

NATIONAL WEATHER SERVICE MANUAL 10-913

JULY 8, 2010

Operations and Services

Hydrologic Services Program, NWSPD 10-9

RIVER FORECAST CENTER PRODUCT EXAMPLES

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

OPR: W/OS31 (E. Wells)

Certified by: W/OS3 (T. Graziano)

Type of Issuance: Routine.

SUMMARY OF REVISIONS: This directive supersedes NWS Instruction 10-913, "River Forecast Center Product Examples," dated June 2, 2003. The following revisions were made to this manual:

- 1) Updated name of Section 2 to Deterministic Hydrologic Forecast (RVF).
- 2) Replaced example in Section 2.1 with RVF that includes a crest forecast and replaced example in Section 2.2 with more recent RVF
- 3) Adds a new Section 3 for the Contingency River Forecast (CRF) product.
- 4) In Section 4, updated with more recent examples and included a hydrologic outlook for flooding.
- 5) In Section 5, added an example of a Streamflow Guidance (ESG) with probabilistic forecast information.
- 6) In Section 10, updated with more recent example of Daily Data Summary (HYD) product without the leading zero in the precipitation column.
- 7) Adds a new Section 11 for the Hydrometeorological Data (RRx) product.

(Signed)

June 23, 2010

David B. Caldwell
Director, Office of Climate,
Water, and Weather and Services

Date

River Forecast Center Product Examples

<u>Table of Contents:</u>	<u>Page</u>
1. Purpose	2
2. Deterministic Hydrologic Forecast (RVF)	2
2.1 Example #1 - In SHEF with crest forecast.....	3
2.2 Example #2 - In Text followed by SHEF.....	3
3. Contingency River Forecast (CRF)	6
3.1 Example #1 - Product With Extended Time Window for QPF.....	6
4. Streamflow Guidance (ESG)	7
4.1 Example #1 - Spring Flood Potential Outlook.....	7
4.2 Example #2 - Hydrologic Outlook.....	12
5. Extended-Range Streamflow Prediction (ESP)	12
5.1 Example #1 - Water Supply Forecast.....	12
5.2 Example #2 - Probabilistic Forecast Information.....	15
6. Flash Flood Guidance (FFG)	15
6.1 Example #1 - County Name.....	15
6.2 Example #2 - Zone Name.....	17
7. Headwater Flash Flood Guidance (FFH)	18
7.1 Example #1 - With 1 Hour Values.....	18
7.2 Example #2 - With 1, 3, and 6 Hourly Values.....	19
8. Hydrometeorological Discussion (HMD)	20
8.1 Example #1 - Ohio RFC.....	20
8.2 Example #2 - Alaska RFC.....	21
9. Hydrometeorological Coordination Message (HCM)	22
9.1 Example #1 - Coordinating Extension in Hours of Operations.....	22
10. Hydrologic Data Summary Products (HYx)	22
10.1 Daily Data Summary Example (HYD).....	22
11. Hydrometeorological Data Products (RRx)	25
11.1 RFC Data QC changes (RR9).....	25

1. **Purpose.** This document provides examples of river forecast center (RFC) products described in NWS Instruction 10-912. Although RFC products have become more standardized, more than one format is provided for several of the following products. These examples cover the more common types of formats used and should not be taken as the only prescribed formats.

2. **Deterministic Hydrologic Forecast (RVF).**

2.1 Example #1 - In SHEF with Crest Forecast.

```

FGUS52 KALR 190036
RVFFFC
RIVER FORECAST
NATIONAL WEATHER SERVICE
SOUTHEAST RIVER FORECAST CENTER ATLANTA GA
FORECASTS INCLUDE FUTURE RAINFALL IN 6 HOUR INCREMENTS
0834 PM EDT THU MAR 18 2010
:
:
:   FORECAST ISSUED BY GA- ALTAMAHA FORECASTER
:
:*****
:ABBEVILLE - Ocmulgee River (162.08 + FORECAST STAGE = HEIGHT IN MSL)
:FLOOD STAGE  12.0      ACTION STAGE  10.0
:
:LATEST STAGE      13.37 FT AT 845 PM EDT ON 0318
.AR : CREST : ABBG1 0319 E DC201003182034/DH02/HGIFFX      13.4
.ER ABBG1      0319 E DC201003182034/DH02/HGIF/DIH6
:24HR QPF APPLIED      8AM          2PM          8PM          2AM
.E1 :0319:              ::          ::          /          13.4
.E2 :0319: /           13.3/        13.3/        13.3/        13.2
.E3 :0320: /           13.2/        13.1/        13.1/        13.1
.E4 :0321: /           13.0/        13.0/        13.0/        12.9
.E5 :0322: /           12.9/        12.9/        12.8/        12.8
.E6 :0323: /           12.7/        12.7/        12.6
:6HR QPF VALUES  0.00/0.00/0.00/0.00
:*****
:COMMENT
:
:
:
.AR ALR 0319 E Dt201003182034/YIDRZ   12: cm
:
:...END OF MESSAGE...

$$

```

2.2 Example #2 - In Text Followed by SHEF.

```

FGUS56 KRSA 181449
RVFCC

CENTRAL COAST FORECAST
NATIONAL WEATHER SERVICE / CALIFORNIA-NEVADA RFC / SACRAMENTO CA
CALIFORNIA DEPARTMENT OF WATER RESOURCES / SACRAMENTO CA
749 AM PLT THU MAR 18 2010

NEXT ISSUANCE:      THURSDAY, MARCH 18, 2010 AT  3PM PLT

FORECASTS THROUGH: TUESDAY, MARCH 23, 2010 AT  5AM PLT

*****
SITUATION SUMMARY:
ALL LOCATIONS ARE EXPECTED TO REMAIN BELOW CRITICAL LEVELS

*****

```

NWSM 10-913 JULY 8, 2010

RIVER	LOCATION (NWSLI)	STAGE (FT)	FLOW (CFS)	TIME (PT)	DATE (MM/DD/YY)	LEAD TIME
PAJARO RIVER		OBS 5.0	165 AT	7AM	03/18/10	(24)
CHITTENDEN (AROC1)		>MS 25.0	NOT	EXPECTED		
		>FS 32.0	NOT	EXPECTED		
		MAX 5.0	165 AT	CURRENT TIME		
SALINAS RIVER		OBS 11.7	193 AT	7AM	03/18/10	(18)
PASO ROBLES (PRBC1)		>MS 23.0	NOT	EXPECTED		
		>FS 29.0	NOT	EXPECTED		
		MAX 11.7	193 AT	CURRENT TIME		
SANINAS RIVER		OBS 3.8	250 AT	7AM	03/18/10	(24)
BRADLEY (BRDC1)		>MS 12.0	NOT	EXPECTED		
		>FS 14.0	NOT	EXPECTED		
		MAX 3.8	250 AT	CURRENT TIME		
SALINAS RIVER		OBS 7.7	427 AT	7AM	03/18/10	(24)
SPRECKLES (SPRC1)		>MS 20.0	NOT	EXPECTED		
		>FS 23.0	NOT	EXPECTED		
		MAX 7.7	427 AT	CURRENT TIME		
CARMEL RIVER		OBS 2.2	266 AT	7AM	03/18/10	(18)
ROBLES DEL RIO (RDRC1)		>MS 8.0	NOT	EXPECTED		
		>FS 9.0	NOT	EXPECTED		
		MAX 2.2	266 AT	CURRENT TIME		
GUADALUPE RIVER		OBS 4.7	60 AT	7AM	03/18/10	(18)
SAN JOSE (GSJC1)		>MS 15.0	NOT	EXPECTED		
		>FS 17.0	NOT	EXPECTED		
		MAX 4.7	60 AT	CURRENT TIME		
COYOTE CREEK		OBS 3.4	6 AT	7AM	03/18/10	(18)
EDENVALE (CYEC1)		>MS 8.0	NOT	EXPECTED		
		>FS 10.0	NOT	EXPECTED		
		MAX 3.4	6 AT	CURRENT TIME		

DEFINITIONS:

OBS MOST RECENT OBSERVATION (MAY BE ESTIMATED)
MS MONITOR STAGE
FS FLOOD STAGE
MAX MAXIMUM FORECAST WITHIN PERIOD
LEAD TIME FORECASTS WITHIN THIS PERIOD (HOURS) ARE CONSIDERED
RELIABLE ENOUGH TO INITIATE PHYSICAL MITIGATION EFFORTS.
* EVENT EXCEEDS MS/FS/DS WITHIN LEAD TIME PERIOD

SIM 03/18/2010 @ 0748P

NOTE: ALL TIMES IN SHEF ENCODED MESSAGES BELOW ARE UTC

```
.A AROC1 20100318 Z DH14/HG 5.0
.ER AROC1 20100318 Z DH15/DC201003181448/DUE/HGIFE/DIH01
.ER1 / 5.0/ 5.0/ 5.0/ 5.0/ 5.0/ 5.0/ 5.0/ 5.0/ 5.0/ 5.0
.ER2 / 5.0/ 4.9/ 4.9/ 4.9/ 4.9/ 4.9/ 4.9/ 4.9/ 4.9/ 4.9
.ER3 / 4.9/ 4.9/ 4.9/ 4.9/ 4.9/ 4.9/ 4.8/ 4.8/ 4.8/ 4.8
.ER4 / 4.8/ 4.8/ 4.8/ 4.8/ 4.8/ 4.8/ 4.8/ 4.8/ 4.8/ 4.8
.ER5 / 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7
.ER6 / 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6
.ER7 / 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6
```

NWSM 10-913 JULY 8, 2010

.ER8	/	4.6/	4.6/	4.5/	4.5/	4.5/	4.5/	4.5/	4.5/	4.5
.ER9	/	4.5/	4.5/	4.5/	4.5/	4.5/	4.5/	4.5/	4.5/	4.5
.ER10	/	4.5/	4.4/	4.4/	4.4/	4.4/	4.4/	4.4/	4.4/	4.4
.ER11	/	4.4/	4.4/	4.4/	4.4/	4.4/	4.4/	4.4/	4.4/	4.4
.ER12	/	4.4/	4.4/	4.4/	4.4/	4.3/	4.3/	4.3/	4.3	

.A	PRBC1	20100318	Z	DH14/HG	11.7					
.ER	PRBC1	20100318	Z	DH15/DC201003181448/DUE/HGIFE/DIH01						
.ER1	/	11.7/	11.7/	11.7/	11.7/	11.7/	11.7/	11.7/	11.7/	11.7
.ER2	/	11.7/	11.7/	11.7/	11.7/	11.7/	11.6/	11.6/	11.6/	11.6
.ER3	/	11.6/	11.6/	11.6/	11.6/	11.6/	11.6/	11.6/	11.6/	11.6
.ER4	/	11.6/	11.6/	11.6/	11.6/	11.6/	11.6/	11.6/	11.6/	11.5
.ER5	/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5
.ER6	/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5/	11.5
.ER7	/	11.5/	11.5/	11.5/	11.5/	11.5/	11.4/	11.4/	11.4/	11.4
.ER8	/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4
.ER9	/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4/	11.4
.ER10	/	11.4/	11.4/	11.4/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3
.ER11	/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3
.ER12	/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3/	11.3	

.A	BRDC1	20100318	Z	DH14/HG	3.8					
.ER	BRDC1	20100318	Z	DH15/DC201003181448/DUE/HGIFE/DIH01						
.ER1	/	3.8/	3.8/	3.8/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7
.ER2	/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7
.ER3	/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7
.ER4	/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7
.ER5	/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7/	3.7
.ER6	/	3.7/	3.7/	3.7/	3.7/	3.7/	3.6/	3.6/	3.6/	3.6
.ER7	/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6
.ER8	/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6
.ER9	/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6
.ER10	/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6
.ER11	/	3.6/	3.6/	3.6/	3.6/	3.6/	3.6/	3.5/	3.5/	3.5
.ER12	/	3.5/	3.5/	3.5/	3.5/	3.5/	3.5/	3.5/	3.5	

.A	SPRC1	20100318	Z	DH14/HG	7.7					
.ER	SPRC1	20100318	Z	DH15/DC201003181448/DUE/HGIFE/DIH01						
.ER1	/	7.7/	7.7/	7.7/	7.7/	7.7/	7.7/	7.7/	7.7/	7.6
.ER2	/	7.6/	7.6/	7.6/	7.6/	7.6/	7.6/	7.6/	7.6/	7.6
.ER3	/	7.6/	7.6/	7.6/	7.6/	7.6/	7.6/	7.6/	7.5/	7.5
.ER4	/	7.5/	7.5/	7.5/	7.5/	7.5/	7.5/	7.5/	7.5/	7.5
.ER5	/	7.5/	7.5/	7.5/	7.5/	7.5/	7.5/	7.4/	7.4/	7.4
.ER6	/	7.4/	7.4/	7.4/	7.4/	7.4/	7.4/	7.4/	7.4/	7.4
.ER7	/	7.4/	7.4/	7.4/	7.4/	7.3/	7.3/	7.3/	7.3/	7.3
.ER8	/	7.3/	7.3/	7.3/	7.3/	7.3/	7.3/	7.3/	7.3/	7.3
.ER9	/	7.3/	7.3/	7.2/	7.2/	7.2/	7.2/	7.2/	7.2/	7.2
.ER10	/	7.2/	7.2/	7.2/	7.2/	7.2/	7.2/	7.2/	7.2/	7.2
.ER11	/	7.1/	7.1/	7.1/	7.1/	7.1/	7.1/	7.1/	7.1/	7.1
.ER12	/	7.1/	7.1/	7.1/	7.1/	7.1/	7.1/	7.1/	7.0	

.A	RDR1	20100318	Z	DH14/HG	2.2					
.ER	RDR1	20100318	Z	DH15/DC201003181448/DUE/HGIFE/DIH01						
.ER1	/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2
.ER2	/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2
.ER3	/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2/	2.2
.ER4	/	2.2/	2.2/	2.2/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1
.ER5	/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1
.ER6	/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1
.ER7	/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1/	2.1
.ER8	/	2.1/	2.1/	2.0/	2.0/	2.0/	2.0/	2.0/	2.0/	2.0

NWSM 10-913 JULY 8, 2010

.ER9 / 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0
.ER10 / 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0
.ER11 / 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0/ 2.0
.ER12 / 2.0/ 1.9/ 1.9/ 1.9/ 1.9/ 1.9/ 1.9/ 1.9/ 1.9

.A GSJC1 20100318 Z DH14/HG 4.7
.ER GSJC1 20100318 Z DH15/DC201003181448/DUE/HGIFE/DIH01
.ER1 / 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7/ 4.7
.ER2 / 4.7/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6
.ER3 / 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6
.ER4 / 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6
.ER5 / 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6/ 4.6
.ER6 / 4.6/ 4.6/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5
.ER7 / 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5
.ER8 / 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5
.ER9 / 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5/ 4.5
.ER10 / 4.5/ 4.5/ 4.5/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4
.ER11 / 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4
.ER12 / 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4/ 4.4

.A CYEC1 20100318 Z DH14/HG 3.4
.ER CYEC1 20100318 Z DH15/DC201003181448/DUE/HGIFE/DIH01
.ER1 / 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4
.ER2 / 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4
.ER3 / 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4
.ER4 / 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.4/ 3.3/ 3.3/ 3.3
.ER5 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3
.ER6 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3
.ER7 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3
.ER8 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3
.ER9 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3
.ER10 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3
.ER11 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3
.ER12 / 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3/ 3.3

END

3. Contingency River Forecast (CRF).

3.1 Example #1 - Product With Extended Time Window for QPF.

FGUS53 KMSR 041321
RVFTIA

RIVER FORECAST
NWS NORTH CENTRAL RIVER FORECAST CENTER TWIN CITIES/CHANHASSEN MN
1134 AM CDT TUE AUG 4 2009

: CONTINGENCY 72 Hour QPF CONTINGENCY
: THIS PRODUCT HAS PRELIMINARY DATA THAT MAY BE SUBJECT TO REVISION.
: REFER TO YOUR LOCAL WFO FOR THE LATEST OFFICIAL RIVER FORECAST.

: CONTINGENCY 72 Hour QPF CONTINGENCY
:
: Mississippi R Grafton IL - GRFI2
: HSA:LSX Flood Stage:18.0 FT Fcst Issuance Stage:17.0 FT
.E GRFI2 0803 Z DH18/DC08041634/HGIP/DIH06 :6-Hr Obs Stage (ft)
.E1 15.6/ 15.5/ 15.6/ 15.7/
.E GRFI2 0804 Z DH18/DC08041634/HGIC3/DIH06 :6-Hr Fcst Stage (ft)

```

.E1 15.7/ 15.7/ 15.7/ 15.7/ 15.7/ 15.7/ 15.7/ 15.7/
.E1 15.7/ 15.7/ 15.7/ 15.7/ 15.7/ 15.7/ 15.6/ 15.6/
.E1 15.6/ 15.6/ 15.6/ 15.6/ 15.6/ 15.6/ 15.5/ 15.5/
.E1 15.5/ 15.5/ 15.5/ 15.5/ 15.4/ 15.4/ 15.4/ 15.4/
.E1 15.4/ 15.4/ 15.4/ 15.3/ 15.3/ 15.3/ 15.3/ 15.3/
.E1 15.3/ 15.3/ 15.2/ 15.2/ 15.2/ 15.2/ 15.2/ 15.2/
.E1 15.1/ 15.1/ 15.1/ 15.1/ 15.1/ 15.0/ 15.0/ 15.0/
:
: Mississippi R Alton - L&D 26 - ALNI2
: HSA:LSX Flood Stage:21.0 FT Fcst Issuance Stage:19.0 FT
.E ALNI2 0803 Z DH18/DC08041634/HTIP/DIH06 :6-Hr Obs Stage (ft)
.E1 5.0/ 5.2/ 5.0/ 5.0/
.E ALNI2 0804 Z DH18/DC08041634/HTIC3/DIH06 :6-Hr Fcst Stage (ft)
.E1 5.0/ 5.0/ 5.0/ 5.0/ 5.0/ 5.1/ 5.1/ 5.3/
.E1 5.4/ 5.5/ 5.6/ 5.6/ 5.6/ 5.6/ 5.5/ 5.3/ 5.2/
.E1 5.0/ 4.9/ 4.8/ 4.8/ 4.7/ 4.6/ 4.6/ 4.5/
.E1 4.4/ 4.4/ 4.3/ 4.3/ 4.2/ 4.2/ 4.1/ 4.1/
.E1 4.0/ 4.0/ 3.9/ 3.9/ 3.8/ 3.8/ 3.7/ 3.6/
.E1 3.6/ 3.5/ 3.4/ 3.3/ 3.3/ 3.2/ 3.1/ 3.0/
.E1 3.0/ 2.9/ 2.9/ 2.8/ 2.8/ 2.7/ 2.7/ 2.7/
:
: Mississippi R St Louis MO - EADM7
: HSA:LSX Flood Stage:30.0 FT Fcst Issuance Stage:28.0 FT
.E EADM7 0803 Z DH18/DC08041634/HGIP/DIH06 :6-Hr Obs Stage (ft)
.E1 5.0/ 5.0/ 5.0/ 4.9/
.E EADM7 0804 Z DH18/DC08041634/HGIC3/DIH06 :6-Hr Fcst Stage (ft)
.E1 4.9/ 4.8/ 4.8/ 4.9/ 4.9/ 4.8/ 4.9/ 4.8/
.E1 4.9/ 5.1/ 5.2/ 5.4/ 5.4/ 5.4/ 5.3/ 5.2/
.E1 5.1/ 5.0/ 4.9/ 4.8/ 4.8/ 4.7/ 4.6/ 4.4/
.E1 4.3/ 4.1/ 4.0/ 3.8/ 3.7/ 3.6/ 3.5/ 3.3/
.E1 3.2/ 3.1/ 3.0/ 2.9/ 2.8/ 2.7/ 2.6/ 2.5/
.E1 2.4/ 2.3/ 2.2/ 2.1/ 2.0/ 1.9/ 1.8/ 1.7/
.E1 1.5/ 1.4/ 1.3/ 1.3/ 1.2/ 1.1/ 1.0/ 1.0/
:
: Mississippi R Chester IL - CHSI2
: HSA:LSX Flood Stage:27.0 FT Fcst Issuance Stage:25.0 FT
.E CHSI2 0803 Z DH18/DC08041634/HGIP/DIH06 :6-Hr Obs Stage (ft)
.E1 9.3/ 9.0/ 8.7/ 8.6/
.E CHSI2 0804 Z DH18/DC08041634/HGIC3/DIH06 :6-Hr Fcst Stage (ft)
.E1 8.4/ 8.4/ 8.3/ 8.2/ 8.2/ 8.2/ 8.2/ 8.2/
.E1 8.2/ 8.2/ 8.2/ 8.2/ 8.3/ 8.4/ 8.5/ 8.6/
.E1 8.6/ 8.6/ 8.6/ 8.5/ 8.3/ 8.2/ 8.1/ 8.0/
.E1 7.9/ 7.8/ 7.6/ 7.5/ 7.4/ 7.2/ 7.1/ 6.9/
.E1 6.8/ 6.6/ 6.5/ 6.3/ 6.2/ 6.1/ 5.9/ 5.8/
.E1 5.7/ 5.5/ 5.4/ 5.3/ 5.2/ 5.0/ 4.9/ 4.8/
.E1 4.7/ 4.6/ 4.5/ 4.4/ 4.3/ 4.2/ 4.1/ 4.0/
:
:END

```

\$\$

FCSTR EXT: 2532

4. Streamflow Guidance (ESG).

4.1 Example #1 - Spring Flood Potential Outlook.

FGUS61 KTAR 181809
ESGTAR

SPRING FLOOD POTENTIAL OUTLOOK
NATIONAL WEATHER SERVICE
NORTHEAST RIVER FORECAST CENTER...TAUNTON MA
208 PM EDT THU MAR 18 2010

...FOR OFFICIAL NWS USE ONLY...

SPRING FLOOD POTENTIAL FOR THE NORTHEASTERN U.S. /6A/

THE SPRING FLOOD POTENTIAL FOR RHODE ISLAND...EASTERN MASSACHUSETTS AND SOUTHEASTERN NEW HAMPSHIRE IS MUCH ABOVE NORMAL. ACROSS THE THE REMAINDER OF SOUTHERN NEW HAMPSHIRE...CENTRAL MASSACHUSETTS AND WESTERN MASSACHUSETTS...CONNECTICUT...AND SOUTHERN VERMONT THE FLOOD POTENTIAL IS ABOVE NORMAL. THE POTENTIAL FOR FLOODING IS ALSO ABOVE NORMAL ALONG TANAWANDA CREEK IN WESTERN NEW YORK. ACROSS THE REMAINDER OF THE NORTHEAST THE FLOOD POTENTIAL IS NORMAL.

THE POTENTIAL FOR FLOODING DUE TO ICE JAMS IS NEAR NORMAL ACROSS FAR NORTHERN SECTIONS OF MAINE. RIVER ICE IS NON-EXISTANT ELSEWHERE.

...CLIMATE GUIDANCE...

THE LARGE SCALE PATTERN IS CURRENTLY UNDERGOING A CHANGE FROM WHAT HAS BEEN STRONG BLOCKING ACROSS THE NORTHERN ATLANTIC OCEAN AND EASTERN NORTH AMERICA FORCED BY A NEGATIVE NAO. THE BREAK DOWN OF THE BLOCKING PATTERN IS ALLOWING FOR A MORE WESTERLY OR SOUTHWESTERLY FLOW DURING THE BEGINNING OF THE OUTLOOK PERIOD. THERE ARE INDICATIONS HOWEVER THAT THIS MAY BE SHORT TERM WITH A RETURN TO BLOCKING BY THE END OF THE OUTLOOK PERIOD.

A STRONG SUBTROPICAL JET STREAM CONTINUES IN THE CURRENT EL-NINO PATTERN BUT IN A WEAKENED FORM COMPARED TO THE LAST MONTH. THIS WEAKENED FORM WILL BE LESS CONDUCIVE TO TROPICAL MOISTURE BEING FED NORTH INTO THE EASTERN AND NORTHEASTERN UNITED STATES. IN ADDITION WITH THE BREAKING DOWN OF THE NEGATIVE NAO THERE IS LIKELY TO BE LESS AVAILABLE TRANSPORT FOR MOISTURE TO BE CARRIED NORTHWARD WITH THE AID OF AN EASTERN TROUGH WITH AN AXIS JUST WEST OF THE SERVICE AREA.

IN THE SHORT TERM...MODEL GUIDANCE IS INDICATING THE POTENTIAL FOR MODERATE RAIN EVENT EARLY DURING THE WEEK OF THE 21ST AS ANOTHER SYSTEM TRACKS OUT OF THE ROCKY MOUNTAINS AND TOWARD THE EAST COAST.

THE OFFICIAL NATIONAL WEATHER SERVICE 6-14 DAY OUTLOOK FOR 22-30 MARCH AGREES WITH A WEAKENING NAO AND CALLS FOR ABOVE NORMAL TEMPERATURES ACROSS THE NORTHEAST. THIS WOULD BE CONSISTENT WITH A MORE WESTERLY OR SOUTHWESTERLY FLOW IN THE UPPER ATMOSPHERE. PRECIPITATION FOR THE SAME TIME PERIOD INITIALLY EXPECTED TO BE ABOVE NORMAL ACROSS THE NORTHEAST...BUT SHOULD TREND TOWARD NORMAL DURING THE SECOND HALF OF OUTLOOK PERIOD. IT IS IMPORTANT TO MENTION THAT ANY ANOMOLOUS DIGGING TROUGH IN THE NORTHERN JET STREAM COULD ONCE AGAIN PHASE WITH AND STRENGTHEN THE SUBTROPICAL JETSTREAM ALLOWING FOR THE FORMATION OF A CONDUIT FOR COPIUS MOISTURE AT ANY TIME.

...OBSERVED SNOW DEPTHS AND WATER EQUIVALENTS...

SNOWMELT ACROSS THE NORTHEAST HAS DRAMATICALLY REDUCED SNOW COVER IN MANY LOWLAND LOCATIONS WITH BELOW NORMAL SNOW DEPTHS ON THE GROUND ACROSS THE REGION.

...NEW YORK STATE...

LOWLAND OR VALLEY SNOW HAS FOR THE MOST PART MELTED ACROSS MOST OF NEW YORK STATE THIS MORNING. MUCH OF THE SNOW ON THE GROUND IS CONFINED TO THE HIGHER ELEVATIONS WHERE THERE ARE STILL SOME IMPRESSIVE DEPTHS...ESPECIALLY ACROSS THE CATSKILLS. SLIDE MOUNTAIN REPORTED 31 INCHES OF SNOW ON THE GROUND THIS MORNING AND EAST JEWITT REPORTED 24 INCHES. SNOW WATER EQUIVALENT IN THESE AREAS REMAINS AS HIGH AS 5 INCHES IN THE HIGHEST ELEVATIONS. SEVERAL INCHES OF SNOW REMAIN ON THE GROUND ALSO IN THE LEE OF LAKE ERIE ACROSS THE HILLY TERRAIN...SNOW WATER EQUIVALENTS ARE LESS THAN AN INCH. THE OTHER LOCATION WITH SIGNIFICANT SNOW ON THE GROUND IS THE ADIRONDACKS WHERE ONE TO TWO FEET REMAIN ACROSS THE HIGHER TERRAIN...WITH MAXIMUM WATER EQUIVALENTS OF AROUND 4 INCHES..

...SOUTHERN NEW ENGLAND...

OUTSIDE OF THE BERKSHIRES AND HIGH HILLS OF NORTHWESTERN CONNECTICUT...THE SNOWPACK HAS LARGELY BEEN ERADICATED. EAST OF THE CONNECTICUT RIVER IN SOUTHERN NEW ENGLAND...SNOW DEPTHS OF A FEW INCHES ARE FOUND IN SOME WOODED AREAS IN NORTH CENTRAL MASSACHUSETTS. WEST OF THE CONNECTICUT RIVER...SNOW DEPTHS ACROSS WESTERN PORTIONS OF BOTH MASSACHUSETTS AND CONNECTICUT ARE RUNNING FROM NEGLIGABLE TO A COUPLE OF INCHES IN THE VALLEYS BUT INCREASE TO BETWEEN 6 AND 12 INCHES ABOVE 1000 FEET.

BELOW 1500 FEET IN SOUTHERN NEW ENGLAND...SNOW WATER EQUIVALENTS ARE RUNNING BETWEEN NOTHING TO UNDER AN INCH WITH THE HIGHEST AMOUNTS ACROSS NORTH CENTRAL AND WESTERN MASSACHUSETTS AND WESTERN CONNECTICUT. ABOVE 1500 FEET IN THE BERKSHIRE MOUNTAINS OF WESTERN MASSACHUSETTS AND NORTHWEST HILLS OF CONNECTICUT...SNOW WATER EQUIVALENTS INCREASE TO BETWEEN 1 AND 2 INCHES. WATER EQUIVALENTS ARE BELOW NORMAL ACROSS ALMOST ALL OF SOUTHERN NEW ENGLAND EXCEPT ABOVE 1500 FEET IN THE BERKSHIRES AND HILLS OF NORTHWESTERN CONNECTICUT WHERE THEY ARE BELOW TO NEAR NORMAL FOR MID MARCH.

...VERMONT...

WEST OF THE GREEN MOUNTAIN SPINE IN WESTERN VERMONT AS WELL AS ACROSS THE CONNECTICUT RIVER VALLEY IN EASTERN VERMONT...SNOW DEPTHS HAVE BEEN MOSTLY ERADICATED WITH CONSIDERABLE BARE GROUND SHOWING UP. ABOVE 1500 FEET IN THE GREEN MOUNTAINS...SNOW DEPTHS INCREASE TO BETWEEN 1 AND 2.5 FEET. SNOW DEPTHS ACROSS VERMONT REMAIN NEAR TO BELOW NORMAL IN THE MOUNTAINS AND BELOW NORMAL FOR MID MARCH.

LITTLE WATER IS AVAILABLE FOR MELT RUNOFF WEST OF THE GREEN MOUNTAIN SPINE AS WELL AS ACROSS THE CONNECTICUT RIVER VALLEY IN EASTERN VERMONT. THESE AMOUNTS DO INCREASE ACROSS THE HIGHER TERRAIN IN THE GREEN MOUNTAINS WHERE 1 TO 4 INCHES OF WATER IS HELD IN THE PACK ABOVE ABOUT 1500 FEET. SNOW WATER EQUIVALENTS ARE NEAR NORMAL ACROSS THE HIGHER TERRAIN OF VERMONT...BUT BELOW NORMAL IN THE VALLEYS.

...NEW HAMPSHIRE...

THE GROUND IS NOW MAINLY BARE IN IN THE VALLEYS SOUTH OF THE WHITE MOUNTAINS. ACROSS THE HIGHER TERRAIN OF WESTERN NEW HAMPSHIRE SNOW DEPTHS INCREASE TO AS MUCH AS 10 OR 12 INCHES. IN THE VALLEYS NORTH OF THE WHITE MOUNTAINS SNOW DEPTHS AVERAGE 1 TO 2 FEET AND INCREASE TO 4 FEET IN THE WOODED MOUNTAINS.

...MAINE...

WITHIN 50 MILES OF THE COAST IN MAINE...THE GROUND IS NOW MAINLY BARE. APPROACHING THE FOOTHILLS AND EASTWARD THROUGH DOWNEAST AND EASTERN MAINE AMOUNTS INCREASE TO 6 TO 12 INCHES...BUT ARE BELOW NORMAL FOR MID MARCH. IN THE MOUNTAINS AND NORTHWESTERN MAINE SNOW DEPTHS ARE ON THE ORDER OF 1 TO 3 FEET WITH HIGHEST AMOUNTS ACROSS THE HIGHER TERRAIN.

SNOW WATER EQUIVALENTS IN THE MOUNTAINS AND NORTHWESTERN MAINE ARE ON THE ORDER OF 5 TO 7 INCHES AND BELOW NORMAL FOR MID MARCH. THESE TAPER TO LESS THAN 2 INCHES EAST OF THE MOUNTAINS WITH ONLY PATCHY AMOUNTS IN DOWNEAST MAINE.

...SOIL MOISTURE CONDITIONS AND WATER SUPPLY...

ANTECEDENT MOISTURE STATES CONTINUED TO INCREASE DRAMATICALLY ACROSS THE LOWER HUDSON VALLEY...AND MUCH OF SOUTHERN NEW ENGLAND. ANOTHER HEAVY RAINFALL EVENT FROM THE 12TH THROUGH THE 15TH OF MARCH BROUGHT 2 TO 4 INCHES OF RAIN TO THE LOWER HUDSON VALLEY...THE CATSKILLS AND THE BERKSHIRES AND MUCH OF CONNECTICUT AND RHODE ISLAND. IN THE WORCESTER HILLS SOUTHWARD INTO NORTHERN RHODE ISLAND 4 TO 7 INCHES OF RAIN WAS RECORDED. 6 TO 10 INCHES OF RAIN FELL EAST OF THESE LOCATIONS IN MASSACHUSETTS...COASTAL NEW HAMPSHIRE AND EXTREME SOUTHWESTERN MAINE. THESE AMOUNTS TAPERED OFF TO 2 TO 4 INCHES FARTHER INLAND IN CENTRAL AND SOUTHERN NEW HAMPSHIRE AND THE REMAINDER OF SOUTHWESTERN MAINE.

EXAMINING GROUNDWATER LEVELS ACROSS THE REGION...WE SEE WIDE VARIANCES FROM WEST TO EAST. ACROSS MOST OF INTERIOR NEW YORK STATE...GROUNDWATER LEVELS ARE NEAR TO BELOW NORMAL. HOWEVER...FROM EXTREME EASTERN SECTIONS OF NEW YORK STATE INCLUDING LONG ISLAND EAST THROUGH ABOUT ALL OF NEW ENGLAND...GROUNDWATER LEVELS ARE NEAR OR ABOVE NORMAL. IN FACT...DUE TO THE EXCESSIVE RAINFALL AND MELTING SNOWS DURING LATE FEBRUARY THROUGH MID MARCH...NEW RECORD HIGH GROUNDWATER LEVELS FOR MARCH WERE BEING SEEN ACROSS SOUTHERN AND EASTERN MAINE. MONITORING WELLS AT AMHERST...OXFORD...LITCHFIELD...CALAIS AND BRUNSWICK IN THE STATE OF MAINE ALL REPORTED RECORD HIGH MONTHLY LEVELS DURING THE FIRST WEEK OF MARCH. ACROSS CENTRAL AND WESTERN SECTIONS OF NEW YORK STATE WHERE GROUNDWATER LEVELS ARE LOW...WE ARE ENCOURAGED THAT LEVELS WILL BE ABLE TO RECHARGE DURING THE SPRING MELT WHICH IS NOW UNDERWAY SINCE A DECENT SNOWPACK WAS BUILT UP DURING FEBRUARY.

RESERVOIR LEVELS CONTINUE TO RUN VERY HIGH ACROSS A LOT OF NEW ENGLAND AND EASTERN NEW YORK STATE BUT ARE LOWER ACROSS CENTRAL AND WESTERN SECTIONS OF NEW YORK STATE. IN NORTHERN NEW YORK STATE...BOTH INDIAN AND GREAT SACANDAGA LAKES WERE RUNNING BETWEEN 10 AND 25 PERCENT HIGHER THAN NORMAL AS OF THE END OF FEBRUARY 2010. THE NEW YORK CITY WATER SUPPLY SYSTEM...WHICH IS COMPRISED OF 7 LARGE RESERVOIR PROJECTS IN SOUTHEASTERN NEW YORK STATE...WAS AT 92 PERCENT OF CAPACITY AS OF 16 MARCH 2010 WHICH WAS 3 PERCENT ABOVE NORMAL...BUT THAT IS PARTLY BECAUSE SEVERAL OF THE RESERVOIRS IN THIS SYSTEM HAVE BEEN RELEASING WATER TO PREPARE FOR MELT RUNOFF FROM THE DEEP SNOWPACK IN THE CATSKILLS. AND ACROSS SOUTHERN NEW ENGLAND...MANY RESERVOIRS ARE EITHER AT OR ABOVE CAPACITY DUE TO EXCESSIVE RAINFALL DURING THE LAST WEEK OF FEBRUARY AND EARLY/MID MARCH. IN MAINE THE KENNEBEC RIVER RESERVOIRS ARE 51.3 PERCENT FULL OR ABOUT 34 PERCENT ABOVE NORMAL. THE ANDROSCOGGIN RIVER BASIN RESERVOIRS ARE 50 PERCENT FULL WHICH IS ABOUT 51.5 PERCENT ABOVE NORMAL. WE ANTICIPATE NO WATER SUPPLY PROBLEMS AS WE HEAD THROUGH SPRING IN NEW ENGLAND. AND ACROSS CENTRAL AND WESTERN NEW YORK STATE...THE RECENT ADDITION OF A HEALTHY SNOWPACK DECREASES THE LIKELIHOOD OF SIGNIFICANT

WATER SUPPLY PROBLEMS LATER THIS SPRING SINCE GROUNDWATER LEVELS WILL LIKELY BE ABLE TO RECHARGE DURING THE SPRING MELT.

...RIVER CONDITIONS...RIVER ICE CONDITIONS....

STREAM FLOWS ARE RUNNING NORMAL TO ABOVE NORMAL ACROSS MUCH OF CENTRAL...WESTERN AND NORTHERN NEW YORK STATE. FROM THE CATSKILL MOUNTAINS SOUTHWARD STREAM FLOW IS ABOVE NORMAL TO MUCH ABOVE NORMAL. ACROSS MUCH OF NORTHERN NEW ENGLAND STREAM FLOW IS ALSO IN THE NORMAL TO ABOVE NORMAL CATEGORY. ACROSS SOUTHERN NEW HAMPSHIRE...RHODE ISLAND AND MUCH OF EASTERN MASSACHUSETTS STREAM FLOWS ARE MUCH ABOVE NORMAL TO HIGH. FLOODING WAS STILL OBSERVED AT A NUMBER OF LOCATIONS IN SOUTHERN NEW ENGLAND AFTER THE RECENT HEAVY RAIN EVENT.

ICE HAS BEEN CLEARED OUT OF ALL RIVERS WITH THE EXCEPTION OF NORTHERN AND WESTERN MAINE. ICE STILL EXISTS IN THE PARTS OF THE ST JOHN...BIG BLACK...ALLAGASH AND AROOSTOOK RIVERS. ICE THICKNESS IN THESE LOCATIONS IS THIN FOR MID MARCH AND BREAK UP WILL LIKELY BE EARLY...PERHAPS DURING BY OR DURING THE FIRST WEEK OF APRIL.

...IN CONCLUSION...

BASED ON THE INFORMATION AVAILABLE AT THIS TIME...THE SPRING FLOOD POTENTIAL FOR RHODE ISLAND...EASTERN MASSACHUSETTS AND SOUTHEASTERN NEW HAMPSHIRE IS MUCH ABOVE NORMAL. ACROSS THE THE REMAINDER OF SOUTHERN NEW HAMPSHIRE...CENTRAL MASSACHUSETTS AND WESTERN MASSACHUSETTS...CONNECTICUT...AND SOUTHERN VERMONT THE FLOOD POTENTIAL IS ABOVE NORMAL. THE POTENTIAL FOR FLOODING IS ALSO ABOVE NORMAL ALONG TANAWANDA CREEK IN WESTERN NEW YORK. ACROSS THE REMAINDER OF THE NORTHEAST THE FLOOD POTENTIAL IS NORMAL.

HEAVY RAIN DURING THE PERIOD OF MARCH 12TH THROUGH THE 15TH RESULTED IN FLOODING REACHING MODERATE TO MAJOR CATEGORIES ACROSS LOCATIONS IN SOUTHERN NEW HAMPSHIRE...EASTERN MASSACHUSETTS AND RHODE ISLAND. RECORD FLOODING WAS RECORDED ON THE SHAWSHEEN AT WILMINGTON AND THE PAWTUXET RIVER AT CRANSTON. THE CONCORD RIVER AT LOWELL MATCHED THE RECORD FLOODING. ELSEWHERE WIDESPREAD MINOR FLOODING WAS OBSERVED AT MANY LOCATIONS IN SOUTHERN NEW ENGLAND AND SOUTHERN NEW HAMPSHIRE.

THE POTENTIAL FOR FLOODING DUE TO ICE JAMS EXISTS ONLY ACROSS NORTHERN MAINE WHERE IT IS NEAR NORMAL.

DESPITE BELOW NORMAL SNOW DEPTHS THE POTENTIAL FOR A MODERATE RAINFALL EVENT EARLY THE WEEK OF MARCH 19TH KEEPS ALL LOCATIONS THAT MIGHT HAVE BEEN SEEN A BELOW NORMAL THREAT FOR FLOODING AT NORMAL.

A GRAPHIC DEPICTING THE FLOOD POTENTIAL ON A BASIN BY BASIN BASIS IS AVAILABLE ON THE NERFC WEB SITE AT

WWW.ERH.NOAA.GOV/NERFC/SFPOG.HTML

ALL IN LOWER CASE.

THE NEXT SCHEDULED WINTER/SPRING FLOOD POTENTIAL OUTLOOK WILL BE ISSUED BY THE NERFC ON THURSDAY 1 APRIL 2010.

END/NOGUEIRA
\$\$

4.2 Example #2 - Hydrologic Outlook.

FGUS62 KALR 141249
 ESGTBW
 FLC081-115-171300-

HYDROLOGIC OUTLOOK
 NATIONAL WEATHER SERVICE TAMPA BAY AREA - RUSKIN FL
 847 AM EDT FRI AUG 14 2009

...RIVER FLOOD OUTLOOK FOR PORTIONS OF CENTRAL FLORIDA...

MODERATE TO HEAVY RAINFALL THAT IS FORECAST OVER CENTRAL FLORIDA DURING THE NEXT 48 HOURS WILL QUICKLY RUN OFF ALREADY SATURATED SOILS. WIDESPREAD BASIN-AVERAGED RAINFALL AMOUNTS IN EXCESS OF ONE AND A QUARTER INCHES WITH LOCALIZED AMOUNTS OF 2 TO 3 INCHES MAY CAUSE RIVERS AND STREAMS TO RISE TO LEVELS THAT RESULT IN FLOODING.

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

- MINOR FLOODING ON THE Myakka River NEAR MYAKKA STATE PARK

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.

\$\$

5. Extended-Range Streamflow Prediction (ESP).

5.1 Example #1 - Water Supply Forecast.

FGUS66 KRSA 051935
 ESPRSA

WATER SUPPLY OUTLOOK Mar 1 2010

COASTAL BASINS

	Period	MP	MP%	RMAX	RMIN	AVG
	-----	-----	-----	-----	-----	-----
Williamson River						
Sprague, blo	Apr-Sep	240	62	330	151	385
Sprague River						
Chiloquin, nr	Apr-Sep	150	65	220	79	230
Upper Klamath Falls River						
Inflow	Apr-Sep	315	61	465	166	515
Lost River						
Gerber Reservoir Inflow	Mar-Jul	14.0	38	36	2.4	37
Clear Lake Reservoir Inflow	Mar-Jul	40	50	95	7.0	80
Scott River						
Fort Jones, nr	Apr-Jul	130	72	230	80	181
Trinity River						
Trinity Lake Inflow	Apr-Jul	740	117	1060	540	635

NWSM 10-913 JULY 8, 2010

SACRAMENTO RIVER ABOVE BEND BRIDGE

Pit River							
Montgomery Ck, nr	Apr-Jul	780	83	1190	640	940**	
Mccloud River							
Shasta Lk, abv	Apr-Jul	390	105	520	300	370	
Sacramento River							
Delta	Apr-Jul	320	110	490	230	290	
Shasta Dam	Apr-Jul	1680	94	2500	1330	1790	
Bend Bridge, abv, Red Bluff, nr	Apr-Jul	2210	91	3540	1610	2440	

FEATHER RIVER ABOVE OROVILLE RESERVOIR

NF Feather River							
Prattville, nr	Apr-Jul	280	84	400	200	333*	
Big Bar	Apr-Jul	830	86	1280	590	962*	
Feather River							
Oroville Dam	Apr-Jul	1500	85	2550	1000	1760	

YUBA RIVER ABOVE SMARTVILLE

North Yuba River							
Goodyears Bar, blo	Apr-Jul	260	95	420	190	273*	
South Yuba River							
Langs Crossing	Apr-Jul	210	93	350	150	225*	
Yuba River							
Englebright Reservoir	Apr-Jul	930	93	1540	650	995	

AMERICAN RIVER ABOVE FOLSOM RESERVOIR

MF American River							
Auburn, nr	Apr-Jul	420	86	700	240	490*	
Silver Ck							
Union Valley	Apr-Jul	90	92	160	60	98*	
Camino Dam, blo	Apr-Jul	140	89	230	70	158*	
American River							
Folsom Reservoir	Apr-Jul	1080	88	1900	700	1230	

SAN JOAQUIN BASIN

SF San Joaquin River							
Hooper Ck, blo Florence Lk	Apr-Jul	210	109	300	140	192*	
San Joaquin River							
Millerton Lk	Apr-Jul	1400	110	1950	1070	1270	
Merced River							
Pohono Bridge, at, Yosemite, nr	Apr-Jul	390	108	570	300	360*	
Merced Falls, blo	Apr-Jul	660	102	1000	520	645	
Tuolumne River							
Hetch Hetchy, nr	Apr-Jul	610	102	900	450	596*	
La Grange, nr	Apr-Jul	1220	99	1850	950	1230	
MF Stanislaus River							
Beardsley Dam, blo	Apr-Jul	290	91	470	200	320*	
Stanislaus River							
New Melones Dam	Apr-Jul	625	90	1000	450	695	
NF Mokelumne River							
West Point	Apr-Jul	375	90	570	205	416*	
Mokelumne River							
Pardee Reservoir	Apr-Jul	440	96	585	245	460	
Cosumnes River							
Michigan Bar	Apr-Jul	110	89	250	50	123	

NWSM 10-913 JULY 8, 2010

TULARE LAKE BASIN

Kern River							
Kernville, nr	Apr-Jul	405	102	650	300	398*	
Isabella Dam, blo	Apr-Jul	500	104	800	370	480	
Bakersfield, nr	Apr-Jul	515	105	820	380	490	
Tule River							
Success Dam	Apr-Jul	65	98	140	45	66	
Kaweah River							
Terminus Dam	Apr-Jul	315	109	490	250	290	
NF Kings River							
Cliff Camp, nr	Apr-Jul	270	112	400	200	240*	
Kings River							
Pine Flat Dam, blo	Apr-Jul	1380	110	2000	1090	1250	

EASTSIDE SIERRA - HUMBOLDT BASIN

Truckee River							
Lake Tahoe Stage Rise	Apr-High	1.00	72	1.90	0.29	1.38	
Ltl Truckee River							
Stampede Dam	Apr-Jul	63	79	126	32	80	
Truckee River							
Farad	Apr-Jul	205	79	320	88	260	
EF Carson River							
Gardnerville, nr	Apr-Jul	160	85	230	88	189	
WF Carson River							
Woodfords	Apr-Jul	46	82	68	24	56	
Carson River							
Carson City, nr	Apr-Jul	132	70	220	67	188	
Fort Churchill, nr	Apr-Jul	125	70	190	66	178	
East Walker River							
Bridgeport, nr	Apr-Aug	60	90	87	33	67	
West Walker River							
Coleville, nr	Apr-Jul	135	87	210	66	156	
NF Humboldt River							
Devils Gate, at, Halleck, nr	Apr-Jul	21	62	37	5.4	34*	
SF Humboldt River							
Dixie Ck, abv, Elko, nr	Apr-Jul	51	67	122	2.3	76	
Marys River							
Hot Springs, abv, Deeth, nr	Apr-Jul	22	56	39	5.2	39	
Humboldt River							
Elko, nr	Apr-Jul	80	52	165	13.0	154	
Palisade	Apr-Jul	125	50	230	21	250	
Comus	Apr-Jul	90	40	210	7.0	225	
Imlay, nr	Apr-Jul	50	27	155	2.0	188	
Martin Ck							
Paradise Vly, nr	Apr-Jul	8.0	43	18.9	0.60	18.7	

* 30 Year Averages for 1971-2000 are incomplete. Those forecast points with an asterik have incomplete averages, so 1961-1990 averages are listed. The new averages will be incorporated into this product when the complete data sets become available.

** Pit River 30-year average is full natural flow.

MP Most probable volume in 1000 acre-feet.
 MP% Most probable volume in percent of the 71-00 average.
 RMAX Volume that has a 10 percent chance of being exceeded.
 RMIN Volume that has a 90 percent chance of being exceeded.
 AVG Average volume for the 71-00 period.

All forecast volumes reflect natural flow. Actual observed flow may be affected by upstream water management.

CNRFC

5.2 Example #2 - Probabilistic Forecast Information.

FGUS65 KSTR 032002

ESPCO

National Weather Service, Colorado Basin River Forecast Center, SLC, Utah

San Juan Basin Special Forecasts
 March final Forecast March 03, 2010

Rio Blanco	FORECAST			
	90%	50%	10%	
Apr-Jul	40.0	56.0	70.0	

Navajo-Chromo	FORECAST			
	90%	50%	10%	
Apr-Jul	55.0	73.0	95.0	

Vallecito Res	FORECAST			
	90%	50%	10%	
Apr-Jul	140.0	200.0	260.0	
Mar	2.5	3.5	5.9	
Apr	8.9	17.0	28.0	
May	45.0	65.0	93.0	

Navajo Res	FORECAST			
	90%	50%	10%	
Apr-Jul	520.0	765.0	1060.0	
Mar	33.0	50.0	70.0	
Apr	101.0	140.0	223.0	
May	200.0	290.0	380.0	

Durango	FORECAST			
	90%	50%	10%	
Apr-Jul	300.0	420.0	560.0	
Mar	9.3	11.5	15.5	
Apr	29.0	45.0	58.0	
May	104.0	135.0	180.0	

Lemon Res	FORECAST			
	90%	50%	10%	
Apr-Jul	41.0	55.0	72.0	
Mar	0.42	0.65	1.09	
Apr	1.55	3.5	6.0	
May	11.8	20.0	28.0	

6. Flash Flood Guidance (FFG).

6.1 Example #1 - County Name.

FOUS63 KKRF 251726
 FFGKS

FLASH FLOOD RAINFALL GUIDANCE
 NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO
 1125 AM CST MON FEB 25 2002

K A N S A S H Y D R O L O G I C S E R V I C E A R E A S

FLASH FLOOD RAINFALL GUIDANCE BY COUNTIES
 GENERAL FLASH FLOOD GUIDANCE FOR STEEP TERRAIN AND URBAN AREAS ARE
 ONE TO TWO INCHES OR MORE IN ONE TO TWO HOURS OR LESS RESPECTIVELY.

.B KRF 020225 Z DH12/DC0202251717 /DUE/PPHCF/PPTCF/PPQCF

:IDENT	1HR	3HR	6HR	COUNTY NAME
:=====	=====	=====	=====	=====
: ***** DODGE CITY HSA *****				
KSC051	2.3/	2.4/	2.7	: ELLIS
KSC195	2.4/	2.6/	3.0	: TREGO
: ***** GOODLAND HSA *****				
KSC023	3.0/	3.1/	3.6	: CHEYENNE
KSC039	2.8/	2.9/	3.4	: DECATUR
KSC063	2.6/	2.8/	3.4	: GOVE
KSC065	2.2/	2.4/	2.8	: GRAHAM
KSC109	2.7/	2.9/	3.4	: LOGAN
KSC137	2.4/	2.6/	2.9	: NORTON
KSC153	2.7/	2.8/	3.2	: RAWLINS
KSC179	2.2/	2.4/	2.8	: SHERIDAN
KSC181	2.8/	3.0/	3.6	: SHERMAN
KSC193	2.5/	2.7/	3.1	: THOMAS
KSC199	2.7/	3.0/	3.6	: WALLACE
: ***** HASTINGS HSA *****				
KSC089	1.8/	2.0/	2.2	: JEWELL
KSC123	1.6/	1.8/	2.3	: MITCHELL
KSC141	1.7/	1.9/	2.3	: OSBORNE
KSC147	2.0/	2.2/	2.5	: PHILLIPS
KSC163	1.7/	1.9/	2.4	: ROOKS
KSC183	1.8/	2.0/	2.4	: SMITH
: ***** PLEASANT HILL HSA *****				
KSC005	1.4/	1.6/	2.0	: ATCHISON
KSC043	1.3/	1.5/	1.8	: DONIPHAN
KSC091	1.2/	1.5/	2.0	: JOHNSON
KSC103	1.1/	1.3/	1.7	: LEAVENWORTH
KSC107	1.4/	1.7/	2.2	: LINN
KSC121	1.4/	1.6/	2.2	: MIAMI
KSC209	1.2/	1.4/	1.9	: WYANDOTTE
: ***** TOPEKA HSA *****				
KSC003	1.3/	1.5/	2.0	: ANDERSON
KSC013	1.4/	1.6/	1.9	: BROWN
KSC027	1.5/	1.8/	2.4	: CLAY

KSC029 1.3/ 1.5/ 1.8 :CLOUD
 KSC041 1.6/ 2.0/ 2.7 :DICKINSON
 KSC045 1.3/ 1.6/ 2.1 :DOUGLAS
 KSC059 1.4/ 1.7/ 2.3 :FRANKLIN
 KSC061 1.4/ 1.9/ 2.6 :GEARY
 KSC085 1.2/ 1.4/ 1.8 :JACKSON
 KSC087 1.1/ 1.3/ 1.6 :JEFFERSON
 KSC117 1.5/ 1.7/ 1.9 :MARSHALL
 KSC131 1.4/ 1.6/ 2.0 :NEMAHA
 KSC143 1.3/ 1.5/ 2.0 :OTTAWA
 KSC149 1.4/ 1.7/ 2.2 :POTTAWATOMIE
 KSC157 1.3/ 1.4/ 1.6 :REPUBLIC
 KSC161 1.6/ 2.0/ 2.6 :RILEY
 KSC177 1.3/ 1.5/ 1.9 :SHAWNEE
 KSC197 1.6/ 2.0/ 2.6 :WABAUNSEE
 KSC201 1.4/ 1.5/ 1.8 :WASHINGTON

:
 : ***** WICHITA HSA *****
 :

KSC053 1.9/ 2.1/ 2.6 :ELLSWORTH
 KSC105 1.2/ 1.4/ 1.8 :LINCOLN
 KSC113 2.1/ 2.3/ 2.7 :MCPHERSON
 KSC167 1.8/ 2.1/ 2.5 :RUSSELL
 KSC169 1.9/ 2.2/ 2.6 :SALINE

.END
 \$\$

6.2 Example #2 - Zone Name.

FOUS61 KTAR 161522
 FFGME
 COUNTY FLASH FLOOD GUIDANCE
 NWS NORTHEAST RIVER FORECAST CENTER TAUNTON MA
 1120 AM EDT THU MAY 16 2002

GRAY HYDROLOGIC SERVICE AREA

:AVERAGE RAINFALL IN INCHES NEEDED TO BEGIN FLOODING.
 .B HFD 020516 Z DH12/DC0205161520 /DUE/PPHCF/PPTCF/PPQCF/PPKCF/PPDCF

:
 :.....MAINE
 :

:IDENT	1HR	3HR	6HR	12HR	24HR	ZONE NAME
:=====	=====	=====	=====	=====	=====	=====
MEZ020	1.3/	1.9/	2.1/	2.3/	2.6	:ANDROSCOGGIN
MEZ001	1.1/	1.7/	1.9/	2.1/	2.4	:NW AROOSTOOK
MEZ002	1.1/	1.7/	1.9/	2.1/	2.4	:NE AROOSTOOK
MEZ006	1.1/	1.7/	1.9/	2.1/	2.4	:SE AROOSTOOK
MEZ019	1.3/	1.9/	2.1/	2.3/	2.6	:INT CUMBERLA
MEZ024	1.3/	1.9/	2.1/	2.3/	2.6	:COA CUMBERLA
MEZ008	1.2/	1.8/	2.0/	2.2/	2.5	:N FRANKLIN
MEZ013	1.2/	1.8/	2.0/	2.2/	2.5	:S FRANKLIN
MEZ016	1.3/	1.9/	2.1/	2.3/	2.6	:INT HANCOCK
MEZ029	1.3/	1.9/	2.1/	2.3/	2.6	:COA HANCOCK
MEZ021	1.2/	1.8/	2.0/	2.2/	2.5	:KENNEBEC
MEZ027	1.2/	1.9/	2.1/	2.3/	2.6	:KNOX
MEZ026	1.2/	1.9/	2.1/	2.3/	2.6	:LINCOLN
MEZ007	1.2/	1.8/	2.0/	2.2/	2.5	:N OXFORD
MEZ012	1.2/	1.8/	2.0/	2.2/	2.5	:S OXFORD

```

MEZ005      1.1/  1.7/  1.9/  2.1/  2.4  :N PENOBSCOT
MEZ011      1.3/  1.9/  2.1/  2.3/  2.6  :C PENOBSCOT
MEZ015      1.3/  1.9/  2.1/  2.3/  2.6  :S PENOBSCOT
MEZ004      1.1/  1.7/  1.9/  2.1/  2.4  :N PISCATQUIS
MEZ010      1.3/  1.9/  2.1/  2.3/  2.6  :S PISCATQUIS
MEZ025      1.3/  1.9/  2.1/  2.3/  2.6  :SAGADAHOC
MEZ003      1.3/  1.9/  2.1/  2.3/  2.6  :N SOMERSET
MEZ009      1.2/  1.8/  2.0/  2.2/  2.5  :C SOMERSET
MEZ014      1.2/  1.8/  2.0/  2.2/  2.5  :S SOMERSET
MEZ022      1.2/  1.9/  2.1/  2.3/  2.6  :INT WALDO
MEZ028      1.2/  1.9/  2.1/  2.3/  2.6  :COA WALDO
MEZ017      1.3/  1.9/  2.1/  2.3/  2.6  :INT WASHINGT
MEZ030      1.3/  1.9/  2.1/  2.3/  2.6  :COA WASHINGT
MEZ018      1.3/  1.9/  2.1/  2.3/  2.6  :INT YORK
MEZ023      1.3/  1.9/  2.1/  2.3/  2.6  :COA YORK

```

```

:
:.....NEW HAMPSHIRE
:

```

```

:IDENT      1HR    3HR    6HR    12HR   24HR   ZONE NAME
:=====
NHZ009      1.4/  2.1/  2.4/  2.5/  2.9   :BELKNAP
NHZ004      0.9/  1.5/  1.7/  1.9/  2.2   :N CARROLL
NHZ006      1.4/  1.9/  2.1/  2.3/  2.6   :S CARROLL
NHZ011      1.4/  2.1/  2.4/  2.5/  2.9   :CHESHIRE
NHZ003      1.1/  1.7/  1.9/  2.1/  2.4   :N GRAFTON
NHZ005      1.1/  1.7/  2.0/  2.1/  2.4   :S GRAFTON
NHZ012      1.5/  2.2/  2.5/  2.6/  3.0   :HILLSBOROUGH
NHZ008      1.4/  2.1/  2.4/  2.5/  2.9   :MERRIMACK
NHZ013      1.7/  2.4/  2.7/  2.9/  3.2   :I ROCKINGHAM
NHZ014      1.7/  2.4/  2.7/  2.9/  3.2   :C ROCKINGHAM
NHZ010      1.3/  1.9/  2.1/  2.3/  2.6   :STRAFFORD
NHZ007      1.1/  1.7/  2.0/  2.1/  2.4   :SULLIVAN
.END

```

\$\$

7. Headwater Flash Flood Guidance (FFH).

7.1 Example #1 - With 1 Hour Values.

FOUS73 KKRF 251727
FFHMO

HEADWATER FLASH FLOOD GUIDANCE
NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO
1117 AM CST MON FEB 25 2002

M I S S O U R I H Y D R O L O G I C S E R V I C E A R E A S

.B KRF 020225 Z DH12/DC0202251717 /DUE/PPHCF/PPTCF/PPQCF

```

:IDENT      1HR    3HR    6HR    HEADWATER NAME      STREAM
:=====
:
: ***** PLEASANT HILL HSA *****
:
FFXM7      1.1/  /      /      :FAIRFAX MO          TARKIO R
BRLM7      1.5/  /      /      :BURLINGTON JCT MO   NODAWAY R
MYVM7      1.7/  /      /      :MARYVILLE MO        102 R
AGYM7      2.0/  /      /      :AGENCY MO 4NE       PLATTE R
SMHM7      1.2/  /      /      :SMITHVILLE MO     LITTLE PLATTE R

```

```

SODM7      1.8/ / / :ST JOSEPH MO      WHITEHEAD CR
SOBM7      1.6/ / / :ST JOSEPH MO      BLACKSNAKE CR
KCCM7      1.8/ / / :KC MO BANNISTER RD BLUE R
KBNM7      2.8/ / / :KNOBTOWN MO      LITTLE BLUE R
LKCM7      1.8/ / / :LAKE CITY MO     LITTLE BLUE R
RICM7      1.2/ / / :RICHMOND MO      CROOKED R
CAXM7      1.2/ / / :CARROLLTON MO    WAKENDA CR
VLYM7      1.0/ / / :VALLEY CITY MO   BLACKWATER R
MBYM7      1.1/ / / :MOSBY MO         FISHING R
TTZM7      3.2/ / / :TRENTON MO       THOMPSON R
CHZM7      2.8/ / / :CHILLICTHE MO 2S GRAND R
URHM7      1.1/ / / :URICH MO 3NW     SOUTH GRAND R
BLRM7      1.2/ / / :BLAIRSTOWN MO    BIG CR
BLVM7      2.0/ / / :BLUE LICK MO     BLACKWATER R
OTTM7      1.1/ / / :OTTERVILLE MO   LAMINE R
FYTM7      1.0/ / / :FAYETTE MO       MONITEAU CR
BONM7      1.1/ / / :BOONVILLE MO    PETITE SALINE CR
NVZM7      2.0/ / / :NOVINGER MO      CHARITON R
KWPM7      2.5/ / / :WARD PARKWAY     BRUSH CREEK
:
: ***** ST LOUIS HSA *****
:
JCMM7      1.5/ / / :JEFFERSON CITY MO MOREAU R
:
: ***** SPRINGFIELD HSA *****
:
TBNM7      1.3/ / / :FT LEONARD WOOD MO BIG PINEY R
CMZM7      1.5/ / / :CAPLINGER MILLS MO SAC R
.END

```

\$\$

7.2 Example #2 - With 1, 3, and 6 Hourly Values.

FOUS72 KALR 151541
FFHMEM

HEADWATER GUIDANCE...MEMPHIS CWA
NWS SOUTHEAST RIVER FORECAST CENTER ATLANTA GA
1140 AM EDT WED MAY 15 2002

INCHES OF RAINFALL FOR SPECIFIED DURATIONS REQUIRED TO PRODUCE
FLASH FLOODING IN HEADWATERS. LOWER AMOUNTS MAY CAUSE
FLASH FLOODING IN URBAN OR MOUNTAINOUS AREAS.

.B ATR 20020515 Z DH12/DC200205151540 /DUE/PPHCF/PPTCF/PPQCF/PPKCF/PPDCF

```

:
:IDENT      1HR   3HR   6HR   12HR  24HR
:=====
ABDM6      2.5/  2.8/  2.9//
CBM        2.7/  3.0/  3.2//
TPOM6      2.4/  2.6/  2.7//
:

```

: TO USE HEADWATER ADVISORY TABLES TAKE THE THREE HOUR VALUE
: ABOVE FOR THAT LOCATION AND USE THE FOLLOWING RELATIONS...

```

:
: TABLE 1 / 0 TO 2.4 IN      TABLE 4 / 4.1 TO 4.5 IN
:           2 / 2.5 TO 3.3 IN      5 / 4.6 TO 4.9 IN
:           3 / 3.4 TO 4.0 IN      6 / 5.0 IN
:

```

.END

\$\$

8. Hydrometeorological Discussion (HMD).

8.1 Example #1 - Ohio RFC.

AGUS71 KTIR 221750
HMDTIR

Ohio River Basin Hydrometeorological Discussion
Ohio River Forecast Center, Wilmington, Ohio
149 PM EDT Monday, March 22, 2010

...HYDROMETEOROLOGICAL DISCUSSION...

Low pressure over the southeast Ohio Valley will continue to gradually lift northeast through the basin, finally exiting to the east on Tuesday morning. Rainfall will gradually be pulled eastward with it. Rains will be most persistent over the northeast Ohio Valley through tomorrow.

After a couple of days of dry weather another low will pass through the basin Thursday morning through Friday morning providing another dose of rainfall to the region.

...FLOOD POTENTIAL DISCUSSION...

Minor flooding continues on portions of the Wabash and lower Ohio Watersheds. The low pressure system crossing the Ohio Basin today will bring light to moderate rainfall to parts of the region. It is not expected to be enough to produce any new flooding in the Ohio Valley.

...24-HR OBSERVED PRECIPITATION USED FOR TODAY`S RIVER FORECASTS...

Rain fell across the entire basin. Heaviest amounts ranged from 0.75 to 2.25 inches in the New River Watershed south of West Virginia. Southern Illinois, far southwest Indiana and western Kentucky received basin average amounts in the 1.00 to 2.00 inch range

...24-HOUR FORECAST PRECIPITATION USED FOR TODAY`S RIVER FORECASTS...

Measurable rainfall is forecast throughout the entire basin. Heaviest basin average amounts will range from 0.50 to 0.85 inch in western New York, western Pennsylvania and northern Ohio. Amounts generally decrease to the southwest.

...RIVER BASINS IN FLOOD...

Points along the following river basins were in flood Monday morning:

River Basin	Forecast Point	Flood Stage	Latest Stg	Tendency *
Ohio River	Newburgh Lock &	38	39.5	Falling
Ohio River	Mount Vernon	35	37.0	Falling
Ohio River	J T Myers Dam	37	38.2	Falling
Wabash River	Hutsonville	16	19.6	Falling
Wabash River	Riverton	15	18.2	Falling

Detailed precipitation graphics and other maps are available on the HAS Support

Page at this web address: <http://weather.gov/ohrfc/HAS>

* Tendency based on observed value and a 1-day forecast.

\$\$

8.2 Example #2 - Alaska RFC.

AGAK78 PACR 162300
HMDACR

HYDROMETEOROLOGICAL DISCUSSION
NWS ALASKA-PACIFIC RIVER FORECAST CENTER ANCHORAGE AK
300 PM ADT THU MAY 15 2002

...HYDROMETEOROLOGICAL DISCUSSION FOR THE STATE OF ALASKA...
...FLOOD POTENTIAL...

FOR MORE INFORMATION ON BREAKUP CONDITIONS...SEE THE SPRING BREAK UP
SUMMARY SRAK48PACR AND CURRENT FLOOD STATEMENTS.

FLOODING IS POSSIBLE ON THE YUKON AT NULATO AND KOYUKUK DUE TO A
BREAK UP FRONT MOVING TOWARDS THE AREA WHICH HAD BACKED UP WATER
BEHIND IT AT GALENA.

A FLOOD WARNING IS IN EFFECT FOR THE VILLAGE OF KWETHLUK ON THE
KUSKOKWIM. HIGH WATER MOVING DOWNSTREAM ON THE KUSKOKWIM MAY CAUSE
WATER LEVELS WHICH ARE ALREADY ABOVE BANKFULL AT KWETHLUK TO RISE AND
CAUSE MINOR FLOODING.

THE WATCHES AT AKIAK AND UPPER AND LOWER KALSKAG HAVE BEEN DROPPED.
THE WARNING AT ANIAK WILL EXPIRE AT 4 PM THURSDAY...BUT WATER IN THE
VILLAGE MAY TAKE SOME TIME TO RECEDE.

SNOW MELT HAS INUNDATED LOW SPOTS OF THE CHENA HOT SPRINGS ROAD NEAR
MILE 37.

FLOOD POTENTIAL IS LOW ACROSS THE REMAINDER OF THE STATE.

...HYDROMETEOROLOGICAL CONDITIONS...

ON WEDNESDAY...SOME LIGHT RAIN OCCURRED ACROSS SOUTH CENTRAL THE EAST
AND SOUTHEAST INTERIOR AND IN THE PANHANDLE. AMOUNTS WERE GENERALLY
LESS THAN 0.2 INCHES EXCEPT FOR A FEW COASTAL LOCATIONS WITH OVER 0.5
INCHES.

HIGH PRESSURE OVER THE STATE WILL KEEP MOST OF THE MAINLAND DRY OVER
THE NEXT SEVERAL DAYS. TEMPERATURES WILL ALSO SLOWLY WARM UP THROUGH
THE WEEKEND WITH SOME HIGHS IN THE 70S LIKELY. A FRONT WILL WEAKEN AS
IT APPROACHES THE Y-K DELTA BRINGING A CHANCE OF RAIN TO THAT AREA
LATE THIS WEEKEND.

A LOW SOUTH OF THE GULF OF ALASKA WILL CONTINUE TO ROTATE SOME SHOWERS
INTO THE PANHANDLE.

ELSEWHERE, UPPER LEVEL RIDGING OVER WESTERN ALASKA KEEPS MOST OF THE
MAINLAND WARM AND DRY. THIS PATTERN STRENGTHENS AND PUSHES EAST BY THE
WEEKEND.

FREEZING LEVELS WERE AT THE SURFACE ALONG THE NORTH SLOPE THURSDAY
MORNING AND HAD RISEN TO 5000 TO 6000 FT OVER THE CENTRAL INTERIOR.

CLEAR SKIES AND HIGHER FREEZING LEVELS SHOULD LEAD TO ADDITIONAL UPPER
ELEVATION SNOW MELT OVER THE NEXT SEVERAL DAYS.

...HYDROLOGIC CONDITIONS...

HIGH WATER ON THE KUSKOKWIM REMAINS BEHIND A WEAKENING JAM BELOW ANIAK. THE REMAINDER OF THE KUSKOKWIM IS BECOMING FREE OF ICE AND FLOODING RELATED TO ICE JAMS IS NOT EXPECTED AT OTHER VILLAGES. HOWEVER...WATER LEVELS IN VILLAGES BELOW ANIAK MAY RISE IF THE JAM BELOW ANIAK RELEASES.

ACTIVE BREAKUP IS OCCURRING ON THE YUKON WHERE ONE BREAK UP FRONT WAS TRAVELING PAST FORT YUKON THURSDAY AFTERNOON AND ANOTHER WAS MOVING TOWARDS KOYUKUK. ADDITIONALLY...ICE AT RAMPART HAD ALSO BEEN RUNNING.

...SNOWPACK...

RECENTLY REPORTED SNOW DEPTHS FROM STATIONS WITH SNOW REMAINING:

LOCATION	DEPTH	LOCATION	DEPTH
. INTERIOR			
PABT-BETTLES	3	PAMC-MCGRATH	0
PAOM-NOME	1	PAOT-KOTZEBUE	3
. SOUTHCENTRAL			
HAT-HATCHER PASS	40	PASP-SHEEP MOUNTAI	0
PASW-SKWENTNA	0	PAWR-WHITTIER	18
PAMX-MCCARTHY	0	PATW-CANTWELL	6

\$\$

9. Hydrometeorological Coordination Message (HCM).

9.1 Example #1 - Coordinating Extension in Hours of Operations.

AGUS83 KCRF 200323
HCMKRF

HYDROMETEOROLOGICAL COORDINATION MESSAGE
NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO
1024 PM CDT TUE JUN 19 2001

AT THE REQUEST OF WFO EAX, MBRFC WILL BE EXTENDING HOURS OF OPERATION. WFOs AFFECTED BY TONIGHT'S RAIN AND NEEDING ADDITIONAL FORECAST OR OTHER HYDROLOGIC SUPPORT ARE URGED TO PROVIDE AS MUCH HYDROMETEOROLOGICAL DATA AS POSSIBLE. THANKS IN ADVANCE.

\$\$

10. Hydrometeorological Data Summary Products (HYx).

10.1 Daily Data Summary Example (HYD).

SXUS52 KALR 181649
HYDALR

24 HOUR RAINFALL COLLECTIVE ENDING AT 12Z
SOUTHEAST RIVER FORECAST CENTER - ATLANTA, GA
12:49 PM EDT Thu Mar 18 2010

.BR ALR 20100318 DH12/PPD
:
: ID PRECIP
:

NGKP4 0.72 :R BLANCO NR FLORIDA (PR)
 GCRP4 0.54 :R GUAYANES/YBUCOA 1N (PR)
 YBUP4 0.46 :YABUCOA (PR)
 PIEP4 0.28 :R HUMACAO@L PIEDRAS (PR)
 UTHP4 0.27 :R TANAMA NR UTUADO (PR)
 VAMP4 0.25 :BARRIO MONTONES RAIN (PR)
 GUV4 0.25 :LAS PIEDRAS CON RAIN (PR)
 GUTP4 0.13 :R GURABO BL EL MANGO (PR)
 NGIP4 0.11 :R ICACOS NR NAGUABO (PR)
 MANP4 0.07 :MANATI NR MANATI (PR)
 MSAP4 0.07 :R MAMEYES NR SABANA (PR)
 JABP4 0.06 :B MAMAYS AB/JYUYA 6N (PR)
 GUSP4 0.05 :PUEBLITO DEL R RAING (PR)
 ELPP4 0.04 :EL PORTAL/LQILLO 4SW (PR)
 NGHP4 0.04 :QUEB GUABA/NAGUABO (PR)
 DEXP4 0.02 :FT ALLEN RES CTR (PR)
 VALP4 0.02 :R VALENCIANO-JUNCOS (PR)
 UTKP4 0.01 :B RNCADOR NR UTUADO (PR)
 FAEP4 0.01 :FAJARDO 5SW (PR)
 GRO4 0.01 :GURABO 2W/AG EXP STN (PR)
 GAR4 0.01 :GURABO ABAJO RAINGAG (PR)
 SLMP4 0.01 :QUEB ARENAS RAINGAGE (PR)
 CMAP4 0.01 :RIO CAMUY NR BAYANEY (PR)
 AJTP4 0.00 :ADJUNTAS 5WNW/AG STN (PR)
 ADAP4 0.00 :AGUADA 2E, PR (PR)
 ZGEP4 0.00 :AGUAS BUENAS-ALERT (PR)
 ALPP4 0.00 :AIBONITO 1S, PR (PR)
 BZBP4 0.00 :BAIROA ARRIBA PCPN (PR)
 USAP4 0.00 :BARRAN (PR)
 BZDP4 0.00 :BARRIO BEATRIZ PCPN (PR)
 PARP4 0.00 :BO MARIN/PATILLAS 4N (PR)
 JAMP4 0.00 :BRIO COLLORES/JYUYA (PR)
 CAHP4 0.00 :CANABONCITO RAINGAGE (PR)
 PAXP4 0.00 :CANAL DE PATILLAS (PR)
 VGBP4 0.00 :CIBUCO@ VEGA BAGA (PR)
 GMNP4 0.00 :CNL GUAMANI W/GUAYMA (PR)
 ARHP4 0.00 :DOS BOCAS 3E, PR (PR)
 NAMP4 0.00 :GUADIANA/NRNJTO 1E (PR)
 HORP4 0.00 :GUANAJIB NR HORP4 (PR)
 GURP4 0.00 :GURABO AT GURABO (PR)
 ZGAP4 0.00 :GURABO LOWER-ALERT (PR)
 TOAP4 0.00 :HWY 2 AT TOA ALTA (PR)
 MOC4 0.00 :HWY 404 NR MOCA (PR)
 VIEP4 0.00 :ISABEL SEGUNDA 2SE (PR)
 IGRP4 0.00 :ISLA GRANDE/SAN JUAN (PR)
 BZAP4 0.00 :JAGUEYES ABAJO PCPN (PR)
 ANMP4 0.00 :L ANA MARIA/COTO LRL (PR)
 LGUP4 0.00 :L GUAYO NR CASTANER (PR)
 MELP4 0.00 :L MELINIA/GYAMA 2WSW (PR)
 PRIP4 0.00 :L PRIETO/ADJNTAS 10W (PR)
 CAIP4 0.00 :LA PLAZA RAINGAGE (PR)
 PCXP4 0.00 :LAGO CERRILLOS DAM (PR)
 DRAP4 0.00 :LAGO CIDRA NR CIDRA (PR)
 OROP4 0.00 :LAGO DE MATRULLAS (PR)
 ARGP4 0.00 :LAGO DOS BOCAS, PR (PR)
 QUEP4 0.00 :LAGO GUAJATACA @ DAM (PR)
 JUBP4 0.00 :LAGO GUAYABEL AT DAM (PR)
 NARP4 0.00 :LAGO LA PLATA (PR)
 RPCP4 0.00 :LAGO LAS CURIAS, PR (PR)
 LOCP4 0.00 :LAGO LOCO AT DAM (PR)
 LLUP4 0.00 :LAGO LUCCHETTI (PR)

PASP4 0.00 :LAGO PATILLAS AT DAM (PR)
 TOXP4 0.00 :LAGO TOA VACA, PR (PR)
 CRRP4 0.00 :LAS ARENAS 4SSW (PR)
 RPAP4 0.00 :LAS CURIAS RG-CUPEY (PR)
 ANBP4 0.00 :LAS MARIAS 2NW (PR)
 LADP4 0.00 :LG ADJUNTAS/ADJUNTAS (PR)
 LCOP4 0.00 :LG COAMO/LOS LLANOS (PR)
 REGP4 0.00 :LG REGULADOR/ISABELA (PR)
 VIVP4 0.00 :LG VIVI/UTUADO 4SSE (PR)
 COSP4 0.00 :MANATI (PR)
 CIAP4 0.00 :MANATI AT CIALES (PR)
 CEIP4 0.00 :NSSR/CEIBA 3SE (PR)
 RPOP4 0.00 :PIEDRAS@ HATO REY (PR)
 PRTP4 0.00 :PONCE 7N/R PORT TIBS (PR)
 SLGP4 0.00 :QUEB BLANC/SAN LOREN (PR)
 SLEP4 0.00 :QUEB SAL/SAN LOR 3WS (PR)
 CABP4 0.00 :R BAIROA ABV BAIROA (PR)
 CIFP4 0.00 :R BAYAMON @ ARENAS (PR)
 CIEP4 0.00 :R BAYAMON BL L CIDRA (PR)
 CAMP4 0.00 :R CAGUITAS@V BLANCA (PR)
 CAPP4 0.00 :R CANAS @ RIO CANAS (PR)
 CNAP4 0.00 :R CANOVANAS-CAMPO RI (PR)
 JAXP4 0.00 :R CAONLLAS@PASO PLMA (PR)
 ANAP4 0.00 :R CASEI/MAYAGUEZ 3NE (PR)
 SLKP4 0.00 :R CAYAGUAS@CERRO GOR (PR)
 PCEP4 0.00 :R CERRILLOS ABV L CE (PR)
 CORP4 0.00 :R CIBUCO BLO COROZAL (PR)
 VEDP4 0.00 :R ESPIRITU SANTO-R G (PR)
 FAJP4 0.00 :R FAJARDO NR FAJARDO (PR)
 MORP4 0.00 :R G D MANATI/MOROVIS (PR)
 UTXP4 0.00 :R GR ARECIBO-UTUADO (PR)
 UTUP4 0.00 :R GR D ARECIBO-UTUAD (PR)
 SLNP4 0.00 :R GR D LOIZA/SAN LOR (PR)
 VERP4 0.00 :R GR EL VERDE - R GR (PR)
 GYAP4 0.00 :R GUAYANILLA @ HWY 2 (PR)
 JUAP4 0.00 :R JACAGUAS@JUAN DIAZ (PR)
 PRNP4 0.00 :R PORTUGUES BLO DAM (PR)
 PCZP4 0.00 :R PORTUGUES-PONCE (PR)
 TOVP4 0.00 :R TOA VACA ABV L T V (PR)
 AGAP4 0.00 :RAMEY RES CTR/AGDLA (PR)
 CMRP4 0.00 :REPRESA DE COMERIO (PR)
 BAUP4 0.00 :RIO BAUTA/OROCOVIS (PR)
 ZFAP4 0.00 :RIO BAYAMON-ALERT (PR)
 BAYP4 0.00 :RIO BAYAMON/BAYAMON (PR)
 COAP4 0.00 :RIO COAMO @ COAMO (PR)
 ZCAP4 0.00 :RIO GR DE ARECIBO-AD (PR)
 ZCBP4 0.00 :RIO GR DE ARECIBO-UT (PR)
 PATP4 0.00 :RIO GR DE PATILLAS (PR)
 ZOBP4 0.00 :RIO GUANAJIBO-SAB GR (PR)
 ZOAP4 0.00 :RIO GUANAJIBO-SN GRM (PR)
 ZJAP4 0.00 :RIO GUAYANES-YABUCOA (PR)
 IANP4 0.00 :RIO INABON NR PONCE (PR)
 ZMAP4 0.00 :RIO JACAQUAS-VILLALB (PR)
 ZEEP4 0.00 :RIO LA PLATA-NARANJI (PR)
 ZDAP4 0.00 :RIO MANATI-MOROVIS (PR)
 ZDCP4 0.00 :RIO MANATI-OROCOVIS (PR)
 ZECP4 0.00 :RIO MATON-CAYEY-ALRT (PR)
 ZDDP4 0.00 :RIO MATRULLAS-MATRUL (PR)
 JAYP4 0.00 :RIO SALIENTE@COABEY (PR)
 CAKP4 0.00 :RIO TURABO/BORINQUEN (PR)
 ZCDP4 0.00 :RIO VIVI-UTUADO-ALRT (PR)

SEBP4 0.00 :SAN SEBASTIAN (PR)
ZGCP4 0.00 :TURABO-CAGUAS-ALERT (PR)
BZCP4 0.00 :VAQUERIA EL NIMO (PR)
VINP4 0.00 :VILLALBA 3NE/BAR APE (PR)
YACP4 0.00 :YAUCO 1NNE, PR (PR)
LLYP4 0.00 :YAUCO 1NNE/RIO YAUCO (PR)
CAGP4 0.00 :de LOIZA @ CAGUAS (PR)
.END
\$\$

11. Hydrometeorological Data Products (RRx).

11.1 RFC Data QC Changes (RR9).

SRUS84 KTUA 171545
RR9TUA
:
: Values that RFC has changed for QC reasons
:LUB HSA AREA
.AR CHLT2 20090817 DH141500/HGIRGZ M : Orig 10.30
.AR CHLT2 20090817 DH143000/HGIRGZ M : Orig 10.33
.AR CHLT2 20090817 DH144500/HGIRGZ M : Orig 10.31
:PUB HSA AREA
:.AR APSC2 20090817 DH140000/PPHRZZ M : Orig 0.10 (Orig value computed)
:SGF HSA AREA
.AR KSCR03 20090817 DH123000/PPDRAZ M : Orig -36893488147419103232.00
\$\$