

Appendix F: Updated Report Documentation

In order to facilitate IWRSS oversight of the quality of the maps, all submissions shall be accompanied by documentation. The documentation shall include the following citations, and shall meet the minimum documentation requirements for each citation.

Purpose and Scope

A general description of the purpose of the study shall be provided, which shall include a description of the type of study completed: map library, event map, historical map or dam break EAP map. A general description of the scope of the study shall be provided.

Disclaimer, uncertainties, use limitations, and accuracy assessment for maps

The disclaimer shall incorporate the default IWRSS disclaimer and the default IWRSS use limitations. Any applicable project specific use limitations shall be incorporated into the documentation. For Official Use Only (FOUO) data shall be clearly identified, and the conditions for which FOUO data may be released to the public shall be disclaimed.

A generalized accuracy assessment of the mapping products shall be developed based upon the horizontal and vertical mapping error and any additional project specific information. Standardized IWRSS guidance shall be provided on how mapping products, classified by categorical horizontal and vertical accuracy, may be applied by users. The accuracy assessment shall include a list of streamgage(s) that may be considered to be connected to the map and used for event mapping, and disclose the elevations that depart from a measured rating curve at the specified streamgage(s).

Study area description, including flood risk analysis of impacts to life and property

A generalized study area description shall be included which includes a description of the geographic location of the study, a description of the study river reach, the streamgage(s) that are tied to the study, the elevations mapped by the study, a list of communities included within the study reach, the flood history and significant flood impacts within the study reach.

Elevation data source, datum and nominal accuracy

A description of the quality of the streamgage vertical datum shall be provided for any streamgage(s) that are associated with the mapping products. The description shall include the following items: the date of the last streamgage elevation survey, source of the streamgage survey, survey technique, survey datum, methods used to convert the survey datum and nominal accuracy of the survey.

A description of the quality of the terrain model source(s) shall be provided. The description shall include: a description of the data source, acquisition date, publication date, vertical/horizontal nominal accuracy, native horizontal datum/projection, native vertical datum, format (raster or TIN), DEM cell size (if applicable).

A description of the quality of survey information used to develop the hydraulic and/or terrain model geometry shall be provided. The description shall include the following items: a description of the data source, survey acquisition date, vertical/horizontal nominal accuracy, native horizontal datum/projection, and native vertical datum.

A description of the quality of other information, such as as-built plans, used to develop the hydraulic and/or terrain model geometry shall be provided. The description shall include the following items: a description of the data source, acquisition date, publication date, vertical/horizontal nominal accuracy, native horizontal datum/projection, native vertical datum and format.

Hydrologic modeling, methods (model and version), accuracy assessment, and calibration procedures

A description of the hydrologic model (if applicable) shall include a discussion of the model version, model technique, and scale. The source of the model geometry, and any updates to the source geometry shall be described. Major assumptions made during the modeling analysis shall be described. Model calibration and validation techniques, assumptions and results shall be described. An error analysis shall be published and based upon on the best available data. A description of the hydrologic analysis shall include a discussion of the flows loaded into the hydraulic model, a discussion of the location and assumptions made at the flow load points, an analysis of the local flow contributions within the study area extent, and the evaluation of backwater influences on the study extent.

Hydraulic modeling, methods (model and version), calibration procedures and validation results

A description of the hydraulic model shall be provided, which will include the version of the model, the model dimension (1D or 2D), and the mode of operation (steady or unsteady flow). The source of the model geometry, and any updates to the source geometry shall be described. The assumptions and justification for selection of a one- or two dimensional analysis and a steady or unsteady mode of operation shall be described. Major assumptions made during the modeling analysis, including boundary conditions, and modeling approaches for levees or other storage areas (if applicable) shall be described. For flood libraries or events maps connecting inundation data to forecast points, a rating curve analysis shall be developed to compare the model results to the operational rating curve. Hydraulic model calibration and validation techniques, assumptions and results shall be described. An error analysis shall be published and based upon on the best available high-water mark observations and available streamgage data.

Water-surface profile development process and mapping methods

A description of the GIS techniques used to convert the hydraulic model profiles into inundation polygons and optional depth grids shall be included. A description of terrain model post-processing shall be provided.

Coordinate system & projection & horizontal datum

Documentation shall be provide to demonstrate that all mapping data have been submitted in a standard IWRSS geographic coordinate system (NAD83 based system). The projection shall be identified, and the NAD83 horizontal datum shall be disclaimed.

List of data/products developed and delivered

A list of the standard IWRSS product deliverables and optional IWRSS deliverables shall be included.

List of references cited

A list of references cited throughout the documentation shall be published in standard format.