Experimental Long Range River Flood Risk National Webpage (AHPS)
**Product Description Document (PDD)**
February 11, 2013

Part 1 - Mission Connection

 a. <u>Product Description</u> - A national scale map with drill down capabilities on AHPS which routinely displays the long range (3-month) risk of minor, moderate and major river flooding locations where probabilistic forecasts are produced.

 b. <u>Purpose</u> - In recent years, stakeholders and Federal water partners, including FEMA and the US Army Corps of Engineers, have expressed a strong desire for nationally consistent, long-range flood risk information displayed on a national map. This objective assessment of long range flood risk is based on probabilistic river forecasts which were previously available only at individual forecast points (example), without a means of easily assessing the risk at these forecast locations. To address this issue, the NWS has improved decision support services with a new "Experimental National Long Range River Flood Risk" web page, available at: http://water.weather.gov/ahps/long_range.php. Here stakeholders can access a single, nationally consistent map depicting the 3-month risk of minor, moderate and major, river flooding. This risk information is based on NWS Ensemble Streamflow Prediction (ESP) forecasts which are generated for thousands of river and stream forecast locations across the nation. With this new capability, a stakeholder, such as a local emergency manager, can quickly view flood risk at the levels which are known to affect their specific area of concern. These enhancements improve the value of the National Hydrologic Assessment, by clearly communicating flood risk at the local level.

c. <u>Audience</u> - General public, emergency managers, water managers, electronic media, NOAA, NWS, NASA, FEMA and other federal, state, and local government agencies.

d. <u>Presentation Format</u> - http://water.weather.gov/ahps/long_range.php

 "Experimental Long Range River Flood Risk" tab
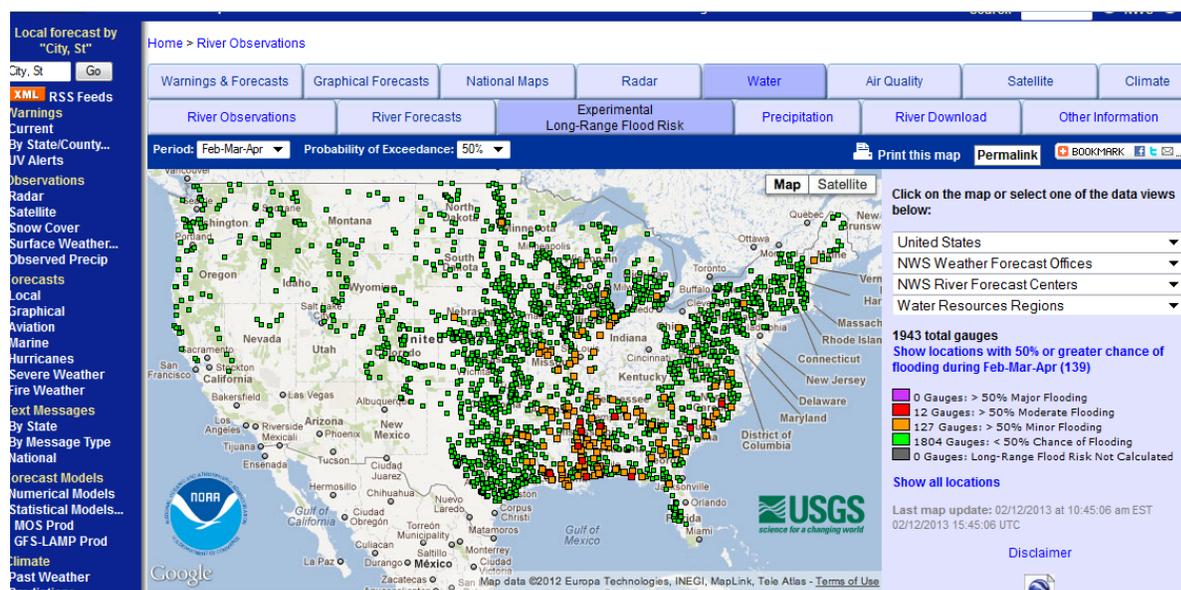
e. <u>Feedback Method</u> – proposed URL: http://www.nws.noaa.gov/survey/nws-survey.php?code=lro

Technical and policy questions regarding this experimental forecast product may be addressed to:
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Part II – Technical Description

a. <u>Format and Science Basis</u> - The Long Range River Flood Outlook project began as an effort aimed at strengthening the Spring Flood Outlook from the national and regional perspectives. In recent years, NWS leadership and national level stakeholders, such as FEMA and the USACE, expressed a strong desire for a nationally consistent map displaying long range flood risk at the thousands of AHPS forecast points. The requirement was to develop an objective assessment of long range flood risk based on probabilistic river forecasts. This information is currently available for river locations in individual AHPS graphics, and not as geospatial display. As the NWS transitions to providing routine impact based decision support, RFCs serving the Mississippi Basin recognized that an integrated geospatial display of the Ensemble Streamflow Prediction (ESP) based long range flood risk would greatly facilitate their stakeholder engagement both within their areas of responsibility and when providing decision support to partners across the RFC boundaries. This past spring, 5 RFCs collaborated to produce a multi-RFC map of long range risk in the Mississippi Basin, which was a very valuable briefing tool and well received by national and regional level stakeholders. By leveraging the existing ESP information, the national geospatial display of long range river flood risk provides an assessment of flood risk on the national scale.

b. <u>Availability</u> - The experimental product will be accessible at water.weather.gov/ahps/long_range.php