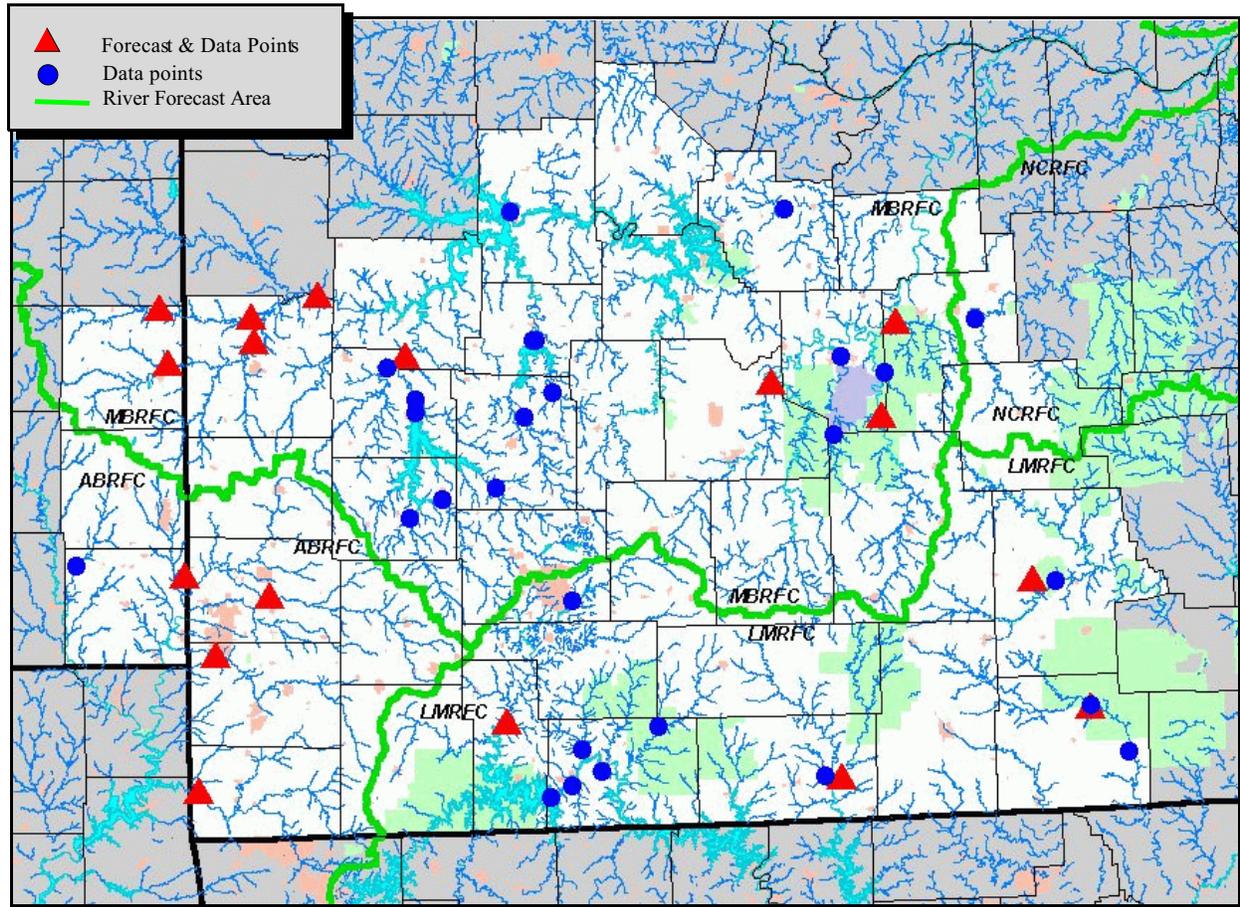


Hydrological Forecast and Services

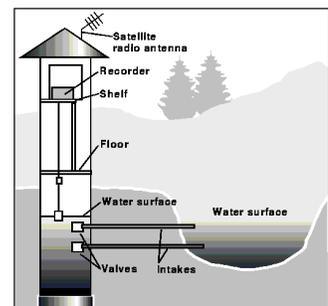
The mission of NWS Springfield includes actions to mitigate the loss of life and property by providing timely flood warnings and forecasts. NWS Springfield works along with various River Forecast Centers to provide flash flood and river flood products. The hydrologic service area for our office includes 3 counties in extreme southeast Kansas, and 34 counties across central and southern Missouri.

➡ <http://www.crh.noaa.gov/sgf/hydrology/>



River Gages	
Big Piney River at Ft. Leonard Wood, MO	Marmaton River at Nevada, MO
Elk River at Tiff City, MO	North Fork White River at Tecumseh
Gasconade River at Hazlegreen, MO	Osage River at Schell City, MO
Gasconade River at Jerome, MO	Sac River near Caplinger Mills, MO
Jack's Fork River at Eminence, MO	Shoal Creek near Joplin, MO
James River at Galena, MO	Spring River at Carthage, MO
Little Osage River at Horton, MO	Spring River at Waco, MO
Marmaton River at Ft. Scott, KS	

The USGS, Corps of Engineers, and the National Weather Service own and operate a number of automatic river gages across the nation. Locations with real-time or near real-time stage information are listed left.



Hydrological Forecast and Services

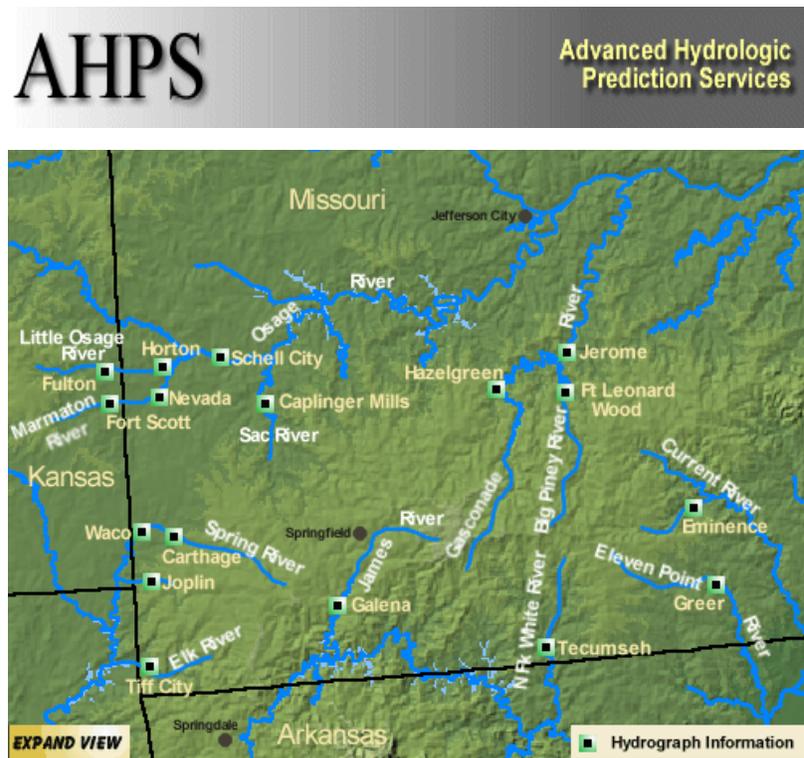
Advanced Hydrologic Prediction Services (AHPS)

Hydrologic data including the latest river stages and forecast can be found using the Advanced Hydrologic Prediction Service (AHPS). AHPS is a web-based suite of accurate and information-rich forecast products. They display the magnitude and uncertainty of occurrence of floods or droughts, from hours to days and months, in advance. These new products will enable government agencies, private institutions, and individuals to make more informed decisions about risk based policies and actions to mitigate the dangers posed by floods and droughts.

➡ <http://www.crh.noaa.gov/ahps2/index.php?wfo=sgf>

The current group of AHPS products covers forecast periods ranging from hours to months. It also includes valuable information about the chances of flood or drought. This information is presented through user-friendly graphical products.

The information, such as the flood forecast level to which a river will rise and when it is likely to reach its peak or crest, is shown through hydrographs. Other information includes, 1) the probability of a river exceeding minor, moderate, or major flooding, 2) the chance of a river exceeding certain level, volume, and flow of water at specific points on the river during 90 day periods, and 3) a map of areas surrounding the forecast point that provides information about major roads, along with railways, landmarks, etc. likely to be flooded, the levels of past floods, etc.



An additional feature of the AHPS Web site is a map of the river basin and various points along the river for which information is available. The data are not limited to information about floods, but can also provide information about potential droughts. This core suite may change over time reflecting the changing needs communicated by customers.

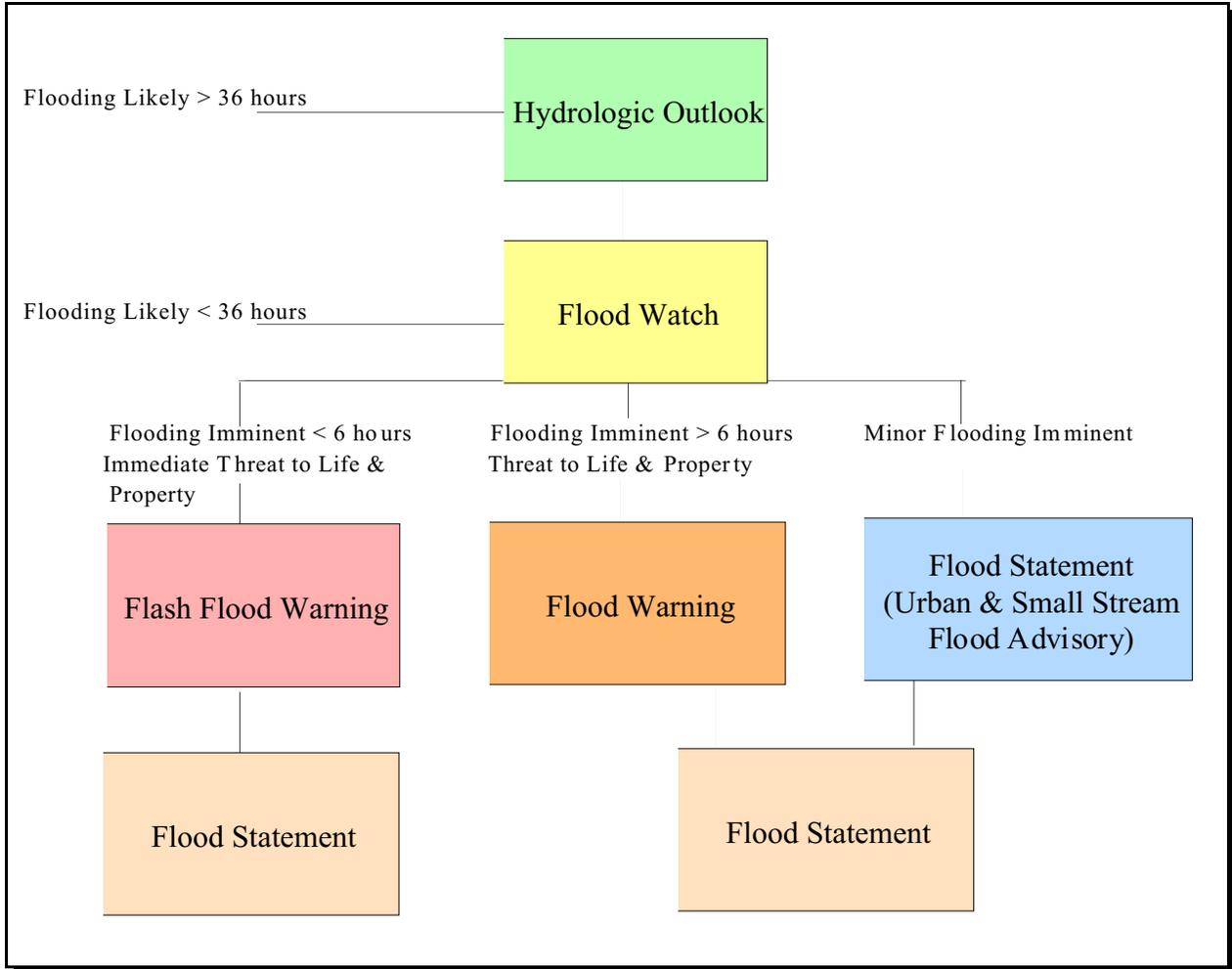
AHPS forecast products are a basis for operation and management of flood-control structures. Emergency management officials at local and state levels use these forecasts to fight floods, evacuate residents, and to take other measures to mitigate the impact of flooding. As the population grows, people increasingly choose to live near water, creating an increased need for the NWS to educate the public about flood hazards and to improve flood forecasts. These products can be used by a wide range of people, such as power companies, recreational users, farmers, households, businesses, and environmentalists.

Hydrological Forecast and Services

Flood Products

NWS Springfield issues outlooks, watches, warnings and statements for flooding and flash flooding. NWS Springfield is the sole source of flood watches and warnings for the Missouri Ozarks and extreme southeast Kansas.

Flood products follow a multi-tiered concept which communicate the certainty, severity, proximity, and timing of flooding.



Hydrological Forecast and Services

Hydrologic Outlook

Issued to alert the public when flood producing rainfall is expected in 36 to 72 hours. During the months of February and March, this product contains information on the potential for flooding from snowmelt. It also contains flood forecasts for locations that would rise above flood stage if forecast precipitation occurs.

This product may also be issued during drought situations.

Product	Product Header	WMO Header	Issuance
Hydrologic Outlook	STLESFSGF	FGUS73	as needed

<p>ZCZC STLESFSGF FGUS73 KSGF 221934 KSZ073-097-101-MOZ055>058-066>071-077>083-088>098-101>106-230900-</p> <p>HYDROLOGIC OUTLOOK NATIONAL WEATHER SERVICE SPRINGFIELD MO 300 PM CDT WED MAY 22 2002</p> <p>...HEAVY RAINFALL POSSIBLE THURSDAY NIGHT INTO FRIDAY...</p> <p>A COMPLEX OF THUNDERSTORMS IS EXPECTED TO DEVELOP THURSDAY EVENING OVER SOUTHEAST KANSAS...AND MOVE INTO CENTRAL MISSOURI FRIDAY MORNING BEFORE WEAKENING. ONE TO THREE INCHES OF RAIN WILL BE POSSIBLE...MAINLY NORTH OF INTERSTATE 44...BY LATE FRIDAY MORNING.</p> <p>SOIL MOISTURE CONDITIONS ARE SUCH THAT HEAVY RAINFALL WILL CAUSE FLOODING TO DEVELOP QUICKLY. RIVER FLOODING WILL LIKELY OCCUR IF THE HEAVY RAINFALL MATERIALIZES AS EXPECTED. PERSONS WITH INTERESTS ALONG THE SAC...SPRING...LITTLE OSAGE...MARMATON AND OSAGE RIVERS SHOULD TAKE ACTION TO PROTECT PROPERTY THAT MAY BE AFFECTED BY FLOODING.</p> <p>IN ADDITION...CAMPERS SHOULD CHOOSE THEIR CAMP SITE CAREFULLY. HEAVY RAINFALL WILL CAUSE RAPID RISES IN THE SMALLER CREEKS AND STREAMS...WHICH COULD CAUSE FLASH FLOODING OF CAMP SITES LOCATED ON GRAVEL BARS OR IN OTHER LOW AREAS NEAR RIVERS OR STREAMS.</p> <p>STAY TUNED TO NOAA WEATHER RADIO AND OTHER LOCAL MEDIA FOR FURTHER DETAILS OR UPDATES.</p>

Flood Watch

Issued when conditions are favorable for flooding or flash flooding to develop.

Product	Product Header	WMO Header	Issuance
Flood Watch	STLFFASGF	WGUS63	as needed

<p>ZCZC STLFFASGF WGUS63 KSGF 122338 CCA KSZ073-097-101-MOZ055>058-066>071-077>083-088>098-101>106-131700-</p> <p>BULLETIN - IMMEDIATE BROADCAST REQUESTED FLOOD WATCH NATIONAL WEATHER SERVICE SPRINGFIELD MO 637 PM CDT WED JUN 12 2002</p> <p>...FLOOD WATCH IN EFFECT THROUGH NOON THURSDAY...</p> <p>THE NATIONAL WEATHER SERVICE IN SPRINGFIELD HAS ISSUED A FLOOD WATCH FOR TONIGHT AND THURSDAY MORNING...ACROSS THE MISSOURI OZARKS AND SOUTHEAST KANSAS. THIS WATCH INCLUDES THE FOLLOWING COUNTIES...</p> <p>IN MISSOURI:</p> <p>BARRY...BARTON...BENTON...CAMDEN...CEDAR...CHRISTIAN...DADE... DALLAS...DENT...DOUGLAS...GREENE...HICKORY...HOWELL...JASPER... LACLEDE...LAWRENCE...MARIES...MCDONALD...MILLER...MORGAN...NEWTON... OREGON...OZARK...PHELPS...POLK...PULASKI...SHANNON...ST. CLAIR... STONE...TANEY...TEXAS...VERNON...WEBSTER AND WRIGHT.</p>
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Hydrological Forecast and Services

Flash Flood Warning

Issued when flooding is imminent or reported. Flash flooding develops within six hours of heavy rainfall. Also, flash flooding is usually associated with strong thunderstorms which produce heavy rainfall over a short period of time.

Product	Product Header	WMO Header	Issuance
Flash Flood Warning	STLFFWSGF	WGUS53	as needed

ZCZC STLFFWSGF
WGUS53 KSGF 132311
MOC153-140500-

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE SPRINGFIELD MO
606 PM CDT THU JUN 13 2002

THE NATIONAL WEATHER SERVICE IN SPRINGFIELD HAS ISSUED A

* FLASH FLOOD WARNING FOR...
SOUTHEASTERN OZARK COUNTY IN SOUTHWEST MISSOURI

* UNTIL MIDNIGHT CDT

* AT 603 PM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED THUNDERSTORMS WITH HEAVY RAINFALL ACROSS THE WARNED AREA. DOPPLER RADAR ESTIMATED THREE AND A HALF INCHES OF RAIN HAD FALLEN SINCE 4 PM.

* THUNDERSTORMS ARE PRODUCING TORRENTIAL RAINFALL IN THE WARNED AREA. RUNOFF FROM THIS EXCESSIVE RAINFALL WILL CAUSE FLASH FLOODING TO OCCUR. LOCATIONS THAT WILL EXPERIENCE FLOODING INCLUDE...BAKERSFIELD.

EXCESSIVE RUNOFF FROM HEAVY RAINFALL WILL CAUSE FLOODING OF SMALL CREEKS AND STREAMS...AND COUNTRY ROADS. FLOODING IS OCCURRING OR IS IMMINENT. IT IS IMPORTANT TO KNOW WHERE YOU ARE RELATIVE TO STREAMS... RIVERS...OR CREEKS WHICH CAN BECOME KILLERS IN HEAVY RAINS.

Flash Flood Statement

Issued to follow up on or cancel a Flash Flood Warning.

Product	Product Header	WMO Header	Issuance
Flood Warning	STLFFSSGF	RWUS32	as needed

ZCZC STLFFSSGF
RWUS32 KSGF 140225
MOZ153-140500-

FLASH FLOOD STATEMENT
NATIONAL WEATHER SERVICE SPRINGFIELD MO
924 PM CDT THU JUN 13 2002

...FLASH FLOOD WARNING CONTINUES UNTIL MIDNIGHT CDT FOR SOUTHEASTERN OZARK COUNTY...

AT 915 PM...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED THAT THE SHOWERS HAD DIMINISHED OVER THE WARNED AREA. RADAR ESTIMATES UP TO FOUR INCHES OF RAIN FELL BETWEEN BAKERSFIELD AND TECUMSEH.

LOCAL LAW ENFORCEMENT AGENCIES REPORT THAT FLOOD WATERS HAD RECEDED IN BAKERSFIELD WHERE SEVERAL HOMES HAD BEEN FLOODED.SEVERAL LOW WATER CROSSINGS AND COUNTY ROADS REMAIN FLOODED IN SOUTHEAST OZARK COUNTY.

BECAUSE OF THE HILLY TERRAIN OF THE OZARKS...THERE ARE HUNDREDS OF LOW WATER CROSSINGS WHICH ARE POTENTIALLY DANGEROUS IN HEAVY RAIN. DO NOT ATTEMPT TO TRAVEL ACROSS FLOODED ROADS. FIND ALTERNATE ROUTES.

Hydrological Forecast and Services

Flood Warning

As opposed to flash flooding, a flood is a longer-term phenomenon, usually taking more than six hours to develop. Flooding generally occurs when the heavy rainfall has ended and light to moderate rain continues, or a prolonged period of moderate to occasionally heavy rain occur.

Flood warnings may also be issued for on going flooding previously warned as a flash flood.

Product	Product Header	WMO Header	Issuance
Flood Warning	STLFLWSGF	WGUS43	as needed

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ZCZC STLFLWSGF
WGUS43 KSGF 130559
MOC097-131200-

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE SPRINGFIELD MO
1255 AM CDT THU JUN 13 2002

THE NATIONAL WEATHER SERVICE IN SPRINGFIELD HAS ISSUED A

* FLOOD WARNING FOR...
  JASPER COUNTY IN SOUTHWEST MISSOURI

* UNTIL 700 AM CDT

* AT 1252 AM CDT...LOCAL LAW ENFORCEMENT OFFICIALS REPORTED THAT
  EXCESSIVE RAINFALL WAS PRODUCING FLOODING ACROSS THE WARNED AREA.

* EARLIER EXCESSIVE RAINFALL WAS CONTINUING TO CAUSE FLOODING IN
  PARTS OF JASPER COUNTY. SEVERAL ROADS REMAINED IMPASSABLE EARLY
  THIS MORNING...SO THE FLASH FLOOD WARNING PREVIOUSLY IN EFFECT IS
  BEING REPLACED BY A FLOOD WARNING.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE ROAD.
THE WATER DEPTH MAY BE TOO GREAT TO ALLOW YOUR CAR TO CROSS SAFELY.
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Flood Statement

Issued to follow up on or cancel a Flood Warning

Product	Product Header	WMO Header	Issuance
Flood Statement	STLFLSSGF	RWUS42	as needed

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ZCZC STLFLSSGF
RWUS42 KSGF 281144
MOZ077-281430-

FLOOD STATEMENT
NATIONAL WEATHER SERVICE SPRINGFIELD MO
640 AM CDT FRI JUN 28 2002

...AN URBAN AND SMALL STREAM FLOOD ADVISORY HAS BEEN ISSUED FOR...
BARTON COUNTY UNTIL 930 AM CDT...

AT 635 AM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED
THUNDERSTORMS WITH VERY HEAVY RAINFALL ACROSS THE ADVISORY AREA.
DOPPLER RADAR ESTIMATED 2 TO 3 INCHES OF RAIN HAS ALREADY FALLEN
OVER NORTHWESTERN BARTON COUNTY SINCE 630 AM.

SLOW MOVING THUNDERSTORMS ARE PRODUCING VERY HEAVY RAINFALL IN THE
ADVISORY AREA. RUNOFF FROM THIS EXCESSIVE RAINFALL WILL CAUSE MINOR
FLOODING TO OCCUR...ESPECIALLY ALONG SMALL STREAMS AND NEAR LOW WATER
CROSSINGS. SOME LOCATIONS THAT WILL EXPERIENCE FLOODING INCLUDE
...MINDENMINES...LIBERAL...HANNON...VERDELLA...AND MULBERRY.

MOST DEATHS IN FLASH FLOODING OCCUR IN AUTOMOBILES. DO NOT ATTEMPT TO
CROSS BRIDGES...DIPS...OR LOW WATER CROSSINGS IF WATER COVERS THE
ROADWAY. NEVER TRY TO CROSS A FLOWING STREAM ON FOOT.
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Hydrological Forecast and Services

Urban/Small Stream Flood Advisory

Issued when minor flooding problems are expected, namely in flood prone urban areas or near small streams that rise out of their banks.

Product	Product Header	WMO Header	Issuance
Flood Statement	STLFLSSGF	RWUS42	as needed

ZCZC STLFLSSGF
RWUS42 KSGF 280150
MOZ071-280500-

FLOOD STATEMENT
NATIONAL WEATHER SERVICE SPRINGFIELD MO
849 PM CDT THU JUN 27 2002

...AN URBAN AND SMALL STREAM FLOOD ADVISORY HAS BEEN ISSUED FOR...
NORTHEASTERN PHELPS COUNTY UNTIL MIDNIGHT CDT...

AT 843 PM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED
THUNDERSTORMS WITH VERY HEAVY RAINFALL ACROSS THE ADVISORY AREA.
DOPPLER RADAR ESTIMATED 2 TO 3 INCHES OF RAIN OVER THE ROLLA AREA
WITHIN THE PAST HOUR.

SLOW MOVING THUNDERSTORMS ARE PRODUCING VERY HEAVY RAINFALL IN THE
ADVISORY AREA. RUNOFF FROM THIS EXCESSIVE RAINFALL WILL CAUSE MINOR
FLOODING TO OCCUR...ESPECIALLY ALONG SMALL STREAMS AND NEAR LOW WATER
CROSSINGS. SOME LOCATIONS THAT WILL EXPERIENCE FLOODING
INCLUDE...ROLLA AND ST. JAMES.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE THE 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.

River Flood Warnings

Issued when larger rivers and streams are expected to rise above flood stage, based on observed or forecast precipitation.

Product	Product Header	WMO Header	Issuance
Flood Warning	STLFLWSGF	WGUS43	as needed

ZCZC STLFLWSGF
WGUS43 KSGF 172015
MOZ088-101-180800-
BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE SPRINGFIELD MO
306 PM CDT FRI MAY 17 2002

A FLOOD WARNING HAS BEEN ISSUED FOR THE FOLLOWING RIVER:

THE SHOAL CREEK ABOVE JOPLIN.
FLOOD STAGE: 14.0 FEET.
LATEST STAGE: 6.6 FEET AT 2 PM FRIDAY.
FORECAST: MINOR FLOODING IS FORECAST WITH A CREST OF 14.3 FEET AT 7
AM SATURDAY.
FORECAST: THE RIVER WILL FALL BELOW FLOOD STAGE AT 3 PM SATURDAY.
AREAS AFFECTED: AT 7 FEET LOW WATER CROSSINGS NEAR THE GAGE SITE
FLOOD.

RAINFALL OUTLOOK
NO ADDITIONAL RAINFALL IS EXPECTED OVER THIS AREA DURING THE NEXT
24 HOURS. THOSE WITH PROPERTY AND LIVESTOCK ALONG THE RIVER SHOULD
CONTINUE TO MONITOR RIVER CONDITIONS. DO NOT DRIVE THROUGH FLOODED AREAS.

Hydrological Forecast and Services

River Flood Statement

Issued to update previous river flood warnings and make minor changes to the crest forecast.

Product	Product Header	WMO Header	Issuance
Flood Statement	STLFLSSGF	RWUS42	as needed

RWUS42 KSGF 022006
FLOOD STATEMENT
NATIONAL WEATHER SERVICE SPRINGFIELD, MO
839 AM CDT SAT OCT 02 2002

FLOOD WARNING REMAINS IN EFFECT FOR THE FOLLOWING LOCATION:

LOCATION:THE OSAGE RIVER NEAR SCHELL CITY

FLOOD STAGE: 25.0 FEET.

LATEST STAGE: 25.3 FEET AT 5 AM SATURDAY.

FORECAST: THE RIVER WILL FALL BELOW FLOOD STAGE LATE THIS MORNING.
AREAS AFFECTED: THE SCHELL-OSAGE WILDLIFE AREA WILL REMAIN FLOODED THROUGH LATE MORNING.

...RAINFALL OUTLOOK...

SCATTERED SHOWERS WILL BE POSSIBLE THROUGH THE AFTERNOON...POSSIBLY PRODUCING ONE QUARTER OF AN INCH OF RAINFALL. THOSE WITH PROPERTY AND LIVESTOCK ALONG THE RIVER SHOULD CONTINUE TO MONITOR RIVER CONDITIONS STAY TUNED TO NOAA WEATHER RADIO FOR LATER STATEMENTS. DO NOT DRIVE CARS THROUGH FLOODED AREAS.

River Statement

Issued to inform the public of notable hydrologic conditions, usually within-bank rises.

Product	Product Header	WMO Header	Issuance
River Statement	STLRVSSGF	FFGUS83	as needed

ZCZC STLRVSSGF
FGUS83 KSGF 181517
MOZ078-103-191500-

HYDROLOGIC STATEMENT
NATIONAL WEATHER SERVICE SPRINGFIELD MO
1014 AM CDT SAT MAY 18 2002

SIGNIFICANT RISE EXPECTED ON THE FOLLOWING RIVER:

THE JAMES RIVER AT GALENA.
FLOOD STAGE: 15.0 FEET.
LATEST STAGE: 14.6 FEET AT 8 AM SATURDAY.
FORECAST: THE RIVER WILL CREST AT 15.0 FEET BY 2 PM SATURDAY.

RAINFALL OUTLOOK:
A DRY WEATHER PATTERN WILL TAKE HOLD THIS WEEKEND BRINGING NO ADDITIONAL RAINFALL TO THE BASIN UNTIL WEDNESDAY.

STAY TUNED TO NOAA WEATHER RADIO FOR LATER STATEMENTS.

Hydrological Forecast and Services

Routine Hydro Products

Precipitation Summary

This product is produced each morning between 10 am and noon and includes precipitation, both rain and snow, from cooperative observers and automatic precipitation gages.

Product	Product Header	WMO Header	Issuance
Daily Precipitation Report	STLRRMSGF	SRUS43	1100

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ZCZC STLRRMSGF
TTAA00 KSGF 131538

DAILY PRECIPITATION REPORT
NATIONAL WEATHER SERVICE SPRINGFIELD MO
9:32 AM CST MON DEC 13 2002

WESTERN OZARKS/SOUTHWEST MISSOURI

STATION                                PRECIPITATION

BOLIVAR 1 NE                            0.00
BRANSON                                  0.17
GALENA 1SW                               0.08
GARRISON                                  0.41
GROVESPRING 3N                          0.02

WEST CENTRAL MISSOURI

ELDORADO SPRINGS                        0.00
    
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River Summary

This product gives the latest stage as well as the expected stage for the next three days for the Jack's Fork River at Eminence, MO James River at Galena, MO. These forecasts are provided by the River Forecast Center in Slidell, Louisiana and include the effects of forecast precipitation over the next 24 hours.

Product	Product Header	WMO Header	Issuance
Daily River Summary	STLRVDSGF	FGUS53	1000

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FGUS53 KSGF 261546
RVDSGF

DAILY RIVER SUMMARY
NATIONAL WEATHER SERVICE SPRINGFIELD MO
1015 AM CST SUN DEC 26 2002

.B SGF 1226 DC0012261200 DH12/HG/DRH+24/HGIFF/DRH+48/HGIFF/DRH+72/HGIFF

:STATION      FLOOD      7AM      24-HOUR      7 AM
ID  NAME      STAGE      STAGE      CHANGE      FORECAST
                                MON   TUE   WED

JAMES RIVER

GLNM7  :GALENA  15.0:    3.40/:    0.39:    3.40 /3.40/ 3.40

JACKS FORK RIVER

EMCM7  :EMINENCE 12.0:    1.90/:    0.29:    1.90 /1.90/ 1.90

.END
    
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