

Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

***NATIONAL WEATHER SERVICE SOUTHERN REGION SUPPLEMENT 05-2004
APPLICABLE TO INSTRUCTIONS 10-922 and 10-923
January 30, 2006***

***OPERATIONS AND SERVICES
HYDROLOGIC SERVICES PROGRAM, NWSPD
WEATHER FORECAST OFFICE HYDROLOGIC PRODUCTS SPECIFICATION NWSI 10-922
WEATHER FORECAST OFFICE HYDROLOGIC PRODUCTS EXAMPLES NWSI 10-923
WFO PUBLIC HYDROLOGIC PRODUCTS***

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>.

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SUMMARY OF REVISIONS: This supplement supersedes Southern Region Supplement 05-2004, WFO Public Hydrologic Products, dated July 6, 2004.

Major revisions include:

1. Flood Watches (FFA) are used to indicate the potential for areal flooding, flash flooding, or river flooding. The type of flooding should be highlighted in the product's headline or body.
2. A Flood Watch (FFA) is used to issue, update, or cancel a Flood Watch as per NWS Instruction 10-922. The FFA product is segmented and includes operational VTEC.
3. Updated to reflect segmented Flash Flood Statement products as per NWS Instruction 10-922.
4. An example of a Flash Flood Warning with WFO site-specific hydrologic model information.
5. In addition to NWSI 10-922, this Supplement now also applies to NWSI 10-923.

<u>Steven Cooper for</u>	<u>01/10/06</u>
BILL PROENZA	Date
DIRECTOR, SOUTHERN REGION	

Weather Forecast Office Public Hydrologic Products

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1. Introduction. This Supplement will describe the various types of public hydrometeorological products issued by a Weather Forecast Office (WFO).
- 1.1 Purpose. This Supplement states Southern Region’s guidance for the production and delivery of public WFO hydrologic products. National policy on WFO Hydrologic Products is available in NWS Instruction 10-922.
- 1.2 Scope. This Supplement applies to all Southern Region WFOs.
- 1.3 Objectives. This Supplement will establish regional guidance related to the headers, issuance criteria, contents, and format of the WFO public hydrologic products.
- 1.4 Call to Action Statements. Call to Action (CTA) statements should be used whenever possible to emphasize the seriousness of the hydrologic situation. In particular, offices are strongly encouraged to use the phrase, TURN AROUND DON’T DROWN®, in their offices products as well as in media interviews. Appropriate examples include:
 - TURN AROUND DONT DROWN...THE LIFE YOU SAVE MAY BE YOUR OWN.
 - DONT TRADE ONE HOUR FOR A LIFETIME...TURN AROUND DON’T DROWN.
 - WHEN WATER COVERS THE ROADWAY REMEMBER...TURN AROUND DONT DROWN.

Hedging statements weaken the customer’s confidence in the information presented, and should not be used in flash flood statements (see Section 2.4). Hedging statements in the CTA statements should be replaced with those that focus more on advising customers to tune to NOAA Weather Radio or their favorite news source for additional information, or to report any flooding they observe to their local law enforcement agencies so the information can be passed on to the NWS.

2. Definitions. The following section outlines the various public hydrologic products issued by a WFO.
- 2.1 Hydrologic Outlook. An ESF should be used to issue outlooks for long term conditions or events expected beyond 36 hours. Hydrologic Outlooks can include River Flood Outlooks, Drought Information Statements, Long Range Probabilistic Outlooks, Flood Potential Outlooks, and Spring Flood Outlooks. Details about the River Flood Outlook product are contained in SR Supplement 02-2005.
- 2.1.1 Example: Drought Information Statement

FGUS72 KFFC 031949
ESFATL
GAC009-011-013-015-021-023-035-045-047-053-055-057-059-063-067-077-
079-081-083-085-089-091-093-097-107-111-113-115-117-121-123-125-129-
133-135-139-141-143-145-149-151-153-157-159-163-167-169-171-175-187-
193-195-197-199-207-209-211-213-215-217-219-221-223-225-227-231-233-
235-237-247-249-255-259-261-263-265-269-271-279-281-283-285-289-291-
293-295-297-301-303-307-309-311-313-315-317-319-011856-201900-

**HYDROLOGIC OUTLOOK
NATIONAL WEATHER SERVICE PEACHTREE CITY GA
345 PM EDT SAT AUG 3 2002**

...DROUGHT INFORMATION STATEMENT...

**DROUGHT CONDITIONS IMPROVE SLIGHTLY ACROSS WEST GEORGIA...AND WORSEN
IN NORTHEAST GEORGIA.**

SYNOPSIS...

**THE LATEST DROUGHT MONITOR INDICATES SLIGHTLY BETTER CONDITIONS
ACROSS NORTHWEST AND WEST CENTRAL GEORGIA...WITH CONDITIONS
REMAINING UNCHANGED ACROSS EAST CENTRAL AND NORTHEAST GEORGIA DURING
THE PAST TWO WEEKS. A MODERATE DROUGHT IS ONGOING ACROSS NORTH AND
PARTS OF WEST CENTRAL GEORGIA...WHILE SEVERE TO EXTREME DROUGHT
CONDITIONS PREVAIL ACROSS CENTRAL AND EAST CENTRAL GEORGIA.**

12 MONTH RUNNING RAINFALL DEFICITS THROUGH LATE JULY...

CITY	ATLANTA	ATHENS	MACON	COLUMBUS
DEFICIT	-19.23	-8.62	-11.12	-13.26

HYDROLOGIC IMPACTS...

**WATER TABLE LEVELS CONTINUE TO FALL ACROSS MOST OF THE AREA. THIS
IS NOT UNCOMMON DURING THE SUMMER MONTHS.**

**THE CURRENT STATE OF LAKES ACROSS NORTH AND CENTRAL GEORGIA SHOWS
THAT MOST OF THE SMALL TO MID SIZE LAKES HAVE FALLEN STEADILY DURING
THE PAST TWO WEEKS...WHILE THE LARGER WATER RESOURCE LAKES ARE 7 TO
12 FEET BELOW NORMAL SUMMER LEVELS. LAKE LANIER HAS FALLEN ABOUT A
HALF FOOT DURING THE PAST TWO WEEKS...WHILE LAKE HARTWELL AND
THURMOND HAVE CONTINUED SIGNIFICANT FALLS.**

RESTRICTIONS...

**THE OUTDOOR WATERING RESTRICTIONS REMAIN IN EFFECT IN GEORGIA. FOR
THE 15 COUNTY ATLANTA METRO AREA...INCLUDING BARTOW...CHEROKEE...
CLAYTON...COBB...COWETA...DEKALB...DOUGLAS...FAYETTE...FORSYTH...
FULTON...GWINNETT...HALL...HENRY...PAULDING...AND ROCKDALE
COUNTIES...NO WATERING IS ALLOWED FROM 10 AM TO 10 PM DAILY. ADDRESS
BASED ODD EVEN WATER USE IS ALLOWED DURING OTHER HOURS.**

**FOR THE REMAINDER OF NORTH AND CENTRAL GEORGIA...ADDRESS BASED ODD
EVEN WATER USE IS IN FORCE.**

**THIS AFOREMENTIONED INFORMATION WAS PROVIDED BY THE GEORGIA ENVIRONMENTAL
PROTECTION DIVISION.**

OUTLOOK...

**THE OUTLOOK FOR NORTH AND CENTRAL GEORGIA THROUGH AUGUST 20TH CALLS
FOR TEMPERATURES TO AVERAGE 0 TO 2 DEGREES ABOVE AVERAGE...WITH 50
TO 125 PERCENT OF AVERAGE PRECIPITATION ACROSS THE AREA. ISOLATED
AREAS MAY FALL OUTSIDE THIS RANGE.**

**AS HAS BEEN THE CASE SINCE LATE MAY...UPPER LEVEL HIGH PRESSURE WILL
BE CENTERED FROM THE ROCKIES TO THE TENNESSEE VALLEY...WHILE A WEAK
UPPER LEVEL LOW WILL PERSIST NEAR THE GULF COAST TO SOUTHEAST U.S.
COAST. THIS WILL SUPPORT TEMPERATURES AT OR A LITTLE ABOVE NORMAL**

DUE TO THE CLOSE LOCATION OF THE UPPER LEVEL HIGH. THE BEST CHANCE FOR WETTER THAN AVERAGE CONDITIONS WILL BE CLOSER TO THE UPPER LEVEL GULF COAST TROUGH ACROSS CENTRAL GEORGIA...WHILE FURTHER AWAY...THERE WILL BE A BETTER CHANCE FOR LESS THAN AVERAGE RAINFALL IN NORTH GEORGIA.

THEREFORE...THE CURRENT STATUS OF THE DROUGHT IS EXPECTED TO REMAIN THE SAME IN CENTRAL GEORGIA...BUT MAY WORSEN SOME IN NORTHEAST GEORGIA THE NEXT TWO WEEKS.

YOU CAN KEEP UP TO DATE ON THE LATEST DROUGHT INFORMATION AT THE FOLLOWING WEBSITES...

WWW.SRH.NOAA.GOV/FFC ...SELECT LATEST DROUGHT INFORMATION STATEMENT...

WWW.SRH.NOAA.GOV/SERFC ...GO TO WATER INFORMATION/WATER RESOURCES...

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**Example: River Flood Outlook
FGUS74 KMEG 231633
ESFMEM
MSC095-081-057-017-115-025-261500-**

**HYDROLOGIC OUTLOOK
NATIONAL WEATHER SERVICE MEMPHIS TN
1025 AM CST MON DEC 23 2002**

...RIVER FLOOD OUTLOOK FOR PORTIONS OF NORTHEAST MISSISSIPPI...

HEAVY RAINFALL THAT IS FORECAST OVER NORTHEAST MISSISSIPPI DURING THE NEXT 48 HOURS WILL QUICKLY RUN OFF ALREADY SATURATED SOILS. WIDESPREAD BASIN-AVERAGED RAINFALL AMOUNTS IN EXCESS OF 1.8 INCHES WITH LOCALIZED AMOUNTS OF 3 TO 4 INCHES MAY CAUSE RIVERS AND STREAMS TO RISE TO LEVELS THAT RESULT IN MINOR FLOODING.

THIS RIVER FLOOD OUTLOOK IS IN EFFECT DUE TO THE POTENTIAL FOR...

- MINOR FLOODING ALONG THE TOMBIGBEE FROM NEAR BIGBEE TO NEAR AMORY**
- MINOR FLOODING ON TIBBEE CREEK NEAR TIBBEE**

A RIVER FLOOD OUTLOOK MEANS THERE IS A POTENTIAL FOR RIVER FLOODING...BUT IT IS NOT IMMINENT. FORECAST RAINFALL MAY CAUSE RIVERS AND STREAMS TO RISE TO CRITICAL STAGES. PERSONS WITH INTERESTS ALONG THE AREAS MENTIONED ABOVE SHOULD REMAIN INFORMED OF THE LATEST WEATHER AND RIVER INFORMATION AND BE PREPARED TO TAKE ACTION AS NECESSARY. PLEASE REFER TO NATIONAL WEATHER SERVICE RIVER FLOOD WARNINGS AND STATEMENTS FOR THE LATEST INFORMATION IN YOUR AREA.

A GRAPHIC SHOWING THE COUNTIES...RIVER FORECAST POINT LOCATIONS... AND RIVER REACHES IN THE OUTLOOK AREA IS AVAILABLE AT THE FOLLOWING WEB SITE /USE LOWER CASE/

WWW.SRH.WEATHER.GOV/SERFC/RFO/MEGRFO.HTML

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Example: Spring Flood Outlook

FGUS74 KBRO 141858

ESFBRO

TXC047-061-215-247-261-427-489-505-142200-

HYDROLOGIC OUTLOOK

NATIONAL WEATHER SERVICE BROWNSVILLE TX

100 PM CST FRI MAR 14 2003

...SPRING FLOOD OUTLOOK...

SOIL MOISTURE CONDITIONS...

ABOVE NORMAL RAINFALL HAS FALLEN ACROSS THE EXTREME WESTERN AND NORTHERN COUNTIES OF ZAPATA, JIM HOGG, BROOKS, AND KENEDY DURING THE DURING THE MONTH OF FEBRUARY. YEAR TO DATE RAINFALL TOTALS ARE AVERAGING 1 TO 2 AND A HALF INCHES ABOVE NORMAL OVER THESE AREAS. THIS IS UNUSUAL FOR THIS TIME OF THE YEAR. COMBINED WITH THE BENEFICIAL RAINS THAT OCCURRED OVER THE LATTER PART OF 2002, SOIL MOISTURE IS ABOVE NORMAL FOR THE COUNTIES OF ZAPATA, JIM HOGG, BROOKS AND KENEDY. THE SOUTHERN COUNTIES OF DEEP SOUTH TEXAS OR THE LOWER RIO GRANDE VALLEY HAVE CONTINUED TO RECEIVE BELOW NORMAL RAINFALL. SOIL MOISTURE OVER THIS AREA IS NEAR NORMAL.

RIVER AND STREAM CONDITIONS...

THE RIO GRANDE RIVER AND LOCAL STREAMS IN THE DEEP SOUTH TEXAS HYDROLOGIC SERVICE AREA ARE ALL WELL BELOW FLOOD STAGE.

RECENT FLOODS....

THE AREA EXPERIENCED FLOOD EVENTS DURING THE MONTHS OF SEPTEMBER, OCTOBER AND NOVEMBER 2002. THE FLOOD EVENTS WERE LIMITED TO BRIEF FLOODING OF URBAN AREAS AND LOW LYING FLOOD PRONE AREAS.

DROUGHT AREAS...

SEVERE TO INTENSE DROUGHT CONDITIONS PERSISTED THROUGH MUCH OF LAST YEAR. BENEFICIAL RAINFALL DURING THE LATTER PART OF THE 2002 EASED THE DROUGHT CONDITIONS. MAJOR LONG TERM CONCERNS CONTINUE FOR WATER SHORTAGES AT BOTH FALCON AND AMISTAD RESERVOIRS. THESE TWO RESERVOIRS PROVIDE MUCH OF THE WATER FOR MUNICIPALITIES AND AGRICULTURAL INTERESTS FOR THE LOWER RIO GRANDE VALLEY. COMBINED STORAGE AT BOTH RESERVOIRS HAVE REMAINED STEADY DURING THE PAST MONTH, WITH COMBINED STORAGE AT JUST OVER 39 PERCENT. STORAGE AT FALCON RESERVOIR IS 268 FEET...NORMAL CONSERVATION LEVEL IS 302 FEET. STORAGE AT AMISTAD IS 1071 FEET...NORMAL CONSERVATION LEVEL IS 1117 FEET. FALCON AND AMISTAD BOTH REACHED ALL TIME RECORD LOW STORAGE LEVELS DURING THE SUMMER OF 2002.

SPRING FLOOD POTENTIAL...

DUE TO THE WET SOIL MOISTURE AND RECENT ABOVE NORMAL RAINFALL OCCURRING OVER THE COUNTIES OF ZAPATA, JIM HOGG, BROOKS AND KENEDY, SPRING FLOOD POTENTIAL FOR THESE AREAS IS AVERAGE. FURTHER SOUTH...A LOW FLOOD POTENTIAL EXISTS FOR THE LOWER RIO GRANDE VALLEY.

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2.2 Flood Watch. A Flood Watch is used to inform the public that current and developing hydrometeorological conditions are such that there is a threat of flooding, as indicated by meteorological, soil, and stream conditions. A Flood Watch should be issued if flooding/flash flooding is expected in the first 36 hours of the forecast period. Flood watches may cover states, counties, rivers, portions of counties, portions of states, or portions of rivers (e.g., one or more forecast points). The term “flash flood” can be used in the headline or body of the flood watch product, but should not be included in the MND Header.

2.2.1 Example: Flood Watch – VTEC Coding

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WGUS62 KMLB 081452

FFAMLB

URGENT - IMMEDIATE BROADCAST REQUESTED

FLOOD WATCH

NATIONAL WEATHER SERVICE MELBOURNE FL

1052 AM EDT THU SEP 8 2005

**...A FLOOD WATCH IS IN EFFECT FOR PARTS OF EAST CENTRAL FLORIDA
UNTIL 4 AM EDT FRIDAY MORNING...**

**THIS WATCH INCLUDES THE COUNTIES OF VOLUSIA...ORANGE...SEMINOLE...
AND ALL OF BREVARD IN EAST CENTRAL FLORIDA.**

FLZ047-082300-

/O.EXB.KMLB.FA.A.0002.000000T0000Z-050909T0800Z/

/00000.0.ER.000000T0000Z.000000T0000Z.000000T0000Z.OO/

SOUTHERN BREVARD-

INCLUDING THE CITIES OF...MELBOURNE...PALM BAY

1052 AM EDT THU SEP 8 2005

...FLOOD WATCH IN EFFECT UNTIL LATE THURSDAY NIGHT...

THE NATIONAL WEATHER SERVICE IN MELBOURNE HAS EXPANDED THE

*** FLOOD WATCH TO INCLUDE SOUTHERN BREVARD COUNTY**

*** UNTIL 4 AM FRIDAY MORNING**

*** ABUNDANT TROPICAL MOISTURE AND STRONG NORTHEAST WINDS ASSOCIATED
WITH TROPICAL STORM OPHELIA WILL PUSH NUMEROUS SHOWERS AND
SQUALLS ONSHORE FROM THE ATLANTIC THROUGH TONIGHT. ADDITIONAL
RAIN SHOWERS WILL MOVE SOUTH AFFECTING SOUTHERN BREVARD COUNTY
THROUGH TONIGHT...HEAVY AT TIMES. ADDITIONAL RAINFALL
ACCUMULATIONS OF ONE TO TWO INCHES ARE EXPECTED...WITH ISOLATED
AMOUNTS OF THREE TO FIVE INCHES POSSIBLE...ESPECIALLY IF THE
INNER RAINBANDS OF TROPICAL STORM OPHELIA JUST OFFSHORE
OVERSPREAD THE BARRIER ISLANDS.**

*** FLOODING WILL BE MOST LIKELY TO OCCUR IN URBAN LOCATIONS...AS
WELL AS POORLY DRAINED AND LOW LYING AREAS THAT ARE MORE
SUSCEPTIBLE TO FLOODING.**

**A FLOOD WATCH MEANS THERE IS A POTENTIAL FOR FLOODING THAT
THREATENS TO ENTER HOMES AND BUSINESSES.**

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE WATER COVERS THE ROAD.

THE WATER DEPTH MAY BE TOO GREAT TO ALLOW YOUR CAR TO CROSS SAFELY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED QUICKLY. IT TAKES LESS THAN TWO FEET OF WATER FOR MOST VEHICLES TO BE ABLE TO FLOAT. TURN AROUND...DON'T DROWN.

YOU SHOULD BE ALERT FOR THE POSSIBILITY OF FLOOD WARNINGS. THOSE LIVING IN AREAS PRONE TO FLOODING SHOULD TAKE PROTECTIVE MEASURES AGAINST FLOODING...AND BE PREPARED TO TAKE QUICK ACTION SHOULD FLOODING DEVELOP.

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Example: Flood Watch

FLZ041-045-046-141-147-082300-
/X.EXT.KMLB.FA.A.0002.000000T0000Z-050909T0800Z/
/00000.0.ER.000000T0000Z.000000T0000Z.000000T0000Z.OO/
INLAND VOLUSIA COUNTY-ORANGE-SEMINOLE-COASTAL VOLUSIA-
NORTHERN BREVARD-
INCLUDING THE CITIES OF...DE LAND...ORLANDO...SANFORD...
DAYTONA BEACH...TITUSVILLE
1052 AM EDT THU SEP 8 2005

...FLOOD WATCH EXTENDED UNTIL LATE THURSDAY NIGHT...

THE NATIONAL WEATHER SERVICE IN MELBOURNE HAS EXTENDED THE

* FLOOD WATCH FOR VOLUSIA...SEMINOLE...ORANGE AND NORTHERN BREVARD COUNTIES

* UNTIL 4 AM FRIDAY MORNING

* ABUNDANT TROPICAL MOISTURE AND STRONG NORTHEAST WINDS ASSOCIATED WITH TROPICAL STORM OPHELIA WILL PUSH NUMEROUS SHOWERS AND ISOLATED STORMS ONSHORE FROM THE ATLANTIC THROUGH TONIGHT. THE SQUALLS WILL BE MORE PERSISTENT OVER VOLUSIA AND BREVARD COUNTIES AND HEAVY AT TIMES. ADDITIONAL RAINFALL ACCUMULATIONS OF ONE TO TWO INCHES ARE EXPECTED...WITH ISOLATED AMOUNTS OF THREE TO FIVE INCHES POSSIBLE MAINLY EAST OF METRO ORLANDO THROUGH TONIGHT.

* FLOODING WILL BE MOST LIKELY TO OCCUR IN URBAN LOCATIONS...AS WELL AS POORLY DRAINED AND LOW LYING AREAS THAT ARE MORE SUSCEPTIBLE TO FLOODING.

A FLOOD WATCH MEANS THERE IS A POTENTIAL FOR FLOODING THAT THREATENS TO ENTER HOMES AND BUSINESSES.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE WATER COVERS THE ROAD. THE WATER DEPTH MAY BE TOO GREAT TO ALLOW YOUR CAR TO CROSS SAFELY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED QUICKLY. IT TAKES LESS THAN TWO FEET OF WATER FOR MOST VEHICLES TO BE ABLE TO FLOAT. TURN AROUND...DON'T DROWN.

YOU SHOULD BE ALERT FOR THE POSSIBILITY OF FLOOD WARNINGS. THOSE LIVING IN AREAS PRONE TO FLOODING SHOULD TAKE PROTECTIVE MEASURES AGAINST FLOODING...AND BE PREPARED TO TAKE QUICK ACTION SHOULD FLOODING DEVELOP.

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KELLY

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2.3 Flash Flood Warning. Flash Flood Warnings inform the public of flash flooding that is imminent or occurring in which water rises rapidly from normal level to inundation within 6 hours of the causative event. Credibility is added to flash flood warnings that mention ground truth reports of flooded areas (especially from Law Enforcement Officials or Emergency Managers) and precipitation amounts.

2.3.1 Example: Flash Flood Warning

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WGUS54 KOUN 042044
FFWOKC
OKC071-042345-

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE NORMAN OK
342 PM CDT TUE JUN 4 2002

THE NATIONAL WEATHER SERVICE IN NORMAN HAS ISSUED A

• FLASH FLOOD WARNING FOR
KAY COUNTY IN NORTHERN OKLAHOMA

*** UNTIL 645 PM CDT**

*** AT 342 PM CDT...DOPPLER RADAR DETECTED ANOTHER ROUND OF THUNDERSTORMS AND HEAVY RAINFALL MOVING INTO WESTERN KAY COUNTY. RADAR DETECTED OVER THREE INCHES OF RAINFALL ACROSS NORTHWEST KAY COUNTY THIS AFTERNOON. THE POTENTIAL FOR FLASH FLOODING REMAINS HIGH INTO THE EARLY EVENING AS THE STORMS MOVE EAST AND DROP ADDITIONAL HEAVY RAINS.**

*** LOCATIONS IN THE WARNING INCLUDE BLACKWELL...BRAMAN...KILDARE... NEWKIRK AND TONKAWA. DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE WATER COVERS THE ROADWAY. THE WATER DEPTH MAY BE TOO GREAT TO ALLOW YOUR CAR TO CROSS SAFELY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED QUICKLY. MOVE TO HIGHER GROUND.**

REMEMBER WHEN WATER IS COVERING THE ROAD...TURN AROUND DONT DROWN...THE LIFE YOU SAVE MAY BE YOUR OWN.

LAT...LON 3661 9744 3661 9722 3698 9686 3697 9745

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Example: Flash Flood Warning with Site-Specific Model Information

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE BIRMINGHAM AL
1225 PM CDT TUE JUL 01 2003

THE NATIONAL WEATHER SERVICE IN BIRMINGHAM HAS ISSUED A

*** FLASH FLOOD WARNING FOR...
VILLAGE CREEK IN JEFFERSON COUNTY**

*** UNTIL 300 PM CST**

*** AT 12:15PM, DOPPLER RADAR WAS SHOWING HEAVY RAINFALL OVER THE VILLAGE CREEK BASIN.**

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE WATER COVERS THE ROADWAY. THE WATER DEPTH MAY BE TOO GREAT TO ALLOW YOUR CAR TO CROSS SAFELY. TWO FEET OF RUSHING WATER CAN CARRY AWAY MOST VEHICLES...INCLUDING SUV'S AND PICKUPS. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED QUICKLY. MOVE TO HIGH GROUND.

YOU CAN REPORT FLOODING TO THE NATIONAL WEATHER SERVICE BY CALLING 1-800-856-0758.

LAT...LON 3348 8729 3329 8704 3358 8659 3383 8678

&&

**FOR VILLAGE CREEK AT AVENUE W...
NO FLOODING IS CURRENTLY OCCURRING.
LATEST STAGE...WAS 9.8 FEET AT 1220 PM TUESDAY.
FLOOD STAGE...IS 10 FEET.
THE FORECAST...FOR VILLAGE CREEK AT AVENUE W...
THE CREEK WILL RISE ABOVE FLOOD STAGE BY 1230 PM.
IT WILL CREST NEAR 10.5 FEET BY 130 PM.
IT WILL FALL BELOW FLOOD STAGE BY 3 PM.**

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2.4 Flash Flood Statement. Flash Flood Statements provide supplemental information on active flash flood warning products, such as updated observations and impact information. A Flash Flood Statement (FFS) will be issued to supplement or cancel a Flash Flood Warning (FFW). The Flash Flood Statement should contain more detailed impact information and/or remove parts of the geographical area covered by the original flash flood warning.

Hedging statements that indicate the threat may still exist should not be included when ending a flash flood warning. Hedging statements in the calls to action (CTAs) in ending statements should be replaced with CTAs that focus more on advising customers to tune to NOAA Weather Radio All Hazards or their favorite news source for additional information, or to report any flooding they observe to their local law enforcement agencies so the information can be passed on to the NWS.

Here are some examples which should NOT be included in the ending statements related to flash flooding:

1. Area ditches and creeks will be running full or possibly causing minor flooding.
2. Remain alert for standing water on the roadways.
3. Low lying areas and underpasses could still be under water.
4. Localized small stream flooding and ponding of water is still possible.

5. Some minor flooding may continue but the threat of serious flooding was ending.
6. While some water may be standing on low water crossings along the river, the threat for significant flooding has ended.
7. There may still be some minor flooding on some low lying roads and creeks.
8. Motorists should still use caution overnight due to the potential for lingering water on roadways.
9. Low spots on city streets and rural highways may still be inundated with water.
10. Roadways may still be covered with water.

Flash Flood products should never be ended solely based on the fact that radar no longer shows radar echoes over an area. Flooding will likely continue for a period of time after the storms have moved out of an area. The following wording is discouraged: *“Heavy rainfall has ended across the region so the flash flood warning is cancelled.”*

2.4.1 Example: Flash Flood Statement – Supplemental information

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WGUS74 KEWX 010956

FFSEWX

**FLASH FLOOD STATEMENT
NATIONAL WEATHER SERVICE AUSTIN/SAN ANTONIO TX
454 AM CDT WED JUN 1 2005**

**TXC123-149-177-255-285-011300-
FAYETTE TX-GONZALES TX-LAVACA TX-DEWITT TX-KARNES TX-
454 AM CDT WED JUN 1 2005**

**...A FLASH FLOOD WARNING CONTINUES UNTIL 800 AM CDT FOR KARNES...
DEWITT...LAVACA...GONZALES AND FAYETTE COUNTIES...**

**AT 436 AM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR CONTINUED TO
INDICATE THUNDERSTORMS PRODUCING VERY HEAVY RAIN OVER KARNES,
DEWITT, LAVACA, GONZALES AND FAYETTE COUNTIES. RAINFALL RATES ARE
APPROACHING TWO INCHES AN HOUR WITH THE STRONGER THUNDERSTORMS.**

**LOCATIONS IN THE WARNING INCLUDE WAELDER...SHINER...SCHULENBURG...
ROUND TOP...PALMETO...MULDOON...MOULTON...LA
GRANGE...HALLETTSVILLE...GONZALES...FLATONIA...FAYETTEVILLE AND
CISTERN.**

**HEAVY RAINFALL WILL CAUSE FLOODING OF SMALL CREEKS AND STREAMS...
COUNTRY ROADS...AND FARMLAND ALONG THE BANKS OF CREEKS AND STREAMS.**

**BE ESPECIALLY CAUTIOUS AT NIGHT WHEN IT IS HARDER TO RECOGNIZE THE
DANGERS OF FLOODING. IF FLASH FLOODING IS OBSERVED ACT QUICKLY. MOVE
UP TO HIGHER GROUND. DO NOT STAY IN FLOOD PRONE AREAS.**

REMEMBER....WHEN WATER COVERS THE ROAD...TURN AROUND DONT DROWN.

**REPORT FLASH FLOODING TO THE NEAREST LAW ENFORCEMENT AGENCY FOR
RELAY TO THE NATIONAL WEATHER SERVICE.**

LAT...LON 2930 9662 2907 9693 2911 9699 2887 9730
2893 9741 2867 9778 2872 9791 2869 9800
2888 9817 2923 9772 2936 9786 2963 9765
2976 9735 3004 9704 3016 9670 3014 9666
2996 9658 2963 9687 2935 9658

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Example: Flash Flood Statement – Cancellation

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WGUS74 KJAN 292123

FFSJAN

**FLASH FLOOD STATEMENT
NATIONAL WEATHER SERVICE JACKSON MS
421 PM CDT SUN MAY 29 2005**

**MSC069-099-292131-
KEMPER MS - NESHOPA MS -
421 PM CDT SUN MAY 29 2005**

**...THE FLASH FLOOD WARNING FOR NESHOPA AND KEMPER COUNTIES IS
CANCELLED...**

**THE BAND OF HEAVY RAIN HAS DISSIPATED AND ONLY LIGHT TO MODERATE
RAIN IS EXPECTED TO CONTINUE OVER THE NEXT COUPLE OF HOURS.**

**RADAR ESTIMATED THAT A SMALL AREA OF 1 TO 1.5 INCHES OF RAIN FELL
WEST OF BLACK WATER OVER THE PAST HOUR. HOWEVER...WIDESPREAD HEAVY
RAINFALL AND FLOODING IS NO LONGER EXPECTED.**

**ANOTHER QUARTER INCH OF RAIN IS POSSIBLE THROUGH 6 PM BEFORE THE
RAIN ENDS.**

LAT...LON 3258 8932 3261 8888 3277 8837 3292 8835
3283 8888 3270 8932

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CRAVEN

2.5 Flood Warning. Flood warnings (FLW) are issued when flooding is expected to occur more than 6 hours after the causative event. There are two general types of flood warnings - areal flood warnings and flood warnings issued for forecast points. Areal flood warnings are issued for areas along rivers and streams or for counties or portions of counties (with the areas covered described in the same way as for flash flood warnings). Flood warnings for forecast points usually include information on the impacts of

expected flooding at locations upstream and/or downstream from covered forecast point(s). A flood category is a qualitative term valid for a river forecast point and its associated reach of the river and may not apply to an areal flood warning outside a river flood plain. Flood categories (minor, moderate, major, flood of record) will be included in the headlines or body of the FLWs pertaining to river forecast points.

A FLW will be reissued when the magnitude of expected flooding increases (e.g. moderate to major, minor to moderate, etc.) or when there is a significant change in the crest forecast values within a flood category for a given forecast point in a river basin. WFOs should issue site-specific river flood warnings that are basin-specific (i.e, for one river basin). WFOs should consider dissemination system requirements and customer/partner needs when packaging FLW products.

2.5.1 Example: River Based Flood Warning

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WGUS44 KSJT 150338

FLWSJT

TXC081-151528-

**BULLETIN - EAS ACTIVATION REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE SAN ANGELO TX
1028 PM CDT SUN AUG 14 2005**

**...THE NATIONAL WEATHER SERVICE IN SAN ANGELO TX HAS ISSUED A
FLOOD WARNING FOR THE FOLLOWING RIVER...COLORADO RIVER
ABOVE SILVER...**

COLORADO RIVER ABOVE SILVER.

**LATEST FLOOD CATEGORY: MINOR.
FORECAST FLOOD CATEGORY: MINOR.
LATEST STAGE: 16.3 FEET AT 08/14 22:15.
FLOOD STAGE: 15.0 FEET.
FLOOD STAGE REACHED AT: 08/14 21:36.
FORECAST CREST: 17 TO 18 FEET LATE SUNDAY NIGHT.
FORECAST BELOW FLOOD STAGE: MONDAY MORNING.**

**AT 18.0 FEET... MINOR FLOODING WILL OCCUR. OIL FIELD EQUIPMENT
AND RANCH LAND WILL BE FLOODED. SECONDARY ROADS AND LOW WATER
CROSSINGS WILL BE IMPASSIBLE.**

**HEAVY RAINFALL OF 4 TO 5 INCHES ACROSS STERLING AND WESTERN
COKE COUNTY HAS RESULTED IN A RISE ABOVE FLOOD STAGE ON THE
COLORADO RIVER ABOVE SILVER IN NORTHWEST COKE COUNTY SUNDAY
NIGHT. THE LATEST STAGE AT 10 PM IS 16.3 FEET. FLOOD STAGE
IS 15 FEET. THE RIVER WILL CREST AT 17 TO 18 FEET LATE TONIGHT.**

**RESIDENTS WITH INTERESTS ALONG THE COLORADO RIVER IN NORTHERN
COKE COUNTY SHOULD MONITOR THE WEATHER AND RIVER LEVELS THROUGH
MONDAY. ADDITIONAL HEAVY RAINFALL COULD CAUSE THE RIVER TO RISE
EVEN FURTHER.**

A FOLLOWUP PRODUCT WILL BE ISSUED LATER TONIGHT OR MONDAY MORNING.

STAY TUNED TO NOAA WEATHER RADIO OR OTHER MEDIA OUTLETS FOR THE LATEST INFORMATION ON THIS SITUATION.

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Example: Areal Flood Warning

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WGUS44 KMRX 061718

FLWMRX

TNC145-061815-

**BULLETIN - EAS ACTIVATION REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE MORRISTOWN TN
115 PM EDT WED JUL 6 2005**

THE NATIONAL WEATHER SERVICE IN MORRISTOWN TN HAS ISSUED A

*** FLOOD WARNING FOR...
ROANE COUNTY IN EAST TENNESSEE**

*** UNTIL 315 PM EDT WEDNESDAY AFTERNOON**

NATIONAL WEATHER SERVICE DOPPLER RADAR ESTIMATES THAT OVER 3 INCHES OF RAIN HAS FALLEN ACROSS SOUTHERN ROANE COUNTY IN THE LAST HOUR. AN ADDITIONAL INCH IS POSSIBLE OVER THE NEXT HOUR.

ROANE COUNTY EMERGENCY MANAGEMENT REPORTS THAT FLOODING IS OCCURRING NEAR THE MEIGS COUNTY LINE...ESPECIALLY NEAR HIGHWAY 58.

RUNOFF FROM HEAVY RAIN WILL CAUSE FLOODING OF CREEKS AND STREAMS, URBAN AREAS, HIGHWAYS, STREETS, AND UNDERPASSES. LOW LYING PLACES THAT NORMALLY FLOOD COULD BECOME DEATH TRAPS. IF YOU COME TO A FLOODED OR CLOSED ROAD...TURN AROUND DON'T DROWN. THIS IS A LIFE THREATENING SITUATION.

REMEMBER A FEW RULES ABOUT MOVING WATER. A FEW INCHES OF MOVING WATER WILL CARRY OFF MOST ADULTS. A FOOT OF RUNNING WATER WILL CARRY OFF MOST VEHICLES. TWO FEET OF MOVING WATER CAN CARRY OFF TRACTOR-TRAILER RIGS. DON'T MESS AROUND WITH MOVING WATER. IF YOU COME TO A FLOODED OR CLOSED ROAD...TURN AROUND DON'T DROWN. BETTER TO BE SAFE NOW THAN SORRY LATER.

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GODSEY

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- 2.6 Flood Statement. Flood Statements are issued to follow up flood warnings. Flood statements contain supplemental information on previously issued flood warnings, including updated observations and impact information. WFOs will use the FLS product category to issue Urban and Small Stream or Arroyo Advisories.

Although the word “advisory” is not allowed in a MND header, WFOs may issue FLSs with headlines containing the word “advisory.” WFOs should issue site-specific river flood statements that are basin-specific (i.e, for one river basin). WFOs may combine flood forecasts from multiple basins into one FLW product, when forecast points from multiple basins are in flood. WFOs should consider dissemination system requirements and customer/partner needs when issuing river based FLS products.

If evidence indicates flooding, determine if it is considered “nuisance” or “life threatening.” If life threatening, a flood or flash flood warning should be in effect. If the situation is considered a “nuisance”, an urban/small stream/arroyo advisory should be in effect. If neither, there should be no mention of dangers from high water in the terminating statement (including the calls to action) as this conflicts with the idea of ending the advisory/warning. If nuisance ponding of water or urban and small stream/arroyo flooding is occurring at the end of an Advisory then the Advisory should be continued.

2.6.1 Example: River-Based Flood Statement

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WGUS84 KLZK 311431

FLSLIT

ARC067-147-010200-

FLOOD STATEMENT

NATIONAL WEATHER SERVICE LITTLE ROCK AR

824 AM CST WED JAN 31 2004

...RIVER FLOOD STATEMENT...

MINOR FLOODING ALONG THE CACHE RIVER POSSIBLE LATE THIS WEEK...

THIS MORNING AT THE HWY 64 BRIDGE NEAR PATTERSON...THE STAGE WAS 7.1 FEET AT 8 AM. THE RIVER IS FORECASTED TO CREST NEAR 8.0 FEET SATURDAY. FLOOD STAGE IS 8.0 FEET.

LOW SWAMPY TIMBERLAND ALONG THE RIVER WILL BEGIN TO FLOOD. FLOOD GATES SHOULD BE CLOSED AND EQUIPMENT MOVED OUT OF THE LOW GROUNDS ALONG THE RIVER AND IT'S TRIBUTARIES.

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THIS FORECAST WAS BASED ON RAINFALL THAT OCCURRED OVER THE PREVIOUS 24 HOURS COMBINED WITH RAINFALL THAT IS FORECASTED TO OCCUR OVER THE NEXT 12 HOURS.

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Example: River-Based Flood Statement – Bullet Format

FLSMEM

ARC093-MOC155-TNC045-095-097-091400-

FLOOD STATEMENT

NATIONAL WEATHER SERVICE MEMPHIS TN

719 PM CST SUN FEB 08 2004

THIS IS UPDATED INFORMATION FOR FLOODING ALONG THE TALLAHATCHIE RIVER.

TALLAHATCHIE RIVER AT LOCOPOLIS...

- * FLOOD STAGE- 33.0 FEET
- * LATEST STAGE- 33.2 FEET AT 01/23 6:00 AM AND STEADY
- * FORECAST- REMAIN STEADY
- * IMPACT- FLOODING IS OCCURRING ALONG BOTH BANKS OF THE RIVER.

TALLAHATCHIE RIVER NEAR SWAN LAKE...

- * FLOOD STAGE- 26.0 FEET
- * LATEST STAGE 27.8 FEET AT 01/23 6:00 AM AND STEADY
- * FORECAST- SLOWLY FALLING
- * IMPACT- FLOODING IS OCCURRING ON FARM LAND NEAR THE RIVER.

STAY TUNED TO YOUR WEATHER RADIO AND YOUR LOCAL NEWS MEDIA FOR THE LATEST RIVER INFORMATION.

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Example: Urban and Small Stream Flood Advisory
WGUS84 KBMX 302127
FLSBHM
ALC125-302330-

**FLOOD STATEMENT
NATIONAL WEATHER SERVICE BIRMINGHAM AL
426 PM CDT TUE JUL 30 2002**

...URBAN AND SMALL STREAM FLOOD ADVISORY...

THE NATIONAL WEATHER SERVICE IN BIRMINGHAM HAS ISSUED AN URBAN AND SMALL STREAM ADVISORY FOR TUSCALOOSA COUNTY UNTIL 630 PM CDT.

SEVERAL THUNDERSTORMS HAVE DEVELOPED ACROSS TUSCALOOSA COUNTY THIS AFTERNOON. THE STORMS WERE MOVING VERY SLOWLY...WITH ONE TO THREE INCHES OF RAIN POSSIBLE IN A SHORT PERIOD OF TIME. SOME MINOR STREET FLOODING HAS BEEN REPORTED IN THE SOUTHERN PARTS OF TUSCALOOSA. THE THUNDERSTORMS WILL SLOWLY DIMINISH THROUGH THE EVENING HOURS.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE ROADWAY. THE WATER DEPTH MAY BE TOO GREAT TO ALLOW YOUR VEHICLE TO CROSS SAFELY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED QUICKLY. MOVE TO HIGHER GROUND.

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Example: Flood Statement to update a Flood Advisory

**000
WGUS85 KABQ 051311
FLSABQ
NMC009-041-051400-**

**FLOOD STATEMENT
NATIONAL WEATHER SERVICE ALBUQUERQUE NM
711 AM MDT TUE OCT 5 2004**

...THE ARROYO AND SMALL STREAM FLOOD ADVISORY FOR EAST CENTRAL NEW MEXICO REMAINS IN EFFECT UNTIL 800 AM MDT TUESDAY MORNING...

STRONG FLOWS AND HIGH WATER LEVELS ARE EXPECTED IN ARROYOS...SMALL STREAMS AND LOW WATER CROSSINGS IN THE FOLLOWING COUNTIES...

**IN EAST CENTRAL NEW MEXICO...
ROOSEVELT AND CURRY...**

AT 710 AM MDT NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A LARGE AREA OF HEAVY RAIN EXTENDING FROM 10 MILES NORTH OF CLOVIS TO NEAR ELIDA. THE RAIN WAS MOVING TOWARD THE EAST SOUTHEAST AT 10 TO 15 MPH.

THE HEAVY RAINFALL AND SLOW MOVEMENT OF THESE STORMS MAY RESULT IN FLOODING OF ROAD INTERSECTIONS AND LOW-LYING AREAS. WATERS MAY BEGIN TO RUN IN NORMALLY DRY ARROYOS. ADDITIONALLY...STREET FLOODING IN THE CLOVIS AND PORTALES AREAS CAN BE EXPECTED ALONG WITH SIGNIFICANT PONDING OF WATER ON ROADS INCLUDING HIGHWAY 70 BETWEEN CLOVIS AND KENNA.

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Example: Flood Statement to update an Areal Flood Warning

000

WGUS74 KEWX 092330

FLSEWX

TXC299-100300-

FLOOD STATEMENT

NATIONAL WEATHER SERVICE AUSTIN/SAN ANTONIO TX

620 PM CDT MON MAY 9 2005

...A FLOOD WARNING CONTINUES UNTIL 1000 PM CDT FOR LLANO COUNTY...

AT 616 PM CDT...RADAR INDICATED THUNDERSTORMS CONTINUING TO PRODUCE HEAVY RAIN OVER MUCH OF CENTRAL LLANO COUNTY. RAINFALL OF 3 TO 5 INCHES MAY HAVE FALLEN IN SPOTS.

LOCAL LAW ENFORCEMENT OFFICIALS REPORTED CLOSURE OF COUNTY ROAD 152 AT HIGHWAY 29.

HEAVY RAINFALL WILL CAUSE FLOODING OF SMALL CREEKS AND STREAMS...COUNTRY ROADS...AND FARMLAND ALONG THE BANKS OF CREEKS AND STREAMS.

MOST FLOOD DEATHS OCCUR IN AUTOMOBILES. DO NOT ATTEMPT TO CROSS WATER COVERED AREAS. A LITTLE OVER A FOOT OF WATER CAN CARRY AWAY MOST CARS AND TRUCKS. TURN AROUND DONT DROWN.

LAT...LON 3088 9846 3084 9838 3079 9843 3076 9843

3073 9838 3066 9844 3058 9841 3056 9836

3052 9836 3052 9894 3092 9894 3091 9846

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2.7 Hydrologic Statement. A Hydrologic Statement can be used to issue forecast information on elevated stream or river levels below flood stage, which warrant public notification, to meet customer and partner needs. This product category should also be used to issue river recreation statements and river ice statements, as required.

2.7.1 Example: Hydrologic Statement

**FGUS84 KMEG 311504
RVSMEM
ARC021-MOC069-312100-**

**HYDROLOGIC STATEMENT
NATIONAL WEATHER SERVICE MEMPHIS TN
903 AM CST THU JAN 31 2002**

DUE TO HEAVY RAINS EXPECTED LATER TODAY AND TONIGHT...WATER LEVELS CAN BE EXPECTED TO RISE ON THE SAINT FRANCIS RIVER.

AT 2 AM THURSDAY, THE STAGE ON THE SAINT FRANCIS RIVER NEAR SAINT FRANCIS WAS 13.7 FEET. FLOOD STAGE IS 22.0 FEET. THE RIVER IS FORECAST TO CREST AT 20.5 FEET ON SATURDAY MORNING. AT 19.0 FEET, OVER BANK FLOODING INTO LOW LAND BEGINS.

DO NOT DRIVE THROUGH FLOODED AREAS...ESPECIALLY AT NIGHT. STAY TUNED TO YOUR WEATHER RADIO AND YOUR LOCAL NEWS MEDIA FOR THE LATEST RIVER INFORMATION.

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2.8 Hydrologic Summary. The hydrologic summary provides hydrologic observational data and related information in a format which meets local customer and partner needs. This product will be issued at the discretion of the local WFO.

2.8.1 Example:

**SRUS44 KOHX 011315
RVABNA
TNC003-021-027-037-043-055-081-085-087-099-103-117-119-125-135-159-165-169-187-021300-**

**HYDROLOGIC SUMMARY
NATIONAL WEATHER SERVICE NASHVILLE TN
813 AM CDT THU AUG 01 2002**

LOCATION	FLOOD STAGE	6AM STAGE	24-HOUR CHANGE
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CUMBERLAND RIVER			
CELINA	40.0	15.8	-0.1
CARTHAGE	40.0	7.2	0.0
NASHVILLE	40.0	17.7	-0.1
CLARKSVILLE	46.0	27.0	-0.2

SHOAL CREEK
IRON CITY 14.0 2.7 -0.1

THIS DATA WAS FURNISHED WITH COOPERATION FROM THE U.S. GEOLOGICAL SURVEY...THE ARMY CORPS OF ENGINEERS...AND THE TENNESSEE VALLEY AUTHORITY.

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2.9 Daily River and Lake Summary (RVD). The Daily River and Lake Summary will be issued daily to provide a standardized report of river observations, lake levels, and forecast information.

2.9.1 Example: Daily River and Lake Summary without reservoir information

FGUS54 KJAN 011524
RVDJAN
MSC001-007-011-021-023-029-031-035-037-049-051-053-055-067-073-075-
077-079-083-089-091-099-101-121-125-127-133-149-151-157-163-
LAC025-029-035-041-065-083-107-ARC017-041-021800-

DAILY RIVER AND LAKE SUMMARY
NATIONAL WEATHER SERVICE JACKSON MS
1022 AM CDT THU AUG 01 2002

```
.B JAN 0801 DC200208011022
.BIDH12/HG/DRH+24/HGIFF/DRH+48/HG/DRH+72/HGIFF
:
:RIVER FORECAST POINT SITES
:
:ID      NAME      FLOOD 7AM    24-HR    7AM
:          STAGE STAGE CHANGE FORECASTS
:          :      :      :      :      FRI  SAT  SUN
:
:---UPPER PEARL RIVER BASIN...
PLAM6 :PHILADELPHIA  13.0:    5.78/:    1.00:    7.60 / 8.70 / 9.00/
ENBM6 :EDINBURG      20.0:    3.14/:    0.52:    3.20 / 3.50 / 4.30/
:
KSCM6 :KOSCIUSKO     15.0:    6.80/:    3.05:    8.20 / 6.70 / 5.40/
OFAM6 :OFAHOMA       19.0:    M:      M:      5.30 / 6.20 / 7.70/
:
:---MIDDLE AND LOWER PEARL AND STRONG RIVER BASINS...
:
RATM6 :RATLIFF       303.0:  297.32/:    0.09:  297.30 /297.30 /297.30/
JACM6 :JACKSON       28.0:   11.93/:   -2.63:   9.80 / 8.20 / 7.60/
ROCM6 :ROCKPORT      25.0:   11.18/:    6.10:  12.30 /11.20 /10.30/
:
:---LOWER MISSISSIPPI RIVER...
:
ARSA4 :ARKANSAS CITY  37.0:    6.28/:    0.68:    6.70 / 7.30 / 7.90/
GEEM6 :GREENVILLE  48.0:   17.44/:    0.50:   18.00 /18.50 /19.10/
VCKM6 :VICKSBURG     43.0:   10.52/:   -0.33:   11.00 /11.60 /12.10/
NTZM6 :NATCHEZ       48.0:   17.58/:   -0.46:   17.20 /17.70 /18.30/
:
.END
$$
```

Example: Daily River and Lake Summary with reservoir information

000
FGUS54 KTSA 041640
RVDTUL

OKC037-061-071-077-091-101-105-107-111-113-117-131-143-145-147-

042200-

**DAILY RIVER AND LAKE SUMMARY
NATIONAL WEATHER SERVICE TULSA OK
1040 AM CST WED FEB 04 2004**

.B TSA 0204 DC200402041040 DH12/HG/DRH+24/HGIFZ/DRH+48/HGIFZ/
.B1 DRH+72/HGIFZ

:
: RIVER STAGES AND LAKE LEVELS ARE FURNISHED COURTESY OF THE
: U.S. GEOLOGICAL SURVEY AND U.S. ARMY CORPS OF ENGINEERS.

: RIVER FORECAST POINT SITES

: STATION	FLOOD	7AM	24-HR	7AM	7AM		
: ID NAME	STAGE	STAGE	CHANGE	FORECASTS	THU	FRI	SAT
: GRAND-NEOSHO RIVER BASIN							
: NEOSHO RIVER							
COMO2 :COMMERCE	15.0:	3.02/:	-0.01:	3.0 /	3.1 /	3.1 /	
: SPRING RIVER							
QUAO2 :QUAPAW	20.0:	7.19/:	-0.05:	7.2 /	7.1 /	7.1 /	
: UPPER WHITE RIVER BASIN							
: KINGS RIVER							
BRYA4 :BERRYVILLE	31.0:	3.35/:	-0.05:	3.4 /	3.3 /	3.3 /	
.END							

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.B TSA 0204 DC200402041040 DH12/HP/

: STATION	7AM	POOL	24-HR
: ID NAME	NORMAL	ELEV.	CHANGE
: RESERVOIR/LAKE SITES			
: ARKANSAS RIVER BASIN			
KAWO2 :KAW LAKE	1013.0:	1012.30/:	-0.10:
KEYO2 :KEYSTONE LAKE	723.0:	727.51/:	-0.39:
HEYO2 :HEYBURN LAKE	761.5:	762.38/:	-0.17:
BIRO2 :BIRCH LAKE	750.5:	751.51/:	-0.19:
SKLO2 :SKIATOOK LAKE	714.0:	712.31/:	0.05:
HULO2 :HULAH LAKE	733.0:	735.35/:	-0.06:
: MCCLELLAN-KERR NAVIGATION SYSTEM			
WAGO2 :CHOTEAU L&D 17	:	532.26/:	0.04:
: RED RIVER BASIN			
CYDO2 :SARDIS LAKE	599.0:	599.17/:	-0.01:
HGLO2 :HUGO LAKE	405.0:	405.47/:	-0.42:
: WHITE RIVER BASIN			
BVGA4 :BEAVER LAKE	1120.4:	1113.63/:	0.02:
.END			

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Appendix A. WFO Hydrologic Product Summary

Products MNDs/IDs UGC	Headline Options	Issuance Criteria	AWIPS Application
Hydrologic Outlook - ESF UGC - County	-Flood Potential Outlook -Spring Flood Outlook -River Flood Outlook -Drought Information Statement	-Possibility of flooding beyond 36 hours - Information on drought conditions - Information on spring flood potential	Text Editor
Flood Watch - FFA UGC - Zones	-Flood Watch - Flash Flood Watch - Overview Headline (optional)	-Possibility of flooding within 36 hours -Increase areal coverage of watch -Update effective time of watch or cancel watch - Dam/levee failure is possible, but not imminent - An FFA supplements or cancels a preexisting FFA	GHG
Flash Flood Warning - FFW UGC - County	-Flash Flood Warning	-Issue or increase geographic area of a flash flood warning - Flash flooding defined as flooding within six hours of causative event - Flash flooding reported - Dam/levee failure imminent or occurring - Local tools (eg. FFMP) indicate flash flooding is likely - Update effective time of warning - Small basin hydrologic models indicate flash flooding for specific locations along small streams	WARNGEN
Flash Flood Statement- FFS UGC - County	-Flash Flood Statement	-Supplement or cancel a Flash Flood Warning	WARNGEN
Flood Warning - FLW UGC - County	-River Flood Warning -Flood Warning	-Flooding is reported -RFC or other guidance indicates flooding is likely -Geographical area increases -Update effective time -Flooding is expected to occur more than 6 hours after the causative event -Observed flooding increases to a higher category (e.g. minor to moderate, moderate to major) - Significant change in crest forecast values within a flood category - Forecast flooding increases to a higher category	WHFS WARNGEN
Flood Statement - FLS UGC - County	-River Flood Warning -Flood Warning -Urban and Small Stream Flood Advisory -Urban and Arroyo Advisory	-Continue, or cancel a Flood Warning, Urban and Small Stream Flood Advisory -Urban or small stream flooding is expected or occurring	WWA WARNGEN WHFS
Hydrologic Statement - RVS UGC - County	-River Statement -Daily River Forecasts -River Recreation Statement -River Ice Statement	-River levels are elevated but forecast points remain below flood stage -Locally determined	WHFS
Hydrologic Summary - RVA UGC - County	(Headline optional)	-Locally determined	WHFS
Daily River and Lake Summary - RVD UGC - County	(Headline optional)	-Issued once daily coded in SHEF	WHFS

