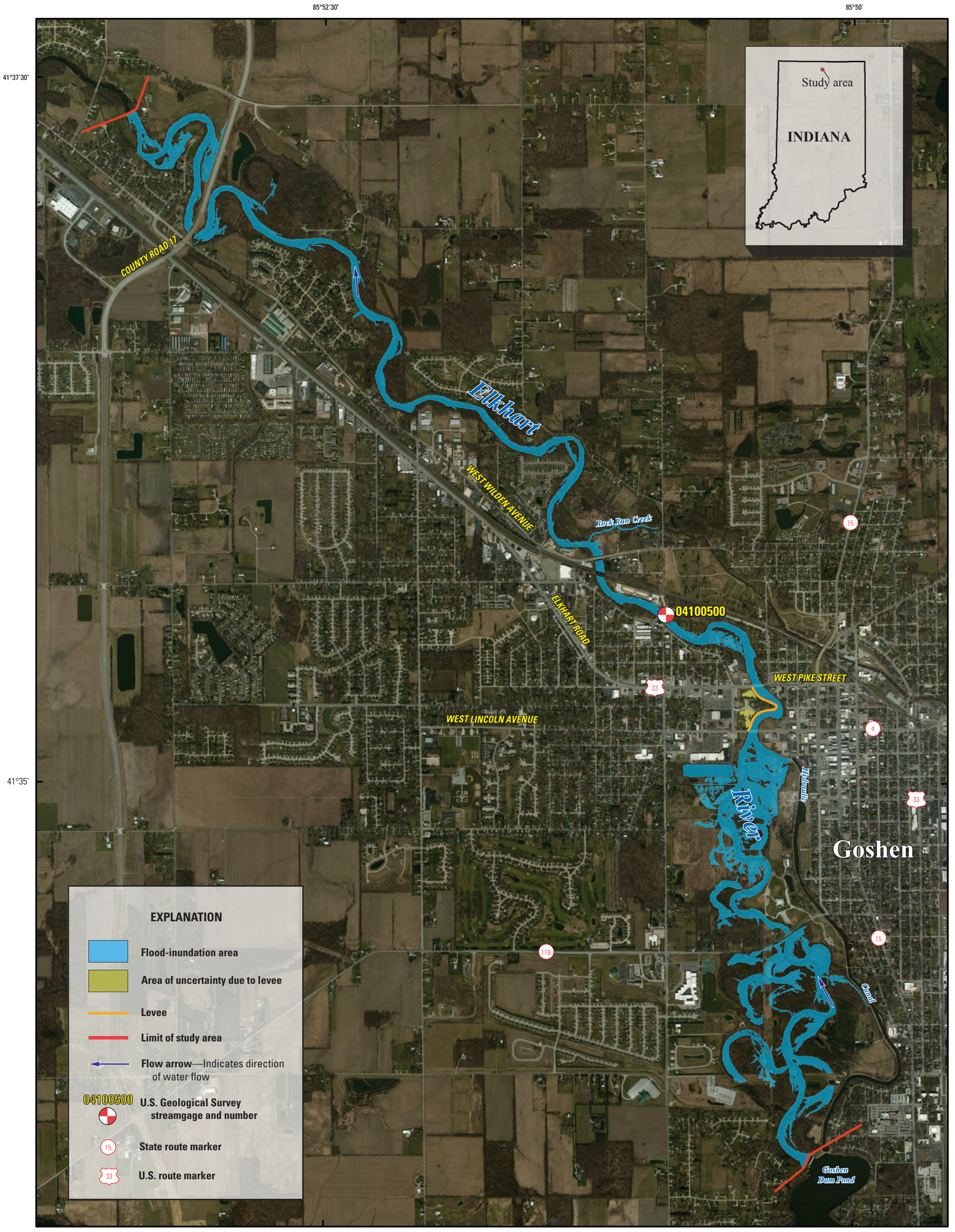
U.S. Department of the Interior
U.S. Geological Survey

Prepared in cooperation with the
Indiana Office of Community and Rural Affairs

Scientific Investigations Map 3269
Sheet 1 of 9

Pamphlet accompanies map



UNCERTAINTIES AND LIMITATIONS REGARDING 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 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 October 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 may be described elsewhere in this report.

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 (and water-surface elevation) for the stream at a given location (Advanced Hydrologic Prediction Service (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 the Elkhart River at Goshen, Indiana, Corresponding to a Stage of 5.00 Feet and an Elevation of 774.03 Feet (NAVD 88) at U.S. Geological Survey Streamgage Number 04100500 on the Elkhart River

By

Kellan R. Strauch

2013

Projection: Indiana State Plane Coordinate System Eastern Zone
Horizontal coordinate information is referenced to the North American Datum of 1983

Orthophotography from Esri ArcGIS World Imagery,
2011, available at *http://goto.arcgisonline.com/maps/World_Imagery*

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