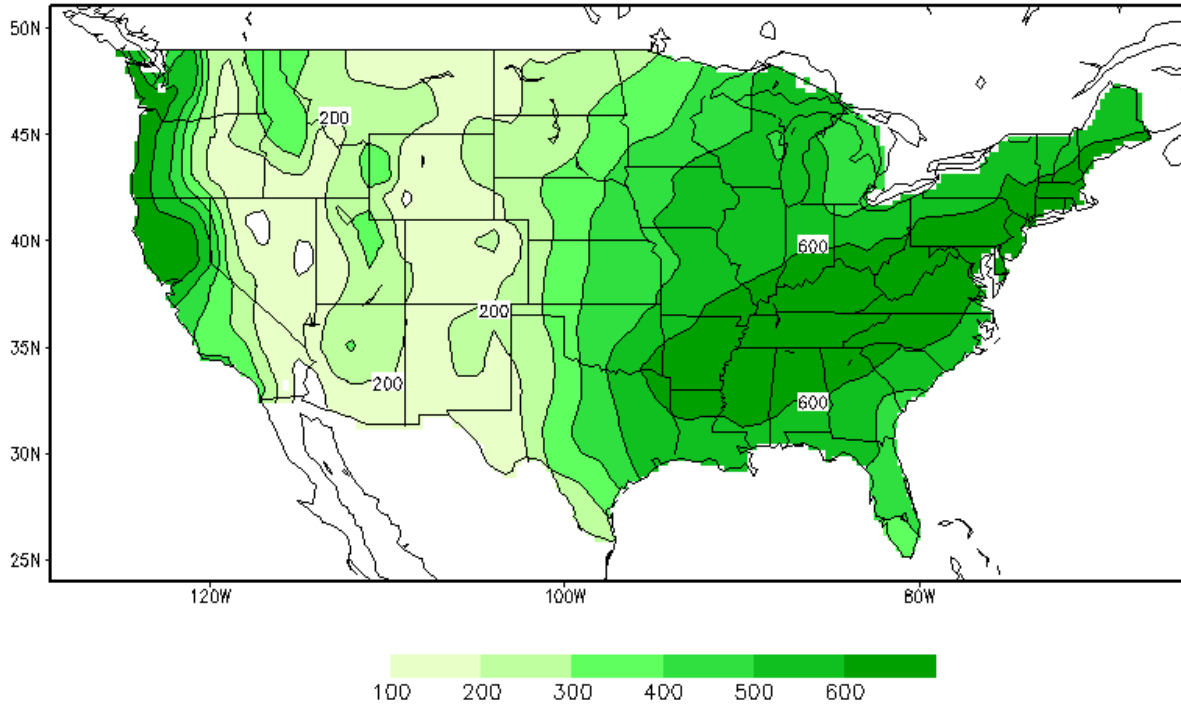


<http://droughtmonitor.unl.edu/>

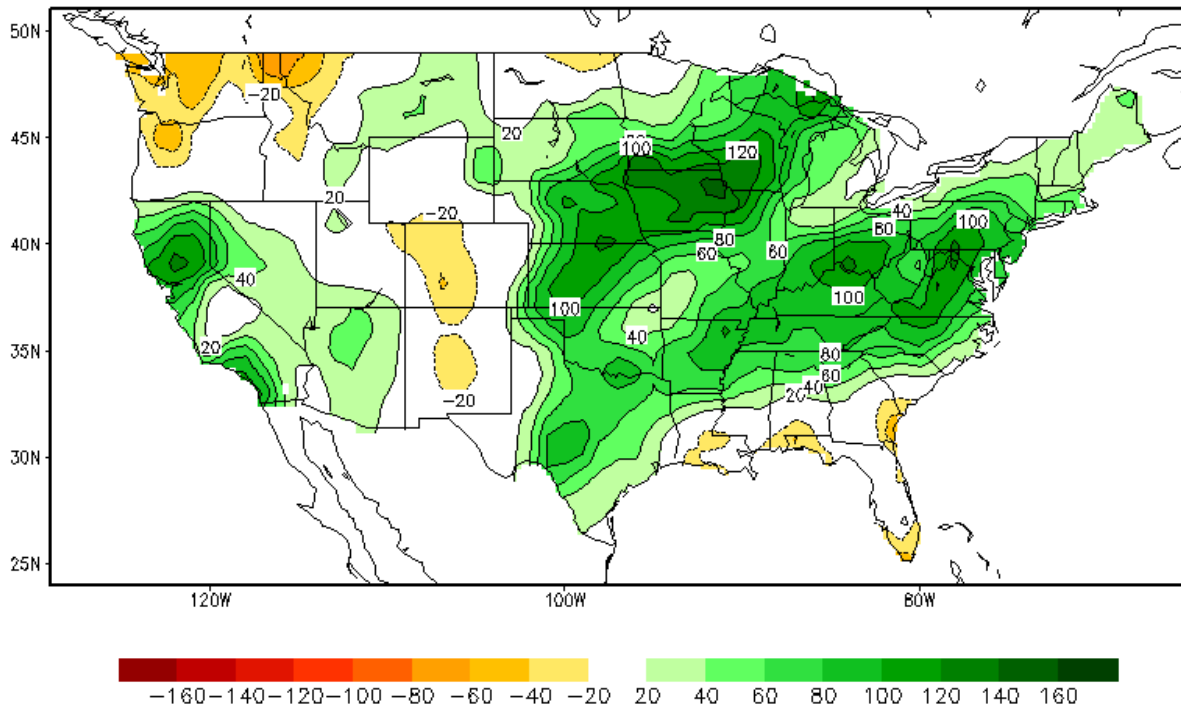
Soil Moisture:

Soil moisture was in excess of 600mm in all areas of Tennessee during the month of March, which was well above normal. Soil moisture anomalies had a surplus that ranged from 80 to 90mm across the state. There was a drying trend in soil moisture over the month, as soils started to dry from February's record precipitation.

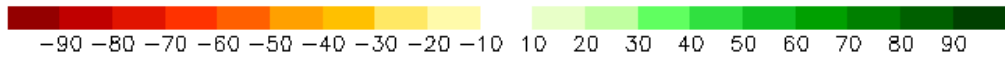
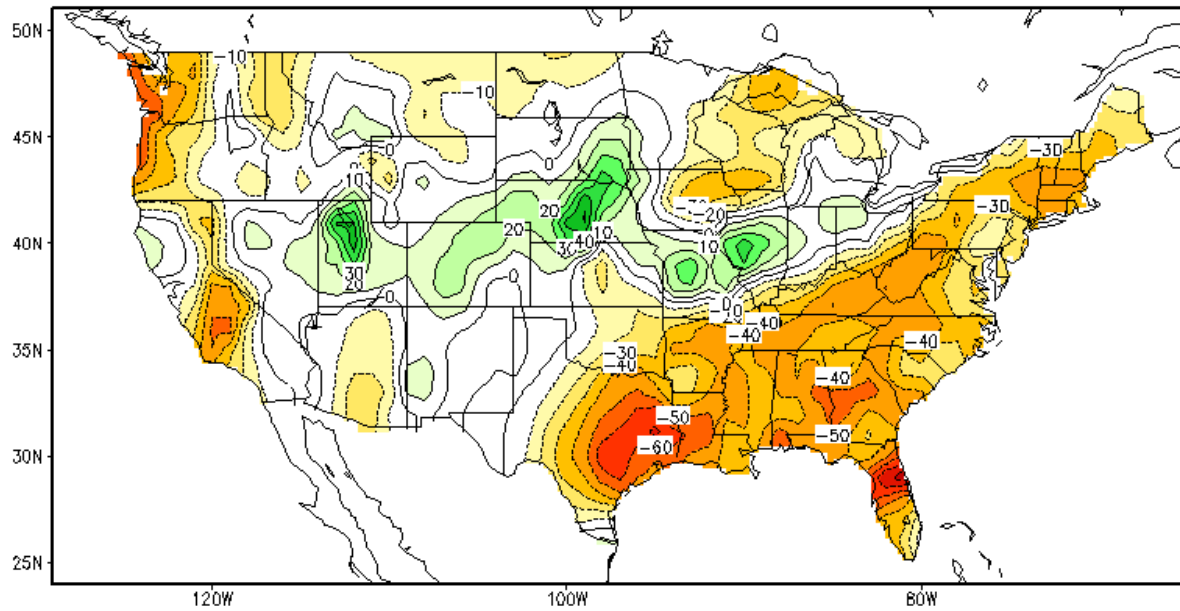
Calculated Soil Moisture (mm)
MAR, 2019



Calculated Soil Moisture Anomaly (mm)
MAR, 2019



Calculated Soil Moisture Anomaly Change
MAR 31, 2019 from FEB.28



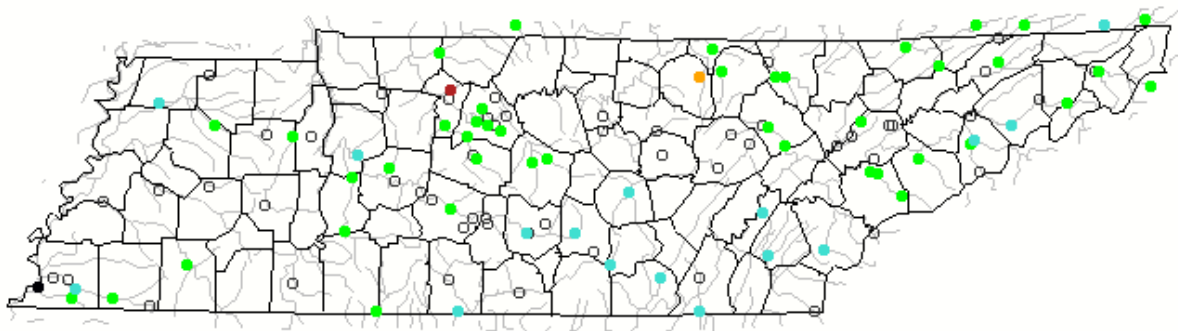
Streamflow:

Coming out of February, many streams across the state were in flood stage or had much-above-normal flows. With a drying trend during March, and many areas in Middle Tennessee observing below normal precipitation, many streamflow readings dropped into the normal range for the month of March. However, many areas were reporting below normal streamflow by the end of the month.

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

Tennessee ▼ or Water-Resources Regions ▼









March 2019



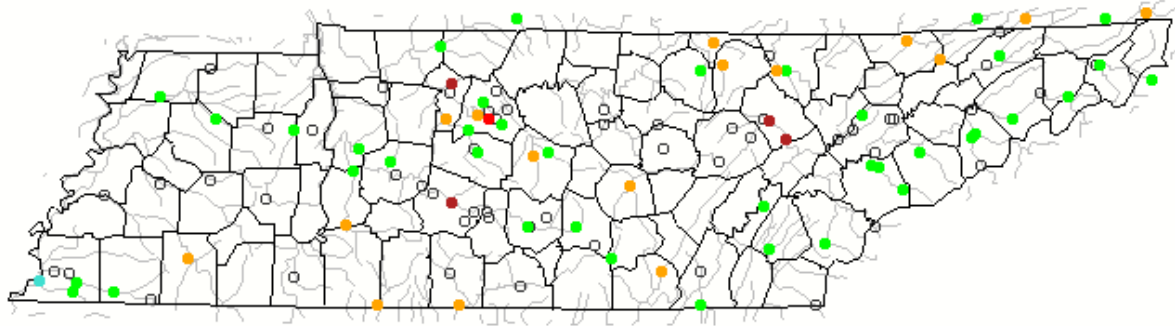
Search USGS streamgage 🔍

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	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Sunday, March 31, 2019



Search USGS streamgage

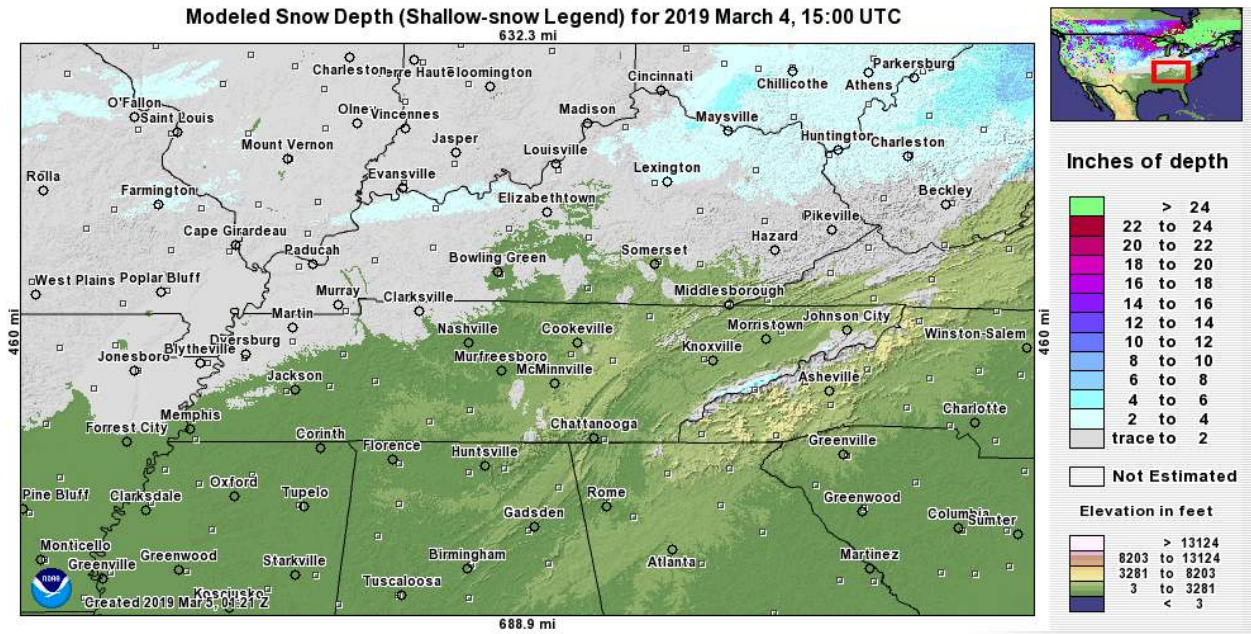
Choose a data retrieval option and select a location on the map

- List of all stations Single station Nearest stations Peak flow

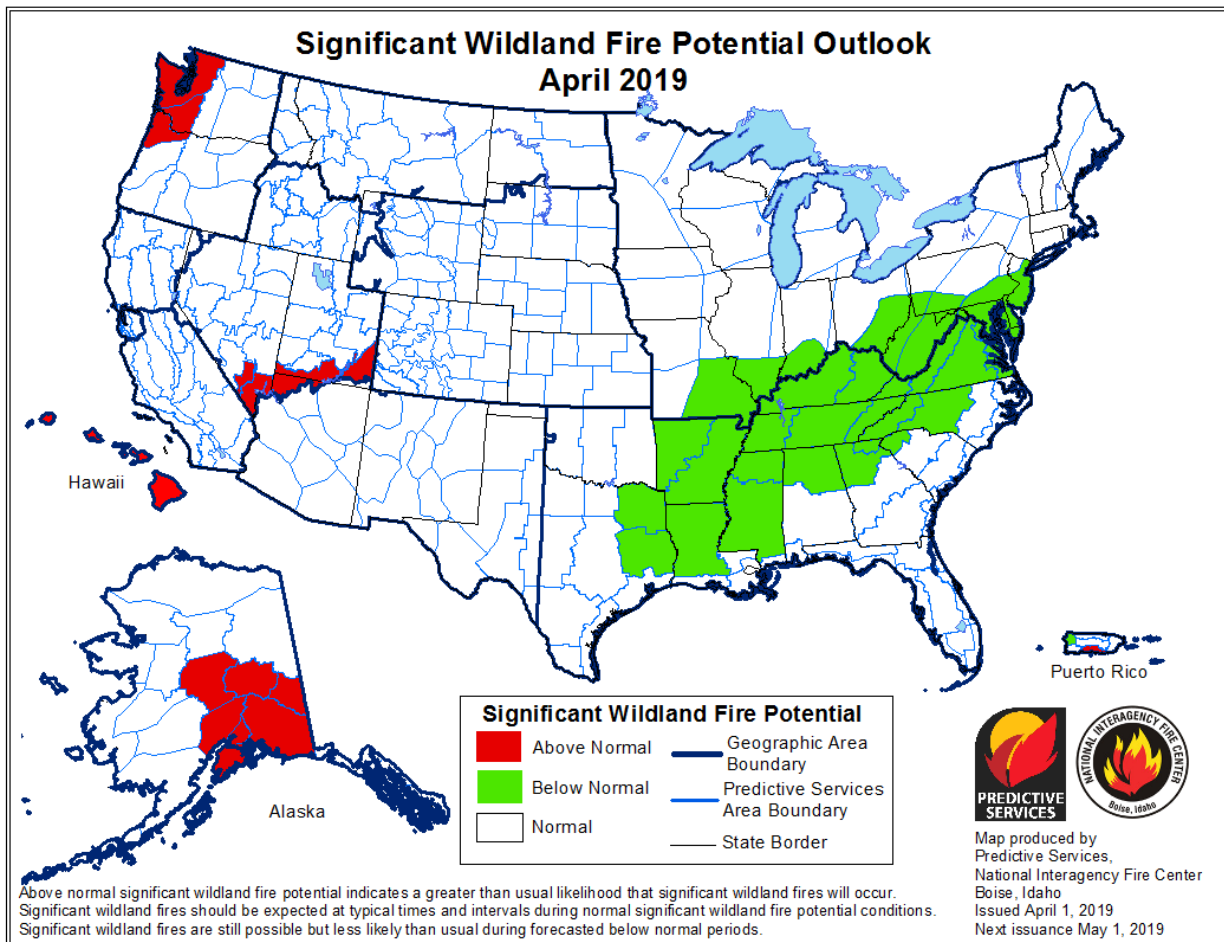
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Miscellaneous:

Snowfall: Widespread light snow occurred across the state from the 3rd to the 5th of the month, resulting in a maximum coverage of trace amounts on the 4th, and measurable snow at mountain locations in East Tennessee. Additional high elevation snows were recorded on the 22nd and 31st.



Fire: With high soil moisture throughout the state, the National Interagency Fire Center's outlook for April wildland fire potential is below normal for the entire state.



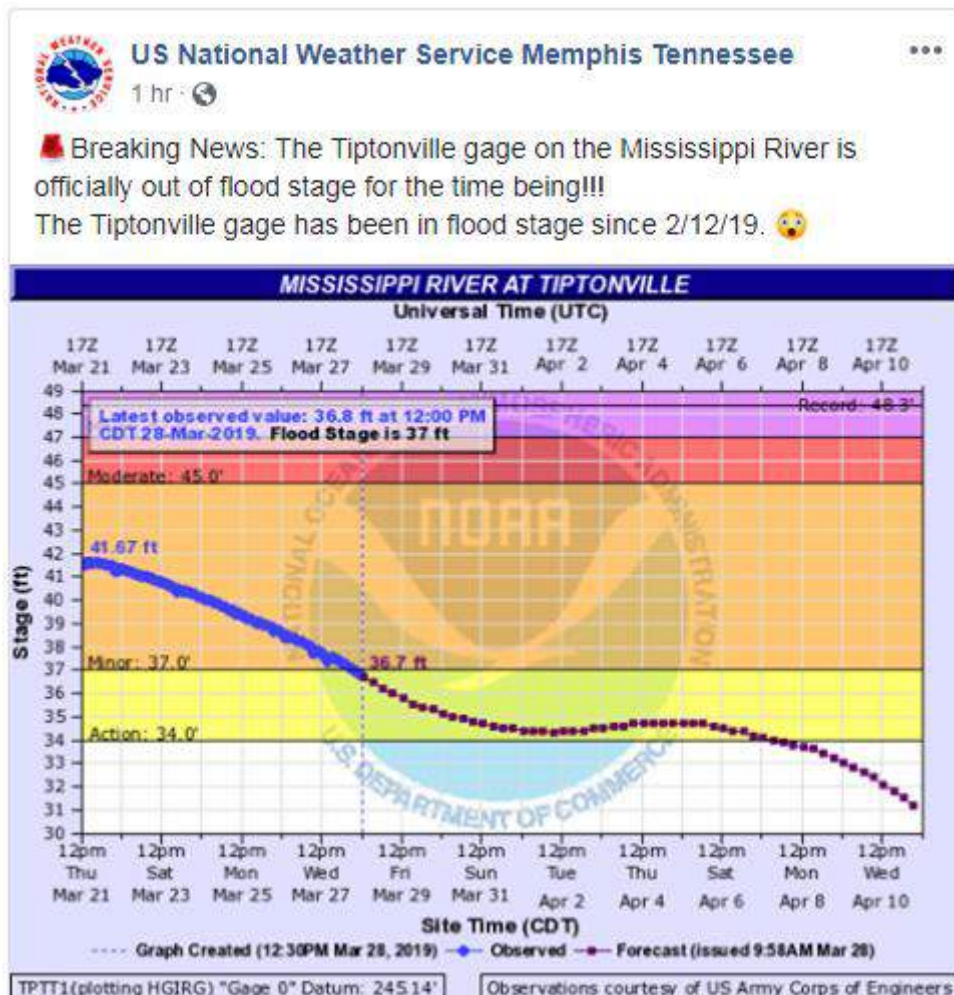
Agriculture: Spring blooms and leaf outs were generally about a week earlier than normal across the state. However, a freeze warning was issued for the state on the night of the 31st, which is a concern for fruit crops. Drying conditions over the month have been mostly beneficial as fields are being prepared for spring planting. Weekly crop progress and condition reports from the Tennessee Field Office of the USDA should resume in April.

Story of the month:

The main story of March for Tennessee was the drying trend across the state. While about 1/3 of the state did record above normal precipitation, this paled in comparison to February’s precipitation patterns.

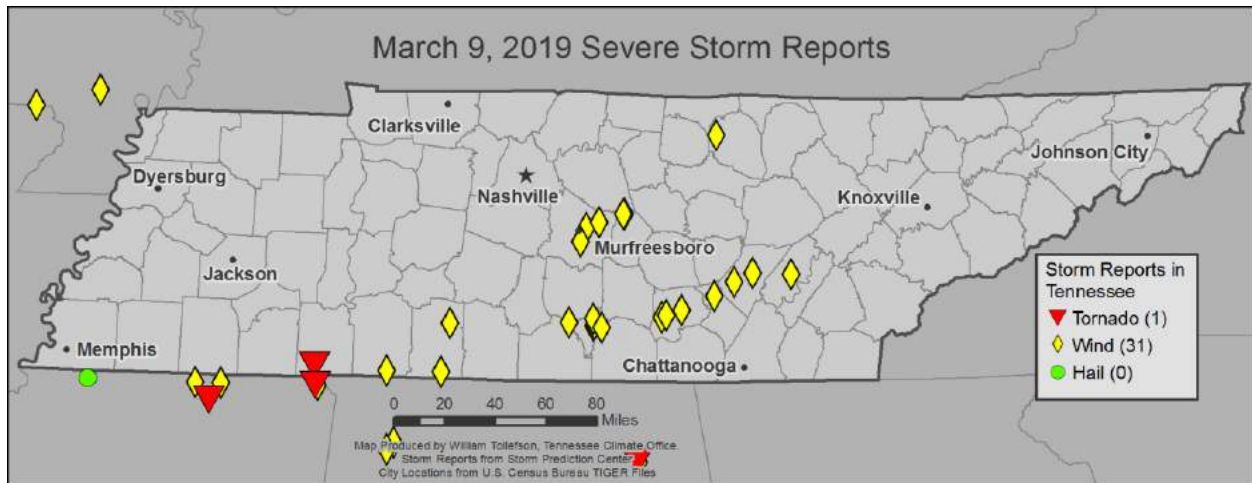
From March 16th to 20th in the Tri-Cities of northeast Tennessee, the airport reported a string of five rain-free days for the first time since October 21st!

By the 28th of March, all rivers and streams in the state were back below flood stage, and while the Mississippi River is still in ‘Action’ stage it dipped below flood stage during the last week of the month.



Storm Reports:

There were three days during March with reports of severe weather in Tennessee (9th, 14th, and 30th), resulting in a total of one report of a tornado and forty reports of severe wind damage.



Tornado Report:

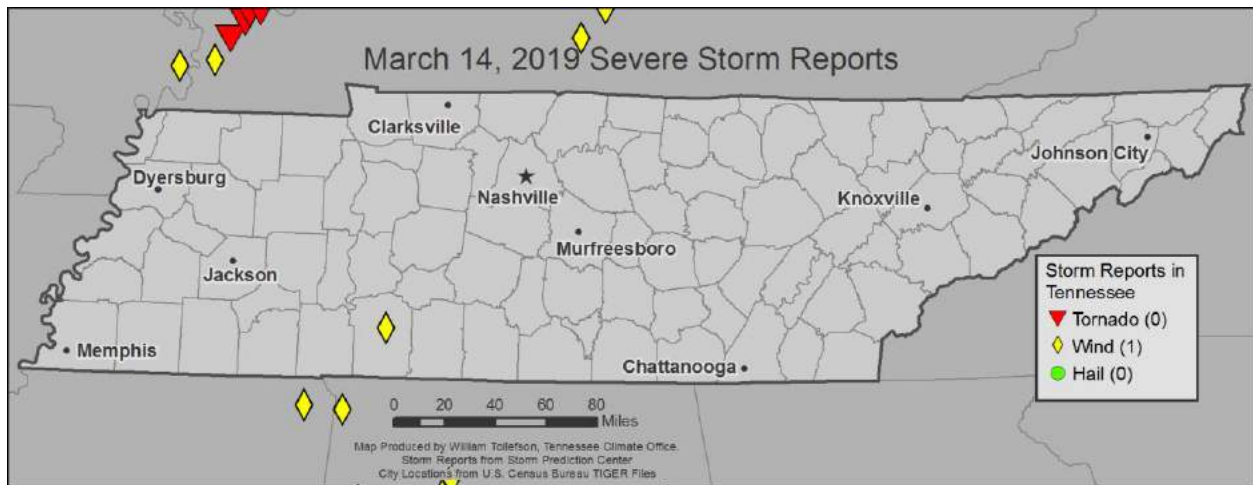
Time	F/EF Scale	Location	County	Lat	Lon	Comments
21:26	UNK	1 N PICKWICK DAM	HARDIN	35.06	-88.25	SPOTTER REPORTED POSSIBLE TORNADO WITH BRIEF TOUCHDOWNS 5 MILES NORTH OF PICKWICK DAM. (MEG)

Wind Reports:

Time	Speed	Location	County	Lat	Lon	Comments
23:46	--	5 SE LORETTO	LAWRENCE	35.04	-87.37	TREES DOWN ALONG TN-98... 5 MI N OF THE STATE LINE. ADDITIONAL TREES DOWN EAST OF TN-227 NEAR LIBERTY GROVE. FURTHER REPORTS OF DAMAGE EXTENDING FROM ST. MARY'S ROAD TO (OHX)
23:48	--	9 W IRON CITY	WAYNE	35.04	-87.75	DELAYED REPORT FROM SATURDAY MARCH 9. TREE DOWN ON POWER LINES IN CYPRESS INN ON MIDDLE CYPRESS CREEK ROAD AT MAY BRANCH ROAD. (OHX)
0:00	--	4 S MURFREESBORO	RUTHERFORD	35.79	-86.4	POWER LINES DOWN ON SHELBYVILLE HWY. LOCATION ESTIMATED FROM DISPATCH AND TIME ESTIMATED FROM RADAR. (OHX)
0:05	--	2 ENE MURFREESBORO	RUTHERFORD	35.87	-86.36	DELAYED REPORT FROM SATURDAY MARCH 9. SOME SIDING WAS BLOWN OFF AN APARTMENT BUILDING...LARGE TREE LIMBS WERE BLOWN DOWN...AND A TALL SIGN FOR A MEXICAN RESTAURANT WAS (OHX)

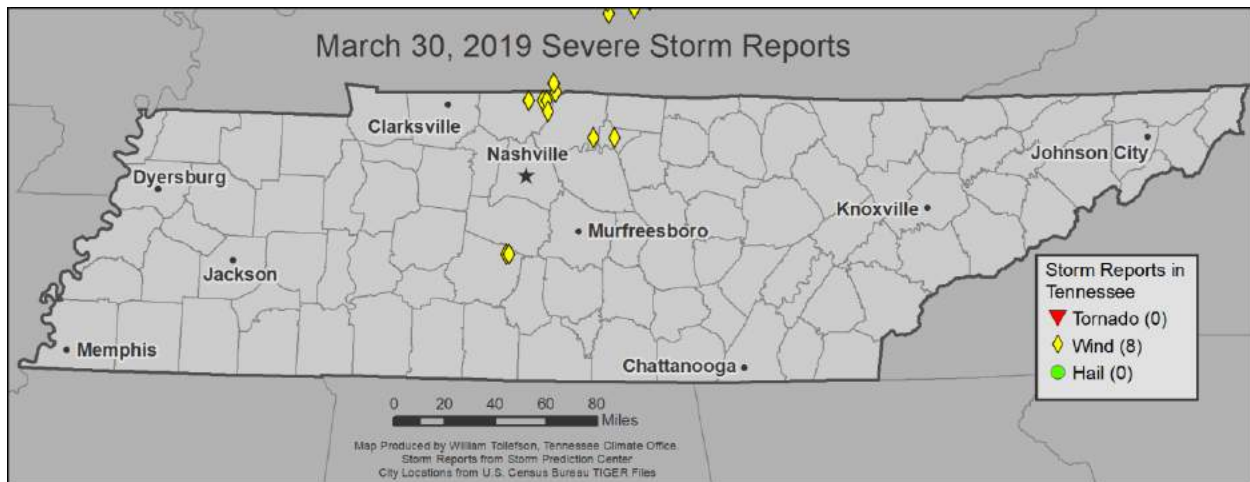
0:07	--	ETHRIDGE	LAWRENCE	35.32	-87.31	POWER LINE DOWN ACROSS GWINN ROAD. OUTBUILDING AND BARN SUSTAINED DAMAGE ALONG ETHRIDGE RED HILL ROAD. (OHX)
0:08	--	3 SSE LASCASSAS	RUTHERFORD	35.9	-86.27	LARGE TREE DOWN ON BROWNS MILL ROAD NEAR LASCASSAS. (OHX)
0:15	--	AUBURNTOWN	CANNON	35.95	-86.09	SOME VINYL SIDING WAS PEELED BACK FROM A HOUSE IN AUBURNTOWN. (OHX)
0:15	--	AUBURNTOWN	CANNON	35.95	-86.1	TREE DOWN IN ROAD ON HWY 145. (OHX)
0:30	--	8 WNW LYNCHBURG	MOORE	35.33	-86.48	TREES REPORTED DOWN ON BAGLEY HOLLOW ROAD. (HUN)
0:40	--	3 NE LYNCHBURG	MOORE	35.31	-86.31	TREES WERE REPORTED DOWN ON FLIPPO ROAD. TIME ESTIMATED BY RADAR. (HUN)
0:42	--	4 NE LYNCHBURG	MOORE	35.32	-86.3	TREES REPORTED DOWN ON HURRICANE CREEK ROAD. TIME ESTIMATED BY RADAR. (HUN)
0:42	--	6 NNE LYNCHBURG	MOORE	35.35	-86.31	TREES REPORTED DOWN ON CUMBERLAND SPRINGS ROAD. TIME ESTIMATED BY RADAR. (HUN)
0:46	--	5 SE LORETTO	LAWRENCE	35.04	-87.37	TREES DOWN ALONG TN-98... 5 MI N OF THE STATE LINE. ADDITIONAL TREES DOWN EAST OF TN-227 NEAR LIBERTY GROVE. FURTHER REPORTS OF DAMAGE EXTENDING FROM ST. MARY'S ROAD TO (OHX)
0:48	--	6 E LYNCHBURG	FRANKLIN	35.3	-86.25	TREES WERE REPORTED DOWN ON GOURDNECK RD NW. (HUN)
1:00	--	4 S MURFREESBORO	RUTHERFORD	35.79	-86.4	POWER LINES DOWN ON SHELBYVILLE HWY. LOCATION ESTIMATED FROM DISPATCH AND TIME ESTIMATED FROM RADAR. (OHX)
1:07	--	ETHRIDGE	LAWRENCE	35.32	-87.31	POWER LINE DOWN ACROSS GWINN ROAD. OUTBUILDING AND BARN SUSTAINED DAMAGE ALONG ETHRIDGE RED HILL ROAD. (OHX)
1:08	--	3 SSE LASCASSAS	RUTHERFORD	35.9	-86.27	LARGE TREE DOWN ON BROWNS MILL ROAD NEAR LASCASSAS. (OHX)
1:15	--	AUBURNTOWN	CANNON	35.95	-86.09	SOME VINYL SIDING WAS PEELED BACK FROM A HOUSE IN AUBURNTOWN. (OHX)
1:15	--	AUBURNTOWN	CANNON	35.95	-86.1	TREE DOWN IN ROAD ON HWY 145. (OHX)
1:20	--	7 WNW COALMONT	GRUNDY	35.36	-85.83	HIGHWAY 50 WAS SHUT DOWN NEAR PELHAM DUE TO TREES AND POWER LINES DOWN ACROSS THE ROADWAY IN THREE SEPARATE LOCATIONS. ONE TREE FELL ONTO A CAR. (OHX)

1:28	--	5 WNW COALMONT	GRUNDY	35.37	-85.8	TREES DOWN ON HWY 108 IN PELHAM. (OHX)
1:30	--	3 SE ALTAMONT	GRUNDY	35.4	-85.69	TREES AND POWER LINES DOWN ON ESTHER DRIVE OFF COLONY ROAD (OHX)
1:49	--	3 ENE OLD CUMBERLAND	BLEDSON	35.56	-85.32	FEW TREES DOWN. (MRX)
1:53	--	CAGLE	SEQUATCHIE	35.48	-85.46	A FEW POWER OUTAGES REPORTED BETWEEN CAGLE AND DUNLAP. (MRX)
1:58	--	6 W LIVINGSTON	OVERTON	36.4	-85.44	TREE DOWN OVER HILHAM ROAD. (OHX)
2:05	--	PIKEVILLE	BLEDSON	35.61	-85.19	ONE TREE DOWN ALONG HIGHWAY 30 W. (MRX)
2:28	--	5 WNW COALMONT	GRUNDY	35.37	-85.8	TREES DOWN ON HWY 108 IN PELHAM. (OHX)
2:28	--	3 NE EVENSVILLE	RHEA	35.6	-84.92	FEW TREES DOWN. (MRX)
2:30	--	3 SE ALTAMONT	GRUNDY	35.4	-85.69	TREES AND POWER LINES DOWN ON ESTHER DRIVE OFF COLONY ROAD (OHX)
2:53	--	CAGLE	SEQUATCHIE	35.48	-85.46	A FEW POWER OUTAGES REPORTED BETWEEN CAGLE AND DUNLAP. (MRX)
3:05	--	PIKEVILLE	BLEDSON	35.61	-85.19	ONE TREE DOWN ALONG HIGHWAY 30 W. (MRX)



Wind Report:

Time	Speed	Location	County	Lat	Lon	Comments
18:00	--	2 S WAYNESBORO	WAYNE	35.29	-87.76	TREE FELL ONTO A HOUSE ON HIGHWAY 13. TIME ESTIMATED. (OHX)



Wind Reports:

Time	Speed	Location	County	Lat	Lon	Comments
23:17	--	6 W ORLINDA	ROBERTSON	36.6	-86.77	NWS STORM SURVEY DETERMINED AN 8 MILE LONG BY 1 MILE WIDE DOWNBURST CAUSED SPORADIC DAMAGE FROM 3 MILES WEST TO 5 MILES EAST OF ORLINDA. AT LEAST 10 BARN SUFFERED ROOF (OHX)
23:21	--	ORLINDA	ROBERTSON	36.6	-86.67	DAMAGE TO HOMES AND POWER POLES IN THE 8700 BLOCK OF HWY 49 NEAR ORLINDA. (OHX)
23:25	--	2 E ORLINDA	ROBERTSON	36.6	-86.64	POWER POLE AND LINES DOWN IN ROAD AT COOK ROAD AND HIGHWAY 52. (OHX)
23:30	--	3 E CROSS PLAINS	SUMNER	36.54	-86.63	LIMBS WERE BLOWN DOWN NEAR I-65 AND CROSS PLAINS. (OHX)
23:46	--	1 SSE SPRING HILL	MAURY	35.72	-86.92	NWS STORM SURVEY DETERMINED A 1 MILE LONG BY 300 YARDS WIDE MICROBURST CAUSED SIGNIFICANT DAMAGE ALONG JOHN LUNN ROAD JUST SOUTH OF SATURN PARKWAY IN SPRING HILL. ONE B (OHX)
23:50	--	2 SE SPRING HILL	MAURY	35.72	-86.9	DAMAGE TO BARN AND HOUSE WITH BROKEN WINDOWS. TREES AND FENCE WERE BLOWN DOWN. THESE REPORTS WERE IN THE TOM LUNN ROAD AREA WITH TIME ESTIMATED BY RADAR. (OHX)
0:00	--	CASTALIAN SPRINGS	SUMNER	36.39	-86.31	SEVERAL TREES REPORTED DOWN AROUND CASTALIAN SPRINGS (OHX)
0:11	--	HARTSVILLE	TROUSDALE	36.39	-86.16	ROOF DAMAGE TO A BUILDING IN DOWNTOWN HARTSVILLE (OHX)

CPC Outlooks for Next Month:

Climate Prediction Center outlooks for April indicate that Tennessee will likely see temperatures above normal, with higher confidence in East Tennessee. The state will have equal chances of drier than normal, wetter than normal, or normal precipitation patterns, with the exception of extreme southwest Tennessee having a slightly better chance of having above normal precipitation.

