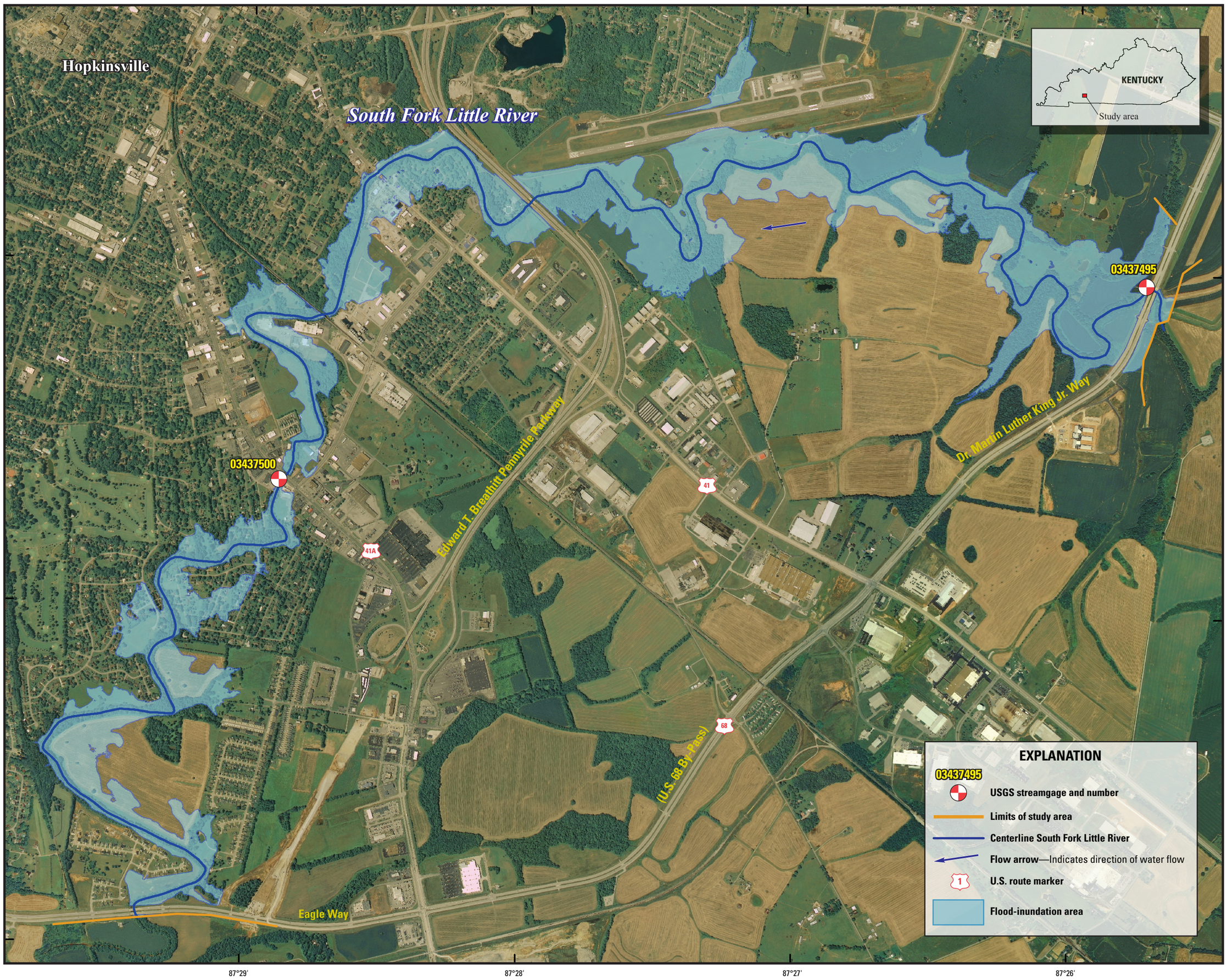
U.S. Department of the Interior
U.S. Geological Survey

Prepared in cooperation with the
City of Hopkinsville, Kentucky

Scientific Investigations Map 3242
Sheet 12 of 13
Pamphlet accompanies map



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 streamflows at selected USGS streamgages. Water-surface elevations along the stream reaches were estimated by steady-state hydraulic modeling, assuming unobstructed flow, and using streamflows and hydrologic conditions anticipated at the USGS streamgage(s). The hydraulic model reflects the land-cover characteristics and any bridge, dam, levee, or other hydraulic structures existing as of August 2012. 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 inundation boundaries shown. Additional areas may be flooded due to unanticipated conditions such as: changes in the streambed elevation or roughness, backwater into major tributaries along a main stem river, or backwater from localized debris or ice jams. The accuracy of the floodwater extent portrayed on these maps will vary with the accuracy of the digital elevation model used to simulate the land surface. Additional uncertainties and limitations pertinent to this study are described in the document accompanying this set of flood inundation map plates.

If this series of flood-inundation maps will be used in conjunction with National Weather Service (NWS) river forecasts, the user should be aware of additional uncertainties that may be inherent or factored into NWS forecast procedures. The NWS uses 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 movement of floodwater as it proceeds downstream, and (3) predict the flow and stage (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.

1 0.5 0 1 MILE

1 0.5 0 1 KILOMETER

NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88)

Flood-inundation Map for Hopkinsville, Kentucky Corresponding to a Stage of 21.00 Feet and an Elevation of 541.00 Feet (NAVD 88) at U.S. Geological Survey Streamgage Number 03437495 South Fork Little River at Highway 68 By-Pass

By
Jeremiah Lant
2012

Projection: Lambert Conformal Conic
State Plane Coordinate System, Kentucky, FIPS, 1600
North American Datum of 1983 (NAD83)
Orthophotography from National Agriculture Imagery Program, 2006

Suggested citation:
Lant, J. G., 2012, Flood-inundation maps for an 8.9-mile reach of the South Fork Little River at Hopkinsville, Kentucky: U.S. Geological Survey Scientific Investigations Map 3242, 13 sheets, 8-p. pamphlet.

Publishing support provided by: Columbus Publishing Service Center
Manuscript approved for publication December 26, 2012

For more information concerning this publication, contact:
Director, Kentucky Water Science Center
U.S. Geological Survey
9818 Bluegrass Parkway
Louisville, KY 40299
(502) 493-1900

Or visit the Kentucky Water Science Center Web site at:
http://ky.water.usgs.gov/

This report is available at: *http://pubs.usgs.gov/sim/3242/.*

Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government

This and other USGS information products are available at:
http://store.usgs.gov/
U.S. Geological Survey, Box 25286
Denver Federal Center, Denver, CO 80225

To learn about the USGS and its information products visit
http://www.usgs.gov/
1-888-ASK-USGS