

WINTER/SPRING FLOOD POTENTIAL OUTLOOK
NATIONAL WEATHER SERVICE GREENVILLE-SPARTANBURG SC
Issued Friday, February 9th, 2018

...Recent above-normal rainfall and much-improved antecedent conditions have resulted in significant changes to the flood potential across the region for the third 2018 Winter/Spring Flood Potential Outlook...

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ABOUT THIS PRODUCT...
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NOTICE: This product may migrate to a downloadable, PDF document by March 2018. Once this occurs, the information contained below will no longer be available via standard NWS text product format. Instead, future NWS GSP Flood Potential Outlook text products will only refer to the web address where the complete product can be downloaded. If you have any concerns about the unavailability of this product via NWS text, please IMMEDIATELY contact the author of this product via the methods shown at the bottom of this product.
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Every two weeks from January through mid-March, NWS Greenville-Spartanburg (GSP) issues a Flood Potential Outlook for the entire service area (see county-to-region legend at the end of this outlook for a list of counties serviced by NWS GSP). These outlooks forecast the potential for runoff, small stream, and mainstem river flooding through late April, or the end of the winter recharge season. The outlook is prepared based on an assessment of several hydrometeorological factors, including recent and forecasted precipitation and observed soil moisture, groundwater levels, streamflows, reservoir levels, and recent flooding events.

This product and an archive of past Flood Potential Outlooks is also located at:

<http://weather.gov/gsp/floodoutlook>

For additional hydrological and meteorological information please visit:

<http://weather.gov/gsp/hydro>

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CLIMATOLOGY and SEASON to DATE...
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The mainstem river flood season typically begins in late December. The quantity, frequency, magnitude, and significance of river flood events often increases through late winter with a peak in early to mid-March. While the mainstem river flood season typically ends by late April for the region, small-stream flash flooding can occur year-round.

This season, the mainstem flood season began prematurely in

October across the western North Carolina mountains; however, a dry fall and early winter resulted in the development of drought conditions across the Piedmont. Outside of the Blue Ridge Escarpment, January 2018 was a dry month for the remainder of the region, especially across the western Piedmont, where precipitation totals were generally 50-75% of normal. This exacerbated below-normal hydrologic parameters, especially with respect to soil moisture and streamflows and combined with weak long-range signals for precipitation, suggested below-normal flood potential across the Piedmont.

However, February 2018 has begun very wet in response to a more active northern jet stream and the return of a southern jet stream which traditionally brings additional moisture and energy into the region. This additional activity has resulted in several weak to average-strength storm systems over the past 7-10 days, with some producing one- to two-weeks' worth of normal rainfall. The result has been regionwide precipitation totals equivalent to 150-350 percent of normal for the month-to-date. The highest deviations have been across Upstate South Carolina, where runoff and small-stream response has been impressive, albeit still largely below flood levels.

A more persistent southwesterly flow pattern aloft is forecasted to establish itself across the Southeast heading into the second full week of February, which promises to keep the region in a wet pattern and eliminate any lingering drought conditions.

Therefore, the overall flood outlook for late winter and spring 2018 has changed dramatically across the region with near-normal conditions returning to the Piedmont after a prolonged dry spell.

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 14-DAY OBSERVED PRECIPITATION and FLOODING...
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REGION	OBSERVED PRECIP (in)	% OF NORMAL	MAINSTEM FLOODING	SMALL STREAM FLOODING
NC Piedmont	2.00-4.25	125-250	None	None
NC Foothills	2.00-4.25	110-225	None	None
NC Nrn Mnts	1.75-2.50	75-150	NA	None
NC Cntl Mnts	1.75-4.00	50-150	None	None
NC Srn Mnts	2.50-5.00	50-200	None	Iso. Minor
SC Mnts	4.00-5.25	150-225	NA	None
SC Foothills	3.75-4.75	175-250	None	Iso. Minor
SC Piedmont	3.75-5.00	200-275	None	None
GA NE Mnts/ Foothills	3.75-6.00	125-250	None	None
GA Piedmont	4.00-5.00	175-250	None	None

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 SNOW DEPTH and FORECAST...
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REGION	SNOW DEPTH (in)	SNOW WATER EQUIVALENT (in)	7-DAY SNOWFALL FORECAST (2/9-2/16) (in)
NC Piedmont	None	None	None
NC Foothills	None	None	None
NC Nrn Mnts	None	None	None
NC Cntl Mnts	0-4	0-0.4	None
NC Srn Mnts	None	None	None
SC Mnts	None	None	None
SC Foothills	None	None	None
SC Piedmont	None	None	None
GA NE Mnts/ Foothills	None	None	None
GA Piedmont	None	None	None

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 1-10 DAY FUTURE PRECIPITATION FORECAST and FLOOD POTENTIAL...
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REGION	10-DAY PRECIP (2/9-2/19) (in)	% OF NORMAL (2/9-2/19)	MAINSTEM FLOOD PTNTL (2/9-2/19)	SMALL STREAM FLOOD PTNTL (2/9-2/19)
NC Piedmont	2.00-3.00	140-280	Slight	Slight
NC Foothills	3.00-4.50	190-360	Slight	Slight
NC Nrn Mnts	2.50-4.50	150-500	NA	Slight
NC Cntl Mnts	2.50-6.00	100-670	Slight	Moderate
NC Srn Mnts	3.00-6.00	105-480	Slight	Moderate
SC Mnts	2.50-4.00	120-280	NA	Slight
SC Foothills	2.50-3.50	140-280	Slight	Moderate
SC Piedmont	2.00-3.00	120-240	Near Zero	Slight
GA NE Mnts/ Foothills	3.00-5.00	120-310	Slight	Moderate
GA Piedmont	2.00-3.50	110-250	Near Zero	Slight

DEFINITIONS:

Flood Potential	Zero	= No flood potential
Categories:	Near Zero	= Very low flood potential

Slight = Isolated Minor Flooding Possible
 Moderate = Scattered Minor Flooding Likely;
 Iso Moderate Flooding Possible
 Likely = Sct-Wdsprd Minor Flooding Likely;
 Iso Moderate Flooding Possible
 Significant = Scattered Mod/Iso Major Flooding
 Likely

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 8-90 DAY PRECIPITATION OUTLOOKS...
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REGION	8-14 DAY PRECIP OUTLOOK (2/17-2/23)	15-28 DAY PRECIP OUTLOOK (2/24-3/9)	MAR 2018 PRECIP OUTLOOK
NC Piedmont	Slightly Blw Nrml	Slightly Blw Nrml	Near Normal
NC Foothills	Near Normal	Slightly Blw Nrml	Near Normal
NC Nrn Mnts	Near Normal	Slightly Blw Nrml	Near Normal
NC Cntl Mnts	Near Normal	Slightly Blw Nrml	Near Normal
NC Srn Mnts	Near Normal	Slightly Blw Nrml	Near Normal
SC Mnts	Near Normal	Slightly Blw Nrml	Near Normal
SC Foothills	Slightly Blw Nrml	Slightly Blw Nrml	Near Normal
SC Piedmont	Slightly Blw Nrml	Slightly Blw Nrml	Near Normal
GA NE Mnts/ Foothills	Slightly Blw Nrml	Slightly Blw Nrml	Near Normal
GA Piedmont	Slightly Blw Nrml	Slightly Blw Nrml	Near Normal

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 HYDROLOGIC SUMMARY...
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 ..IMPORTANT NOTES...

It is very important to note that flash flooding and flooding of smaller tributaries is still very possible during periods of dry weather and/or drought. Several important and damaging flash floods were observed during previous drought periods. Residents are strongly encouraged to heed related flood advisories and warnings, even during significant drought.

The winter and early spring months are a critical time for the water system as widespread winter precipitation normally restores streamflows and reservoir levels following the spotty, convective nature of precipitation during the summer and the drier weeks of early fall. This recharge of the water system is critical for

adequate water supply heading into the late spring and summer of 2018. When the winter begins in a significant drought, it takes a greater amount of precipitation to adequately complete this recharge.

 ..SOIL and CROP MOISTURE...

 ----- SOIL/CROP MOISTURE ESTIMATES -----

REGION	2/7 TOTAL^ COLUMN SOIL MOISTURE ANOMALY (mm)	2/7 SOIL MOISTURE %ile~ (%)	CHANGE FROM Jan 19 (mm)	2/10 SHORT-TERM CROP MOISTURE INDEX*
NC Piedmont	0 to - 25	30-70	+50 to +25	+1 - +2, SAN
NC Foothills	+ 50 to 0	50-70	+25 to 0	+1 - +2, SAN
NC Nrn Mnts	+ 25 to - 25	30-70	0	+1 - +2, SAN
NC Cntl Mnts	+ 25 to - 25	30-70	0	+2 - +3, Abv Nrml
NC Srn Mnts	+ 50 to + 25	50-80	0	+2 - +3, Abv Nrml
SC Mnts/ Foothills	+ 50 to + 25	50-80	+50	+2 - +3, Abv Nrml
SC Piedmont	+ 25 to 0	30-70	+100 to +50	+2 - +3, Abv Nrml
GA NE Mnts/ Foothills	+ 25 to 0	50-80	+50 to +25	+2 - +3, Abv Nrml
GA Piedmont	+ 25 to 0	30-70	+50 to +25	+1 - +2, SAN

DEFINITIONS:

EVAPOTRANSPIRATION = The loss of moisture from the soil to the atmosphere plus the loss of moisture from the soil to vegetation.

INTERPRETATION = Note that above-normal temperatures and below-normal precipitation exacerbate the loss of soil moisture through evapotranspiration, while below-normal temperatures and above-normal precipitation mitigates soil-moisture deficits. However, heading into fall and winter, cooler temperatures and less-active or dormant vegetation reduce demands on the water system and while still important, the effects of above-normal temperatures and below-normal precipitation are lessened.

*CROP MOISTURE INDEX = Depicts short-term (< 1 month) dryness or wetness impacting agriculture. Negative values indicate dryness, while positive values indicate wetness. The index is not a depicter of medium-range (i.e., 1-6 months) to long-range (i.e., >6 months) wetness or drought.

SBN = Slightly Below Normal

SAN = Slightly Above Normal

^TOTAL COLUMN = Defined as a 2-meter depth (6.56ft) and derived from the North American Land Data Assimilation System (NLDA5) which is a joint modeling effort between the National Centers for Environmental Prediction and the National Aeronautics and Space Administration.

~PERCENTILES = Normal is defined as anywhere within the 30-70th percentiles, with above-normal or wet conditions >70th and below-normal or dry conditions <30th.

..GROUNDWATER*...

----- GROUNDWATER WELL MEASUREMENTS -----
 ----- Depth Below Ground Surface in Feet -----

COUNTY	LOCATION	DEPTH* 2/7 (ft)	FEB** MEDIAN (ft)	CHANGE***RECORD	
				SINCE 1/22 (ft)	LOWEST and LEVEL DATE (ft)
Caldwell	Granite Falls	19.61	19.92	-0.59	26.43, 03/23/17
Catawba	Oxford Resrch St	41.14	39.53	-0.12	42.09, 01/14/13
Gaston	Pasour Mtn	45.67	39.04	+0.24	45.67, 02/07/18
McDowell	Pleasant Gardens	28.15	29.09	+0.05	31.89, 11/29/10
Union (NC)	Mineral Springs	38.84	38.75	-0.37	42.70, 01/10/13
York	York Co Airport	27.20	25.50	-0.97	29.69, 12/13/12

COUNTY	LOCATION	DEPTH* 2/7 (ft)	CHANGE*** SINCE 1/22 (ft)	%ile **** (2/7)	RECORD	
					LOWEST and LEVEL DATE (ft)	
Anderson	Williamston	3.50	-0.21	10-25	5.98, 06/25/02	
Burke	Glen Alpine	10.45	-0.71	50-75	13.84, 09/04/11	
Cherokee	Marble	3.32	-3.26	75-90	15.16, 11/28/16	
Chester	Leeds Road	89.38	+0.17	25-50	94.52, 01/12/14	
Davie	Mocksville	18.75	-0.65	10-25	23.32, 08/24/02	
Haywood	near Cruso	4.50	-0.55	25-50	6.96, 09/12/02	
Iredell	Langtree	26.84	-1.06	< 1st	33.03, 11/02/17	
Oconee	Oconee Statn Rd	29.47	-0.48	25-50	32.08, 12/31/08	
Rowan	Barber	6.42	-0.76	75-90	11.15, 09/14/02	
Spartanburg	Croft State Park	47.61	+0.10	25-50	51.69, 03/17/13	
Transylvania	Blantyre	29.84	-0.66	25-50	42.19, 12/12/08	
Transylvania	Pisgah Forest	13.38	-0.66	50-75	17.86, 08/25/08	
White	Unicoi State Pk	4.26	-1.17	25-50	6.49, 09/28/98	

DEFINITIONS:

- * DEPTH = Note that groundwater is measured as depth below the surface, unlike streamflow and reservoir data which is the reverse or height above the surface. Therefore, the higher the depth value, the less the groundwater supply because the groundwater level is further from the surface.
- **MEDIAN = Current depth values that are larger than the monthly median can be loosely correlated to drier-than-normal conditions while current depth values that are smaller than the monthly median can be loosely correlated to wetter-than-normal conditions.
- ***CHANGE = A POSITIVE CHANGE means the groundwater depth has increased or is further from the surface. Therefore, a NEGATIVE CHANGE means the groundwater depth has decreased or is closer to the surface. In periods of drought, negative changes are ideal. However, positive changes are NORMAL during the late summer and early fall, as rainfall is typically isolated to scattered and less significant, causing losses to surface and subsurface water sources due to increased evapotranspiration, evaporation, and increased consumption, while negative changes are NORMAL during the late fall and winter, as widespread significant precipitation recharges surface and subsurface water sources and environmental demands are lower.

Note, however, that for many groundwater sites, the depth of the wells are very deep and there is a lag between significant rainfall and deep infiltration into subsurface water supplies. If the rainfall is not significant or occurring over a sustained period of time, the water may never reach the groundwater wells. Additionally, if the rainfall is significant but occurring quickly and only once during a period of several weeks, a shallower groundwater well may spike and then return to near pre-rainfall levels.

****PERCENTILE = The percentile (%ile) values can be interpreted as follows:

Less than 10th percentile	- Well-Below Normal
10th-25th percentile	- Below Normal
25th-50th percentile	- Slightly Below Normal/Near Normal
50th-75th percentile	- Slightly Above Normal/Near Normal
75th-90th percentile	- Above Normal
Greater than 90th percentile	- Well-Above Normal

The percentile values are computed monthly. Therefore, percentiles referenced in the chart above are for the month of January. Groundwater well statistics change throughout the water year such that the median monthly depth typically reaches a minimum in autumn and a peak in late spring. This can result in a dramatic change in the percentile of an observed depth from one month to the next, even if the observed depth does not change significantly.

 ..STREAMFLOW*...

----- 28-DAY AVERAGE USGS STREAMFLOW PERCENTILES BY REGION -----

REGION	% OF NORMAL (2/8)	%ILE (2/8)	%ILE (1/22)	CLASSIFICATION (2/8)
NC Piedmont	68-161	30-82	1-42	Slightly-Above Normal
NC Foothills	78-162	42-90	19-83	Slightly-Above Normal
NC Nrn Mnts	128-149	80-85	84-92	Above Normal
NC Cntl Mnts	71-156	28-84	7-91	Slightly-Above Normal
NC Srn Mnts	62-133	20-81	15-82	Slightly-Above Normal
SC Mnts/ Foothills	81-125	41-74	4-59	Normal
SC Piedmont	62-111	30-77	2-23	Normal
GA NE Mnts/ Foothills	75-125	28-74	13-59	Normal
GA Piedmont	65- 99	39-67	11-20	Normal

----- 28-DAY AVERAGE USGS STREAMFLOW PERCENTILES BY RIVER SYSTEM -----

RIVER BASIN	% OF NORMAL (2/8)	%ILE (2/8)	%ILE (1/22)	CLASSIFICATION (2/8)
Broad (GA)	65- 93	39-55	11-13	Normal
Broad (NC/SC)/Pacolet	61-124	34-74	9-57	Normal
Catawba	71-162	42-90	1-83	Above Normal (Upr)/ Slight Abv Nrml (Lwr)
Enoree/Tyger	62-115	30-73	3-22	Normal
French Broad	88-133	54-81	54-82	Slightly Above Normal
Nantahala/Tuckasegee/ Little Tennessee	62-110	20-59	15-41	Normal
Pigeon	71-156	32-84	40-91	Slightly Above Normal
Rocky/Yadkin	68-161	30-82	6-65	Slightly Above Normal
Reedy/Saluda	69-121	38-74	3-43	Normal
Tallulah/Chattooga	75-125	28-74	19-59	Normal
Toxaway/Keowee/ Savannah	78-104	29-61	3-20	Normal

DEFINITIONS...

*RESERVOIR = Please note that streamflows along regulated rivers INFLUENCE (i.e., rivers with reservoirs) may be influenced positively and/or negatively by the control of releases from those reservoirs. For a list of mainstem rivers and their regulation influence, please see the bottom of this product.

 ..RESERVOIRS...

 ----- POOL ELEVATIONS and DROUGHT STAGES -----

RESERVOIR	NWS ID	AVG* ELEV 2/7 (ft)	AVG ELEV 1/22 (ft)	TARGET ELEV 2/7 (ft)	2/7 ELEV- TARGET (ft)	2/7 MIN ELEV* (ft)	2/7 DGT STGE
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BROAD SYSTEM

Summit	(None)	98.3	98.7	97.5	+0.80	85.0	NA
Gaston Shoals	(BLAS1)	99.85	98.97	NA	NA	98.0	NA
Ninety-Nine Isl	(NNIS1)	100.30	99.00	NA	NA	98.0	NA

CATAWBA SYSTEM (As of 2/1, Total Reservoir Storage 137% of Target)

James	(BRWN7)	96.72	97.16	94.2	+2.52	92.0	0
Rhodhiss	(RHON7)	97.17	97.09	97.0	+0.17	94.0	0
Hickory	(OXFN7)	98.35	97.76	96.2	+2.15	94.0	0
Lookout Shoals	(LKSN7)	97.23	96.93	97.0	+0.23	94.0	0
Norman	(CWAN7)	97.34	96.79	94.3	+3.04	91.3	0
Mountain Island	(MOUN7)	98.10	97.10	96.0	+2.10	94.3	0
Wylie	(FOMS1)	98.46	97.34	97.0	+1.46	94.0	0
Fishing Creek	(FCDS1)	96.28	98.31	98.0	-1.72	95.0	0
Great Falls	(GTFS1)	97.58	97.64	97.5	+0.08	95.0	0
Cedar Creek	(CDCS1)	97.75	97.61	97.5	+0.25	96.0	0

NANTAHALA/LITTLE TENNESSEE/TUCKASEGEE SYSTEM

Tanasee Creek	(EFKN7)	85.48	86.35	85.0	+0.48	83.0	ND
Wolf Creek	(WCDN7)	85.20	86.58	85.0	+0.20	83.0	ND
Bear Creek	(BCDN7)	93.70	92.98	93.0	+0.70	91.0	ND
Cedar Cliff	(ICCN7)	99.28	97.87	98.0	+1.28	96.0	0
Glenville	(THPN7)	91.20	90.80	90.3	+0.90	85.7	ND
Nantahala	(NANN7)	83.05	77.65	84.3	-1.25	76.5	ND
Queens Creek	(QCDN7)	89.35	88.35	86.8	+2.55	85.8	ND
Fontana	(FONN7)	1651.80	1650.44	1653.5	-1.70	1645.5	NA

SAVANNAH SYSTEM (As of 2/1, Total Reservoir Storage is 79% of Target for Jocassee and Keowee (Duke Energy) and 73% for Hartwell and Russell (USACE))

Jocassee	(JCSS1)	95.63	95.25	NA	NA	77.0	2
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Keowee	(KEOS1)	98.38		97.54		NA		NA		94.6		2
Hartwell	(HRTG1)	653.12		651.40		657.58		-4.46		625.0		1
Russell	(RBDS1)	475.12		473.20		475.0		+0.12		470.0		ND

PROJECTIONS...

LAKE HARTWELL...assuming net inflows increase to 50% of normal then hold steady over the next two months, the pool elevation is projected to increase 1-3 feet through mid-March, and potentially another 1-2 feet through mid-April for a total rise of 2-4 feet. This pool rise is sufficient to bring the lake back to near the Drought Level 1 trigger pool, but insufficient to make full long-term recovery relative to rising target elevations for summer storage.

FONTANA LAKE... projected to remain near the flood guide curve through the winter if near-normal rainfall occurs.

DEFINITIONS...

*AVG ELEV = Reporting the daily average elevation factors in the fluctuations in pool elevation due to scheduled discharges and/or power generation.

MINIMUM ELEVATION = The minimal elevation is the lowest elevation that the pool can be while meeting local community and river system needs. Drought release reduction plans may begin above the minimal elevation. For Lake Hartwell and Richard B. Russell Lake, the minimal elevation marks the bottom of conservation storage or the top of the inactive pool. Drought release reduction plans begin at or above the minimal elevation, at 656.0 feet at Lake Hartwell and at 470.0 feet for Richard B. Russell Lake.

ND = No Drought
 NA = Not Applicable

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 LONG-TERM FLOOD OUTLOOK...
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Therefore, given current antecedent conditions and short- to long-range precipitation guidance, the latest long-term flood outlook through the end of April 2018 is as follows...

REGION	RUNOFF POTENTIAL	SMALL STREAMS FLOOD POTENTIAL	MAINSTEM RIVERS FLOOD POTENTIAL
NC Piedmont	Slight Abv Nrml	Near Normal	Near Normal
NC Foothills	Above Normal	Slight Abv Nrml	Near Normal
NC Nrn Mnts	Above Normal	Above Normal	NO MAINSTEMS

NC Cntl Mnts	Above Normal	Above Normal	Slightly Above Nrml
NC Srn Mnts	Well-Abv Nrml	Above Normal	Slightly Above Nrml
SC Mnts	Above Normal	Slight Abv Nrml	NO MAINSTEMS
SC Foothills	Above Normal	Slight Abv Nrml	Near Normal
SC Piedmont	Slight Abv Nrml	Near Normal	Near Normal
GA NE Mnts/ Foothills	Above Normal	Slight Abv Nrml	Near Normal
GA Piedmont	Near Normal	Near Normal	Near Normal

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ACKNOWLEDGMENTS...
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The precipitation analysis is derived from quality-controlled gridded precipitation estimates produced at the Lower Mississippi River Forecast Center (LMRFC) and the Southeast River Forecast Center (SERFC).

The 1-10 day future precipitation is derived from guidance produced by NWS Greenville-Spartanburg.

The long-term precipitation outlooks are derived from guidance produced at the Climate Prediction Center (CPC).

Streamflow information is courtesy of the United States Geological Survey (USGS).

Reservoir information is courtesy of Duke Energy...Georgia Power... and the US Army Corps of Engineers (USACE).

The mainstem rivers flood outlook is produced in collaboration with the LMRFC and the SERFC.

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NEXT ISSUANCE DATE...
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The second flood outlook should be issued around:
Tuesday, February 20th, 2018.

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ADDITIONAL RESOURCES...
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For the latest LEVELS of streams and mainstem rivers across the region please visit and bookmark:

http://water.weather.gov/ahps2/area.php?wfo=gsp&hydro_type=0&hsa_type=1

For the latest status of DROUGHT conditions across the region please visit and bookmark:

<http://droughtmonitor.unl.edu>

Please note the U.S. Drought Monitor is released every Thursday morning, but only factors in data through Tuesday morning. Any precipitation which may occur after Tuesday morning, but before Thursday morning, is considered in the following week's product.

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COUNTY TO REGION LEGEND...

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..GEORGIA...

COUNTY	REGION
Elbert	GA Piedmont
Franklin	GA Piedmont
Habersham	GA NE Mountains/Foothills
Hart	GA Piedmont
Rabun	GA NE Mountains/Foothills
Stephens	GA NE Mountains/Foothills

..NORTH CAROLINA...

COUNTY	REGION (SUBREGION)
Alexander	NC Foothills (Northern)
Avery	NC Northern Mountains
Buncombe	NC Central Mountains
Burke	NC Foothills (Northern)
Cabarrus	NC Piedmont (Southern)
Caldwell	NC Foothills (Northern)
Catawba	NC Foothills (Northern)
Cleveland	NC Piedmont (Southern)
Davie	NC Piedmont (Northwest)
Gaston	NC Piedmont (Southern)
Graham	NC Central Mountains
Haywood	NC Central Mountains
Henderson	NC Southern Mountains
Iredell	NC Piedmont (Northwest)
Jackson North	NC Central Mountains
Jackson South	NC Southern Mountains
Lincoln	NC Piedmont (Southern)
Macon	NC Southern Mountains
Madison	NC Central Mountains
McDowell	NC Foothills (Northern)
Mecklenburg	NC Piedmont (Southern)
Mitchell	NC Northern Mountains
Polk	NC Foothills (Southern)
Rowan	NC Piedmont (Northwest)
Rutherford	NC Foothills (Southern)
Swain	NC Central Mountains
Transylvania	NC Southern Mountains

Union NC Piedmont (Southern)
 Yancey NC Northern Mountains

 ..SOUTH CAROLINA...

COUNTY	REGION (SUBREGION)
Abbeville	SC Piedmont (Lower)
Anderson	SC Piedmont (Northern)
Cherokee	SC Piedmont (Northern)
Chester	SC Piedmont (Eastern)
Greenville	SC Mountains/Foothills
Greenwood	SC Piedmont (Lower)
Laurens	SC Piedmont (Lower)
Oconee	SC Mountains/Foothills
Pickens	SC Mountains/Foothills
Spartanburg	SC Mountains/Foothills
Union	SC Piedmont (Eastern)
York	SC Piedmont (Eastern)

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 MAINSTEM RIVER LEGEND...
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REGION	RIVER	
NC Piedmont	Catawba (Heavily Regulated)	
	South Fork Catawba (Slightly Regulated)	
	Rocky	
	Yadkin (Regulated)	
NC Foothills	Broad (Regulated)	
	Catawba (Regulated)	
NC Nrn Mnts	NONE	
NC Cntl Mnts	French Broad (Slightly Regulated)	
	Little Tennessee (Heavily Regulated)	
	Nantahala (Heavily Regulated)	
	Oconaluftee (Slightly Regulated)	
	Pigeon	
	Tuckasegee (Heavily Regulated)	
NC Srn Mnts	French Broad (Slightly Regulated)	
	Little Tennessee (Heavily Regulated)	
	Nantahala (Regulated)	
	Tuckasegee (Regulated)	
SC Mnts	NO MAINSTEM RIVERS	
SC Foothills	Chatooga	
	Enoree	
	Pacolet (Slightly Regulated)	
	Reedy (Slightly Regulated)	
	Saluda (Regulated)	
	Savannah (Heavily Regulated)	
	Toxaway/Seneca (Heavily Regulated)	
	Tyger	
	SC Piedmont	Broad (Regulated)
		Pacolet (Slightly Regulated)
Reedy (Slightly Regulated)		

	Saluda	(Regulated)
	Savannah	(Heavily Regulated)
	Tyger	
GA NE Mnts/	Chatooga	
Foothills	Tallulah/Tugaloo	(Heavily Regulated)
GA Piedmont	Broad	
	Savannah	(Heavily Regulated)

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 QUESTIONS or COMMENTS...
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This product has undergone several revisions and enhancements over the past couple of years. Additional enhancements are planned for future flood outlooks. Your feedback and recommendations are encouraged in order to ensure this product meets user needs. Please direct feedback, recommendations, questions, and comments to:

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