

NATIONAL WEATHER SERVICE MANUAL 10-923
MARCH 22, 2005

Operations and Services
Hydrologic Services Program, NWSPD 10-9

WEATHER FORECAST OFFICE HYDROLOGIC PRODUCT EXAMPLES

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

OPR: OS31 (T. Helble)

Certified by: OS3 (G. Austin)

Type of Issuance: Routine.

SUMMARY OF REVISIONS: This directive supersedes NWS Manual 10-923, dated February 9, 2004.

- 1) Adds one flash flood warning and two flash flood statement examples, including a segmented flash flood statement to support the corresponding format change specified in NWSI 10-922.
- 2) Groups examples of flash flood warnings and follow-up flash flood statements in the same section to provide more continuity.
- 3) Reverts to use of product title “Flash Flood Watch” instead of “Flood Watch for Flash Flooding.”

Signed

March 22, 2005

Dennis H. McCarthy
Acting Director, Office of Climate,
Water, and Weather Services

Date

Weather Forecast Office Hydrologic Product Examples

<u>Table of Contents:</u>	<u>Page</u>
1. Introduction	3
2. Hydrologic Outlook (ESF)	3
2.1 Example #1 - Potential Snowmelt Flooding.....	3
2.2 Example #2 – Potential Flooding from Excessive Rainfall.....	4
2.3 Example #3 - AHPS Probabilistic Outlook	5
3. Flood Watch and Associated Follow-up Products (FFA)	6
3.1 Example #1 – Flash Flood Watch	6
3.2 Example #2 – Flash Flood Watch: Extension in Time.....	7
3.3 Example #3 - Flash Flood Watch: Expansion Into a New Area.....	7
3.4 Example #4 - Flash Flood Watch (Short and Long Zone Names)	8
3.5 Example #5 - Flash Flood Watch (Long Zone Names).....	9
3.6 Example #6 - Flood Watch for Mainstem River and Tributary Flooding.....	10
3.7 Example #7 - Flood Watch (Long Zone Names)	11
3.8 Example #8 - Flood Watch: Follow-up	12
3.9 Example #9 - Flood Watch: Follow-up (Long Zone Names).....	12
3.10 Example #10 – Flood Watch: Termination	13
4. Flash Flood Warning (FFW) and Associated Follow-up Products (FFS)	14
4.1 Example #1 - Flash Flood Warning (FFW).....	14
4.2 Example #2 - Flash Flood Statement: Follow-up to Flash Flood Warning (FFS)	14
4.3 Example #3 - Flash Flood Statement: Cancellation of Flash Flood Warning (FFS).....	15
4.4 Example #4 - Flash Flood Warning for a Three-County Area (FFW).....	16
4.5 Example #5 - Flash Flood Statement: Follow up to Flash Flood Warning	16
With Cancellation and Continuation Segments (FFS)	
4.6 Example #6 - Flash Flood Warning: Dam Failure (FFW)	17
4.7 Example #7 - Flash Flood Statement: Follow up to Flash Flood Warning	18
5. Flood Warning For Forecast Points (FLW)	19
5.1 Example #1 - Flood Warning for Forecast Points	19
5.2 Example #2 - Flood Warning for Forecast Points (Segmented).....	19
5.3 Example #3 – Areal Flood Warning.....	21
5.4 Example #4 – Areal Flood Warning for Forecast Points: Extension In Time.....	21
6. Flood Statement (FLS)	22
6.1 Example #1 - Flood Warning for Forecast Point: Follow-up.....	22
6.2 Example #2 - Flood Warning for Forecast Points: Termination	22
6.3 Example #3 - Areal Flood Warning: Follow-up.....	23
6.4 Example #4 - Areal Flood Warning: Termination	24

7. Flood Statement – Miscellaneous Advisories (FLS)24
 7.1 Example #1 - Urban and Small Stream Flood Advisory24
 7.2 Example #2- Advisory for Elevated Streamflow25

8. Hydrologic Statement (RVS)25
 8.1 Example #1 - Information on Elevated Stream Levels at a River Forecast Point.....25
 8.2 Example #2 - SHEF Encoded Observed/Forecast Information.....26

9. Hydrologic Summary (RVA)27
 9.1 Example #1 - Report for Rivers and Creeks in Hydrologic Service Area27

10. River and Lake Forecast Product (RVD)28
 10.1 Example #1 - Lake Sites (in SHEF)28
 10.2 Example #2 - River and Lake Sites28

11. Hydrometeorological Data Summary (HYx)29
 11.1 Example #1 - Daily Summary (HYD).....29
 11.2 Example #2 - Monthly Summary (HYM)29

1. Introduction. This directive provides examples of weather forecast office (WFO) hydrologic products described in NWS Instruction 10-922. Some WFO hydrologic products issued under a given Advanced Weather Information Processing System (AWIPS) identifier (e.g., flood statement – FLS) are used for multiple purposes. Therefore, several product examples are provided to illustrate key applications. NWS Instruction 10-922 provides flexibility to include or exclude certain items from hydrologic products, so these examples should not be taken as the only prescribed formats.

2. Hydrologic Outlook (ESF).

2.1 Example #1 - Potential Snowmelt Flooding.

FGUS73 KBIS 221358
 ESFBIS
 NDZ001>005-009>013-017>023-025-031>037-040>048-050>051-231200-

HYDROLOGIC OUTLOOK
 NATIONAL WEATHER SERVICE BISMARCK ND
 800 AM CST FRI MAR 22 2002

...SNOWMELT FLOOD OUTLOOK NUMBER 2...

THIS SNOWMELT OUTLOOK IS FOR RIVER BASINS IN WEST AND CENTRAL NORTH DAKOTA AND INCLUDES THE SOURIS RIVER DRAINAGE...THE MISSOURI RIVER DRAINAGE AND THE JAMES RIVER DRAINAGE.

BECAUSE OF THE LACK OF SIGNIFICANT AMOUNTS OF SNOW ON THE GROUND, THERE IS LITTLE POTENTIAL FOR FLOODING DURING THIS SNOWMELT SEASON EVEN IF NORMAL PRECIPITATION FOR THE NEXT TWO WEEKS IS ADDED TO THE CURRENT SNOW CONDITIONS. RIVER LEVELS AT ALL FORECAST POINTS ARE

EXPECTED TO REMAIN BELOW FLOOD STAGE.

ABOVE NORMAL SPRING PRECIPITATION AND ICE JAMS WOULD INCREASE THE FLOOD THREAT DURING SPRING THAW. BELOW NORMAL PRECIPITATION OR A GRADUAL MELT WOULD DECREASE THE FLOOD THREAT.

SUMMARY OF NORTH DAKOTA'S WINTER CONDITIONS...
THE PAST WINTER BROUGHT ABOVE NORMAL TEMPERATURES AND BELOW NORMAL PRECIPITATION. FALL MOISTURE (SEPTEMBER-NOVEMBER 2001) WAS ALSO WELL BELOW NORMAL IN NORTH DAKOTA. THIS HAS CREATED BELOW NORMAL SOIL MOISTURE CONDITIONS. FROST DEPTHS AVERAGE 18 TO 24 INCHES. MARCH TEMPERATURES HAVE BEEN MUCH BELOW NORMAL WITH ABOVE NORMAL SNOWFALL.

THE 6-10 DAY FORECAST FOR NORTH DAKOTA CALLS FOR ABOVE NORMAL TEMPERATURES AND NORMAL PRECIPITATION.

THE 30-DAY AND 90-DAY OUTLOOKS INDICATE NO DEVIATION FROM NORMAL FOR PRECIPITATION OR TEMPERATURE.

CURRENT SNOW CONDITIONS...
THERE IS GENERALLY 3 TO 6 INCHES OF SNOW COVER ACROSS WEST AND CENTRAL NORTH DAKOTA. MUCH OF THIS FELL IN THE LAST SEVERAL DAYS. WATER EQUIVALENTS WERE GENERALLY ONE HALF INCH OR LESS.

BASIN SNOWPACK IN THE MOUNTAINS OF MONTANA AND WYOMING WAS GENERALLY 50% TO 70% OF AVERAGE.

CURRENT RIVER CONDITIONS...
RIVERS AND STREAMS IN NORTH DAKOTA HAVE NEAR NORMAL TO SLIGHTLY ABOVE NORMAL FLOWS WITH MOST RIVERS FROZEN. ALL FORECAST POINTS ARE CURRENTLY BELOW FLOOD STAGE.

THIS IS THE LAST SCHEDULED OUTLOOK FOR THE SEASON.

\$\$

2.2 Example #2 - Potential Flooding From Excessive Rainfall.

FGUS73 KSGF 102135
ESFSGF
MOC055-056-058-060>062-110400-

HYDROLOGIC OUTLOOK
NATIONAL WEATHER SERVICE SPRINGFIELD MO
335 PM CST FRI DEC 10 1999

...ANOTHER HEAVY RAINMAKER TO HIT THE OZARKS COULD PRODUCE FLOODING EARLY NEXT WEEK...

OVER THE PAST COUPLE OF WEEKS...SIGNIFICANT RAINFALL HAS FALLEN ACROSS THE OZARKS. AS A RESULT...MOST OF SOUTHWEST MISSOURI IS ALMOST BACK TO NORMAL RAINFALL...AND IN SOME CASES ABOVE NORMAL. THROUGH DECEMBER 10...SPRINGFIELD HAS RECEIVED 6.84 INCHES AND MANY AREAS OF THE OZARKS HAVE RECEIVED MORE THAN EIGHT INCHES. THE NORMAL RAINFALL FOR SPRINGFIELD IN DECEMBER IS 3.16 INCHES.

BEGINNING MONDAY AND EARLY TUESDAY...THE OZARKS WILL RECEIVE ANOTHER SOAKING RAIN. CURRENT WEATHER MODELS INDICATE A STORM TRACK ACROSS NORTHERN ARKANSAS AND SOUTHERN MISSOURI...BASICALLY THE SAME TRACK TAKEN BY THE RECENT STORMS. THIS MEANS ABUNDANT GULF MOISTURE WILL

BE PULLED INTO THE STORM AND DEPOSIT UPWARDS OF ONE TO TWO INCHES ACROSS MOST SECTIONS OF SOUTHERN MISSOURI.

FLOODING MAY OCCUR BECAUSE THE GROUND IS SATURATED FROM RECENT RAINS. LOW WATER CROSSINGS AND SMALL STREAMS COULD SWELL TO SMALL RAGING STREAMS OF WATER. RIVERS...MAINLY ACROSS SOUTHERN MISSOURI... COULD RISE CLOSE TO OR ABOVE FLOOD STAGE BY NEXT TUESDAY.

THE HAZARDOUS WEATHER OUTLOOK PRODUCT WILL BE UPDATED WITH THE LATEST INFORMATION THROUGHOUT THE WEEKEND. ANOTHER SOURCE OF CURRENT WEATHER INFORMATION FOR SOUTHERN MISSOURI IS THROUGH OUR WEB PAGE AT <http://www.crh.noaa.gov/sgf/>

\$\$

2.3 Example #3 - AHPS Probabilistic Outlook.

FGUS73 KGRR 231917
 ESFGRR
 MIC005-015-025-035-037-045-057-065-067-073-075-077-081-085-105-107-117-121-123-127-133-139-159-221200-

HYDROLOGIC OUTLOOK
 NATIONAL WEATHER SERVICE GRAND RAPIDS MI
 316 PM EDT TUE SEP 23 2003

...ADVANCED HYDROLOGIC PREDICTION SERVICE PROBABILISTIC OUTLOOK FOR THE GRAND...KALAMAZOO...AND ST JOSEPH RIVER BASINS...

THE GRAND RAPIDS OFFICE OF THE NATIONAL WEATHER SERVICE HAS IMPLEMENTED THE ADVANCED HYDROLOGIC PREDICTION SERVICES (AHPS) FOR ALL LOCATIONS IN THE GRAND...KALAMAZOO AND ST JOSEPH RIVER BASINS. AHPS ENABLES THE NATIONAL WEATHER SERVICE TO PROVIDE LONG-RANGE PROBABILISTIC RIVER OUTLOOKS. THIS SERVICE IS ALSO AVAILABLE ON THE INTERNET.

IN THE TABLE BELOW...THE 90 THROUGH 10 PERCENT COLUMNS INDICATE THE CHANCE THE RIVER COULD RISE ABOVE THE LISTED STAGE LEVELS IN THE NEXT 90 DAYS. EXAMPLE: THE RED CEDAR RIVER AT WILLIAMSTON HAS A FLOOD STAGE OF 9 FEET. IN THE NEXT 90 DAYS THERE IS A 20 PERCENT CHANCE THE RED CEDAR RIVER NEAR WILLIAMSTON WILL RISE ABOVE 5.5 FEET.

CHANCE OF EXCEEDING STAGES AT SPECIFIC LOCATIONS
 VALID SEPTEMBER 24, 2003 - DECEMBER 18, 2003

LOCATION	FS(FT)	PERCENT CHANCE OF EXCEEDING LISTED STAGE								
		90	80	70	60	50	40	30	20	10
RED CEDAR RIVER										
WILLIAMSTON	9	2.7	3.5	3.9	4.1	4.6	4.9	5.0	5.5	6.0
EAST LANSING	7	3.4	3.5	3.9	4.0	4.2	4.3	4.4	4.6	4.9
LOOKING GLASS RIVER										
EAGLE	6	1.1	1.5	1.8	2.1	2.2	2.5	2.9	3.0	3.3
MAPLE RIVER										
MAPLE RAPIDS	9.5	2.7	3.5	4.3	4.6	5.1	5.6	6.8	7.3	8.0
FLAT RIVER										
SMYRNA	6	3.7	3.8	4.0	4.2	4.4	4.6	4.9	5.2	5.7
KALAMAZOO RIVER										
MARSHALL	8	4.0	4.1	4.2	4.2	4.3	4.5	4.5	4.7	5.0
COMSTOCK	9	3.9	4.2	4.3	4.5	4.6	4.8	4.9	5.2	5.7

FENNVILLE	12	6.8	7.5	8.5	9.3	9.7	10.0	10.4	10.7	11.2
NEW RICHMOND	9									
ST JOSEPH RIVER										
BURLINGTON	6.5	3.0	3.2	3.3	3.5	3.5	3.7	3.8	4.0	4.2
PORTAGE RIVER										
VICKSBURG	5	3.3	3.5	3.8	4.0	4.0	4.2	4.3	4.4	4.6

THIS LONG-RANGE PROBABILISTIC OUTLOOK CONTAINS FORECAST VALUES THAT ARE CALCULATED USING MULTIPLE SEASON SCENARIOS FROM 30 OR MORE YEARS OF CLIMATOLOGICAL DATA INCLUDING CURRENT CONDITIONS OF THE RIVER... SOIL MOISTURE...AND 30 TO 90 DAY LONG-RANGE OUTLOOKS OF TEMPERATURE AND PRECIPITATION. BY PROVIDING A COMPLETE RANGE OF PROBABILITIES... THE LEVEL OF RISK ASSOCIATED WITH LONG-RANGE PLANNING DECISIONS CAN BE DETERMINED. THESE PROBABILISTIC FORECASTS ARE PART OF THE NATIONAL WEATHER SERVICE/S ADVANCED HYDROLOGIC PREDICTION SERVICE.

ADDITIONAL SUPPORTIVE DATA AND EXPLANATION ARE AVAILABLE ON THE INTERNET AT: WWW.CRH.NOAA.GOV/GRR/ (ALL LOWER CASE).

LONG-RANGE PROBABILISTIC OUTLOOKS ARE ISSUED EACH MONTH...NEAR THE END OF THE MONTH...THROUGHOUT THE YEAR.

\$\$

3. Flood Watch and Associated Follow-up Products (FFA).

3.1 Example #1 – Flash Flood Watch.

WGUS43 KFGF 190900
 FFASGF
 MOZ066-077-088-093-094-101-102-192200-

URGENT - IMMEDIATE BROADCAST REQUESTED
 FLOOD WATCH
 NATIONAL WEATHER SERVICE SPRINGFIELD MO
 300 AM CST WED MAR 19 2003

...THE NATIONAL WEATHER SERVICE IN SPRINGFIELD HAS ISSUED A FLASH FLOOD WATCH FOR SOUTHWESTERN MISSOURI EFFECTIVE UNTIL 4 PM CDT THURSDAY. THE WATCH INCLUDES THE FOLLOWING MISSOURI COUNTIES...

BARRY...BARTON...JASPER...LAWRENCE...MCDONALD...NEWTON...VERNON

A STRONG STORM SYSTEM WILL MOVE NORTHEAST ACROSS THE CENTRAL PLAINS WILL CONTINUE TO PUMP MOISTURE NORTHWARD FROM THE GULF OF MEXICO. A LARGE BAND OF RAIN AND THUNDERSTORMS WILL CONTINUE TO ROTATE NORTHWESTWARD AROUND THIS UPPER LOW. MODERATE TO HEAVY RAIN AND OCCASIONAL THUNDERSTORMS ASSOCIATED WITH THIS BAND WILL CONTINUE OVER THE WATCH AREA MUCH OF TODAY. WIDESPREAD RAINFALL AMOUNTS OF 1 TO 2 INCHES ARE LIKELY IN THE WATCH AREA TODAY...WITH LOCALLY HEAVIER AMOUNTS OF 3 OR MORE INCHES POSSIBLE.

A FLASH FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA. PERSONS IN SOUTHEASTERN MISSOURI SHOULD BE AWARE OF THE POSSIBILITY FOR HEAVY RAINFALL AND FLASH FLOODING...CHECK YOUR PREPAREDNESS REQUIREMENTS...ESPECIALLY IF YOU HAVE INTERESTS ALONG RIVERS IN THE AREA. KEEP INFORMED...AND BE READY FOR ACTION IF FLOODING IS OBSERVED OR IF A FLASH FLOOD WARNING IS ISSUED.

STAY TUNED TO NOAA WEATHER RADIO...COMMERCIAL MEDIA OR YOU CABLE TELEVISION PROVIDER FOR WATCH UPDATES AND POSSIBLE WARNINGS.

\$\$

J. DOE

3.2 Example #2 – Flash Flood Watch: Extension in Time.

WGUS43 KFGF 191700
FFASGF
MOZ066-077-088-093-094-101-102-200600-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE SPRINGFIELD MO
1100 AM CST WED MAR 19 2003

...FLASH FLOODING POSSIBLE IN SOUTHEASTERN MISSOURI UNTIL MIDNIGHT TOMORROW...

...THE NATIONAL WEATHER SERVICE IN SPRINGFIELD HAS EXTENDED THE FLASH FLOOD WATCH FOR SOUTHWESTERN MISSOURI UNTIL 12 AM CST MIDNIGHT FRIDAY MORNING. THE WATCH INCLUDES THE FOLLOWING MISSOURI COUNTIES...

BARRY...BARTON...JASPER...LAWRENCE...MCDONALD...NEWTON...VERNON

A STRONG STORM SYSTEM MOVING NORTHEAST ACROSS THE CENTRAL PLAINS CONTINUES TO PUMP MOISTURE NORTHWARD FROM THE GULF OF MEXICO. RAIN AND THUNDERSTORMS ROTATING AROUND THIS LOW ARE BEGINNING TO FORM TO THE SOUTH...BUT HEAVY RAIN IS NOW EXPECTED TO CONTINUE INTO TONIGHT WIDESPREAD RAINFALL AMOUNTS OF 1 TO 2 INCHES ARE LIKELY IN THE WATCH AREA...WITH LOCALLY HEAVIER AMOUNTS OF 3 OR MORE INCHES STILL POSSIBLE.

A FLASH FLOOD WATCH MEANS THAT FLASH FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA. PERSONS IN SOUTHWESTERN MISSOURI SHOULD BE AWARE OF THE POSSIBILITY FOR HEAVY RAINFALL AND FLASH FLOODING... CHECK YOUR PREPAREDNESS REQUIREMENTS...ESPECIALLY IF YOU HAVE INTERESTS ALONG RIVERS IN THE AREA. KEEP INFORMED...AND BE READY FOR ACTION IF FLOODING IS OBSERVED OR IF A FLASH FLOOD WARNING IS ISSUED.

STAY TUNED TO NOAA WEATHER RADIO...COMMERCIAL MEDIA OR YOU CABLE TELEVISION PROVIDER FOR WATCH UPDATES AND POSSIBLE WARNINGS.

\$\$

J. DOE

3.3 Example #3 – Flash Flood Watch: Expansion Into a New Area.

WGUS43 KFGF 191900
FFASGF
KSZ073-097-101-MOZ066-077-088-093-094-101-102-200600-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE SPRINGFIELD MO
100 PM CST WED MAR 19 2003

...FLASH FLOODING POSSIBLE IN SOUTHEASTERN MISSOURI AND SOUTHWESTERN KANSAS UNTIL MIDNIGHT TOMORROW...

...THE NATIONAL WEATHER SERVICE IN SPRINGFIELD HAS EXPANDED THE FLOOD WATCH FOR FLASH FLOODING TO INCLUDE COUNTIES IN FAR SOUTHEASTERN KANSAS. THE WATCH INCLUDES THE FOLLOWING COUNTIES...

IN MISSOURI...

BARRY...BARTON...JASPER...LAWRENCE...MCDONALD...NEWTON...VERNON

IN KANSAS...

BOURBON...CHEROKEE...CRAWFORD

RAIN AND THUNDERSTORMS ROTATING AROUND A LARGE UPPER LEVEL LOW TO THE WEST ARE APPROACHING THE WATCH AREA. WIDESPREAD RAINFALL AMOUNTS OF 1 TO 2 INCHES ARE LIKELY...WITH LOCALLY HEAVIER AMOUNTS OF 3 OR MORE INCHES POSSIBLE.

A FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA. PERSONS IN SOUTHWESTERN MISSOURI AND SOUTHEASTERN KANSAS SHOULD BE AWARE OF THE POSSIBILITY FOR HEAVY RAINFALL AND FLASH FLOODING...CHECK YOUR PREPAREDNESS REQUIREMENTS...ESPECIALLY IF YOU HAVE INTERESTS ALONG RIVERS IN THE AREA. KEEP INFORMED...AND BE READY FOR ACTION IF FLOODING IS OBSERVED OR IF A FLASH FLOOD WARNING IS ISSUED.

STAY TUNED TO NOAA WEATHER RADIO...COMMERCIAL MEDIA OR YOUR CABLE TELEVISION PROVIDER FOR WATCH UPDATES AND POSSIBLE WARNINGS.

\$\$

J. DOE

3.4 Example #4 - Flash Flood Watch (Short and Long Zone Names).

WGUS65 KABQ 281555
FFAABQ
NMZ006-012-013-018>021-282200-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE ALBUQUERQUE NM
954 AM MDT SAT OCT 28 2000

...FLASH FLOODING POSSIBLE IN THE EAST CENTRAL PLAINS AND SOUTHEAST NEW MEXICO TODAY...

...THE NATIONAL WEATHER SERVICE IN ALBUQUERQUE HAS ISSUED A FLASH FLOOD WATCH FOR THE EAST CENTRAL PLAINS AND SOUTHEAST AREAS OF NEW MEXICO EFFECTIVE UNTIL 400 PM CDT SATURDAY. THE WATCH INCLUDES THE FOLLOWING NEW MEXICO AREAS...

HARDING COUNTY...CONCHAS LAKE/GUADALUPE COUNTY...QUAY COUNTY...
DE BACA COUNTY...CHAVES COUNTY PLAINS...ROOSEVELT COUNTY...CURRY
COUNTY

A WELL DEFINED LINE OF STRONG THUNDERSTORMS IS MOVING SLOWLY EASTWARD ACROSS PARTS OF EASTERN NEW MEXICO. THE LINE CURRENTLY

EXTENDS FROM WESTERN CHAVES TO NORTHEAST DE BACA INTO EASTERN SAN MIGUEL AND HARDING COUNTIES. THE LINE OF THUNDERSTORMS WILL GRADUALLY MOVE EASTWARD AS THE UPPER LEVEL STORM SYSTEM BEGINS TO MOVE INTO NORTHEAST NEW MEXICO LATER TODAY.

SOUTHERLY WINDS...AT THE SURFACE AND ALOFT...ARE CREATING AN ENVIRONMENT FAVORABLE FOR TRAINING OF THUNDERSTORMS OVER THE EASTERN PORTIONS OF NEW MEXICO. SOME OF THE STRONGER STORMS COULD PRODUCE RAINFALL RATES BETWEEN 1 TO 2 INCHES AN HOUR.

ONCE THE UPPER LEVEL SYSTEM BEGINS TO MOVE TO THE NORTHEAST THE SHOWERS AND THUNDERSTORMS ARE LIKELY TO MOVE RAPIDLY EASTWARD INTO THE TEXAS PANHANDLE.

A FLASH FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA.

STAY TUNED TO NOAA WEATHER RADIO...COMMERCIAL MEDIA OR YOU CABLE TELEVISION PROVIDER FOR WATCH UPDATES AND POSSIBLE WARNINGS.

\$\$

3.5 Example #5 – Flash Flood Watch (Long Zone Names).

WGUS66 KSGX 120342
FFASGX
CAZ042-043-048-050-055>058-061-062-121200-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE SAN DIEGO CA
745 PM PST TUE FEB 11 2003

...FLASH FLOODING POSSIBLE OVER SOUTHERN CALIFORNIA UNTIL WEDNESDAY MORNING...

...THE NATIONAL WEATHER SERVICE IN SAN DIEGO HAS ISSUED A FLASH FLOOD WATCH IN SAN DIEGO AND ORANGE COUNTIES...THE INLAND EMPIRE...THE COACHELLA VALLEY AND THE MOUNTAINS AND DESERTS OF SAN BERNARDINO AND RIVERSIDE COUNTIES EFFECTIVE UNTIL 400 AM PST WEDNESDAY. THE WATCH INCLUDES THE FOLLOWING AREAS...

ORANGE COUNTY COASTAL AREAS...
SAN DIEGO COUNTY COASTAL AREAS...
SAN BERNARDINO AND RIVERSIDE COUNTY VALLEYS-THE INLAND EMPIRE...
SAN DIEGO COUNTY VALLEYS...
SAN BERNARDINO COUNTY MOUNTAINS...
RIVERSIDE COUNTY MOUNTAINS...
SANTA ANY MOUNTAINS AND FOOTHILLS...
SAN DIEGO COUNTY MOUNTAINS...
COACHELLA VALLEY...
SAN DIEGO COUNTY DESERTS

A LARGE STORM SOUTHWEST OF SAN DIEGO WILL CONTINUE TO FEED MOISTURE INTO SOUTHERN CALIFORNIA TONIGHT AND WEDNESDAY. AS THE STORM MOVES NORTHEAST RAIN WILL INCREASE ACROSS THE AREA...WITH HEAVY RAIN LIKELY WEDNESDAY. RAINFALL RATES OF 1/2 INCH PER HOUR OR MORE WILL PRODUCE STREET FLOODING...AND MAY ALSO BRING SMALL CREEKS AND STREAMS TO BANKFULL.

A FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA.

THE HEAVY RAINS WILL INCREASE THE THREAT OF MUDSLIDES AND FLOODING IN AND BELOW THE BURN AREAS. RESIDENTS IN THESE AREAS SHOULD MAKE PREPARATIONS FOR FLOODING AND BE PREPARED TO MOVE TO HIGHER GROUND IF HEAVY RAINS DEVELOP. STAY TUNED TO NOAA WEATHER RADIO...COMMERCIAL MEDIA OR YOU CABLE TELEVISION PROVIDER FOR WATCH UPDATES AND POSSIBLE WARNINGS.

\$\$

J. DOE

3.6 Example #6 - Flood Watch for Mainstem River and Tributary Flooding.

WGUS61 KRNK 270653
FFARNK
NCZ003>006-019-020-VAZ022>024-032>035-043>047-058-059-271600-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE BLACKSBURG VA
252 AM EDT TUE MAY 27 2003

...FLOODING POSSIBLE ALONG RIVERS AND CREEKS IN SOUTHWESTERN VIRGINIA AND NORTHWEST NORTH CAROLINA UNTIL TOMORROW MORNING...

...THE NATIONAL WEATHER SERVICE IN BLACKSBURG HAS ISSUED A FLOOD WATCH FOR PARTS OF SOUTHWESTERN VIRGINIA AND NORTHWEST NORTH CAROLINA EFFECTIVE UNTIL 400 AM EDT WEDNESDAY. THE WATCH INCLUDES THE FOLLOWING COUNTIES...

IN NORTHEAST NORTH CAROLINA...

CASWELL...ROCKINGHAM...STOKES...SURRY...WILKES...YADKIN

IN SOUTHWESTERN VIRGINIA...

AMHERST...APPOMATTOX...BEDFORD...BOTETOURT...BUCKINGHAM...CAMPBELL...
CHARLOTTE...FRANKLIN...HALIFAX...HENRY...PATRICK...PITTSYLVANIA...
ROANOKE...ROCKBRIDGE

LOW PRESSURE OVER THE CAROLINAS WILL STRENGTHEN AND MOVE EAST THIS AFTERNOON AS A POTENT UPPER DISTURBANCE OVER KENTUCKY MOVES OVER THE SOUTHERN APPALACHIANS. AS A RESULT RAIN IS EXPECTED TO REDEVELOP AND BECOME HEAVY AT TIMES ALONG AND EAST OF THE BLUE RIDGE LATER THIS MORNING AND THIS AFTERNOON.

LOWER PORTIONS OF THE DAN AND ROANOKE RIVERS ARE ALREADY IN OR NEAR FLOOD DUE TO HEAVY RAINFALL SUNDAY...AND ADDITIONAL RAINFALL COULD EASILY CAUSE SHARP RISES ON THESE RIVERS. AREA CREEKS AND STREAMS ARE ALSO RUNNING HIGH AND COULD FLOOD WITH MORE HEAVY RAIN.

REMEMBER...A FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA.

\$\$

3.7 Example #7 - Flood Watch (Long Zone Names).

WGUS66 KPQR 220131
FFAPQR
ORZ001>004-006>008-WAZ021-220700-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE PORTLAND OR
530 PM PST FRI MAR 21 2003

...THE NATIONAL WEATHER SERVICE IN PORTLAND HAS ISSUED A FLOOD WATCH FOR THE WILLAMETTE TRIBUTARIES DRAINING THE NORTHWEST OREGON COAST RANGE AND THE COASTAL RIVERS AND STREAMS OF SOUTHWEST WASHINGTON AND NORTHWEST OREGON EFFECTIVE UNTIL 11 PM PST SATURDAY. THE WATCH INCLUDES THE FOLLOWING AREAS...

NORTH OREGON COAST...
CENTRAL OREGON COAST...
COAST RANGE OF NORTHWEST OREGON...
CENTRAL COAST RANGE OF WESTERN OREGON...
GREATER PORTLAND METRO AREA...
CENTRAL WILLAMETTE VALLEY...
SOUTH WILLAMETTE VALLEY AND
SOUTH WASHINGTON COAST

RAIN CONTINUES TO FALL THIS EVENING OVER THE COAST AND COAST RANGE OF SOUTHWEST WASHINGTON AND NORTHWEST OREGON...AND WILL CONTINUE TO BE HEAVY AT TIMES TONIGHT. SEVERAL OF THE RIVERS AND STREAMS DRAINING THE COAST RANGE IN NORTHWEST OREGON AND SOUTHWEST WASHINGTON MAY RISE TO FLOOD STAGE TONIGHT OR SATURDAY. ALONG THE COASTAL SLOPES THE STREAMS MOST AT RISK FOR FLOODING INCLUDE THE NEHALEM...WILSON...SILETTE AND SIUSLAW RIVERS. STREAMS AT RISK FOR FLOODING DRAINING THE EAST SLOPES OF THE COAST RANGE INTO THE WILLAMETTE RIVER INCLUDE THE LUCKIAMUTE...MARYS AND UPPER TULATIN RIVERS.

A FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA.

STAY TUNED TO NOAA WEATHER RADIO...COMMERCIAL MEDIA OR YOUR CABLE TELEVISION PROVIDER FOR WATCH UPDATES AND POSSIBLE WARNINGS. STAGE FORECASTS FOR RIVERS IN THE WATCH AREA SHOULD BE MONITORED. THESE STAGE FORECASTS ARE BASED ON OBSERVED AND FORECAST RAINFALL AND TEMPERATURES. IF ACTUAL RAINFALL AND TEMPERATURES VARY FROM THE FORECAST VALUES...THE RIVER STAGE WILL VARY ACCORDINGLY. RIVER FORECASTS ALSO INCLUDE CURRENT AND PLANNED RESERVOIR RELEASES. FOR THE LATEST RIVER STAGES AND FORECASTS...VISIT OUR WEB PAGE AT [HTTP://WWW.WRH.NOAA.GOV/PORTLAND/PUBLIC_HYDRO](http://www.wrh.noaa.gov/portland/public_hydro) (LOWER CASE).

\$\$

J. DOE

3.8 Example #8 - Flood Watch: Follow-up.

WGUS61 KRNK 271605
FFARNK
NCZ003>006-019-020-VAZ022>024-032>035-043>047-058-059-272100-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE BLACKSBURG VA
NOON EDT TUE MAY 27 2003

...FLOOD THREAT CONTINUES IN SOUTHWESTERN VIRGINIA AND NORTHWEST
NORTH CAROLINA UNTIL TOMORROW MORNING...

...A FLOOD WATCH FOR PARTS OF SOUTHWESTERN VIRGINIA AND NORTHWEST
NORTH CAROLINA REMAINS IN EFFECT UNTIL 400 AM EDT WEDNESDAY MORNING.
THE WATCH INCLUDES THE FOLLOWING COUNTIES...

IN NORTHWEST NORTH CAROLINA...

CASWELL...ROCKINGHAM...STOKES...SURRY...WILKES AND YADKIN.

IN SOUTHWESTERN VIRGINIA...

AMHERST...APPOMATTOX...BEDFORD...BOTETOURT...BUCKINGHAM...CAMPBELL...
CHARLOTTE...FRANKLIN...HALIFAX...HENRY...PATRICK...PITTSYLVANIA...
ROANOKE AND ROCKBRIDGE

LOW PRESSURE OVER THE CAROLINAS WILL STRENGTHEN AND MOVE EAST THIS
AFTERNOON AS A POTENT UPPER DISTURBANCE OVER KENTUCKY MOVES OVER THE
SOUTHERN APPALACHIANS. AS A RESULT RAIN MAY BECOME HEAVY AT TIMES
ALONG AND EAST OF THE BLUE RIDGE.

LOWER PORTIONS OF THE DAN AND ROANOKE RIVERS ARE ALREADY IN OR NEAR
FLOOD DUE TO HEAVY RAINFALL SUNDAY...AND ADDITIONAL RAINFALL COULD
EASILY CAUSE SHARP RISES ON THESE RIVERS. AREA CREEKS AND STREAMS
ARE ALSO RUNNING HIGH AND COULD FLOOD WITH MORE HEAVY RAIN.

REMEMBER...A FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT
IMMINENT IN THE WATCH AREA.

\$\$

3.9 Example #9 - Flood Watch: Follow-up (Long Zone Names).

WGUS66 KPQR 230705
FFAPQR
ORZ001>004-006>008-WAZ021-221300-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE PORTLAND OR
1100 PM PST FRI MAR 21 2003

...A FLOOD WATCH FOR THE WILLAMETTE TRIBUTARIES DRAINING THE
NORTHWEST OREGON COAST RANGE AND THE COASTAL RIVERS AND STREAMS OF
SOUTHWEST WASHINGTON AND NORTHWEST OREGON REMAINS IN EFFECT UNTIL
1100 PM PST SATURDAY. THE WATCH INCLUDES THE FOLLOWING AREAS...

NORTH OREGON COAST...
CENTRAL OREGON COAST...
COAST RANGE OF NORTHWEST OREGON...
CENTRAL COAST RANGE OF WESTERN OREGON...
GREATER PORTLAND METRO AREA...
CENTRAL WILLAMETTE VALLEY...
SOUTH WILLAMETTE VALLEY AND
SOUTH WASHINGTON COAST

MODERATE RAIN CONTINUES TO FALL THIS EVENING OVER THE WATCH AREA WITH A FEW HEAVIER AREAS ON THE COASTAL SLOPES. SO FAR ALL MAJOR RIVERS AND STREAMS DRAINING THE COAST RANGE IN NORTHWEST OREGON AND SOUTHWEST WASHINGTON ARE BELOW FLOOD STAGE...BUT STILL SHOULD BE MONITORED CLOSELY FOR THE POSSIBILITY OF FLOODING SHOULD RAINFALL EXCEED THE CURRENTLY FORECAST VALUES.

A FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA.

STAY TUNED TO NOAA WEATHER RADIO...COMMERCIAL MEDIA OR YOUR CABLE TELEVISION PROVIDER FOR WATCH UPDATES AND POSSIBLE WARNINGS. THE LATEST RIVER STAGES AND FORECASTS CAN BE MONITORED AT [HTTP://WWW.WRH.NOAA.GOV/PORTLAND/PUBLIC_HYDRO](http://www.wrh.noaa.gov/portland/public_hydro) (LOWER CASE).

\$\$

J. DOE

3.10 Example #10 - Flood Watch: Termination.

WGUS66 KPQR 230700
FFAPQR
ORZ001>004-006>008-WAZ021-230730-

URGENT - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE PORTLAND OR
1100 PM PST SAT MAR 22 2003

...THE FLOOD WATCH FOR THE WILLAMETTE TRIBUTARIES DRAINING THE NORTHWEST OREGON COAST RANGE AND THE COASTAL RIVERS AND STREAMS OF SOUTHWEST WASHINGTON AND NORTHWEST OREGON HAS BEEN ALLOWED TO EXPIRE...

MODERATE TO HEAVY RAIN FELL OVERNIGHT IN THE COAST AND COAST RANGE OF SOUTHWEST WASHINGTON AND NORTHWEST OREGON...BUT REMAINED WITHIN THE RANGE OF FORECAST VALUES. THIS ALLOWED ALL RIVERS AND STREAMS IN THE WATCH AREA TO REMAIN BELOW FLOOD STAGE. RIVERS WILL STILL BE AT HIGH LEVELS FOR THE NEXT FEW DAYS BUT GRADUALLY RECEDE UNTIL THE NEXT STORM ARRIVES THIS TUESDAY.

THE LATEST STAGES AND FORECASTS FOR RIVERS AND STREAMS CAN BE FOUND AT OUR WEB PAGE AT [HTTP://WWW.WRH.NOAA.GOV/PORTLAND/PUBLIC_HYDRO](http://www.wrh.noaa.gov/portland/public_hydro) (LOWER CASE).

\$\$

J. DOE

4. Flash Flood Warning (FFW) and Associated Follow-up Products (FFS).

4.1 Example #1 - Flash Flood Warning (FFW).

WGUS51 KOKX 141655
FFWOKX
NYC103-142000-

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE NEW YORK NY
1255 PM EDT MON AUG 14 2000

THE NATIONAL WEATHER SERVICE IN UPTON HAS ISSUED A

* FLASH FLOOD WARNING FOR
SOUTHWEST SUFFOLK COUNTY IN SOUTHEASTERN NEW YORK STATE

* UNTIL 400 PM EDT

* AT 1254 PM NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED
THUNDERSTORMS MOVING NORTHWEST TOWARD THE WARNED AREA. RAINFALL
RATES FROM 2 TO 3 INCHES PER HOUR WILL CAUSE FLASH FLOODING OF
LOW LYING AND POOR DRAINAGE AREAS. THE HEAVY RAINS SHOULD END BY
200 PM EDT AND IT WILL TAKE ANOTHER HOUR OR TWO FOR THE FLOODING
TO DISSIPATE.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE
ROADWAY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED. MOVE
TO HIGHER GROUND IMMEDIATELY.

REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY
WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST
OFFICE IN UPTON.

LAT...LON 4153 7264 4131 7255 4138 7190 4159 7198

\$\$

4.2 Example #2 - Flash Flood Statement: Follow-up to Flash Flood Warning (FFS).

WGUS71 KOKX 141730
FFSOKX

FLASH FLOOD STATEMENT
NATIONAL WEATHER SERVICE NEW YORK NY
130 PM EDT MON AUG 14 2000

NYC103-142000-
SUFFOLK NY
130 PM EDT MON AUG 14 2000

...THE FLASH FLOOD WARNING REMAINS IN EFFECT FOR SOUTHWEST SUFFOLK
COUNTY IN SOUTHEASTERN NEW YORK STATE UNTIL 400 PM EDT...

AT 130 PM EDT...WEATHER SERVICE DOPPLER RADAR INDICATED A CLUSTER OF
THUNDERSTORMS PRODUCING VERY HEAVY RAIN IN AN AREA FROM BRENTWOOD
WEST TO DEER PARK AND NORTH TO ABOUT INTERSTATE 495. THUNDERSTORMS

ARE MOVING NORTH TOWARDS HUNTINGTON STATION AND LLOYD POINT. RADAR ESTIMATES INDICATE 2 INCHES HAVE FALLEN. LAW ENFORCEMENT OFFICERS IN THE AREA REPORT SEVERAL ROADS ARE COVERED WITH WATER AND ARE TEMPORARILY IMPASSIBLE.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE ROADWAY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED. MOVE TO HIGHER GROUND IMMEDIATELY.

REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE IN UPTON.

LAT...LON 4153 7264 4131 7255 4138 7190 4159 7198

\$\$

4.3 Example #3 – Flash Flood Statement: Cancellation of Flash Flood Warning (FFS).

WGUS71 KOKX 141930
FFSOKX

FLASH FLOOD STATEMENT
NATIONAL WEATHER SERVICE NEW YORK NY
330 PM EDT MON AUG 14 2000

NYC103-141945-
SUFFOLK NY-
330 PM EDT MON AUG 14 2000

...THE FLASH FLOOD WARNING HAS BEEN CANCELLED FOR SOUTHWEST SUFFOLK COUNTY IN NEW YORK...

NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATES THAT THE THUNDERSTORMS HAVE MOVED WELL OUT OF THE AREA AND INTO THE LONG ISLAND SOUND. NO HEAVY RAINFALL HAS OCCURRED IN THE WARNING AREA FOR OVER AN HOUR. THE MOST SERIOUS FLOODING OCCURRED ON JEFFERSON AVENUE NEAR THE BRENTWOOD COUNTRY CLUB WHERE SEVERAL HOMES WERE FLOODED AND A BRIDGE WAS DAMAGED. WATER WAS REPORTED OVER THE ROADWAY AT SEVERAL LOCATIONS IN DEER PARK AND HUNTINGTON STATION. FLOODING HAS SUBSIDED AND THE FLOOD THREAT NO LONGER EXISTS... BUT PONDING OF WATER ON ROADWAYS MAY CONTINUE AT A FEW LOCATIONS AS FLOOD WATERS RECEDE.

REMAIN CAUTIOUS WHEN DRIVING IN LOW LYING AREAS...AND REPORT ANY FLOODED ROADWAYS TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST OFFICE IN UPTON.

LAT...LON 4153 7264 4131 7255 4138 7190 4159 7198

\$\$

4.4 Example #4 – Flash Flood Warning for a Three-County Area (FFW).

WGUS51 KCLE 210715
FFWCLE
OHC093-103-153-211200-

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE CLEVELAND OH
315 AM EDT FRI MAY 21 2004

THE NATIONAL WEATHER SERVICE IN CLEVELAND HAS ISSUED A

- * FLASH FLOOD WARNING FOR...
LORAIN COUNTY IN NORTH CENTRAL OHIO...
MEDINA COUNTY IN NORTHEAST OHIO...
SUMMIT COUNTY IN NORTHEAST OHIO...
- * UNTIL 800 AM EDT
- * AT 304 AM EDT WEATHER SERVICE RADAR INDICATED THUNDERSTORMS WITH
HEAVY RAINS IN THE AREA. WITH THE GROUND NEARLY SATURATED...FLOODING
IS LIKELY.

NEVER DRIVE OR WALK INTO FLOODED AREAS.

LAT...LON 4113 8224 4130 8238 4117 8147 4097 8147

\$\$

4.5 Example #5 – Flash Flood Statement: Follow up to Flash Flood Warning With Cancellation and Continuation Segments (FFS).

WGUS71 KCLE 210830
FFSCLE

FLASH FLOOD STATEMENT
NATIONAL WEATHER SERVICE CLEVELAND OH
430 AM EDT FRI MAY 21 2004

OHC093-210845-
LORAIN OH-
430 AM EDT FRI MAY 21 2004

...THE FLASH FLOOD WARNING HAS BEEN CANCELLED FOR LORAIN COUNTY IN
NORTH CENTRAL OHIO...

AT 425 AM EDT WEATHER SERVICE RADAR INDICATED THUNDERSTORMS HAVE
MOVED EASTWARD OUT OF THE COUNTY AND FLASH FLOODING HAS SUBSIDED.
SOME MINOR FLOODING WAS REPORTED ON HIGHWAY 18 JUST EAST OF
WELLINGTON...BUT IT QUICKLY SUBSIDED.

DO NOT TO DRIVE WHERE WATER COVERS THE ROAD. WATER DEPTH MAY BE TOO
GREAT TO ALLOW YOUR CAR...TRUCK OR SUV TO CROSS SAFELY.

LAT...LON 4108 8198 4125 8198 4117 8147 4097 8147

\$\$

OHC103-153-211200-
MEDINA OH-SUMMIT OH-
430 AM EDT FRI MAY 21 2004

...A FLASH FLOOD WARNING REMAINS IN EFFECT FOR MEDINA AND SUMMIT
COUNTIES UNTIL 800 AM EDT...

THUNDERSTORMS WITH HEAVY RAIN HAVE CAUSED FLOODING IN PORTIONS OF
MEDINA AND SUMMIT COUNTIES THIS MORNING. RADAR ESTIMATES INDICATED
FROM 1 TO 2 INCHES HAD FALLEN FROM ABOUT 200 AM THROUGH 420 AM. THIS
CAUSED FLOODING ON LAUREL ROAD IN BRUNSWICK WHERE TWO HOMES WERE
FLOODED. FLOODING WAS ALSO REPORTED ON NORTH CARPENTER ROAD.
ADDITIONAL FLOODING IS LIKELY IN OTHER LOCATIONS ACROSS THE AREA.

DO NOT TO DRIVE WHERE WATER COVERS THE ROAD. WATER DEPTH MAY BE TOO
GREAT TO ALLOW YOUR CAR...TRUCK OR SUV TO CROSS SAFELY.

LAT...LON 4108 8198 4125 8198 4117 8147 4097 8147

\$\$

4.6 Example #6 - Flash Flood Warning: Dam Failure (FFW).

WGUS53 KGLD 221608
FFWGLD
COC125-KSC023-NEC057-087-230015-

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE GOODLAND KS
1008 AM MDT MON APR 22 2002

THE NATIONAL WEATHER SERVICE IN GOODLAND HAS ISSUED A

* FLASH FLOOD WARNING FOR THE SOUTH FORK REPUBLICAN RIVER BELOW
FAILING BONNY DAM... INCLUDING THE FOLLOWING DOWNSTREAM
LOCATIONS...

SOUTHEASTERN YUMA COUNTY IN NORTHEAST COLORADO
THIS INCLUDES THE CITY OF HALE
CHEYENNE COUNTY IN NORTHWEST KANSAS
THIS INCLUDES THE CITY OF ST FRANCIS
SOUTHEASTERN DUNDY COUNTY IN SOUTHWEST NEBRASKA
THIS INCLUDES THE CITY OF BENKELMAN
WESTERN HITCHCOCK COUNTY IN SOUTHWEST NEBRASKA
THIS INCLUDES THE CITY OF STRATTON

* UNTIL 615 PM MDT /715 PM CDT/

* AT 1000 AM MDT /11 AM CDT/ NATIONAL WEATHER SERVICE AND THE UNITED
STATES BUREAU OF RECLAMATION REPORTS THAT BONNY DAM HAS FAILED...
MASSIVE FLASH FLOODING IS DEVELOPING BELOW THE DAM DUE TO RAPID
EROSION OF THE STRUCTURE.

* THE ESTIMATED TIME FOR THE LEADING EDGE OF THE FLOOD WAVE TO REACH
HALE IS 1030 AM MDT...FOR ST. FRANCIS 1248 PM MDT...
FOR BENKELMAN 338 PM MDT AND FOR STRATTON 6 PM MDT.

MOVE FAR AWAY FROM THE SOUTH FORK REPUBLICAN RIVER AND DO NOT STAY IN
AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING. THIS IS A VERY
DANGEROUS SITUATION BELOW BONNY DAM. ALL PEOPLE LIVING ALONG OR

LOCATED NEAR THE SOUTH FORK REPUBLICAN AND REPUBLICAN RIVERS SHOULD BEGIN EVACUATION...AND MOVE TO HIGHER GROUND IMMEDIATELY.

LAT...LON 3868 10233 3871 10187 3909 10187 3904 10209 3903 10234

\$\$

4.7 Example #7 – Flash Flood Statement: Follow up to Flash Flood Warning For A Dam Failure (FFS).

WGUS73 KGLD 221638
FFSGLD

FLASH FLOOD STATEMENT
NATIONAL WEATHER SERVICE GOODLAND KS
1038 AM MDT MON APR 22 2002

COC125-KSC023-NEC057-087-230015-
YUMA CO-CHEYENNE KS-DUNDY NE-HITCHCOCK NE-
1038 AM MDT MON APR 22 2002

...THE FLASH FLOOD WARNING DUE TO FAILURE OF BONNY DAM REMAINS IN EFFECT ALONG THE SOUTH FORK REPUBLICAN RIVER IN NORTHEAST COLORADO NORTHWEST KANSAS AND SOUTHWEST NEBRASKA...

THE FLOOD WAVE CAUSED BY FAILURE OF BONNY DAM REACHED THE TOWN OF HALE COLORADO AT 1030 AM MDT. LOCAL POLICE REPORTED A 30 TO 40 FOOT HIGH FLOOD WAVE SWEEPING THROUGH THE TOWN...CAUSING NEAR TOTAL DAMAGE TO ALL STRUCTURES AT LOWER ELEVATIONS NEAR THE RIVER.

THE ESTIMATED TIME FOR THE LEADING EDGE OF THE FLOOD WAVE TO REACH ST. FRANCIS KS IS 1248 PM MDT...FOR BENKELMAN NE 338 PM MDT AND FOR STRATTON NE ABOUT 600 PM MDT.

THE NEXT DOWNSTREAM RESERVOIR...SWANSON RESERVOIR BEHIND TRENTON DAM IN HITCHCOCK COUNTY NEBRASKA...HAS BEEN VERY LOW DUE TO THE RECENT DROUGHT. AUTHORITIES BELIEVE THAT TRENTON DAM WILL BE ABLE TO CONTAIN THE FLOOD WATERS FROM FAILED BONNY DAM...SO FAILURE OF TRENTON DAM IS NOT A THREAT AT THIS TIME. HOWEVER...WATER RELEASES HAVE BEEN STARTED FROM TRENTON DAM TO ENSURE THE SAFETY OF THE DAM. THEREFORE RIVER LEVELS WILL BE A FOOT OR SO HIGHER THAN THEY HAVE BEEN IN THE SOUTH FORK REPUBLICAN RIVER BELOW TRENTON DAM AND IN THE REPUBLICAN RIVER BELOW WHERE THE TWO RIVERS JOIN.

THIS IS A VERY DANGEROUS SITUATION BELOW BONNY DAM! MOVE FAR AWAY FROM THE SOUTH FORK REPUBLICAN RIVER AND DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING. ALL PEOPLE LIVING ALONG OR LOCATED NEAR THE SOUTH FORK REPUBLICAN RIVER SHOULD EVACUATE... AND MOVE TO HIGHER GROUND IMMEDIATELY!

LAT...LON 3868 10233 3871 10187 3909 10187 3904 10209 3903 10234

\$\$

5. Flood Warning (FLW).

5.1 Example #1 - Flood Warning for Forecast Points.

WGUS42 KMHX 061600
FLWMHX
NCC049-107-117-147-070300-

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE NEWPORT/MOREHEAD CITY NC
1159 AM EDT FRI APR 6 2001

...THE NATIONAL WEATHER SERVICE IN NEWPORT HAS ISSUED A FLOOD WARNING
FOR THE FOLLOWING RIVERS IN NORTH CAROLINA...NEUSE...ROANOKE AND
TAR RIVERS...

NEUSE RIVER AT KINSTON...

MINOR FLOODING IS OCCURRING
MINOR FLOODING IS EXPECTED TO CONTINUE
A STAGE OF 14.2 FEET WAS MEASURED AT 9 AM FRIDAY
FLOOD STAGE IS 14.0 FEET
FORECAST MAXIMUM STAGE IS 15.0 FEET AT 8 PM WEDNESDAY
AT 14 FEET...WATER WILL BEGIN TO OVERFLOW INTO LOWLANDS ADJACENT
TO THE NEUSE RIVER.

TAR RIVER AT GREENVILLE...

MINOR FLOODING IS OCCURRING
MINOR FLOODING IS EXPECTED TO CONTINUE
A STAGE OF 14.9 FEET WAS MEASURED AT 11 AM FRIDAY
FLOOD STAGE IS 13.0 FEET
FORECAST MAXIMUM STAGE IS 16.0 FEET AT 8 AM SUNDAY
THE RIVER WILL FALL BELOW FLOOD STAGE AT 6 AM TUESDAY
AT 16 FEET...WIDESPREAD LOW LAND FLOODING ADJACENT TO THE TAR
RIVER OCCURS. FARMLAND WILL BEGIN TO FLOOD ACROSS PITT COUNTY.

ROANOKE RIVER NEAR WILLIAMSTON...

MINOR FLOODING IS OCCURRING
MINOR FLOODING IS EXPECTED TO CONTINUE
A STAGE OF 10.2 FEET WAS MEASURED AT 8 AM FRIDAY
FLOOD STAGE IS 10.0 FEET
FORECAST MAXIMUM STAGE IS 10.6 FEET AT 8 PM MONDAY
AT 10 FEET...MINOR LOWLAND FLOODING ADJACENT TO THE ROANOKE RIVER
WILL BEGIN.

NEVER DRIVE CARS OR TRUCKS THROUGH FLOODED AREAS. THE WATER MAY BE
TOO DEEP TO ALLOW FOR SAFE PASSAGE.

\$\$

5.2 Example #2 - Flood Warning for Forecast Points (Segmented).

WGUS46 KPQR 051759
FLWPQR

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE PORTLAND OR
1000 AM PST TUE DEC 05 2000

...THE NATIONAL WEATHER SERVICE IN PORTLAND HAS ISSUED A FLOOD WARNING FOR THE FOLLOWING RIVERS...

COWLITZ RIVER IN COWLITZ COUNTY
COLUMBIA RIVER IN COWLITZ AND COLUMBIA COUNTIES

WAC015-070000-

COWLITZ RIVER AT CASTLE ROCK

MOST RECENT READING: 46.8 FT / 59000 CFS AT 8 AM MONDAY
FLOOD STAGE ---> 48.0 FT / 65000 CFS

FORECAST / REMARKS:

THIS RIVER IS EXPECTED TO RISE THROUGH THE NIGHT...REACHING FLOOD STAGE AROUND 2 AM THURSDAY. IT WILL CONTINUE TO RISE THROUGH THE MORNING HOURS AND CREST NEAR 51.5 FT LATE MORNING THURSDAY AND REMAIN ABOVE FLOOD STAGE THROUGH THE DAY. ABOVE 51 FEET...EXPECT FLOODING OF BUILDINGS AND RESIDENTIAL AREAS WEST OF THE RIVER IN THE VICINITY OF CASTLE ROCK. ALSO...EXPECT WIDESPREAD FLOODING OF LOW LYING PASTURE AND FARMLAND.

\$\$

WAC015-070000-

COWLITZ RIVER AT KELSO

MOST RECENT READING: 20.2 FT / 90000 CFS AT 9 AM MONDAY
FLOOD STAGE ---> 21.5 FT / 100000 CFS

FORECAST / REMARKS:

THIS RIVER IS EXPECTED TO RISE THROUGH THE NIGHT...REACHING FLOOD STAGE AROUND 6 AM THURSDAY. IT WILL CONTINUE TO RISE THROUGH THE MORNING HOURS AND CREST NEAR 25.0 FT EARLY AFTERNOON THURSDAY AND REMAIN ABOVE FLOOD STAGE THROUGH THE DAY. ABOVE 24.5 FEET...FLOODING OF A FEW RESIDENTIAL AREAS IN THE KELSO VICINITY BEGINS. ALSO... EXPECT WIDESPREAD FLOODING OF PASTURE LAND AND LOW LYING ROADS.

\$\$

ORC009-WAC015-070000-

COLUMBIA RIVER AT LONGVIEW

MOST RECENT READING: 9.8 FT AT 8 AM MONDAY
FLOOD STAGE ---> 12.0 FT

FORECAST / REMARKS:

THIS RIVER IS EXPECTED TO CREST NEAR 12.0 FEET AROUND 7 PM THIS EVENING...AND AT 12.5 FEET AROUND 6 AM THURSDAY...CORRESPONDING WITH HIGH TIDES AT LONGVIEW. ABOVE 12 FEET...EXPECT MINOR FLOODING OF UN-LEVEED LOW LYING FARMLAND NEAR THE COLUMBIA.

RIVER STAGE FORECASTS ARE BASED ON OBSERVED AND FORECAST RAINFALL AND TEMPERATURES. IF ACTUAL RAINFALL AND TEMPERATURES VARY FROM THE FORECAST VALUES...THE RIVER STAGE WILL VARY ACCORDINGLY. NATIONAL WEATHER SERVICE RIVER FORECASTS INCLUDE CURRENT AND PLANNED RESERVOIR RELEASES. FOR THE LATEST RIVER STAGES AND FORECASTS VISIT OUR WEB PAGE AT: http://www.wrh.noaa.gov/portland/public_hydro/

\$\$

5.3 Example #3 - Areal Flood Warning.

WGUS41 KILN 241202
FLWILN
OHC001-241800-

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE WILMINGTON OH
802 AM EDT THU AUG 24 2000

...THE NATIONAL WEATHER SERVICE IN WILMINGTON HAS ISSUED A FLOOD WARNING FOR SMALL STREAMS IN ADAMS COUNTY EFFECTIVE UNTIL 8 PM THURSDAY EVENING...

AT 8 AM EDT...WEATHER SERVICE DOPPLER RADAR INDICATED THAT OVER 3 INCHES OF RAIN HAD FALLEN OVER PARTS OF THE COUNTY. AN ADDITIONAL ONE OR TWO INCHES ARE POSSIBLE THROUGHOUT THE DAY. AS A RESULT... HIGH WATER LEVELS CAN BE EXPECTED INTO THE EVENING HOURS. SOME LOCATIONS IN THE WARNING AREA INCLUDE WEST UNION AND BLUE CREEK.

IF FLOODING IS OBSERVED...ACT QUICKLY! MOVE TO HIGHER GROUND. DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING.

\$\$

5.4 Example #4 - Areal Flood Warning: Extension In Time.

WGUS46 KOTX 061803
FLWOTX
WAC051-070600-

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE SPOKANE WA
1102 AM PDT THU JUN 6 2002

...THE NATIONAL WEATHER SERVICE IN SPOKANE HAS EXTENDED THE FLOOD WARNING FOR THE PEND OREILLE RIVER IN PEND OREILLE COUNTY UNTIL 9 PM PDT FRIDAY EVENING...

ON THE PEND OREILLE RIVER BELOW ALBENI FALLS DAM...THE MOST RECENT READING WAS 92,800 CFS AT 10 AM THURSDAY. THE FLOOD FLOW IS 100,000 CFS. THE OUTFLOW FROM ALBENI FALLS DAM IS FORECAST TO REMAIN BETWEEN 92000 AND 96000 CFS THROUGH FRIDAY.

THOUGH THE RIVER IS CURRENTLY BELOW THE FLOOD FLOW...MINOR FLOODING CONTINUES ALONG THE RIVER DOWNSTREAM FROM NEWPORT TO THE CANADIAN BORDER. SEVERAL STRUCTURES ARE FLOODED AND SOME SAND BAGGING OPERATIONS ARE OCCURRING. ANY RAINFALL THROUGH FRIDAY WILL ADD TO THE EXISTING HIGH FLOW.

BOATERS AND PERSONS WITH INTERESTS ALONG THE PEND OREILLE RIVER ARE URGED TO USE EXTREME CAUTION WHEN NEAR OR ON THE RIVER. STAY TUNED TO FURTHER DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO OR YOUR LOCAL TV OR RADIO STATIONS.

\$\$

6. Flood Statement (FLS).

6.1 Example #1 - Flood Warning for a Forecast Point: Follow-up.

WGUS84 KBMX 211120
FLSBHM
ALC021-037-051-117-121-220000-

FLOOD STATEMENT
NATIONAL WEATHER SERVICE BIRMINGHAM AL
720 AM CDT WED MAY 21 2003

...THE FLOOD WARNING FOR THE COOSA RIVER REMAINS IN EFFECT...

COOSA RIVER AT CHILDERSBURG...

MINOR FLOODING IS OCCURRING
LATEST STAGE: 402.0 FEET AT 6 AM CDT WEDNESDAY
FLOOD STAGE: 402 FEET FORECAST: CREST NEAR 404 FEET EARLY THURSDAY AFTERNOON
THE RIVER WILL FALL BELOW FLOOD STAGE FRIDAY AFTERNOON
AT 403 FEET...FLOODING OF LOW LYING AREAS CAN BE EXPECTED
AT 404 FEET...FLOODING OF SOME LOW LYING ROADS IN THE AREA
BEGINS...AND THE YARDS OF SOME HOMES NEAR THE RIVER BECOME
FLOODED.

HEAVY RAINFALL OF 3 TO 5 INCHES HAS OCCURRED SINCE SATURDAY
OVER THE COOSA RIVER DRAINAGE BASIN...AND A FLOOD WARNING IS
NOW IN EFFECT FOR THE COOSA RIVER AT CHILDERSBURG.

ALL PERSONS WITH INTERESTS ALONG THIS RIVER SHOULD MONITOR THE
LATEST FORECASTS...AND BE PREPARED TO TAKE NECESSARY PRECAUTIONS
TO PROTECT LIFE AND PROPERTY FROM RISING RIVER LEVELS.

\$\$

J. DOE

6.2 Example #2 - Flood Warning for Forecast Points: Termination.

WGUS83 KDVN 031535
FLSDVN
IAC057-111-ILC067-071-031830-

FLOOD STATEMENT
NATIONAL WEATHER SERVICE QUAD CITIES IA IL
1035 AM CDT FRI MAY 03 2002

...THE FLOOD WARNING FOR GLADSTONE AND BURLINGTON ON THE MISSISSIPPI
RIVER HAS BEEN ALLOWED TO EXPIRE...

MISSISSIPPI RIVER NEAR GLADSTONE...

A STAGE OF 9.9 FEET WAS MEASURED AT 9 AM CDT.
FLOOD STAGE IS 10.0 FT.
THE RIVER CRESTED 11.19 FT AT 5 AM APRIL 30TH.
THE RIVER FELL BELOW FLOOD STAGE AT 8 AM THIS MORNING AND WILL
CONTINUE TO FALL.

MISSISSIPPI RIVER AT BURLINGTON...

A STAGE OF 15.0 FEET WAS MEASURED AT 9 AM CDT.
 FLOOD STAGE IS 15.0 FT.
 THE RIVER CRESTED 16.10 FT AT 6 PM APRIL 29TH.
 THE RIVER IS CURRENTLY FALLING BELOW THE FLOOD STAGE AND WILL
 CONTINUE TO FALL.

THIS WILL BE THE LAST STATEMENT FOR THESE LOCATIONS FOR THIS EVENT.
 HOWEVER...REMAIN ALERT FOR HIGH WATER ALONG THE MISSISSIPPI RIVER.
 YOU CAN FIND ADDITIONAL INFORMATION AT OUR WEB SITE:

<http://www.crh.noaa.gov/dvn/>

&&

IN TABLE FORMAT...OBSERVATIONS AND OFFICIAL NWS FORECASTS...IN FEET.

LOCATION	OBSERVED			TIME	SAT	SUN	MON	SITE ID
	FS	STG	DAY		05/04 7 AM	05/05 7 AM	05/06 7 AM	
MISSISSIPPI RIVER								
GLADSTONE	10.0	9.9	FRI	9 AM	9.5	9.0	8.6	GLDI2
BURLINGTON	15.0	15.0	FRI	9 AM	14.6	14.2	13.9	BRLI4

\$\$

6.3 Example #3 - Areal Flood Warning: Follow-up.

WGUS81 KILN 241202
 FLSILN
 OHC001-250000-

FLOOD STATEMENT
 NATIONAL WEATHER SERVICE WILMINGTON OH
 205 PM EDT THU AUG 24 2000

...THE FLOOD WARNING FOR SMALL STREAMS IN ADAMS COUNTY REMAINS IN
 EFFECT UNTIL 8 PM EDT THIS EVENING...

AT 2 PM EDT...WEATHER SERVICE DOPPLER RADAR INDICATES A SECOND
 AREA OF HEAVY RAINFALL APPROACHING THE COUNTY AND SURROUNDING AREAS.
 AN ADDITIONAL ONE TO TWO INCHES OF RAIN IS POSSIBLE OVER PARTS OF
 ADAMS COUNTY...CAUSING SMALL STREAMS TO RISE AGAIN AFTER THIS
 MORNING'S FLOODS. WEST UNION AND BLUE CREEKS REMAIN SPECIAL AREAS OF
 CONCERN.

IF FLOODING IS OBSERVED...ACT QUICKLY! MOVE TO HIGHER GROUND TO
 ESCAPE FLOOD WATERS. DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN
 WATER BEGINS RISING. NEVER DRIVE CARS OR TRUCKS THROUGH FLOODED
 AREAS. THE WATER MAY BE TOO DEEP TO ALLOW FOR SAFE PASSAGE.

\$\$

6.4 Example #4 - Areal Flood Warning: Termination.

WGUS83 KJKL 241425
FLSJKL
KYC051-109-241500-

FLOOD STATEMENT
NATIONAL WEATHER SERVICE JACKSON KY
1024 AM EDT THU AUG 24 2000

...THE FLOOD WARNING FOR CLAY AND JACKSON COUNTIES HAS BEEN
CANCELED...

WEATHER SERVICE RADAR INDICATES THAT THE HEAVY RAIN PRODUCING
THUNDERSTORMS EARLIER THIS MORNING IN CLAY AND JACKSON COUNTIES
HAVE WEAKENED AND MOVED EAST OF THE AREA. THE SHERIFFS DEPARTMENT
REPORTS THAT ROADS ONCE CLOSED BY HIGH WATER NEAR SEXTONS CREEK...
BURNING SPRINGS AND WILD CAT KENTUCKY ARE NOW OPEN. SCATTERED LIGHT
SHOWERS ARE STILL EXPECTED TODAY...BUT AT THIS TIME THEY ARE NOT
EXPECTED TO CAUSE ANY PROBLEMS.

\$\$

7. Flood Statement (FLS) - Miscellaneous Advisories.

7.1 Example #1 - Urban and Small Stream Flood Advisory.

WGUS84 KSJT 281256
FLSSJT
TXC441-281500-

FLOOD STATEMENT
NATIONAL WEATHER SERVICE SAN ANGELO TX
755 AM CDT TUE MAY 28 2002

...THE NATIONAL WEATHER SERVICE IN SAN ANGELO HAS ISSUED AN URBAN
AND SMALL STREAM FLOOD ADVISORY FOR TAYLOR COUNTY AND THE CITY OF
ABILENE EFFECTIVE UNTIL 10 AM CDT TUESDAY...

AT 750 AM CDT...WEATHER SERVICE DOPPLER RADAR INDICATED THUNDERSTORMS
WITH LOCALLY HEAVY RAINFALL ACROSS CENTRAL AND NORTHERN TAYLOR COUNTY.
RAINFALL BETWEEN 1 TO 2 INCHES HAS FALLEN IN ABILENE SINCE 7 AM
WITH ANOTHER ONE HALF INCH POSSIBLE THROUGH MID MORNING.

LOW LYING AND POOR DRAINAGE AREAS ACROSS THE CITY OF ABILENE MAY
BECOME FLOODED AND IMPASSABLE. MOTORISTS ACROSS ABILENE SHOULD USE
EXTREME CAUTION WHEN TRAVELING ACROSS THE CITY. DO NOT ATTEMPT TO
CROSS AREAS WHERE WATER OF UNKNOWN DEPTH COVERS THE ROAD.

\$\$

7.2 Example #2 - Advisory for Elevated Streamflow.

WGUS81 KCAR 212111
FLSCAR
MEC003-222100-

FLOOD STATEMENT
NATIONAL WEATHER SERVICE CARIBOU ME
515 PM EDT MON APR 21 2003

...ICE JAMS PERSIST ON THE AROOSTOOK AND SAINT JOHN RIVERS...

TWO ICE JAMS WERE OBSERVED ON THE AROOSTOOK RIVER...AND ONE ICE JAM WAS REPORTED ON THE SAINT JOHN RIVER IN NORTHEAST AROOSTOOK COUNTY MONDAY.

ON THE AROOSTOOK RIVER...THE FIRST JAM WAS DOWNSTREAM OF THE VILLAGE OF CROUSEVILLE ON STATE ROUTE 164 BETWEEN THE TOWNS OF WASHBURN AND PRESQUE ISLE. THIS JAM APPEARED TO HAVE BROKEN IN HALF OVER THE PAST 24 HOURS...SENDING THE DOWNSTREAM FLOW OF ICE SOUTHEAST THROUGH THE TOWN OF PRESQUE ISLE LATE MONDAY AFTERNOON. THIS JAM...COMBINED WITH THE SNOWMELT RUNOFF...IS CAUSING THE RIVER TO BACKUP INTO LOW LYING AREAS OF THE FLOODPLAIN...BUT DOES NOT SEEM TO BE THREATENING ANY ROADS OR PROPERTY AT THIS TIME.

ON THE AROOSTOOK RIVER...NEAR THE TOWN OF FORT FAIRFIELD...AN ICE JAM HAS FORMED IN THE RUSSELL FLATS AREA APPROXIMATELY TWO MILES DOWNSTREAM OF THE FORT FAIRFIELD BRIDGE...WHERE THE AROOSTOOK RIVER FLOWS INTO NEW BRUNSWICK. THIS JAM IS CAUSING THE RIVER TO RISE BEHIND THE JAM...BUT DOES NOT SEEM TO BE THREATENING AT THIS TIME.

ON THE SAINT JOHN RIVER...A RIVER SPOTTER HAS REPORTED AN ICE JAM FIVE TO SIX MILES DOWNSTREAM OF THE INTERNATIONAL BRIDGE IN VAN BUREN...WHERE THE ICE FLOE HAS RUN INTO THE STILL STRONG SHEET OF RIVER ICE. THIS RIVER SPOTTER ALSO NOTED THAT DOWNSTREAM OF THIS JAM THE SAINT JOHN RIVER APPEARED TO BE FREE OF ICE.

RIVER ICE IS VERY UNPREDICTABLE...AND MAY MOVE AND JAM WITH LITTLE NOTICE. ANY ICE JAM CAN CAUSE FLOODING...AS THE ICE DAMS THE RIVER... CAUSING THE RIVER AT OR BEHIND THE JAM TO ELEVATE. STAY CLEAR OF LOW LYING AREAS NEAR ICE AFFECTED RIVERS AND MONITOR CONDITIONS CLOSELY.

\$\$

J. DOE

8. Hydrologic Statement (RVS).

8.1 Example #1 - Information on Elevated Stream Levels At A River Forecast Point.

FGUS84 KFWD 110117
RVSFWD
TXC119-223-120100-

HYDROLOGIC STATEMENT
NATIONAL WEATHER SERVICE FORT WORTH TX
817 PM CDT WED APR 10 2002

THIS STATEMENT UPDATES INFORMATION FOR THE FOLLOWING LOCATIONS ON THE SULPHUR RIVER...COOPER

FOR THE SOUTH SULPHUR RIVER NEAR COOPER...THE STAGE AT 715 PM WEDNESDAY WAS 15.7 FEET. FLOOD STAGE IS 16.0 FEET. THE RIVER IS FORECAST TO HOLD AROUND 15.7 FEET...JUST BELOW FLOOD STAGE FOR THE NEXT SEVERAL DAYS. IF THE RIVER REACHES OR EXCEEDS 16.0 FEET...MINOR OUT OF BANK FLOODING WILL OCCUR AND A FEW RURAL ROADS WILL BEGIN TO FLOOD. MINOR FLOODING WILL ALSO OCCUR TO FARM AND RANCH LAND ADJACENT TO THE RIVER.

&&

LOCATION	FLD	OBSERVED		FORECAST 7 PM			
	STG	STG	DAY	TIME	THU	FRI	SAT
SULPHUR RIVER COOPER	16	15.7	WED	7 PM	15.7	15.6	15.5

\$\$

8.2 Example #2 - SHEF Encoded Observed/Forecast Information. This example shows how the hydrologic statement could be used to provide routine hydrologic observations and forecasts encoded in Standard Hydrometeorological Exchange Format (SHEF).

FGUS83 KLMK 171530
RVSLMK
INZ089>090-KYZ035-040-049-180300-

HYDROLOGIC STATEMENT
NATIONAL WEATHER SERVICE LOUISVILLE KY
1130 AM EDT TUE APR 17 2001

.B SDF 0417 DH12/DC0104171400/HT/DRH+24/HTIFF/DRH+48/HTIFF/DRH+72/HTIFF

STATION ID NAME	FLOOD STAGE	7AM STAGE	24-HR CHANGE	7AM FORECASTS		
				FRI	SAT	SUN
:OHIO RIVER MCLK2: MARKLAND LOCK	51.0:	25.4/:	-3.9:	23.7	25.1	26.0

.END

.B SDF 0417 DH12/DC0104171400/HP/DRH+24/HPIFF/DRH+48/HPIFF/DRH+72/HPIFF

STATION ID NAME	FLOOD STAGE	7AM STAGE	24-HR CHANGE	7AM FORECASTS		
				FRI	SAT	SUN
:OHIO RIVER MLUK2: MCALPINE UPPER	23.0:	12.5/:	-0.1:	12.5	12.5	12.5

.END

.B SDF 0417 DH12/DC0104171400/HT/DRH+24/HTIFF/DRH+48/HTIFF/DRH+72/HTIFF

STATION ID NAME	FLOOD STAGE	7AM STAGE	24-HR CHANGE	7AM FORECASTS		
				FRI	SAT	SUN
:OHIO RIVER MLPK2: MCALPINE LOCK	55.0:	28.4/:	-4.3:	23.0	24.3	25.0
CNNI3: CANNELTON LOCK	42.0:	18.0/:	0.5:	18.0	22.4	20.2

.END

.B SDF 0417 DH12/DC0104170707/HP/DRH+24/HPIFF/DRH+48/HPIFF/DRH+72/HPIFF

KENTUCKY RIVER

FODK2: FORDHOLE LOCK 26.0: 10.0/: -0.1: 11.1 / 11.3 / 11.4 /
 HIBK2: HIGH BRIDGE LOCK 30.0: 9.9/: 0.2: 9.2 / 9.5 / 9.9 /
 FFTK2: FRANKFORT LOCK 31.0: 7.8/: 0.0: 8.0 / 8.1 / 8.2 /

.END

\$\$

9. Hydrologic Summary (RVA).

9.1 Example #1 - Report for Rivers and Creeks in Hydrologic Service Area.

SRUS43 KDDC 201351
 RVADDC

HYDROLOGIC SUMMARY
 NATIONAL WEATHER SERVICE DODGE CITY KS
 850 AM CDT MON MAY 20 2002

LOCATION	FS	STAGE HEIGHT	24-HR CHANGE	POOL HEIGHT	24-HR CHANGE
ARKANSAS RIVER					
COOLIDGE 1S	8	2.45	0.00		
SYRACUSE	10	3.11	0.00		
GARDEN CITY	10	5.04	0.01		
DODGE CITY	11	5.82	0.01		
KINSLEY	12	3.75	-0.02		
BUCKNER CREEK					
BURDETT 6W	16	3.73	0.00		
CIMARRON RIVER					
ELKHART 8N	8	4.01	0.00		
FORGAN 8N	7	2.44	-0.02		
CROOKED CREEK					
ENGLEWOOD	5	1.64	M		
MEDICINE LODGE RIVER					
KIOWA 2NE	10	1.36	-0.06		
PAWNEE RIVER					
BURDETT 7WNW	23	2.53	0.00		
ROZEL 1N	31	5.86	0.00		
SMOKY HILL RIVER					
ARNOLD 12N	7	0.69	-0.01		
CEDAR BLUFF RSVR					
SCHOENCHEN 3W	11	2.55	-0.02	2143.21	M
SCHOENCHEN 2E	11	2.23	M		

\$\$

10. River and Lake Forecast Product (RVD).

10.1 Example #1 - Lake Sites (in SHEF).

FGUS54 KLUB 081306
 RVDLUB
 TXC045-075-169-263-091300-

DAILY RIVER AND LAKE SUMMARY
 NATIONAL WEATHER SERVICE LUBBOCK TX
 805 AM CDT FRI JUN 08 2001

```
.B LUB 0608 DC0106080805 DH12/HP/
:
:RESERVOIR/LAKE SITES
:
:           STATION           NORMAL       7AM
ID      NAME           POOL       POOL       24-HR:
:           POOL           ELEV.     CHANGE
:
MKZT2 :MCKENZIE LAKE      3100:      3031.69/: -0.03:
CWRT2 :WHITE RIVER LAKE  2370:      2354.38/: -0.02:
LHPT2 :LAKE ALAN HENRY   2220:      2206.35/: -0.07:
:
.END
$$
```

10.2 Example #2 - River and Lake Sites.

FGUS51 KLWX 011706
 RVDLWX
 MDC001>002-009-DCC001-021700-

DAILY RIVER AND LAKE SUMMARY
 NATIONAL WEATHER SERVICE BALTIMORE MD/WASHINGTON DC
 1206 PM EST THU MAR 01 2001

```
.B WBC 0301 DC01030112
DH12/HG/DRH+24/HGDIFF/DRH+48/HGDIFF/DRH+72/HGDIFF
:           STATION           FLOOD       7AM       24-HR           7AM
: ID      NAME           STAGE       STAGE     CHANGE           FORECASTS
:                                           FRI       SAT       SUN
:POTOMAC RIVER
HPFW2 :HARPERS FERRY     18.0 : 11.44/: 0.22: 11.40 /11.32 /9.75/
LITM2 :LITTLE FALLS     10.0 : 3.71/: 0.04: 3.70 / 3.60 /M /
:
.END
:
.B WBC 0301 DH12/HP
:           FULL           WATER       OBSERVED       24-HR
: ID      LAKE NAME       POOL       ELEV.     DAY TIME     CHANGE
KERV2 : JOHN H. KERR     320 : 295.6 : THU 7 AM     -0.2
:
.END
$$
```

11. Hydrometeorological Data Summary (HYx).

11.1 Example #1 - Daily Summary (HYD).

SXUS52 KCHS 301437
 HYDCHS
 GAZ087-088-099>101-114>119-137>141-SCZ040-042>045-047>050-011400-

DAILY HYDROMETEOROLOGICAL DATA SUMMARY
 NATIONAL WEATHER SERVICE CHARLESTON SC
 1036 AM EDT TUE APR 30 2002

.B CHS 0430 E DH07/TX/TN/TA/PPP/TSIRZX/TSIRZN/TSIRZ
 :
 : CHARLESTON AREA TEMPERATURES AND PRECIPITATION
 :
 :MAX...HIGH TEMPERATURE LAST 24 HRS MIN...LOW TEMPERATURE LAST 24 HRS
 :CUR...CURRENT TEMPERATURE PCPN...PRECIPITATION LAST 24 HRS
 :
 :
 : AIR TEMP SOIL TEMP
 : MAX MIN CUR PCPN MAX MIN CUR
 :
 : ...SOUTH COASTAL...
 :CHARLESTON ARPT :CHS 92/ 56/ 63/ 0.01/ 77/ 68/
 :CHARLESTON CITY :CHLS1 92/ 64/ 64/ 0.03/ 79/ 66/
 :BEAUFORT :BEAS1 92/ 62/ 62/ 0.01/ 80/ 67/
 :SUMMERVILLE :SMVS1 93/ 52/ 52/ 0.00/ / /
 :JAMESTOWN :JAMS1 91/ 55/ 57/ 0.02/ / /
 :
 : ...SOUTHEAST GEORGIA...
 :SAVANNAH ARPT :SAV 93/ 56/ 66/ 0.00/ / / 74
 :SPRINGFIELD :SRFG1 93/ 57/ 57/ 0.11/ / /
 :EDEN :EDEG1 93/ 55/ 66/ 0.00/ / /
 :ROCKY FORD :RCFG1 91/ 53/ 53/ M / / /
 :
 .END

\$\$

11.2 Example #2 - Monthly Summary (HYM).

CSUS46 KMTR 051725
 HYMMTR

MONTHLY HYDROMETEOROLOGICAL DATA SUMMARY
 NATIONAL WEATHER SERVICE SAN FRANCISCO CA
 925 AM PST FRI APR 5 2002

.B MTR 0331 P DH24/PPM
 :
 : MONTHLY PRECIPITATION FOR SF BAY AREA AND CENTRAL COAST
 :
 : ANGWIN PACIFIC UNION COLLEGE
 :BIG SUR STATE PARK
 :FORT ROSS
 :HEALDSBURG FIRE DEPT
 :KING CITY
 :MOUNT HAMILTON
 :NAPA STATE HOSPITAL

NWSM 10-923 MARCH 22, 2005

PANC1 0.90 :PANOCHÉ 2W
PRSC1 0.80 :PRIEST VALLEY
SFOC1 2.27 :SAN FRANCISCO DOWNTOWN
SCRC1 3.52 :SANTA CRUZ
STSC1 2.43 :SANTA ROSA
WVIC1 1.51 :WATSONVILLE WATERWORKS
.END

\$\$