***Purpose of this template***

***This template provides guidance for the additional documentation that will be delivered as part of the PDF map deliverable from the Web mapping application. This is not a replacement for the SIM text but rather a summary for the convenience of the mapping application user. Please summarize this information from the SIM text and check for consistency.***

***This document is not intended to be followed word for word—if models, techniques, and conditions differ significantly, you should revise the documentation as necessary and flag the modified sections for SPN editors so they can pay close attention to those changes during their reviews. Also, the wording of the headings cannot be changed; do the best you can to make your text fit the content suggested by the headings, but slight departures are acceptable if your study was unusual. Otherwise, the organization and wording used in this report has been approved by SPN to expedite review and processing. Although ANY part can be revised as needed, the more obvious decision points have been italicized and bolded in blue for consideration by the author. Please keep the word limits in mind to accommodate the mapper formatting requirements. If text is longer than the specified character limit, it may be sent back to you for revisions.***

***The character limits listed are HARD LIMITS. Owing to the automated nature of the print products, the areas provided for each topic are fixed. If you exceed the limits, your file will be returned for further editing.***

**UNCERTAINTY AND USE LIMITATIONS -- fixed text**

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 gage heights at selected USGS streamgages. Water-surface elevations along the stream reaches were estimated by steady-state hydraulic modeling, assuming unobstructed flow and using discharges and hydrologic conditions anticipated at the USGS streamgage(s). The hydraulic model reflects the land-cover characteristics of any bridge, dam, levee, or other hydraulic structure existing in 20XX. Unique meteorological factors (timing and distribution of precipitation) may cause actual discharges along the modeled reach to vary from assumed conditions during a flood and lead to deviations in the water-surface elevations and inundation boundaries shown. Additional areas may be flooded due to unanticipated backwater from major tributaries along the main stem or from localized debris or ice jams.

**STUDY AREA -- limit 375 characters, including spaces**

The City of Harrisburg, Pennsylvania is situated along the east bank of the Susquehanna River and has an estimated population of 50,000 (U.S. Census Bureau data, 2010). The city and neighboring communities have historically experienced severe flooding. Major floods occurred in 1889, 1936, 1972, and most recently in 2011.

**PURPOSE AND SCOPE -- limit 450 characters, including spaces**

The purpose of this document is to describe the development of a library of estimated flood-inundation maps for an approximate 25-mile reach on the Susquehanna River near Harrisburg, Pennsylvania, and to make these maps available to emergency workers and the public on the USGS Flood Inundation Mapping Science Web site available at <http://water.usgs.gov/osw/flood_inundation/>.

**MAP SOURCES -- will be auto populated with report information**

Detailed source data for this map series can be found in "Flood-Inundation Maps for the Susquehanna River near Harrisburg, Pennsylvania, 2013” <report series???> at: http://pubs.usgs.gov/####/####

 **HYDROLOGIC DATA -- limit 615 characters, including spaces**

The study area hydrologic network consists of a streamgage with more than 80 years of recording information and five submersible pressure sensors that were temporarily deployed in the study reach to record water level and (or) barometric pressure during the 2011 flood. Gage height is measured continuously at the Susquehanna River at Harrisburg streamgage from which continuous records of streamflow are computed and were used to develop water-surface elevations in the hydraulic model.

**HYDRAULIC MODEL -- limit 600 characters, including spaces**

The hydraulic model was calibrated to the sensor and gage data collected during the2011 flood and to the streamgage and high-water marks from the floods in 1972 and 2011. Verification of the model was conducted by analyzing peak storm events from 1936 and 1996-2010 and the most current stage-discharge relation (rating 19.0) at the Susquehanna River at Harrisburg streamgage.

**WATER-SURFACE PROFILES -- limit 450 characters, including spaces**

Profiles were developed for 27 gage heights at 1-foot (ft) intervals ranging from 11 to 37 ft and for a gage height of 33.27 ft (peak-of-record flood event) as referenced to a local gage datum at the Susquehanna River at Harrisburg streamgage (station number 01570500), corresponding to elevations between 300.3 and 326.3 ft NAVD88, respectively.

**FLOOD-INUNDATION MAPS -- limit 460 characters, including spaces**

These maps were created in a GIS by combining the water-surface profiles and digital elevation model data. The digital elevation model data have an associated vertical accuracy meeting the requirements of the 1998 National Standard for Spatial Data Accuracy (NSSDA) at the 95-percent confidence interval (1.96 x root-mean-squared-error (RMSE)) – and a maximum permissible RMSE for 95-percent of the horizontal check points of 5.0 feet or better ).

**DISCLAIMER -- fixed text**

Inundated areas shown should not be used for navigation, regulatory, permitting, or other legal purposes. The IWRSS provides these maps as a quick reference and emergency planning tool but assumes no legal liability or responsibility for any direct, indirect, incidental, consequential, special, or exemplary damages or lost profit resulting from the use or misuse of this information.