

Appendix 1. Limitations Regarding Use of Flood-Inundation Maps

Inundated areas and selected points of interest should not be used for navigation, regulatory permitting, or other legal purposes. The U.S. Geological Survey provides the flood-inundation maps in this report “as-is” for a quick-reference, emergency-planning tool but assumes no legal liability or responsibility resulting from the use of this information. Actual areas inundated will depend on the particular failure mechanism and preexisting flood conditions and may differ from areas shown on the maps (Federal Energy Regulatory Commission, 2007). For this reason, isolated inundation areas (those disconnected from the main inundation area) were included on the flood-inundation maps. In some locations, the sunny-day inundation area may extend slightly beyond the 75-percent PMF inundation area because of necessary differences in the placement of levees between the two model scenarios for the same dam.

Although the flood-inundation maps represent the boundaries of inundated areas with a distinct line, some uncertainty is associated with these maps. Water-surface elevations along the stream reaches were estimated by unsteady-flow hydraulic modeling, assuming unobstructed flow, and using measured streamflows and anticipated hydraulic boundary conditions. The hydraulic models include the land-cover characteristics and any bridge, dam, levee, or other hydraulic structures existing in 2013. Features such as pipelines, transmission lines, and footbridges were outside the scope of this report and were not included in the hydraulic model. 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 because of 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 elsewhere in this report.

