

**National Water Center's Experimental National Hydrologic Discussion
Product Description Document
March 2023**

Part I – Mission Connection

a. Product Description

The Office of Water Prediction's (OWP's) National Water Center (NWC) has identified an operational need for a real-time national product to discuss a variety of short and medium range (Days 1-10) observed and modeled hydrologic guidance for the United States.

The experimental National Hydrologic Discussion (NHD) informs users of the current hydrologic conditions at the continental scale, integrates and discusses hydrologic guidance from various sources, and provides additional information on impacts to communities along streams and rivers.

No changes have been made to the Experimental NHD from the version provided during the July 5, 2022 through December 31, 2022 comment period.

b. Purpose

The purpose of this product is to discuss the forecast guidance and analyses for hydrologic events in the United States to form a more holistic picture of current and forecast hydrologic concerns.

c. Audience

The intended audience of this final product will be internal and external surface water information users such as National Weather Service (NWS) River Forecast Centers (RFCs) and Weather Forecast Offices (WFOs), NWS regions, National Centers for Environmental Prediction (NCEP) centers, and NWS core partners such as United States Geological Survey (USGS), Federal Emergency Management Agency (FEMA), U.S. Army Corps of Engineers (USACE), the National Ocean Service (NOS), and National Integrated Drought Information System (NIDIS).

d. Presentation Format

The experimental NHD is routinely issued once daily around 1530 Coordinated Universal Time (UTC). Users are able to view the NHD as a text product. During the experimental phase, the product is available via the following landing page: <https://www.weather.gov/owp/operations>.

e. Feedback Method

The NWC is seeking to improve the availability and quality of its products and services based on user feedback. Comments regarding the experimental NHD should be provided by June 30, 2024, through the electronic survey via the link provided below:

https://www.surveymonkey.com/r/Exp_NatHydrologicDiscussion_2022

Comments and questions may also be submitted to the NWC at nws.nwc.ops@noaa.gov.

Part II – Technical Description

a. Format and Science Basis

This experimental product is intended to be part of an operational product suite, which provides context to state-of-the-science forecast guidance and analyses, inundation information, and additional information that augments services provided at local, regional, and national levels for hydrologic events in the United States. The format is a text product with relevant hyper links to supporting definitions, references, including observations, guidance, and graphics.

b. Product Availability

The NHD will be routinely issued once daily (around 1530 UTC) until the NWC Water Prediction Operations Division (WPOD) is operating at a 24/7 cadence. At that time the NHD will be routinely issued twice daily (morning 1530 UTC and evening 2100 UTC).

c. Additional Information

Sample copy of the experimental NHD to be made available on AWIPS.

National Hydrologic Discussion #0040
NWS National Water Center Tuscaloosa AL
Issued 9:15 AM CST Wednesday, February 9, 2022
Valid 02090600Z - 02190600Z

Synopsis...

River rises and localized flooding possible in the [Alaska Panhandle...](#) Minor river flooding continues across portions of the [Ohio River Valley](#) and the [Southeast...](#)

Discussion...

Alaska Panhandle...

An active weather pattern continues to bring heavy rain to the Alaska Panhandle with an additional 3 - 5"+ expected through day 2 (Thu). Rainfall amounts of 2 - 3"+ over the past 2 days, combined with snowmelt due to rising snow levels (2,500 ft for the northern Panhandle to 8,000 ft in the southern Panhandle), have primed the soils and elevated streamflows. Excessive runoff resulting in rises on streams along with localized urban flooding impacts are possible, especially in areas with poor drainage.

Ohio River Valley...

Minor river flooding is ongoing for portions of the lower Ohio River (IL/IN) between Shawneetown, IL and Louisville, KY. Most forecast locations will continue to crest through the end of the week. Unimpeded recessions should continue along the Ohio River, as dry

conditions prevail into next week. However, smaller basins could see rises early next week (MMEFS) particularly along the Wabash River basin as 0.5 - 0.75" of SWE (NOHRSC) melts out across portions of the region over the next several days keeping many of those rivers and streams elevated through next week.

Southeast...

Minor river flooding continues across portions of the Pascagoula (MS), Alabama (AL), Escambia (FL), Calcasieu (LA) and Apalachicola (FL) river basins. Most forecast locations have crested, with the remainder expected to crest this week. Dry weather over the next 7 days will allow for continued unimpeded recessions.

Recent runs of the National Water Model Medium Range Forecast have started to hint at the potential for widespread bankfull and higher flows across portions of the region late next week (days 8 - 10). However, uncertainty in the magnitude and location of potential impacts remains given the extended forecast period.

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