

Fall 2021 Guidance and Standards Summary of Policy Changes

FEMA maintains guidelines and standards to support the Risk Mapping, Assessment and Planning (Risk MAP) program. These define how to apply the statutory and regulatory requirements for National Flood Insurance Program (NFIP) flood mapping. They also outline how perform Flood Risk Projects, how to process Letters of Map Change (LOMCs), and related Risk MAP activities. More information is available at: www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping.

FEMA has a maintenance plan for these guidelines and standards and issues updates annually. This summary relates to the 2021 update.

The summary of the planned changes was published on June 9, 2021 and can be found [here](#). Those changes are:

Significant Change Topics*

Topic	Description
Flood Risk Products	Clarify requirements and quality checks associated with raster quality.
Potential criteria for removal of effective Zone As that appear as disconnected or erroneous floodplains	Define specific criteria that if met, may allow some effective Zone A floodplain areas, that appear to be hydraulically disconnected and demonstrated to be erroneous by engineering or scientific data, to be removed during a Risk MAP study update.

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The standard changes are as follows:

Item #	Doc. Type	SID #	Standard Change Description
1	Standard	174, 176, 180, 429	Updated to clarify and align with current Mapping Information Platform (MIP) submittal and standard operating procedures.
2	Standard	175	Rescinded to align with current Mapping Information Platform (MIP) submittal and standard operating procedures.
3	Standard	645	New Standard to potentially allow for removal of erroneous Special Flood Hazard Area when verified by engineering or scientific data.



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Item #	Doc. Type	SID #	Standard Change Description
4	Standard	332, 338, 349	Small adjustments to flood map graphic requirements to adjust for the implementation of the Automated Map Production (AMP) tool by FEMA.
5	Standard	371	Adjusted to remove requirement for world files based on the implementation of AMP. Other adjustments to make requirements consistent with current practice.

Standards

The table below lists new standards and updates to existing standards from the 2021 annual update to the Policy for Flood Risk Analysis and Mapping.

The updates and revisions are listed in the table below, with their Standard Identification Number (SID #), implementation date, primary key word(s) and current version of the standard (if applicable). The approach for updating these standards has been chosen to avoid any cost impacts on work underway.

The current standards and a list of acronyms are available on the [FEMA website](#).

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SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
174	Effective immediately	Data Capture	Certification of completeness of all submitted data for FEMA-funded Flood Risk Projects must be provided when work on a project is complete. (via the certification forms.)	Certification of completeness of all submitted data for FEMA-funded Flood Risk Projects must be provided when work by each mapping partner on a project is complete (via the certification forms provided in www.fema.gov/library/viewRecord.do?id=7577).
175	Effective immediately	Data Capture	The preliminary Flood Insurance Study (FIS) Report must be submitted with the other required submittals at the completion of the Floodplain Mapping task.	Rescinded

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SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
176	Effective immediately	Data Capture	All spatial data must be georeferenced, have a standard coordinate system and projection defined and documented, and specify the horizontal and vertical datums used.	All spatial data must be georeferenced, have a standard coordinate system and projection defined and documented, and specify the horizontal and vertical datums used. The data documentation should specify the projection, or clarify that data is unprojected.
180	Effective immediately	Data Capture	<p>All regulatory product deliverables, non-regulatory flood risk product deliverables, and relevant supporting data must be submitted one of the acceptable file format(s) and in the directory structure outlined in the Data Capture Technical Reference</p> <p>If data are collected that are not specifically mentioned in the Data Capture Technical Reference but are relevant to the project, or data is obtained from existing flood hazard analyses, those data must be submitted, but do not have to follow the file format and directory structure requirements.</p>	<p>All data or products uploaded to the MIP-regulatory product deliverables, non-regulatory flood risk product deliverables, and relevant supporting data must be submitted in one of the acceptable file format(s) and in the directory structure outlined in the Data Capture Technical Reference.</p> <p>If data are collected that are not specifically mentioned in the Data Capture Technical Reference but are relevant to the project, or data is obtained from existing flood hazard analyses, those data must be submitted, but do not have to follow the file format and directory structure requirements.</p>

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SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
332	Effective immediately	FIRM Graphic Standards	If a printed FIRM panel falls within the area of a smaller-scale panel that is also printed, the smaller scale panel shall show a breakout note in the blank area represented by the larger-scale panel (the breakout panel area). This note is placed in the center of the breakout panel area and specifies the larger scale panel's map number and scale. The suffixes shall not be used in breakout panel notes (to avoid unnecessary updates in Physical Map Revision (PMRs)).	If a printed FIRM panel falls within the area of a smaller-scale panel that is also printed, the smaller scale panel shall show a breakout note in the blank area represented by the larger-scale panel (the breakout panel area). This note is placed in the center of the breakout panel area and specifies the larger scale panel's map number and scale. The suffixes shall not be used in breakout panel notes (to avoid unnecessary updates in PMRs). Breakout panels will not be labeled on AMP created FIRMs.
338	Effective immediately	FIRM Graphic Standards	Special Flood Hazard Areas shall be labeled at least once with the flood zone on a FIRM panel and, if appropriate, with the static elevation, velocity, or depth.	Special Flood Hazard Areas shall be labeled at least once with the flood zone on a FIRM panel and, if appropriate, with the static elevation, velocity, or depth. If a FIRM panel is produced via AMP, the elevation may appear on an adjacent panel.
349	Effective for all projects that have not started QR5	FIRM Graphic Standards	On the FIRM panels and in the FIRM Database, LIMIT LINES shall be placed at the beginning and at the end of flow in every area analyzed by detailed methods and shall be depicted as specified in the FIRM Panel Technical Reference.	On the FIRM panels and in the FIRM Database, LIMIT LINES shall be placed at the beginning and at the end of flow in every area analyzed by detailed methods and terminus of a 1-percent-annual-chance floodplain where the Special Flood Hazard Area is abruptly truncated and no floodplains exist beyond the limit. This shall be depicted as specified in the FIRM Panel Technical Reference.

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SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
371	Implemented with all newly initiated Fiscal Year 2020 Flood Risk studies and MT-2s received after the automated mapping tool is implemented	Data Capture	<p>The following regulatory deliverables must be submitted using the file formats and directory structure specified in the Data Capture Technical Reference.</p> <ul style="list-style-type: none"> • Transmittal Form • FIRM Database • Orthophotos (if applicable) • FIRM Scans • World Files • FIS Report • Transmittal to community CEO • Community Map Action List • Inventory Worksheet for Each Community 	<p>The following regulatory deliverables must be submitted using the file formats and directory structure specified in the Data Capture Technical Reference:</p> <ul style="list-style-type: none"> • Transmittal Form • FIRM Database • Orthophotos (if applicable) • FIRM Scans • World Files • FIS Report • Transmittal to Community CEO • Community Map Action List • Inventory Worksheet for Each Community
429	Effective immediately	Data Capture	<p>The following flood risk product deliverables must be submitted using the file formats and directory structure specified in the Data Capture Technical Reference:</p> <ul style="list-style-type: none"> • Flood Risk Database • Depth and Analysis Grids • Metadata file 	<p>The following final flood risk product deliverables must be submitted using the file formats and directory structure specified in the Data Capture Technical Reference:</p> <ul style="list-style-type: none"> • Flood Risk Database • Depth and Analysis Grids Rasters • Metadata file

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SID #	Implementation Date	Primary Keyword	Original Standard	Revised Standard
645	Implemented for any project not yet at preliminary as of 12/01/21	Floodplain Boundaries	New standard	<p>Removal of an effective base level (i.e. Zone A) special flood hazard area (SFHA) may be considered by FEMA if these two criteria are met:</p> <p>1) an engineering analysis is performed that shows there is no flood hazard where the effective Zone A is located; 2) the impacted community and FEMA Regional Project Monitor both concur about the removal on the same correspondence (e.g. email, letter, etc.).</p> <p>If the engineering analysis shows there is still flood hazard, but the depth is less than 1 foot, the SFHA may be considered for change to a shaded Zone X; however, this will still require the impacted community and FEMA Regional Project Monitor to concur about the change on the same correspondence (e.g. email, letter, etc.).</p>

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Responses to Public Comments Received in July 2021

Several comments were received during the comment period. The comments and FEMA's response are listed by their SIDs below:

SID #174, 313, 349

- Public Comment:** SID # 174, 313, 349 - the data capture technical reference should be updated to reflect this change; SID 175 - does this mean the FIS tables, figures and profiles are not part of the data capture for the Floodplain Mapping task? If so, the reports and project narratives for the G&G and mapping tasks need to describe these tasks in sufficient detail for the later completion of the FID report. Clarify at what task the FIS report is submitted. SID#371 - Per AMP's Best Practices document, they state that new standard orthoimagery will be used for everything. And if that is the case:
 - 1) Do we need to still keep submitting orthoimagery during basemap?
 - 2) If we do not need to submit orthoimagery any longer, can we also quit submitting S_Base_Index?
 - 3) Since they are able to use a standard orthoimagery layer for AMP panel production, might they also consider standardizing other basemap features in the future, as well? SID 363 says the National

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Flood Hazard Layer (NFHL) should be our source for data when starting a project AND for edge-matching. And as such, edge matching to older data in NFHL is going to become more problematic over time since there are so many varied and constantly changing sources of basemap data. A single standard would be a time saver and make edge matching easier.

- **Response:** SID # 174, 313, 349 - FEMA reviewed the language and the data capture guidance and technical reference to make sure that the intent is clear throughout that each mapping partner involved in a project must submit the completeness certification.

SID #175

- **Public Comment:** SID # 174, 313, 349 - the data capture technical reference should be updated to reflect this change; SID 175 - does this mean the FIS tables, figures and profiles are not part of the data capture for the Floodplain Mapping task? If so, the reports and project narratives for the G&G and mapping tasks need to describe these tasks in sufficient detail for the later completion of the FID report. Clarify at what task the FIS report is submitted. SID#371 - Per AMP's Best Practices document, they state that new standard orthoimagery will be used for everything. And if that is the case:
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 - 3)Since they are able to use a standard orthoimagery layer for AMP panel production, might they also consider standardizing other basemap features in the future, as well? SID 363 says the NFHL should be our source for data when starting a project AND for edge-matching. And as such, edge matching to older data in NFHL is going to become more problematic over time since there are so many varied and constantly changing sources of basemap data. A single standard would be a time saver and make edge matching easier.
- **Response:** SID 175 - This standard was mis-aligned with the FIS requirements in the Data Capture Technical Reference. In general, the relevant data development tasks required draft portion of the FIS to be submitted, the floodplain mapping task requires a draft FIS to be submitted, and the preliminary task requires a preliminary FIS to be submitted. The intent is to continue this approach and the standard was removed to eliminate the disconnect between SID 175 and the language in the Technical Reference.

SID #363

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and constantly changing sources of basemap data. A single standard would be a time saver and make edge matching easier.

- **Response:** SID 363: Not all SIDs listed are part of the Fall 2021 cycle; however, FEMA will consider these comments for the next review cycle. However, they were discussed internally, specifically pertaining to edgematching. Individual FIRMs will continue to be updated (including orthoimagery) as each study is completed. The orthoimagery base map service displayed via the NFHL will continue to be “live”. Regarding other base map features (e.g. transportation lines), FEMA is looking to standardize these datasets as much as possible, however, that is part of the long term vision associated with the Automated Map Production (AMP) rollout.

SID #371

- **Public Comment:** The Transmittal Form and Community Map Action List are no longer submitted with final mapping products, per section 5.2.2 of the Data Capture Technical Reference: "Submitting the Inventory Worksheet to the MIP complies with the standard to submit the Community Map Action List and the Transmittal Form to the MSC." The information that was previously captured in these documents has now been incorporated into the Inventory Worksheet.

Although it isn't part of this review cycle, we'd like to bring up a concern we have with SID 416, which states:

“Depth and Analysis Grids must share the same terrain and bathymetry source datasets as the engineering models.”

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During the Data Development lifecycle it is highly likely new lidar/terrain will become available before a PMR is effective. It is not economically feasible to update the hydraulic model with new topo as this would generate new water surface elevations and much work previously completed would need to be repeated and replaced. Alternately, if using new lidar/terrain for floodplain delineations and development of Flood Risk Products creates a higher quality product, this would conform to the concept of using the best available information to complete tasks even if it means the Flood Risk Products did not use the same terrain as the original model.

- **Response:** SID 371 - FEMA updated the standard language to reflect the newer terminology in the technical reference and also eliminated the reference to the transmittal form which is obsolete.

SID #371

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3) Since they are able to use a standard orthoimagery layer for AMP panel production, might they also consider standardizing other basemap features in the future, as well? SID 363 says the NFHL should be our source for data when starting a project AND for edge-matching. And as such, edge matching to older data in NFHL is going to become more problematic over time since there are so many varied and constantly changing sources of basemap data. A single standard would be a time saver and make edge matching easier.

- **Response:** SID#371 - In the past FEMA required orthos to be delivered twice during a project when applicable. Initially when the orthos were compiled for the base map, they were submitted to the MIP under the base map task. When the project was finalized the orthos were transmitted to the MSC along with other final deliverables. In the past the MSC would facilitate the deliverables of these base map orthos to end users. With the widespread availability of imagery base maps, FEMA phased out this activity for the MSC. So, while this update was triggered by the new approach to base maps with the AMP project, the change in orthos at the final delivery to the MSC could have been eliminated sooner. Since orthoimagery is no longer needed as a basemap, projects may not have any orthoimagery associated with them. In that case no upload of orthoimagery to the MIP is required. But, if a project does compile an orthoimagery base map to use during data development or for other purposes then the orthophotos must be submitted in the base map task or other relevant task (i.e. hydraulics - if the primary purpose of the orthophotos is to support the hydraulic model compilation). This is consistent with prior practice.

SID #416

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- **Response:** SID 416: Because this standard was not part of the Fall 2021 cycle, FEMA will consider this comment for the next review cycle. However, it was discussed internally. The goal of this and other Risk MAP standards is to maintain data integrity and consistency among all products developed during a study. The same topographic information used in the engineering analysis must also be used to create the Depth

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and Analysis rasters. If new terrain data becomes available during the life of a Flood Risk Project, this should be discussed with your FEMA Project Monitor to determine the best course of action.

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