UNCERTAINTIES AND LIMITATIONS FOR USE OF FLOOD-INUNDATION MAPS

Although the flood-inundation maps represent the boundaries of inundated areas with a distinct line, some uncertainty is associated with these maps. The flood boundaries shown were estimated based on water stages, water surface elevations, and water discharges at selected USGS streamgages. Water-surface elevations along the stream reaches were estimated by steady-state hydraulic modeling, assuming unobstructed flow, and using streamflow and hydrologic conditions anticipated at the USGS streamgages. The hydraulic model reflects the land surface characteristics and any bridge, dam, levee, or other hydraulic structures existing as of December 2011. Unique meteorological factors, timing, and duration of peak flood stage may lead to deviations in the water-surface elevations and water-surface inundation areas. Flood-inundation maps may be used as a guidance tool for emergency planning, but should not be used for navigation, regulatory, or other legal purposes. Changes in the modeled stream reaches or structures existing as of December 2011, and unique meteorological factors (timing and distribution of precipitation) may cause actual streamflows along the modeled reach to vary from those assumed during a flood, which may lead to deviations in the water-surface elevations and water-surface inundation areas. Flood-inundation maps may be updated due to unusual flood conditions such as changes in the floodplain elevation or markings, flood control modifications, or changes in the land use or construction of structures. Floodplain elevations along main stream reaches in this study were estimated by the USGS using steady-state modeling methods. The accuracy of the floodwater extent portrayed on these maps will vary with the accuracy of the topographic data and the modeling methods used.

If this series of flood-inundation maps will be used in conjunction with National Weather Service (NWS) river forecasts, additional uncertainty may be introduced due to the inherent limitations of forecast models to estimate the quantity and timing of water flowing through selected stream reaches in the United States. These forecast models (1) estimate the amount of runoff generated by precipitation and snowmelt, (2) simulate the transport and conveyance of runoff along the stream reach, and (3) product the flow and water surface elevation for the stream at a given location (AHPS forecast point) throughout the forecast period (every 6 hours and 3 to 5 days out in many locations). For more information on AHPS forecasts, please see: http://water.weather.gov/ahps/pcpn_and_river_forecasting.pdf.

DISCLAIMER

Inundated areas shown should not be used for navigation, regulatory, permitting, or other legal purposes. The USGS provides these maps "as-is" for a quick reference, emergency planning tool but assumes no legal liability or responsibility resulting from the use of this information.

UNIQUE MARKERS AND SYMBOLS USED IN THE FLOOD-INUNDATION MAPS

- Flood-inundation area
- USGS streamgage and number
- Limits of study area
- Flow arrow—indicates direction of water flow
- U.S. route marker
- State road marker