

Experimental Short Range River Forecast Uncertainty (AHPS) Product Description Document (PDD)

Part 1 - Mission Connection

a. Product Description - A graphical hydrograph depiction of short- to medium-range river forecast uncertainty. The product displays uncertainty bounds for the river forecast in the context of high and low water thresholds used in AHPS.

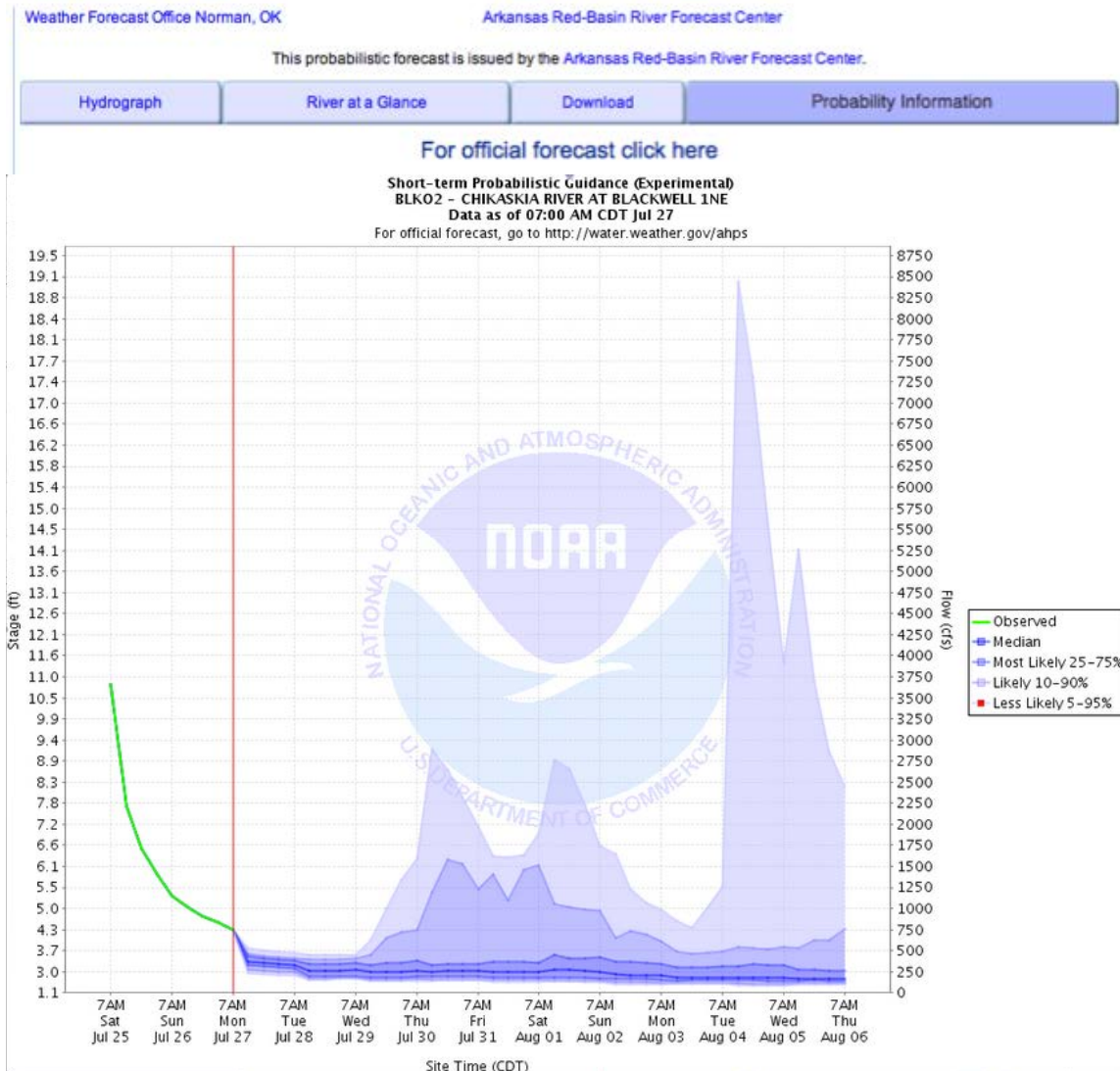
b. Purpose – Providing uncertainty bounds for hydrologic forecasts at all time scales is one of the most pressing needs of operational hydrologic forecasting [NRC report (2006), CFI survey (2008), multiple NWS service assessments]. NOAA's National Weather Service (NWS) is implementing a short- to long-range Hydrologic Ensemble Forecast Service (HEFS) to address this need. The HEFS extends the existing hydrologic ensemble services to include short- to medium-range forecasts, incorporate additional weather and climate information, and better quantify uncertainty in hydrologic forecasting. It provides, at forecast time horizons of less than a day to more than a year, ensemble forecasts and verification products that can be tailored to users' needs. This experimental product is the first attempt to convey uncertainty in NWS short-range river forecasts.

c. Audience - General public, emergency managers, water managers and stakeholders, electronic media, NOAA, NWS, USACE, FEMA and other federal, state, and local government agencies.

d. Presentation Format -

<http://water.weather.gov/ahps2/hydrograph.php?wfo=oun&gage=blko2>

“Probability Information” tab



e. Feedback Method – proposed URL: <http://www.nws.noaa.gov/survey/nws-survey.php?code=SRRFCSTUNC>

Technical and policy questions regarding this experimental forecast product may be addressed to:

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Part II – Technical Description

a. Format and Science Basis - The HEFS project began as an effort to provide

more information regarding forecast uncertainty in hydrologic forecasts at all time scales. Internal assessments, outside research entities, and national/local level stakeholders such as the United States Army Corps of Engineers (USACE) and the Federal Emergency Management Agency (FEMA), have expressed a strong desire for this information. A human engineering study, completed in 2008, provided recommendations regarding the most effective means to communicate this information. The experimental product presented here largely reflects the study recommendations, along with input from previous experimental ensemble products.

b. Availability - The experimental product will be accessible at <http://water.weather.gov/ahps2/hydrograph.php?wfo=oun&gage=blko2> "Probability Information" tab