# 2022 Guidance and Standards Maintenance Cycle and Standards Public Review Announcement

Notice: Combined 2022 G&S Cycle Announcements

This document contains both the **2022 Guidance and Standards Maintenance Cycle Announcement** and the **2022 Standards Public Review Announcement**. The maintenance cycle announcement provides a summary of all the planned changes to Risk MAP guidance and standards this year. The public review announcement provides the specific proposed changes for each standard and provides an opportunity for public review and comment by floodplain managers, engineers and other Risk MAP stakeholders.

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FEMA has guidance and standards to support the Risk Mapping, Assessment and Planning (Risk MAP) program. They define how to apply the statutory and regulatory aspects of the National Flood Insurance Program (NFIP). They also outline how to perform Flood Risk Projects, how to process Letters of Map Change (LOMCs), and related Risk MAP activities. See: <a href="https://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping">www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping</a> for more information.

These guidance and standards need to be maintained. FEMA has a maintenance plan and issues updates each year. This summary and public review opportunity relate to the 2022 update, which is planned for release in or around November 2022.

The annual cycle typically includes both significant changes reflecting impactful policy initiatives and simple maintenance. FEMA identifies these needs through routine reviews and by subject matter experts. Each change is identified as significant, simple, or minor.

We plan to publish revised standards in or around November 2022. This will be the annual update to the Policy for Flood Risk Analysis and Mapping. Drafts of these updates will be available for public review and comment from July 7 to August 5 before they are included in the policy.

If you have any questions, please contact fema-gs@fema.dhs.gov.



# **Risk MAP Guidance and Standards (G&S)** 2022 Maintenance Cycle

# **Significant Change Topics**

Торіс	Description
Guidance for Mapping Tribal Lands	Establishing a new Guidance document to formalize Risk MAP adoption of previously developed tribal mapping guidance.
2D Evaluation Criteria in CNMS	Establishing criteria for assessment of 2D models and related products in the Coordinated Needs Management Strategy (CNMS) process.
Prioritization / Evaluation of Areas to Study	Updates to requirements for Regional prioritization of areas to study, Flood Risk Project planning, and KDP 0 documentation using data and tools provided by FEMA Headquarters (HQ).
HEC-RAS Archive Tool	Updates to data capture documentation to allow the use of the archive capability for studies using HEC-RAS software, including for 2-D models.
Vertical/Horizontal Scale of Flood Profiles (SID 232)	Updates to FIS graphic / production requirements that simplify profile scale requirements.

## **Topics Reviewed for 2022 Cycle**

As part of the routine maintenance cycle for 2022, FEMA reviewed documents related to the following topics. Only standards and documents needing changes are listed in the following sections.

Elevation Data	Flood Risk Report
Geospatial Data Coordination (GDC)	Ice Jam
Notice-to-User (NTU)	LOMR Incorporation
Coastal – General	Scientific Resolution Panel (SRP)
Alluvial Fans	Zone AR/A99
Flood Risk Map	Levee
Appeals Process	Letter of Final Determination (LFD)
National Flood Hazard Layer (NFHL)	Post-Preliminary Deliverables

# Significant and Simple Changes

The table below describes both the specific changes associated with the significant changes above and the simple maintenance items identified through routine maintenance reviews or on an ad hoc basis. A short summary describes the proposed changes. Simple changes have small impacts to current practices that require minimal or no changes in FEMA Regional operations and minimal or no impacts to stakeholders.

Item #	Doc. Type	Doc. Title/SID #	Description
1	Standard	40	Updating to clarify that the latest version of the USGS Lidar Base Specification should be used.
2	Standard	139	Updating to align with current terminology.
3	Standard	232	Proposed to combine with SID 274 to clarify language about profile development.
4	Standard	274	As the program moves further towards a 100% digital vision, it is not as critical to maintain the same vertical or horizontal scale as the effective products since a revised scales may decrease the total numbers of profiles needed for a particular study.
5	Standard	315	Updating to align with the FIRM Panel Technical Reference regarding labeling of levees on FIRM panels.
6	Standard	363	Updating to align with the use of ongoing (adjacent) Risk MAP studies instead of NFHL in some instances.
7	Standard	375	Updating to align with program language for structures to meet the definition of a levee.
8	Standard	377	Updating to align AMP needs for the database outside of the defined Risk MAP study area but within PMR footprint.
9	Standard	447, 448	Updating to align with current FEMA levee terminology for non- accredited levees.
10	Standard	538	Updating to clarify FEMA funding of levee certification.
11	Standard	542	Updating to clarify analysis of overlapping levee systems.
12	Standard	544	Updating to be consistent with protocols for interior drainage analysis.
13	Standard	600	Updating to clarify language regarding appeal period requirements.
14	Standard	602	Updating to add clarification that the National Levee Database should be leveraged and supplemented with local and existing FEMA data as needed.
15	Standard	642	Updating to add clarification that seclusion is not a viable mapping option unless approved by the Region and HQ as well as meeting state eligibility requirements.

Item #	Doc. Type	Doc. Title/SID #	Description	
16	Standard	646 (NEW)	Proposing a new standard requiring FEMA to coordinate with Other Federal Agencies (OFAs) and utilize their data / information pertaining to levee accreditation status.	
17	Standard	647 (NEW)	Proposing a new standard to require use the FEMA Mapping Nee Explorer Tool in the evaluation and prioritization of study areas, the planning of Flood Risk Projects, and KDP 0 documentation.	
18	Guidance	Levee, Shallow Flooding Analyses & Mapping	Proposing updates to add additional guidance that aligns with applied approaches and ongoing coordination with other federal agencies and program partners.	
19	Guidance	Notice-to-User Corrections	Updating to clarify that corrected products do not have to be uploaded with draft NTU letter. Implementing minor formatting adjustments to improve clarity.	
20	Guidance	Zone A99 and Zone AR Determinations	Removing language affected by Risk Rating 2.0 and updating language for consistency with other FEMA and USACE guidance.	
21	Guidance, Template	Physical Map Revision (PMR), LOMR Incorporation, Regulatory QC Checklists	Updating language referencing Automated Map Production (AMP).	
22	Guidance	Elevation	Updating to correct references to standards, accommodate use of the latest versions of USGS and ASPRS specifications, and implement style updates for improved consistency and clarity, including use of the lower-case capitalization of "lidar."	
23	Guidance, Technical Reference, Templates	MT-1 Technical, General Hydrologic Considerations, Floodway Analysis and Mapping, MT- 2, Levee Seclusion, FIS Report, Accepting Numerical Models, AoMI, Automated Engineering, Base Level Engineering, BFE Mapping, Coastal Non-Reg, Coastal Structures, Dam FRP Guidance, Dams Reservoirs and Non-Dam Features, FIS Report, Flood Risk	Updating document to remove language affected by Risk Rating 2.0.	

Item #	Doc. Type	Doc. Title/SID #	Description
		Assessment, Flood Risk Map, Hydraulics Two Dimensional Analyses, Post Flood Hazard Verification Recovery Tools, FIS Report Template	
24	Guidance	Appeal and Comment Processing	Updating to clarify language around submittals (e.g., timing, requirements, usability, etc.). Also updating to clarify standards and terminology.
25	Guidance	Alluvial Fan, Coastal Wave Setup	Updating to align document with the most current modelling software and 2D modelling approaches.
26	Guidance	Coastal General Study Considerations, Combined Coastal and Riverine Floodplain, Coastal Overland Wave Propagation, Geospatial Data Coordination, Notice-to-User Request Form	Updating to reflect current standard practices and to update terminology.
27	Guidance	Coastal Wave Runup and Overtopping	Updating to reflect current standard practices for LOMR incorporation.
28	Guidance	Mapping Tribal Lands	Establishing a new guidance document for tribal mapping and engagement during Risk MAP projects.
29	Guidance, Technical Reference	Data Capture – General, Base Map and FIRM Panel Layout, Data Capture, Flood Risk Products	Updating to reflect process changes associated with the HEC-RAS archive tool.
30	Technical Reference	FIRM Database	Updating to align the NFHL Cluster tolerance and resolution with the requirements in the FIRM database technical reference. Additionally, proposed updates to align Zone subtypes listed in the Domain Table technical reference.
31	Guidance	Project Planning, Key Decision Point (KDP) Process	Adding guidance to describe the FEMA Mapping Needs Explorer Tool, in support of new SID 647 requiring its use in study prioritization, project planning, and KDP 0 documentation.
32	Guidance, Technical Reference	Base Level Engineering (BLE), Hydraulics, Flood Insurance Rate	Updating Base Level Engineering and/or Hydraulics Guidance to reflect continued refinement of 2D modeling practices and sharing of advisory flood data.

Item #	Doc. Type	Doc. Title/SID #	Description
		Map Database (FIRM DB)	

#### **Minor Changes**

Minor changes to standards and guidance do not have any impact on the current intent. They will not have any regional or stakeholder impact. These changes are intended to improve the consistency or clarity of the wording or to correct minor errors (e.g. typos).

SIDs	
41, 153, 213, 214, 227, 517, 520, 522, 543	
Guidance Documents & Technical Reference	Templates
Guidance: Levee-Specific Non-Regulatory Flood Risk Datasets	Notice-to-User (NTU) Letter
Guidance: Post-Preliminary Deliverables	Notice-to-User (NTU) Request
Guidance: Letter of Final Determination	Flood Elevation Determination Docket (FEDD) Checklist
Technical Reference: Domain Table	

If you have any questions, please contact fema-gs@fema.dhs.gov.

# Fall 2022 Guidance and Standards Review of Policy Changes

Below is a summary of proposed standards for 2022. The summary of all planned changes to guidance and standards can be found above and posted to FEMA.gov <u>here</u>.

### **Standards**

The table below lists potential new standards and proposed updates to existing standards. FEMA will <u>publish</u> these standards in November 2022 during the annual update. These draft updates are available for public review and comment from July 7 to August 5 before they are included in the policy.

Each update lists the Standard Identification Number (SID #), implementation date, primary key word(s) and current version of the standard (if applicable). The approach to update these standards was chosen to avoid cost impacts on work that is underway.

The current standards and a list of acronyms are available on the FEMA website.



SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
40	Effective Immediately	Elevation Data	New elevation data purchased by FEMA must comply with the current USGS National Geospatial Program Base Lidar Specification Version 1.2, except hydroflattening is not required and a classified point cloud and a bare earth DEM deliverable are not required.	New elevation data purchased by FEMA must comply with the USGS National Geospatial Program Lidar Base Specification 2022 rev. A or more current, except hydro- flattening is not required and a classified point cloud and a bare earth DEM deliverable are not required.
41	Effective Immediately	Elevation Data	For areas within the Continental United States field surveys and aerial data acquisition must be referenced to the North American Vertical Datum of 1988 (NAVD88) and the North American Datum 1983 (NAD83) and connected to the NSRS.	For areas within the continental United States field surveys and aerial data acquisition must be referenced to the North American Vertical Datum of 1988 (NAVD88) and the North American Datum of 1983 (NAD83) and connected to the NSRS.

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
139	Effective Immediately	Coastal-General	For coastal Flood Risk Projects, where topographic data reflects a temporary disturbance due to recent beach nourishment and/or dune construction projects, and beach berm or dune geometry are not representative of anticipated natural conditions nor have long-standing vegetative cover as per 44 C.F.R. § 65.11, the data shall be adjusted to be representative of anticipated natural conditions prior to conducting the storm- induced erosion and onshore wave hazard analyses.	For coastal Flood Risk Projects, where topographic data reflects a temporary disturbance due to recent beach nourishment and/or dune construction projects, and beach berm or dune geometry are not representative of anticipated natural conditions nor have long-standing vegetative cover, the data shall be adjusted to be representative of anticipated natural conditions prior to conducting the storm- induced erosion and onshore wave hazard analyses.
153	Effective Immediately	GDC	Details of cost, leverage, and project scope must be reported to FEMA's geospatial data tracking systems.	Details of cost, leverage, and project scope for new elevation data purchases must be reported to FEMA's geospatial data tracking systems.
213	Effective Immediately	Notice-to-User	During the Notice-to User revision process, approval of the action taken shall be obtained from the FEMA HQ due process lead and the decision must be documented in writing.	During the Notice-to- User Corrections process, approval of the action taken shall be obtained from the FEMA HQ Due Process Lead and the decision must be documented in writing.

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
214	Effective Immediately	Notice-to-User	During the Notice-to- User revision process: • the FIS, FIRM panel(s), FIRM database, and NFHL must be corrected as appropriate • the corrected components must indicate the appropriate date; • the corrected components must be distributed to the communities affected by the correction; and • the corrected components must be updated on the MSC site.	During the Notice-to- User Corrections process: • the FIS, FIRM panel(s), FIRM Database, and NFHL must be corrected as appropriate; • the corrected components must indicate the appropriate date; • the corrected components must be distributed to the communities affected by the correction; and • the corrected components must be updated on the MSC site.
227	Effective Immediately	Flood Profiles	The Notice-to-Users process shall only be used for corrections of errors or omissions in the FIS Report, FIRM Database, NFHL, or on the FIRM that do not require administrative appeal. The Notice-to- Users revision process shall not change the accreditation status of a levee or the effective date of the FIRM and FIS.	The Notice-to-User Corrections process shall only be used for corrections of errors or omissions in the FIS Report, FIRM Database, NFHL, or on the FIRM that do not require administrative appeal. The Notice-to-User Corrections process shall not change the accreditation status of a levee or the effective date of the FIRM and FIS.
232	Effective Immediately	Flood Profiles	Unless it can be demonstrated that the vertical and horizontal scale of the effective Flood Profiles are inadequate, re-analyzed or redelineated streams must be produced using the same horizontal and vertical scales that were used in the effective Flood Profiles.	Proposed to rescind

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
274	Effective Immediately	Flood Profiles	The horizontal and vertical scales of the Flood Profiles shall be chosen so that Flood Profile slopes are reasonable and can be easily interpreted by the user.	The horizontal and vertical scales of the Flood Profiles shall be chosen so that Flood Profile such that slopes are reasonable for the user and can be easily interpreted by the user developed consistently for each flooding source.
315	Effective Immediately	Levee	All levees stored in the FIRM Database shall be labeled and symbolized on the FIRM panel as outlined in the FIRM Panel Technical Reference, with the appropriate accreditation status noted.	All levees stored in the FIRM Database shall be symbolized on the FIRM panel as outlined in the FIRM Panel Technical Reference, with the appropriate accreditation status noted.
363	Effective Immediately	National Flood Hazard Layer (NFHL)	The NFHL must be used as the source for effective digital FIRM Database data when starting FIRM updates, and used for mandatory edge matching at county/community boundaries.	Unless an adjacent area is being revised, the NFHL must be used as the source for effective FIRM data when starting a Risk MAP study and for mandatory edge matching at county/community boundaries. If the adjacent area is being actively studied, that data must be used as appropriate.

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
375	Effective Immediately	Levee	The S_Levee table is required for any Preliminary or Final FIRM Database that includes levees, floodwalls, closure structures, berms, embankments, or dikes that have been designed for flood control, whether or not they have been demonstrated to meet the NFIP requirements in 44 C.F.R. § 65.10.	The S_Levee table is required for any Preliminary or Final FIRM Database that includes levees, floodwalls, embankments, or structures that have been designed, operated and maintained as levees, whether or not they have been demonstrated to meet the NFIP requirements in 44 CFR 65.10.
377	Effective Immediately	National Flood Hazard Layer (NFHL)	For PMRs, once the NFHL for a community is converted to the latest FIRM Database schema, all database submissions will also be required to conform to this schema. For non- FEMA funded external data studies and for portions of a study where the engineering is unrevised, attribute data associated with the schema that is not needed for FIRM production may be excluded from the study submittal with permission from the FEMA Regional Office. Each exclusion should be documented in the FIRM Database metadata file that accompanies the FIRM Database.	For PMRs, once the NFHL for a community is converted to the latest FIRM database schema, all database submissions are required to conform to this schema. For non- FEMA funded external data studies or portions of a study where the engineering is unrevised, attribute data associated with the schema may be excluded if not needed for FIRM or FIS production and approved by the FEMA Project Officer. Exclusions for data needed to produce FIRM panels with AMP are not allowed. Each exclusion must be documented in the FIRM Database metadata file that accompanies the submittal.

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
447	Effective Immediately	Levee	If the levee system does not continue to meet the criteria within 44 C.F.R. § 65.10, FEMA shall initiate the levee de-accreditation process.	If the levee system does not continue to meet the criteria within Code of Federal Regulations Title 44 C.F.R. § 65.10, FEMA shall initiate the analysis and mapping procedure for non-accredited levee systems.
448	Effective Immediately	Levee	A levee system shall only be designated by FEMA as a PAL if the levee system is already accredited on the effective FIRM and, the owner of the levee system or the community is attempting to compile levee accreditation documentation to demonstrate continuation of compliance with 44 C.F.R. § 65.10. The opportunity for a PAL designation is only offered one time for any given system.	A levee system shall only be designated by FEMA as a PAL if the levee system is shown as providing base flood hazard reduction on the effective FIRM, has a formally adopted Operation and Maintenance Plan, and, the owner of the levee system or the community is attempting to compile and certify levee documentation to demonstrate continuation of compliance with Code of Federal Regulations Title 44 C.F.R. § 65.10. The opportunity for a PAL designation is only offered one time for any given system.
517	Effective Immediately	Post-Preliminary Deliverables	The FIRM Database (including metadata) and the georeferenced FIRM image files must be submitted to the MIP and FEMA (or their designee) must be notified at least 60 days prior to the anticipated LFD date.	The FIRM Database (including metadata) and the FIRM image files must be submitted to the MIP and FEMA (or their designee) must be notified at least 60 days prior to the anticipated LFD date.

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
520	Effective Immediately	Post-Preliminary Deliverables	At least 45-days before the projected LFD date the final LFD letters, Part 67 Final Notice, and Final SOMAs must be submitted. No less than 4-weeks before the LFD the final LFD Summary Sheet/Dockets and LFD Questionnaires must be consolidated and sent to FEMA HQ for approval.	At least 45-days before the projected LFD date the final LFD letters, Part 67 Final Notice, and Final SOMAs must be submitted. No less than 4-weeks before the LFD the final LFD Summary Sheet/Dockets must be consolidated and sent to FEMA HQ for approval.
522	Effective Immediately	LFD	As part of the LFD Docket MIP task, the LFD Verification Summary and LFD Questionnaire, LFD Letters and Final SOMA must be submitted, concurrent with Quality Reviews 5 and 7.	As part of the LFD Docket MIP task, the LFD Verification Summary, LFD Letters and Final SOMA must be submitted, concurrent with Quality Reviews 5 and 7.
538	Effective Immediately	Levee	FEMA will not fund any efforts solely related to certifying data for levee accreditation or making determinations of the levee's structural conditions.	FEMA will not fund any efforts related to developing and/or certifying data for levee accreditation or making determinations on the levee's structural conditions. This includes performing the required analyses on the performance of interior drainage systems within the levee impacted area.
542	Effective Immediately	Levee	If there are levee systems on both sides of a flooding source, or multiple systems that overlap, the extents of the natural valley area and reach specific SFHAs for each system will be analyzed independently assuming the other systems remain in place.	For levee systems located on both sides of a flooding source, in series, or for multiple systems that have overlapping levee impacted areas, the extents of the natural valley area and reach- specific SFHAs for each system will be analyzed independently assuming the other systems remain in place.

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
543	Effective Immediately	Levee	<text></text>	<text></text>
544	Effective Immediately	Levee	The final SFHA delineation shown on the FIRM landward of the non-accredited levee system shall be based on a composite of flooding results from each independently analyzed reach, any interior drainage flooding of the system, and ponding against the landward side of the levee.	The final SFHA delineation shown on the FIRM landward of the non- accredited levee system shall be based on a composite of flooding results from each independently analyzed reach and any interior drainage flooding of the system.

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
			An administrative appeal period must be offered for any FIRM updates including letters of map revision where Flood Hazard Data updates are made. Flood Hazard Data changes include:	Revised Standard An administrative appeal period must be offered for any FIRM updates including letters of map revision where Flood Hazard Data updates are made. Flood Hazard Data changes include: • New BFEs or base flood depths are proposed or currently effective BFEs or base flood depths have been modified; • New SFHAs are proposed or the boundaries of currently effective SFHAs have been modified; • New zone designations are proposed or currently effective SFHA zone designations have been modified; or • New regulatory floodways are proposed or the boundaries of currently effective floodways that have been modified.
600	Effective Immediately	Appeals Process	<ul> <li>New BFEs or base flood depths are proposed or currently effective BFEs or base flood depths have been modified;</li> <li>New SFHAs are proposed or the boundaries of currently effective SFHAs have been modified;</li> <li>New SFHA zone designations are proposed or currently effective SFHA zone designations have been modified; or</li> <li>New regulatory floodways are proposed or the boundaries of currently effective floodways that have been modified.</li> <li>In order to qualify as an appeal, scientific and/or technical data demonstrating these changes are incorrect</li> </ul>	flood depths are proposed or currently effective BFEs or base flood depths have been modified; • New SFHAs are proposed or the boundaries of currently effective SFHAs have been modified; • New zone designations are proposed or currently effective SFHA zone designations have been modified; or • New regulatory floodways are proposed or the boundaries of currently effective floodways that have

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
602	Effective Immediately	Levee	For the analysis and mapping of flood hazards associated with levee systems, if available, data and documentation in the USACE National Levee Database (NLD) or from local communities, tribal entities or other federal or state agencies should be leveraged.	For the analysis and mapping of flood hazards associated with levee systems, data and documentation from the USACE National Levee Database (NLD) must be leveraged as a starting point. Effective FEMA data and supplemental data from local communities, tribal entities or other federal or state agencies, including terrain data, should be evaluated, and the most accurate data shall be used. FEMA shall provide USACE with updated levee data for incorporation into the NLD as appropriate.
642	Effective Immediately	Levee	Justification to use Seclusion mapping on the FIRM panel must be approved by the FEMA Region and FEMA Headquarters.	Levee Seclusion is not a viable mapping option unless approved by the FEMA Region and FEMA Headquarters. Seclusion mapping may only be considered for studies placed on hold during the development of the analysis and mapping procedures for non- accredited levees

SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
646	Effective for all FY23 studies and beyond	Levee	New Standard	When updating flood hazard information for levee systems that were previously mapped with flood hazard reduction based on data, documentation and/or accreditation recommendations from other federal agencies, FEMA will coordinate with the agency of record to confirm the previously provided data, documentation and/or accreditation recommendations are still valid.
647	Effective for all FY23 studies and beyond	Project Planning	New Standard	The FEMA Flood Mapping Needs Explorer information must be used for evaluation and prioritization of study areas. Regions need to leverage the data and any other elective factors and resources to plan Flood Risk Projects. A KDP 0 submission shall have documentation of the selection based on the information from FEMA's Flood Mapping Needs Explorer. Please refer to Section 2.1 of the Project Planning guidance document for information on using the Mapping Needs Explorer

#### How to Submit Comments to FEMA

You may provide comments via email at: <u>FEMA-GS@fema.dhs.gov</u>. Comments received prior to August 5 will be reviewed and addressed, as appropriate, before the standards are finalized.