

Guidance for Flood Risk Analysis and Mapping

Technical Support Data Notebook and Flood Elevation Determination Docket

February 2019



FEMA

Requirements for the Federal Emergency Management Agency (FEMA) Risk Mapping, Assessment, and Planning (Risk MAP) program are specified separately by statute, regulation, or FEMA policy (primarily the Standards for Flood Risk Analysis and Mapping). This document provides guidance to support the requirements and recommends approaches for effective and efficient implementation. Alternate approaches that comply with all requirements are acceptable.

For more information, please visit the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping webpage (www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping). Copies of the Standards for Flood Risk Analysis and Mapping policy, related guidance, technical references, and other information about the guidelines and standards development process are all available here. You can also search directly by document title at www.fema.gov/library.

Table of Revisions

The following summary of changes details revisions to this document subsequent to its most recent version in May 2016.

Affected Section or Subsection	Date	Description
Sections 3 and 4.0	February 2019	<p>Changes made to Subsections 3.1, 3.2, and 4.1 to reference Standards 620, 621, and 622 as well as the guidance documents in which these standards are addressed, and to indicate that templates are accessible through the Flood Risk Templates and Resources page and the password-protected RMD SharePoint Portal.</p> <p>Minor updates to Section 4.0 to clarify submittal and archival of the FEDD and TSDN related to interim FEDD file reviews.</p>

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1.0 Introduction

The Department of Homeland Security's Federal Emergency Management Agency (FEMA) is mandated to manage and document flood studies for the National Flood Insurance Program (NFIP). This documentation is used to support future flood study updates, amendments and revisions to effective maps, Freedom of Information Act (FOIA) requests, Congressional inquiries, and governmental policy. It is therefore extremely important that all data associated with these studies are complete and readily accessible through the submittal of the Technical Support Data Notebook (TSDN). Additionally, in accordance with the NFIP regulations cited in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Section 67.3 (44 CFR 67.3), FEMA is required to establish and maintain a Flood Elevation Determination Docket (FEDD) file for each community affected by a newly created or updated Flood Insurance Rate Map (FIRM). The documentation in the FEDD file is evidence that FEMA has provided due process to communities impacted by new or updated flood hazard information and is a component of the overall TSDN.

The purpose of this guidance document is to identify the various data components, both technical and administrative, and provide a consistent structure for submittal and archiving of the TSDN and FEDD file so that study materials are searchable and discoverable via the Mapping Information Platform (MIP) File explorer and/or Flood Risk Study Engineering Library in the MIP. These data components form the scientific, technical, and administrative basis for a Flood Risk Project and are needed in the future to address challenges or changes to the maps. The data are developed throughout the duration of a Flood Risk Project and are submitted to the MIP at the appropriate workflow step and as defined in the [Data Capture Technical Reference](#) and [Guidance](#) documents should be retained by the Mapping Partner as specified in their contract.

2.0 Post Preliminary Timeline

Figure 1 depicts the overall Post Preliminary Processing (PPP) timeline of Flood Risk Projects to demonstrate where the TSDN and FEDD file actions occur.

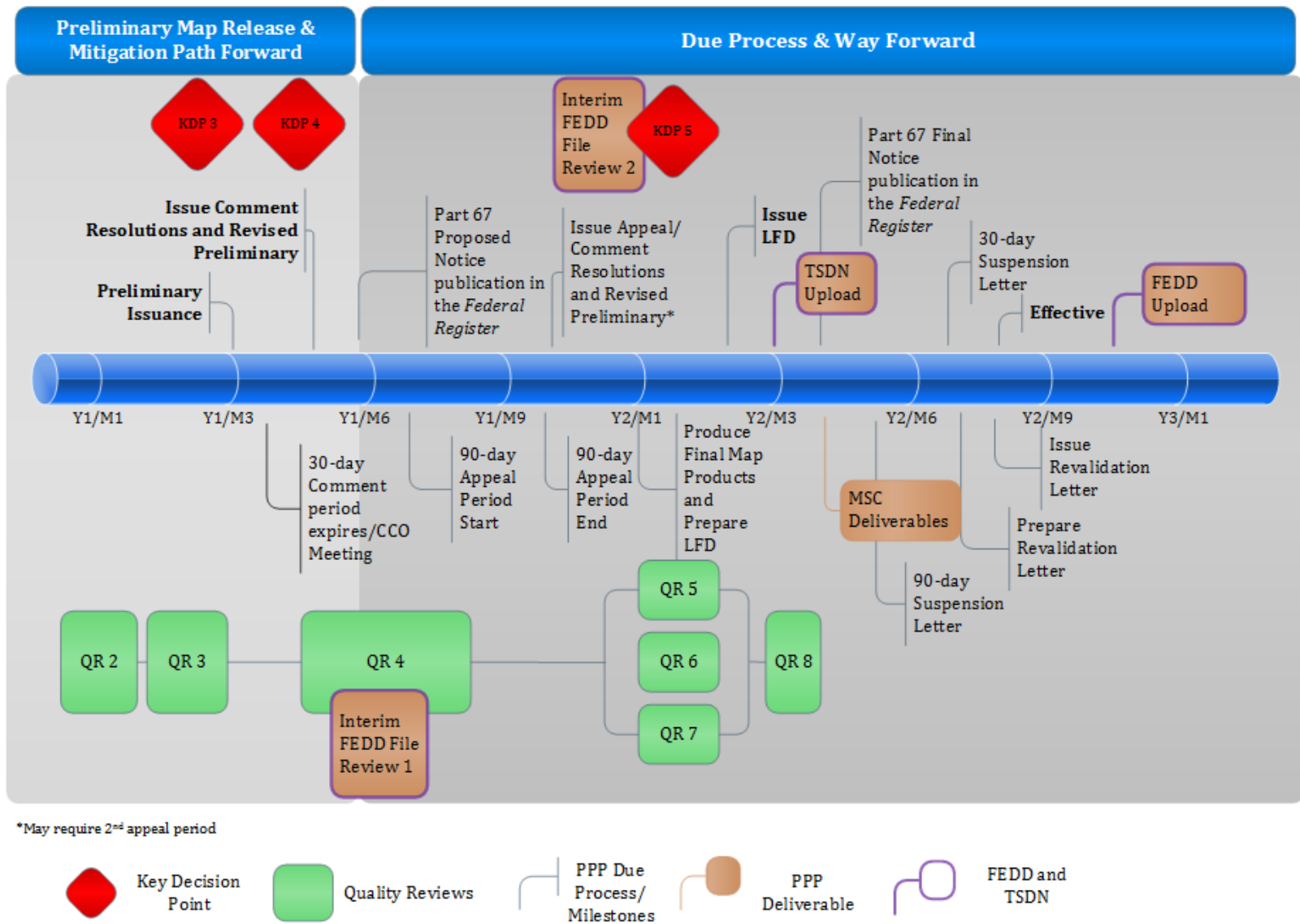


Figure 1. PPP Timeline

3.0 Compiling the TSDN and FEDD File

3.1 TSDN

The TSDN is defined as the complete set of the most up-to-date engineering and mapping data associated with a Flood Risk Project accompanied by the applicable Flood Risk Project administration and/or process documentation (e.g. Project Narratives, project correspondence, FEDD file, TSDN checklist, certification, Engineering Data). This definition replaces the previous working definition of the TSDN as a hardcopy notebook that was submitted at the end of each mapping project, as well as partial digital TSDN submissions. For the purposes of this guidance document, specific information related to the FEDD file is referenced separately in Section 3.2.

The bulk of the TSDN (i.e., the engineering and mapping data and narratives describing them) is developed and captured throughout the duration of the project and is submitted to the MIP at the appropriate workflow step. Additional TSDN data, such as appeal data received, Correspondence, Discovery (Scoping), FEDD file, Floodplain Boundary Standards Reports, and any Supporting Artifacts, may also be submitted at the end of the Flood Risk Project.

Related guidance on data capture and deliverables related to the TSDN, which defines the folder structure, type and format of the data required, upload steps, and procedures to follow for any data revisions, and are provided in Table 1.

The TSDN checklist template, which includes all of these components, is accessible through the [Flood Risk Templates and Resources](#) page and the password-protected Risk Management Directorate (RMD) SharePoint Portal.

Table 1: TSDN Submittal Requirements

Flood Risk Project Phase	Guidance or Reference Document
Discovery	<ul style="list-style-type: none"> • Data Capture Technical Reference • Data Capture Guidance • Data Capture - Workflow Details Guidance • Discovery Guidance • MIP Guidance • Guidance for Stakeholder Engagement: Discovery Phase • Guidance for Stakeholder Engagement: Data and Product Development Phase
Data Development	<ul style="list-style-type: none"> • Data Capture Technical Reference • Data Capture Guidance • Data Capture - Workflow Details Guidance • Guidance for Stakeholder Engagement: Data and Product Development Phase • MIP Guidance

Flood Risk Project Phase	Guidance or Reference Document
	<ul style="list-style-type: none"> • Coastal Data Capture Guidance • Coastal Study Documentation and Intermediate Data Submittals Guidance • Levee Seclusion Guidance • Quality Management Guidance • Quality Review Guidance
Preliminary/Revised Preliminary	<ul style="list-style-type: none"> • Data Capture Technical Reference • Data Capture Guidance • Data Capture - Workflow Details Guidance • Guidance for Stakeholder Engagement: Preliminary NFIP Map Release Phase • MIP Guidance • Preliminary Distribution and Revised Preliminary Guidance • Floodplain Boundary Standards (FBS) Guidance • Quality Management Guidance • Quality Review Guidance
Post Preliminary	<ul style="list-style-type: none"> • Data Capture Technical Reference • Data Capture Guidance • Data Capture - Workflow Details Guidance • MIP Guidance • Post-Preliminary Deliverables Guidance • Floodplain Boundary Standards (FBS) Guidance • Guidance for Stakeholder Engagement: Due Process Phase • Quality Management Guidance • Quality Review Guidance
Notice to User Revisions	<ul style="list-style-type: none"> • Data Capture Technical Reference • Data Capture Guidance • Data Capture - Workflow Details Guidance • MIP Guidance • Notice-to-User Revisions Guidance

Flood Risk Projects include non-regulatory Flood Risk Products for watershed and coastal projects. Submittal of data for these types of products is also defined in the guidance documents referenced above.

3.2 FEDD File

The FEDD file (one PDF file per community), a component of the TSDN, is a file maintained by FEMA that includes all correspondence between FEMA and the community concerning a Flood Risk Project (reports of meetings held among FEMA representatives, community representatives, the State NFIP Coordinator, State Hazard Mitigation Officer, private citizens, FEMA and community contractors, or other interested stakeholders; relevant publications, etc.). The FEDD file checklist template, which includes all of these components, is accessible through the Flood Risk Templates and Resources page on the FEMA website and the password-protected RMD SharePoint Portal.

Related guidance on data capture and deliverables for the interim FEDD File is provided in the Post Preliminary Deliverable Guidance document that outlines all FEDD file components, provides a detailed description of each Interim FEDD File submission and related MIP tasks. The following documents also provide additional information:

- Data Capture Technical Reference
- Data Capture Guidance
- Data Capture - Workflow Details Guidance
- Discovery Guidance
- MIP Guidance
- Post Preliminary Deliverables Guidance
- Guidance for Stakeholder Engagement: Discovery Phase
- Guidance for Stakeholder Engagement: Data and Product Development Phase
- Guidance for Stakeholder Engagement: Due Process Phase
- Guidance for Stakeholder Engagement: Preliminary NFIP Map Release Phase.

Through enactment of the Biggert-Waters Flood Insurance Reform Act of 2012 (BW12) as amended by the Homeowner Flood Insurance Affordability Act of 2014 (HFIAA), the U.S. Congress established a number of mapping-related requirements of FEMA. For a complete breakdown of the new requirements, visit the Flood Insurance Reform portion of the FEMA website (www.fema.gov/flood-insurance-reform).

Some of the new legislative requirements from Section 216 of BW12 have resulted in FEMA implementing the updated FEDD file components summarized in Table 2. These new requirements are also addressed in the following guidance documents:

- Guidance Document No. 5, Guidance for Flood Risk Analysis and Mapping: Discovery Guidance
- Guidance Document No. 22, Guidance for Stakeholder Engagement: Discovery Phase
- Guidance Document No. 61, Guidance for Stakeholder Engagement: Data and Product Development Phase

- Guidance Document No. 56, Guidance for Flood Risk Analysis and Mapping: Post-Preliminary Deliverable Guidance
- Guidance Document No. 62, Guidance for Stakeholder Engagement: Preliminary NFIP Map Release Phase
- Guidance Document No. 23, Guidance for Stakeholder Engagement: Due Processing Phase.

Table 2: FEDD File Components: Stakeholder Engagement Components

FEDD Component	Description
Before Data and Product Development Phase	
Stakeholder Engagement: Mapping Processes and Modeling Correspondence	Before commencing the analysis and mapping activities that take place during the Data and Product Development Phase of a Flood Risk Project, the Mapping Partners shall provide a written notification to the community Chief Executive Officer and Floodplain Administrator that explains selected mapping processes and modeling and explains why chosen processes and models are appropriate. This will include correspondence (letters, telephone records, email messages) that is sent to and received from the communities as well as documentation of FEMA Project Officer decisions.
Data and Product Development Phase	
Stakeholder Engagement: Data Submission Correspondence	Before completing Quality Review 1, the Mapping Partner shall transmit a copy of the draft FIRM database and other contributing data as requested to the affected community Chief Executive Officers and Floodplain Administrators, provide a 30-day period during which the affected communities may provide data to FEMA that can be used to supplement or modify the existing data, and incorporate any data that are consistent with prevailing engineering principles. This will include correspondence (letters, telephone records, email messages) that is sent to and received from the communities as well as documentation of FEMA Project Officer decisions.
Preliminary and Due Process Phases	
Stakeholder Engagement: Flood Map Revisions and Appeals Processes Correspondence	During the Preliminary NFIP Map Release and Due Process Phases of the lifecycle for a Flood Risk Project, the Mapping Partner shall work with the FEMA Regional Office of External Affairs, other FEMA staff, community officials, and local radio and television outlets to further educate property owners about flood map revisions and appeals processes. This will include correspondence (letters, telephone records, email messages, Public Service Announcement documents) that is sent to and received from the communities as well as documentation of FEMA Project Officer decisions.

4.0 TSDN and FEDD File Submittal and Archiving

4.1 Submittals

The TSDN must be submitted throughout the duration of the project by the responsible Mapping Partner. Key Decision Point 4, which occurs after preliminary issuance and before initiation of an appeal period, requires that the TSDN be prepared and available if requested by a potential appellant. The designated Mapping Partner must complete and upload the TSDN Checklist, a Certification of Completeness and a Certification of Compliance form to the MIP when their work on a project is complete or no later than 30-days after the Letter of Final Determination (LFD) has been issued to FEMA HQ (or its designee) for review. Mapping Partner should include all MIP Study Case Numbers that are part of the Flood Risk Project, including regulatory as well as any Flood Risk Product case numbers or any case numbers associated with Revised Preliminaries.

If a Mapping Partner is only funded to complete portions of the Flood Risk Project, as per Standards #82 and #174, a Certification of Completeness and a Certification of Compliance form should be submitted when their work on a project is complete, as outlined in [Data Capture – General Guidance](#), along with a completed TSDN Checklist identifying all data components that the Mapping Partner has been scoped to submit.

All Mapping Partners must submit various FEDD File components (one PDF file per community) along with the FEDD file checklist (one per community) to FEMA HQ (or its designee) for review for the interim FEDD File Reviews concurrent with QR4 Part 1 and prior to KDP 5 submittal.

The Mapping Partner will be uploading the various FEDD File components to the MIP for each interim FEDD File review which includes all documentation through appeal resolution. Data components that are added by FEMA HQ or their designee after LFD is issued include:

- LFD Letters, Final Summary of Map Actions (SOMA), where applicable, that have been mailed and tracking documentation,
- Suspension Letters, where applicable, that have been mailed and tracking documentation,
- Revalidation Letters, where applicable, that have been mailed,
- Federal Register (Final).

4.2 Final Archiving

FEMA HQ or designee will archive the complete TSDN, including the FEDD file, for each community to the MIP no later than 60-days following the FIRM effective date. The TSDN includes all project data previously uploaded to the MIP, TSDN Checklist, Final Project Narrative, Certification of Completeness, Certification of Compliance, Other checklists (if applicable), and Project Charter (if signed after Discovery). The FEDD file and its components will be archived as one file per community.

The guidance provided in this document is designed to help Mapping Partners upload a complete set of the most up-to-date data, both technical and administrative, associated with a Flood Risk

Project. This will ensure that all study materials are searchable and discoverable via the MIP File Explorer and/or the Flood Risk Study Engineering Library in the MIP and that data duplication is minimized. This is an important responsibility for all Mapping Partner, who must certify they have successfully delivered all project documentation.