

Summary of Changes for Appendix C

Guidance for Riverine Flooding Analyses and Mapping

The Summary of Changes below details updates to Appendix C, which were made subsequent to the publication of this appendix in April 2003. These changes represent new or updated guidance for Flood Hazard Mapping Partners. Appendix C was reformatted to be consistent with the Mapping Activity Statements and the study workflow steps in the Mapping Information Platform (MIP). As a result, a summary of the new and updated information is presented below for each major section rather than updates incorporated into the April 2003 layout.

In addition to the changes outlined below, the revised Appendix C summarizes requirements at the beginning of each section and later describes the analysis procedures in greater detail. The use of the word “must” has replaced the word “shall” consistent with other updates to Guidelines and Specifications.

The major changes in the hydrologic analyses, hydraulic analyses, floodway analyses and floodplain boundary sections are summarized in the table below.

Date	Affected Section/ Subsection	Description of Changes
November 2009	C.1 Introduction	Study levels formulated for High Levels Solution is incorporated. More details are provided on the documentation required for flood insurance studies than in the April 2003 version of Appendix C.
November 2009	C.2 Hydrologic Analyses	<p>Plus or minus one standard error (68-percent confidence interval) is adopted for determining statistical significance rather than the 90- and 50-percent confidence intervals (as used in the April 2003 version) in order to reduce the subjective judgment in this process.</p> <p>The Hydrologic Analysis Requirements that must be met are first summarized and then the hydrologic procedures are described.</p> <p>For rainfall-runoff models, each hydrologic process is described in detail. The processes include rainfall, rainfall losses, sub-basin responses, routing, input hydrographs, channel and reservoir storage and calibration of hydrologic models.</p>

Date	Affected Section/ Subsection	Description of Changes
November 2009	C.3 Hydraulic Analyses	<p>The Hydraulic Analysis Requirements that must be met are summarized first and then the hydraulic procedures are described.</p> <p>Hydraulic modeling process for 1-D steady flow, 1-D unsteady flow, and 2-D models are described in detail. The hydraulic processes include a discussion of cross sections, topographic data, hydraulic structures, non-conveyance area, loss coefficients, initial and boundary conditions, split flows, supercritical flow and calibration of hydraulic models.</p>
November 2009	C.4 Floodway Analyses	<p>The Floodway Analysis Requirements that must be met are summarized first and then the floodway procedures are described.</p> <p>New sections are provided on floodway analyses for steady state and unsteady state modeling including the use of 2-D models. More detailed is provided on floodway analyses for unsteady flow modeling than in the April 2003 version of Appendix C.</p> <p>An example is provided for a floodway data table for a link-node type model.</p>
November 2009	C.6 Floodplain Boundaries	<p>The Floodplain Boundary Determination Requirements that must be met are summarized first and then the floodplain boundary determinations for 1-D and 2-D models are described.</p>