

***NATIONAL WEATHER SERVICE CENTRAL REGION SUPPLEMENT 08-2004
APPLICABLE TO INSTRUCTION 10-921
October 9, 2008***

***Operations and Services
Hydrologic Service Programs, NWSPD 10-9
Hydrologic Service Program Management, NWSI 10-901
River Forecast Center Operations, NWSI 10-911
Weather Forecast Office Hydrologic Operations, NWSI 10-921***

AUTHORIZATION FOR NEW AND/OR EXPANDED HYDROLOGIC SERVICES

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

OPR: W/CR1x2 (N. Schwein)

Certified by: W/CRx1 (J. Ogren)

Type of Issuance: Routine

SUMMARY OF REVISIONS: This supplement supersedes Central Region Supplement 08-2004 applicable to Instruction 10-921 dated November 23, 2005. The following noteworthy revisions were made to this supplement:

1. Section 4.1 – Added an e-mail link for submitting requests
2. Section 4.1 - Added “associated costs” to the list of information accompanying a service change request
3. Section 4.1 and Appendix A - Added coordination with DAPM/OPL.
4. Section 4.5 - Recommend adding hydrologic service change statements at the end of products issued by RiverPro for a period of time to remind users of the change.
5. Appendix C – Removed example Service Change Notices now covered in NWSI 10-940.

(Signed by) _____ September 25, 2008 _____

Lynn P. Maximuk

Date

Director, Central Region

TABLE OF CONTENTS	PAGE
1. Purpose.....	2
2. Background.....	2
3. Definitions.....	2
4. Procedure	3
4.1 Requests	3
4.1.1 Requests involving Flood Warning Systems	4
4.2 Review	4
4.3 Authorization	4
4.4 Implementation	4
4.5 Public Notification.....	4
Appendix A - Hydrologic Service Change Checklist.....	A-1
Appendix B – E-19 Change Checklist.....	B-1
Appendix C - Example Public Information Statements (PNS).....	C-1

1. Purpose The purpose of this supplement is to clarify procedures for requesting new hydrologic services or changes to existing hydrologic services at Weather Forecast Offices (WFOs) and River Forecast Centers (RFCs). Changes to existing hydrologic services include discontinuation of those services. This supplement also specifies an e-mail method of request and approval for timely implementation.

2. Background: The service hydrologist or hydrology focal point (herein collectively referred to as the hydrology program manager, or HPM), in coordination with the RFC and partners such as Emergency Managers and other officials, determines the need for new or changed hydrologic services in his or her Hydrologic Service Area. Where RFCs determine a need for a forecast service change involving numerous WFOs, the Hydrologist in Charge (HIC) may designate one of his or her staff to coordinate the change. Requests for new hydrologic services and changes to existing hydrologic services are approved by Central Region Headquarters (CRH) Integrated Services Division (ISD). Approval is not necessary for changes to river gauge locations which *do not* require computational changes to the hydrologic model, significant changes to WHFS applications, changes to service backup, or significant changes to internet services. Instructions regarding U.S. Geological Survey (USGS) gauge closures, flood stage changes and gauge zero changes can be found in [NWSI 10-940](#). Instructions for new or significantly altered internet products and services are in [NWSI 10-102](#) .

3. Definitions: The following definitions apply to this supplement.

Forecast Point (FP): A FP has an established flood stage, an E-19, E-19a and a river gauge (preferably automated) for which the RFC provides a forecast. It is strongly recommended that it also have a rating table.

Local Forecast Point (LFP): A LFP is a point for which either the RFC provides headwater guidance instead of a regularly modeled forecast, or the WFO has a local procedure or model to

provide forecasts for that point. A LFP should have a river gage (preferably automated), an established flood stage and an E-19a. It is strongly recommended that it also have a rating table.

Although requesting forecast services at ungauged locations is discouraged, exceptions may be allowed. Such requests will be reviewed by CRH/ISD on a case-by-case basis and should follow the same procedure described in this supplement.

Hydrologic Services:

New hydrologic services include establishment of a FP or LFP for which operational information will be provided (e.g., stage, flow, volume, probability of exceedance, probability of non-exceedance). For development of a new or experimental hydrologic product, refer to [NWSI 10-102](#).

Changed hydrologic services include relocation or closure of a FP or LFP for which operational products or other information have been provided, and expansion of current services (e.g., add probabilistic forecasts, change flood only to daily forecasts, change 5-day forecasts to 7-day forecasts). For changes in flood category levels (e.g., minor to moderate), approval is not necessary, but the following actions should be taken:

1. Verify either on site or with EM/City official that the impact change is accurate.
 2. Make changes on AHPS pages and E-19s
 3. Work with the RFC to determine the hydrologic / hydraulic impacts of the change to ensure changes are accurate.
4. Procedure: The following procedure will be followed for request and approval of new hydrologic services or changes to existing hydrologic services.

4.1 Requests: Upon approval of the Meteorologist or Hydrologist in Charge, the HPM or RFC designee requests a change for new or existing NWS hydrologic services by submitting the request via e-mail to cr.crhhydro@noaa.gov. The submitter should expect a response within five working days. Prior to sending the e-mail, the HPM or RFC designee should coordinate the proposed change with the overseeing DAPM/OPL, servicing RFC or affected WFOs, respectively, and other impacted agencies. The e-mail request should contain information specific to the change, including but not limited to:

- FP/LFP affected: river or stream and gauge location name
- Current services: type and frequency of delivery
- Proposed change (e.g., new, expanded, reduced, discontinued; datum, flood stage)
- Reason for change
- Parties affected and coordination completed
- Any associated costs (would result in additional requirements process)
- Affected products
- Proposed effective date

4.1.1 Requests involving Flood Warning Systems: Requests involving the establishment or expansion of flood warning systems which involve a cooperative effort between the community and the NWS, require a signed Agreement (Memorandum of Understanding (MOU)) between the cooperator and the NWS. The MOU process will follow the guidelines specified by the NWS Chief Financial Officer at <http://www.weather.gov/cfo/comptroller/agreeover.htm> .

4.2 Review: ISD will designate a point of contact (POC) to coordinate an evaluation of the request with the offices involved (WFOs, RFCs, CRH divisions, national headquarters, other regional headquarters, etc.) and process the request. If needed, the RFC will provide a technical evaluation of the validity of the request and the resources and time needed to implement it (e.g., new calibration, rating table availability).

4.3 Authorization: Upon approval, the POC will notify the requesting HPM or RFC of the approved services (those requested or alternative services based on available data and forecast procedures).

4.4 Implementation: The HPM or RFC will coordinate the new service or change in service with affected hydrologic partners and customers (e.g., emergency managers, other hydrologic agencies, media), and issue new or updated forms E-19 and E-19a as required in [NWSI 10-924](#) (within 60 days for a new FP/LFP and within 30 days for other significant changes such as discontinuance of a FP/LFP). The WFO should keep a file of request, contact, and process information. Appendix A of this supplement, "Hydrologic Service Change Request Implementation Check List" is provided as a change management tool.

4.5 Public Notification. The public will be notified of the new service or change in service in a Public Information Statement (PNS) following guidelines in Table 1, Section 5 and Section 2.1 of [NWSI 10-1805](#). If the type of service change is not specified in Table 1 of NWSI 10-1805, field offices should consult with a broad cross section of appropriate partner and customer groups to determine the impacts of the change and set an advance lead time which accommodates those impacts. If not specified in Table 1, notification lead time is typically 30 days, but can be more or less depending on customer needs. Field offices will post the PNS to their homepage according to the appropriate national/regional procedures, and may also wish to issue a news release or send letters as appropriate. Additionally, the service change can be added as a statement in a river product Riverpro template for a period of time. This statement would be positioned within the products in compliance with [NWSI 10-922](#).

Appendix A - Hydrologic Service Change Checklist

COORDINATION	CONTACT NAME	CONTACT DATE	COMMENTS
DAPM/OPL			
RFC			
CRH			
Partners (list)			
Primary Backup			
Secondary Backup			
Customers (PNS)	n/a		
Internet Notice (PNS)	n/a		
Other			

SOFTWARE CHANGES	LOCATION	DATE	COMMENTS
WHFS			
AHPS PAGE			
OTHER (LIST)			

DOCUMENTATION	DATE ISSUED	COMMENTS
E-19		
E-19a		
Primary Backup Information		
Secondary Backup Information		

Appendix B – E-19 Change Checklist

Station Location/ID: _____ **Date:** _____

The following changes were made to the attached E-19

- ~ New Forecast Point
- ~ Discontinued Forecast Point
- ~ Change in Datum
- ~ Change in Flood Stage
- ~ Change in Action Stage
- ~ Change in Bankfull
- ~ Change in Flood Category
- ~ Change in Lat/Long
- ~ Change in Phone Number
 - ~ Observer
 - ~ Gage
 - ~ Contact
- ~ Change in Area Code
- ~ Change in Equipment
- ~ Change in Observer
- ~ Change in Observation Type
- ~ Updated Point of Contacts
- ~ Change in Station Name
- ~ Changed Station ID/SHEF ID
- ~ Updated Map
- ~ Changed Telemetry

- ~ Change in Benchmarks
- ~ Change in Conditions affecting flow
- ~ Updated USGS Station Description attached
- ~ New Flood of Record Stage and/or Date
- ~ Updated Crest Stages
- ~ Updated Impact Statements
- ~ Change in Forecast Issuance Stage
- ~ Change in Forecast Service
- ~ Other

Appendix C - Example Public Information Statements (PNS)

Example Public Information Statements (PNS)

1. Example Local PNS for new forecast point

NOUS45 KBOU 170019
PNSBOU

SERVICE CHANGE NOTICE
NATIONAL WEATHER SERVICE DENVER CO
620 PM MDT TUE OCT 16 2007

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS...NOAA WEATHER
WIRE SERVICE /NWS/ SUBSCRIBERS...EMERGENCY
MANAGERS WEATHER INFORMATION NETWORK /EMWIN/
SUBSCRIBERS...NOAAPORT SUBSCRIBERS...NATIONAL WEATHER
SERVICE /NWS/ PARTNERS AND OTHER USERS...AND NWS
EMPLOYEES

FROM: TRESTE HUSE
SERVICE HYDROLOGIST
WFO DENVER/BOULDER COLORADO

SUBJECT: ADJUSTMENT TO SERVICES PROVIDED TO THE DENVER/BOULDER
HYDROLOGIC SERVICE AREA

ON NOVEMBER 15 2007 NOAA/S NATIONAL WEATHER SERVICE /NWS/ OFFICE
SERVING THE DENVER/BOULDER COLORADO AREA WILL /1/ PROVIDE RIVER
FORECAST AND WARNING SERVICES AT A NEW LOCATION AND /2/ ADJUST THE
FLOOD STAGE AT AN EXISTING LOCATION.

...AREA ABOVE FORT COLLINS COLORADO...

THE NEW FORECAST POINT LOCATION IS ON THE CACHE LA POUDE RIVER
AT THE CANYON MOUTH. THE NWS LOCATION IDENTIFIER /NWSLI/ FOR THIS
SITE IS FTDC2. THE NWS IN DENVER/BOULDER WILL START RIVER FORECAST
SERVICE AT THE CANYON MOUTH ON THE CACHE LA POUDE RIVER ON
NOVEMBER 15 2007. THE LOCATION FOR THE RIVER FORECASTS IS THE
GAUGING STATION AT THE CANYON MOUTH 9 MILES NORTHWEST OF FORT
COLLINS. THE FLOOD STAGE FOR THIS LOCATION IS 7.5 FEET.

THE DENVER/BOULDER OFFICE OF THE NATIONAL WEATHER SERVICE WILL
IMPLEMENT ADVANCED HYDROLOGIC PREDICTION SERVICE /AHPS/ FOR THE
CACHE LA POUDE RIVER AT THE CANYON MOUTH BY NOVEMBER 15 2007. THE
DENVER/BOULDER AHPS WEBSITE IS LOCATED AT WWW.WEATHER.GOV/BOU
/INTERNET ADDRESSES ARE ALL LOWER CASE/.

...FORT COLLINS COLORADO AREA...

AN OXBOW LEVEE HAS BEEN BUILT ON THE CACHE LA POUFRE RIVER NEAR LINCOLN STREET IN FORT COLLINS. AS A RESULT...THE CACHE LA POUFRE RIVER IS NOW CONTAINED TO HIGHER LEVELS IN THIS AREA. THE FLOOD STAGE WILL BE CHANGED FROM 11 TO 12 FEET ON NOVEMBER 15 2007 TO REFLECT THESE IMPROVEMENTS. THE NWS DEFINES FLOOD STAGE AS THE RIVER LEVEL THAT BEGINS TO IMPACT LIFE AND/OR PROPERTY...AND FLOOD WARNINGS ARE ISSUED WHEN THE CACHE LA POUFRE RIVER AT LINCOLN STREET IN FORT COLLINS IS FORECAST TO REACH FLOOD STAGE. THE NWS LOCATION IDENTIFIER /NWSLI/ AT THIS LOCATION IS POU2.

BOTH CHANGES ARE IN RESPONSE TO LOCAL USER REQUESTS AND HAVE BEEN COORDINATED WITH STAKEHOLDERS.

SPECIFIC PRODUCTS AFFECTED INCLUDE:

PRODUCT TYPE	WMO HEADER	PRODUCT IDENTIFIER
FLASH FLOOD WATCH – FFA	WGUS65 KBOU	DENFFABOU
FLOOD WARNING - FLW	WGUS45 KBOU	DENFLWBOU
FLOOD STATEMENT - FLS	WGUS85 KBOU	DENFLSBOU
RIVER STATEMENT - RVS	FGUS85 KBOU	DENRVSBOU
HYDROLOGIC OUTLOOK - ESF	FGUS75 KBOU	DENESFBOU

IF YOU HAVE ANY QUESTIONS OR COMMENTS ON THIS CHANGE...PLEASE CONTACT

TRESTE HUSE
SERVICE HYDROLOGIST
NATIONAL WEATHER SERVICE FORECAST OFFICE
325 BROADWAY
BOULDER CO 80305

PHONE: 303-494-3210 EXT. 493
E-MAIL: TRESTE.HUSE@NOAA.GOV

THIS AND OTHER NWS SERVICE CHANGE NOTICES ARE AVAILABLE ONLINE AT

[HTTP://WWW.WEATHER.GOV/OM/NOTIF.HTM](http://www.weather.gov/om/notif.htm)

\$\$
HUSE

2. Example National PNS for change in forecast

NOUS41 KWBC DDHHMM
PNSWSH

SERVICE CHANGE NOTICE 04-##
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
xxxx PM EDT THU JUNE 10 2004

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS...NOAA WEATHER WIRE
SERVICE /NWS/ SUBSCRIBERS...EMERGENCY MANAGERS EATHER
INFORMATION NETWORK /EMWIN/ SUBSCRIBERS...NOAAPORT
SUBSCRIBERS...OTHER NATIONAL WEATHER SERVICE /NWS/
CUSTOMERS AND PARTNERS...AND NWS EMPLOYEES

FROM: THOMAS GRAZIANO
CHIEF...SERVICES BRANCH
HYDROLOGIC SERVICES DIVISION

SUBJECT: ENHANCEMENT TO HYDROLOGIC PRODUCTS ISSUED BY NWS
OFFICES IN ITS CENTRAL REGION...EFFECTIVE AUGUST 24 2004

ON AUGUST 24 AT 1200 COORDINATED UNIVERSAL TIME /UTC/...CERTAIN
NATIONAL WEATHER SERVICE FORECAST OFFICES IN CENTRAL REGION WILL
ISSUE HYDROLOGIC PRODUCTS THAT MAY INCLUDE SPECIFIC RIVER
FORECASTS THROUGH SEVEN DAYS. THE HYDROLOGIC PRODUCTS EXPANDING
THE FORECAST TIME FRAME ARE LISTED IN THE FOLLOWING TABLE.

PRODUCT TYPE	PRODUCT CATEGORY
HYDROLOGIC OUTLOOK	ESF
FLOOD WATCH	FFA
FLOOD WARNING	FLW
FLOOD STATEMENT	FLS
HYDROLOGIC STATEMENT	RVS

AN EXPLICIT LIST OF AFFECTED PRODUCTS AND SAMPLE PRODUCTS ARE
POSTED AT :

WWW.CRH.NOAA.GOV/PUBLIC/PRODUCT_EXAMPLES/INDEX.PHP

THE NATIONAL WEATHER SERVICE WELCOMES PUBLIC FEEDBACK. IF YOU HAVE
ANY QUESTIONS OR COMMENTS ON THIS CHANGE...PLEASE CONTACT:

[NAME]
[TITLE]
[ADDRESS]

PHONE:
E-MAIL:

THIS NOTICE AND OTHER SERVICE CHANGE NOTICES ARE AVAILABLE ONLINE
AT /USE LOWER CASE LETTERS/:

[HTTP://WWW.NWS.NOAA.GOV/OM/NOTIF.HTM](http://www.nws.noaa.gov/om/notif.htm)

\$\$

3. Example local PNS for change in gage location

NOUS43 KDVN 212100
PNSDVN

SERVICE CHANGE NOTICE
NATIONAL WEATHER SERVICE QUAD CITIES IA IL
400 PM CDT WED JUL 10 2004

...CHANGES TO RIVER FORECASTS IN THE ANAMOSA IOWA...AND MANCHESTER
IOWA AREAS...

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS...NOAA WEATHER WIRE
SERVICE /NWS/ SUBSCRIBERS...EMERGENCY MANAGERS WEATHER
INFORMATION NETWORK /EMWIN/ SUBSCRIBERS...NOAAPORT
SUBSCRIBERS...OTHER NATIONAL WEATHER SERVICE /NWS/
CUSTOMERS AND PARTNERS...AND NWS EMPLOYEES

FROM: JAMES BELLES
METEOROLOGIST IN CHARGE
WFO QUAD CITIES...DAVENPORT, IOWA

SUBJECT: CHANGE TO RIVER FORECAST SERVICE IN THE ANAMOSA IOWA...AND
MANCHESTER IOWA AREAS

...ANAMOSA IOWA AREA...

UPON COORDINATION WITH LOCAL...STATE...AND FEDERAL OFFICIALS IN THE
ANAMOSA AREA...THE NWS IN THE QUAD CITIES HAS CHANGED THE LOCATION
FOR RIVER FORECASTS AT ANAMOSA ON THE WAPSIPINICON RIVER. ON JULY
15...2004...AT 1800 COORDINATED UNIVERSAL TIME /UTC/...THE LOCATION
FOR RIVER FORECASTS IN ANAMOSA BECAME THE GAUGING STATION ON SHAW
ROAD ON THE SOUTHEAST SIDE OF TOWN...OR NEAR THE U.S. HIGHWAY 151
BRIDGE. THIS REPLACES THE OLD LOCATION WHICH WAS ON THE ELM STREET
BRIDGE ON THE SOUTHWEST SIDE OF TOWN. THE FLOOD STAGE FOR THIS NEW

LOCATION IS 14 FEET.

THE NWS WILL PROVIDE RIVER FORECASTS AND STATEMENTS...AND WARNINGS AS NECESSARY...WHEN THE RIVER IS AT OR ABOVE...OR IS FORECAST TO BE AT OR ABOVE...13 FEET.

AGAIN...RIVER FORECASTS...AS WELL AS FLOOD WARNINGS AND STATEMENTS...FOR THE ANAMOSA AREA ARE NOW FOR THE SHAW ROAD GAUGE.

...MANCHESTER IOWA AREA...

UPON COORDINATION WITH LOCAL...STATE...AND FEDERAL OFFICIALS IN THE MANCHESTER AREA...THE NWS IN THE QUAD CITIES HAS STARTED RIVER FORECAST SERVICE AT MANCHESTER ON THE MAQUOKETA RIVER. ON JULY 15...2004...AT 1800 COORDINATED UNIVERSAL TIME /UTC/...THE RIVER FORECAST SERVICE BEGAN. THE LOCATION FOR RIVER FORECASTS IN ANAMOSA IS THE GAUGING STATION ON U.S. HIGHWAY 20. THE FLOOD STAGE FOR THIS LOCATION IS 14 FEET.

THE NWS WILL PROVIDE RIVER FORECASTS AND STATEMENTS...AND WARNINGS AS NECESSARY...WHEN THE RIVER IS AT OR ABOVE...OR IS FORECAST TO BE AT OR ABOVE...12 FEET.

THE NATIONAL WEATHER SERVICE WELCOMES PUBLIC FEEDBACK. IF YOU HAVE ANY QUESTIONS OR COMMENTS ON THIS CHANGE...PLEASE CONTACT:

JEFF ZOGG
HYDROLOGIC PROGRAM MANAGER
NATIONAL WEATHER SERVICE FORECAST OFFICE
9050 HARRISON STREET
DAVENPORT IOWA 52806-7326

PHONE: (563) 391-7094 X493
E-MAIL: JEFF.ZOGG@NOAA.GOV

\$\$

JAZ/JEB

4. Example local PNS for addition or implementation of probabilistic forecasts

000

NOUS43 KUNR 011720

PNSUNR

SDZ001-002-012>014-024>032-041>044-046-047-049-072>074-

SERVICE CHANGE NOTICE
NATIONAL WEATHER SERVICE RAPID CITY SD
1117 AM MDT THU NOV 1 20xx

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS...NOAA WEATHER WIRE
SERVICE /NWS/ SUBSCRIBERS...EMERGENCY MANAGERS WEATHER
INFORMATION NETWORK /EMWIN/ SUBSCRIBERS...NOAAPORT
SUBSCRIBERS...OTHER NATIONAL WEATHER SERVICE /NWS/
CUSTOMERS AND PARTNERS...AND NWS EMPLOYEES

FROM: DAVID CARPENTER
METEOROLOGIST IN CHARGE
WFO RAPID CITY SD

SUBJECT: ADDITION OF PROBABILISTIC FORECASTS TO RIVER FORECASTS IN
WESTERN SOUTH DAKOTA

BEGINNING 22 SEPTEMBER 20XX...WFO RAPID CITY WILL IMPLEMENT AHPS
PROBABILISTIC FORECASTS FOR THE BELLE FOURCHE RIVER NEAR ELM
SPRINGS...THE MOREAU RIVER NEAR FAITH...THE CHEYENNE RIVER AT
PLAINVIEW AND THE CHEYENNE RIVER NEAR WASTA. ADVANCED
HYDROLOGIC PREDICTION SERVICE OR AHPS IS THE MODERNIZATION OF
HYDROLOGIC SERVICES TO IMPROVE FLOOD FORECASTS AND WATER
RESOURCES INFORMATION. GRAPHICAL INFORMATION IS AVAILABLE ON THE
INTERNET AT [HTTP://WWW.WEATHER.GOV/](http://www.weather.gov/) UNDER THE WATER TAB.
ADDITIONALLY...A HYDROLOGIC OUTLOOK TEXT PRODUCT...CATEGORY
ESF...WILL BE ISSUED AT THE END OF EACH MONTH WITH PROBABILISTIC
FORECASTS FOR THESE NEW SITES AND FOR THE EXISTING PROBABILISTIC
FORECAST POINT ON THE LITTLE MISSOURI RIVER AT CAMP CROOK.

INFORMATION PROVIDED ON THE INTERNET INCLUDES:

- GRAPHS SHOWING CURRENT AND FORECAST RIVER LEVELS
- GRAPHS SHOWING CHANCES OR PROBABILITIES OF EXCEEDING
CERTAIN LEVELS...FLOW AND VOLUME
- IMPACT INFORMATION WHICH IS A DESCRIPTION OF WHAT HAPPENS
WHEN THE WATER REACHES A CERTAIN LEVELS
- A MAP AND SOMETIMES PHOTOGRAPHS SHOWING THE LOCATION OF
THE GAGE

THE NATIONAL WEATHER SERVICE WELCOMES PUBLIC FEEDBACK. IF YOU HAVE
ANY QUESTIONS OR COMMENTS ON THIS CHANGE...PLEASE CONTACT:

MELISSA SMITH
HYDROLOGIC PROGRAM MANAGER
NATIONAL WEATHER SERVICE FORECAST OFFICE
300 EAST SIGNAL DRIVE

RAPID CITY SD 57701-3800

PHONE: 605-341-9271

E-MAIL: MELISSA.SMITH@NOAA.GOV

\$\$