



FEMA POLICY: GUIDANCE ON THE USE OF AVAILABLE FLOOD HAZARD INFORMATION

FEMA Policy #104-008-2

BACKGROUND

The policy is for FEMA Headquarters, Regional program staff, and for the Field Staff at the Joint Field Office (JFO) interacting with states, tribal, and local officials, and other federal agencies and grantees following a Presidential declared disaster. This policy is also for states, tribal, and local officials following a Presidential declared disaster.

SUPERSESSION

This policy supersedes Policy 108.024.5 *Issuance and Use of Advisory Base Flood Elevations in the Implementation of FEMA Assistance* issued December 18, 2013.

PURPOSE

The purpose of this policy is fourfold:

Section 1. To provide available and Advisory Flood Hazard Information for state, tribal, and local officials in order to mitigate future flood damages;

Sections 2, 3, and 4: To provide guidance on the use of work maps, Preliminary Flood Insurance Rate Maps (FIRMs) and a Flood Insurance Study (FIS) or when Advisory Base Flood Elevations (ABFEs) are available to communities for new and substantially improved/substantially damaged structures. The purpose is also to describe the insurance implications of using this information and using it for Increased Cost of Compliance. (See the Definitions section for the definition of “community.”)

Section 5: To provide guidance for FEMA in complying with requirements in 44 CFR Section 9.7(c) and Executive Order (EO) 11988 Sec. 2(a)(1) on the use of best available flood hazard information in making FEMA mitigation and recovery decisions in areas impacted by the severe storms and flooding;

Section 6. To acknowledge the coordination responsibilities under the Unified



Federal Review Process for federal agencies to communicate and allow for an informed and collaborative approach to unifying environmental and historic preservation compliance reviews for disaster recovery work.

PRINCIPLES

- A. Principle 1. FEMA has the responsibility to help ensure that communities affected by disaster events become less vulnerable to the loss of life and property from future disasters.
- B. Principle 2. FEMA is committed to providing flood hazard information to guide recovery. FEMA will identify available flood hazard information and develop Advisory Flood Hazard Information in situations where the Effective FIRMs and FIS and Preliminary FIRMs and FIS may not be adequate.
- C. Principle 3. FEMA is committed to coordinating across program areas and between and among FEMA Headquarters staff, FEMA Regional staff, and the staff at the JFO.
- D. Principle 4. FEMA is committed to implementing objective 4.1 of the FEMA Strategic Plan by ensuring communities use available and Advisory Flood Hazard Information and analytic tools to make better risk-informed decisions before, during, and after disasters.

REQUIREMENTS

A. SECTION 1: AVAILABLE AND ADVISORY FLOOD HAZARD INFORMATION

Outcome: FEMA will communicate to stakeholders the availability of flood hazard information that will be used to guide recovery in areas impacted by severe storms and flooding. In situations where the Effective or Preliminary FIS and FIRM may not be adequate for use in the recovery process, FEMA may develop Advisory Flood Hazard Information in coordination with states, tribes, local officials and other federal agencies.

1. Available Flood Hazard Information. Because flood risk can change over time, FEMA continually updates its inventory of flood hazard information. Therefore, available flood hazard information can vary depending upon the different phases of data development within the flood hazard mapping project lifecycle (see Attachment A.1 for a summary of project phases and the data developed during each phase). Following a severe weather event, impacted communities rely on FEMA's flood hazard information to guide recovery efforts. For this reason, it is important to identify and evaluate all available sources of flood hazard information in order to provide stakeholders the appropriate information needed to support recovery.



- a. Identify: The identification of available flood hazard information may begin while the severe weather event is still occurring. Immediately following a Presidential disaster declaration, the FEMA Region's Mitigation Division (Risk Analysis Branch) should develop an Available Flood Hazard Information Table and Exhibit (for examples, see Attachments A.2 and A.3) containing data that can be used both internally to make decisions and externally to communicate available flood hazard information to stakeholders. The following information should be identified for each county/community/jurisdiction in the impacted area:
 - i. Effective FIRM date(s)
 - ii. Active or Completed Letters of Map Revision (LOMRs)
 - iii. Preliminary FIRM date(s)
 - iv. Ongoing Study Identification (i.e. Watershed/Study Name, Countywide or Physical Map Revision (PMR) Name)
 - v. Flood Hazard Mapping Project Phase (for ongoing studies)
 - vi. Detailed Status of Flood Hazard Mapping Project Phase (for ongoing studies) including next milestone and its projected date
 - vii. Available Flood Risk Products
- b. Evaluate: Once the Available Flood Hazard Information Table and Exhibit have been prepared, the FEMA Region's Mitigation Division (Risk Analysis Branch) should evaluate the status of all available flood hazard information in the impacted communities and determine what data should be used to guide recovery. For ongoing studies that are in the Data Development and Sharing phase of the Flood Hazard Map project lifecycle, FEMA should coordinate with the mapping partner and state, tribe, and local entities to evaluate the feasibility of accelerating project schedules to the Preliminary FIRM stage if appropriate. Considerations include:
 - i. whether work map products have been completed and shared with the community during a Flood Risk Review meeting, and if so, were any significant technical concerns raised?
 - ii. whether the community was provided a 30 day period to provide data to FEMA that can be used to supplement or modify the existing data, to comply with Section 30 (C) of the Homeowner's Flood Insurance Affordability Act
 - iii. if the hydrologic and hydraulic analyses have been completed and passed all quality review processes



- iv. the availability of local, state and/or federal leverage data
- v. the need for additional or improved data
- vi. the current schedule for Preliminary FIRM issuance
- vii. post-event changes to hydrology and/or hydraulics based on impacts from flood, fire, earthquake, and/or other disaster event(s)

Based on the evaluation of the impacts versus benefits of the considerations analysis, FEMA will determine to accelerate the ongoing project or utilize other methods of determining available information. For example, if FEMA determines that accelerating a project to the Preliminary FIRM phase is not feasible, or if there is a need to provide supplemental flood hazard information to support recovery efforts, FEMA may develop Advisory Flood Hazard Information as outlined in Sub-Section A.2 of this policy.

- c. Communicate: Once FEMA has identified available flood hazard information and evaluated the feasibility of accelerating to Preliminary FIRM phase or developing new data, the FEMA Region's Mitigation Division (Risk Analysis Branch) should communicate to stakeholders the available sources of flood hazard information to guide recovery. Available flood hazard information should be communicated from the Region to the Federal Coordinating Officer (FCO) and stakeholders via a Memorandum on Available Flood Hazard Information (see Attachment A.3). The memorandum should provide a table and exhibit (map) summarizing available flood hazard information in the affected area, and guidance related to the availability of current and future flood hazard information as follows:
 - i. *"The status of the Effective FIS and FIRM, active or completed Letters of Map Revision (LOMR), and available Preliminary FEMA flood hazard information for all [Insert counties/communities/other jurisdictions] in [Insert state] are identified on Table 1 and Exhibit 1. It should be noted that available data may change over the course of time, and this information may be updated periodically in the future to reflect these changes. The most current versions of Table 1 and Exhibit 1 are available at this website: [Insert appropriate FEMA/state/local website]:"*
 - ii. *FEMA is committed to providing Available Flood Hazard Information to guide recovery. In situations where the Effective or Preliminary FIS and FIRM may not be adequate for use in the recovery process, FEMA may*



develop Advisory Flood Hazard Information and release Advisory Base Flood Elevations (ABFE) in coordination with state officials.”

- d. Provide: The FEMA Region should consider using local, state or FEMA GIS Data Services such as the GeoPlatform (<https://fema.maps.arcgis.com/home/index.html>) to maintain a summary table and exhibit of available flood hazard information in disaster designated communities. Further, FEMA will direct communities and Federal stakeholders to the Flood Map Service Center (MSC) to download available Effective and Preliminary flood hazard information for declared disaster areas (<https://msc.fema.gov/>).
2. Advisory Flood Hazard Information. Once the available flood hazard information has been determined and the locations where the delivery of accelerated Preliminary FIRMs are known, then FEMA will determine if there is a need to develop Advisory Flood Hazard Information which may include Advisory Base Flood Elevations (ABFEs).
 - a. The decision to develop Advisory Flood Hazard Information shall be made in a timely manner and be based on an evaluation of the need for such information, which is directly informed by the timely ability to deliver advisory information to influence recovery. The decision making process includes: a review of the event to assess the adequacy of the Effective or Preliminary flood hazard information; a technical analysis of the available data elements including those data being collected during and after the event; and an assessment of whether and how the data would be used at the state and local levels. See Attachment A.4, Advisory Flood Hazard Information, for a detailed description of the data considerations, decision making process, and considerations for release of Advisory Flood Hazard Information.
 - b. The FEMA Regional Office (Regional Administrator and Mitigation Division, Risk Analysis Branch) shall collaborate with the Federal Coordinating Officer (FCO) and Hazard Mitigation Branch Director (and other appropriate staff) at the Joint Field Office (JFO), the State Coordinating Officer (SCO), and tribal and/or local jurisdictions to determine the need for Advisory Flood Hazard Information to support recovery. The decision *to not* develop new Advisory Flood Hazard Information shall be made by the Regional Administrator and Mitigation Division, Risk Analysis Branch, in consultation with the FCO and SCO. The decision *to develop* new Advisory Flood Hazard Information shall require approval by the Deputy Associate Administrator for Insurance and Mitigation.



- c. If the development of Advisory Flood Hazard Information and associated products will be funded by the Disaster Fund through the JFO, then concurrence from the FCO is essential.

B. SECTION 2: WORK MAPS, PRELIMINARY FIRMs AND FIS, OR WHEN ABFEs ARE AVAILABLE FOR COMMUNITIES FOR FLOODPLAIN MANAGEMENT PURPOSES

Outcome: In order to minimize future flood damages, the goal of this policy is for communities participating in the NFIP to use work maps, Preliminary FIRM and FIS, or when ABFEs are available where the Effective FIRM and FIS may not represent current flooding conditions.

Information about work maps, Preliminary FIRM and FIS, and ABFEs referenced in this section is described in Section 1 and Attachments A.1 and A.4.

1. Using information from work maps, Preliminary FIRM and FIS, or when ABFEs are available for floodplain management purposes.

a. For Zone A:

Zone A are those parts of the Special Flood Hazard Area (SFHA) where BFEs or floodways have not been developed on the community's Flood Hazard Boundary Maps (FHBMs) or FIRM and FIS. In areas designated as Zone A, communities are required to apply the provision of 44 CFR §60.3(b)(4) of the NFIP Regulations. The information obtained under Subparagraph §60.3(b)(4) constitute available information which requires that communities:

Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source... [44 CFR §60.3(b)(4)]

Information obtained are to be used by communities as criteria for requiring that new and substantially improved/substantially damaged structures have their lowest floors elevated to or above the BFE (non-residential structures can also be floodproofed to or above the BFE) and for prohibiting any encroachments in a floodway that would result in any increase in flood levels during occurrence of the base flood discharge. The information obtained should be used by communities as long as they reasonably reflect flooding conditions expected during the base flood (1% annual chance flood), are not known to be scientifically or technically incorrect, and represent the best information available.

Information from work maps, Preliminary FIRM and FIS or ABFEs,



when available, constitute available information under 44 CFR §60.3(b)(4).

The requirement at Subparagraph 60.3(b)(4) is an important floodplain management tool for reducing flood damages in areas where a detailed study to develop BFEs and designate floodways on rivers and streams has not been conducted. Communities are required to reasonably utilize work maps, Preliminary FIRM and FIS or when ABFEs are available under the section of their ordinance that applies to this subparagraph. A community is allowed discretion in using this information only to the extent that the technical or scientific validity of the work maps, Preliminary FIRMs and the FIS or when ABFEs are available is questioned.

In Zone A areas, the rationale for requiring reasonable utilization of information from work maps, Preliminary FIRM and FIS or when BFEs

are available is premised on the absence of BFE or floodway information on Effective FIRMs and FIS and the need to protect new or substantially improved/substantially damaged structures from flood damage. The use of the qualifier "reasonable" at subparagraph §60.3(b)(4) reflects FEMA's statutory obligation to provide the public an opportunity to appeal the proposed elevation information.

If a community decides not to use the BFE or floodway information from work maps, Preliminary FIRM and FIS, or when ABFEs are available because it is questioning the information through a valid appeal, the community must continue to ensure that structures are constructed using methods and practices that minimize flood damages in accordance with the floodplain management requirements under subparagraphs §60.3(a)(3) and (4).

Subparagraph §60.3(a)(3) requires communities to review permit applications to determine whether proposed building sites are reasonably safe from flooding. If a proposed building site is floodprone, communities are to require that new or substantial improved/substantially damaged structures are adequately anchored, be constructed with flood resistant materials, be constructed to minimize flood damages, and have attendant utilities protected during the conditions of flooding.

Subparagraph §60.3(a)(4) requires communities to review subdivision proposals and other proposed new developments, including manufactured home parks or subdivisions, to determine whether proposals will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is



floodprone, communities are required to review such proposals to assure potential flood damages are minimized, utilities are constructed to minimize or eliminate damages, and adequate drainage is provided to reduce the exposure to flood hazards.

When all appeals have been resolved and a notice of final flood elevation determination has been provided in a Letter of Final Determination (LFD), communities are required to use the BFE and floodway information for regulating floodplain development in accordance with 44 CFR 60.3(b)(4) since the information represents the best information available. This includes meeting the standards at 44 CFR 60.3(c), and (d) pertaining to the elevation of residential and nonresidential structures (or dry floodproofing non-residential structures) and floodways. Communities must regulate floodplain development using the information from the FIRMs and the FIS under 60.3(b)(4) until such time as the community has adopted the revised FIRM and FIS.

b. For Zones AE, A1-30, AH, AO, VE, and V1-30

The NFIP floodplain management criteria do not require communities to use BFE and floodway information from work maps, Preliminary FIRMs and the FIS or when ABFEs are available in Zones AE, A1-30, AH, AO, VE, and V1-30 in lieu of using the BFE and floodway information contained on an Effective FIRM and FIS. Because communities are afforded the opportunity to appeal BFE information after issuance of a Preliminary FIRM and FIS in accordance with Section 1363 of the National Flood Insurance Act of 1968, as amended, a presumption of validity is given to the Effective BFEs that have gone through the formal statutory appeals process and which have been adopted by the community.

However, in cases where BFEs increase in the restudied area, communities have the responsibility to ensure that new or substantially improved/ substantial damaged structures are protected, particularly if the increases in BFEs are significant. While FEMA cannot mandate or require a community to use BFE and floodway information from work maps, Preliminary FIRMs and the FIS or when ABFEs are available or to use the information at the time FEMA issues the LFD to the community until such time that the revised FIRMs and FIS have been adopted, FEMA encourages communities to reasonably utilize this information in instances where BFEs increase and floodways are revised to ensure that the health, safety, and property of their citizens are protected.

In cases where BFEs decrease, the community should not use work maps, Preliminary FIRMs and the FIS or when ABFEs are



available to regulate floodplain development until the LFD has been issued or at least until all appeals have been resolved. If the work maps, Preliminary FIRMs and FIS or when ABFEs are available provides information that BFEs are decreasing, but a valid appeal actually results in higher BFEs, the community could place its citizens at a greater flood risk by using work maps, Preliminary FIRMs and the FIS or when ABFEs are available to regulate floodplain development. Also, these structures could be subject to increased flood insurance premiums.

In communities where floodways have not been designated for all or some of the flooding sources, but BFEs have been provided, communities are required to apply the criteria at 44 CFR §60.3(c)(10):

Require until a floodway is designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community. [44 CFR 60.3(c)(10)].

However, if work maps, Preliminary FIRMs and FIS or when ABFEs are available and designated floodways where none had previously existed, communities should reasonably utilize this information in lieu of applying the encroachment performance standard of subparagraph §60.3(c)(10) since the information from the work maps, Preliminary FIRMs and the FIS or when ABFEs are available represents information that could minimize any increase in flood levels within the community during the occurrence of the base flood discharge.

By utilizing the floodway information from work maps, Preliminary FIRMs and FIS or when ABFEs are available, communities avoid the expense of conducting the hydraulic analysis necessary to demonstrate compliance with 60.3 (c)(10). In addition, communities can minimize flood damages by ensuring that the flood carrying capacity of the floodway is preserved since obstruction of floodways can significantly increase potential flooding upstream (§60.3(d)(3)).

c. For Zones B, C, and X

The NFIP floodplain management criteria do not require the use of



BFE and floodway information from work maps, Preliminary FIRMs and the FIS or when ABFEs are available under 44 CFR 60.3(b)(4) for an area or areas within Zones B, C, or X on the community's FIRM that are being revised to Zone AE, A1-30, AH, AO, VE, or V1-30.

While FEMA cannot mandate or require a community to use the information from work maps, Preliminary FIRMs and the FIS or when ABFEs are available pertaining to areas designated as Zone B, C, or X as available information or use the information at the time FEMA issues the LFD to the community, FEMA encourages communities to reasonably utilize this information to ensure that the health, safety, and property of their citizens are protected.

2. **Ordinance Requirements: Adoption of the Revised FIRMs and FIS**

a. **For Zone A**

When all appeals have been resolved and a notice of a final flood elevation determination has been provided in a LFD for areas previously designated as Zone A, communities are required to use the BFE and floodway from the revised FIRM and FIS for regulating floodplain development in accordance with subparagraph §60.3(b)(4) since the information represents the best information available. This includes meeting the standards of §60.3(c), (d), and/or (e) pertaining to the floodplain requirements of the NFIP for new and substantially improved/substantially damaged structures. Communities must regulate floodplain development using the information on the revised FIRM and in the FIS under subparagraph §60.3(b)(4) until such time as the community has adopted the revised FIRM and FIS.

b. **For Zones AE, A1-30, AH, AO, VE, V1-30, B, C, and X**

Communities are given six months from the date of the LFD in which to adopt the revised FIRM and FIS. This is in keeping with FEMA's statutory obligation to provide a reasonable time for the community to adopt floodplain management regulations consistent with the revised FIRM and FIS. Subparagraph §59.24(a) of the NFIP Regulations provides for a six month compliance period in which the community must adopt the revised FIRM and FIS and amend existing regulations to incorporate any additional floodplain management requirements under §60.3.

Floodplain management ordinances generally contain a section entitled "Basis for Establishing the Areas of Special Flood Hazard" in which the revised FIRMs and FIS are cited. Language in the



ordinance may include any subsequent amendments thereto (i.e., to include any subsequent revised FIRM and FIS); however, this language should not be used as the basis for a community to use the Preliminary FIRMs and the FIS or when ABFEs are available prior to the issuance of the LFD. If a community chooses to use Preliminary FIRMs and FIS or when ABFEs are available prior to the LFD being issued or use the information after a LFD is issued but before the community has adopted the revised FIRM and FIS, it is advised that the community adopt this information before its use.

C. SECTION 3: INSURANCE IMPLICATIONS OF USING AVAILABLE AND ADVISORY FLOOD HAZARD INFORMATION

Outcome: This section explains the insurance implications when using work maps, Preliminary FIRM and FIS, or when ABFEs are available.

Information about work maps, Preliminary FIRM and FIS, and ABFEs referenced in this section is described in Section 1 and Attachments A.1 and A.4.

Zone A

For a new or substantially improved/substantially damaged structure, communities can use information from work maps, Preliminary FIRM and FIS, or when ABFEs are available for completing the Elevation Certificate in Zone A areas. The flood insurance policies for new or substantially improved/substantially damaged structures in Zone A that are rated using BFE data from work maps, Preliminary FIRM and the FIS, and when ABFEs are available will often qualify for significantly lower insurance rates than policies that are rated without a BFE.

Zones AE, A1-30, AH, AO, VE, and V1-30

For flood insurance rating purposes, in Zones AE, A1-30, AH, AO, VE, or V1-30, new or substantially improved/substantially damaged structures are rated based on the BFE and FIRM Zone in effect on the date of construction until the revised FIRM becomes effective. This is the case regardless of whether the work maps, Preliminary FIRMs and the FIS, or available ABFEs indicate that the proposed BFEs will increase or decrease.

If a community chooses to use BFEs from work maps, Preliminary FIRMs and the FIS or when ABFEs are available for a new or substantially improved/substantially damaged structure, the flood insurance rate is still based on the BFE and FIRM Zone in effect on the date of construction. The flood insurance rate will be based on the FIRM Zone in effect and the elevation difference between the BFE in effect and the elevation of the



lowest floor. Therefore, if a new or substantially improved/substantially damaged structure is built to the proposed BFE from a work map, Preliminary FIRM and FIS or when ABFE are available and this BFE is higher than the BFE in effect, the flood insurance rate may be significantly lower. In this case, the insured will qualify for a premium pro rata refund once the revised FIRM and FIS are effective. However, a new or substantially improved/substantially damaged structure built to a BFE from a work map, Preliminary FIRM and FIS or when ABFE are available is lower than the BFE in effect it may result in a significantly higher flood insurance rate.

Zones B, C, and X

For flood insurance rating purposes, new or substantially improved/substantially damaged structures are rated based on the FIRM Zone in effect (i.e., Zone B, C, or X) on the date of start of construction. If a community chooses to use BFEs from work maps, Preliminary FIRMs and FIS, or when ABFEs are available for a new or substantially improved/substantially damaged structure, the flood insurance rate is still based on the FIRM Zone in effect (i.e., Zone B, C or X) on the date of construction.

D. SECTION 4: INCREASED COST OF COMPLIANCE (ICC) COVERAGE

Outcome: To provide information on how ICC uses available and Advisory Flood Hazard Information for mitigation purposes.

Information about Preliminary FIRMs and the FIS or when ABFEs are available referenced in this section is described in Section 1 and Attachments A.1 and A.4.

ICC coverage is a standard coverage in most NFIP policies. The coverage provides up to \$30,000 to help property owners reduce the risk of damage from future floods by elevating residential and nonresidential structures (or floodproofing nonresidential structures only), demolishing, or relocating their structure to meet the requirements of a community's floodplain management ordinance.

If the community adopts and enforces a Preliminary FIRM and FIS or when ABFEs are available, ICC benefits will be available to elevate residential and nonresidential structures (or floodproofing nonresidential structures only), demolish, or relocate their structure. If the community does not adopt and enforce a Preliminary FIRM and FIS or when ABFEs are available, ICC benefits will only pay to elevate residential and nonresidential structures (or floodproofing nonresidential structures only) to the BFE on the Effective FIRM and FIS or BFE plus freeboard if the community has adopted this standard.



The community must declare the building to be substantially damaged by flood by the time the repair permit is issued by the community. The NFIP requires that the ICC claim be filed as soon as the property owner is notified by the community that the building has been substantially damaged by flood.

For additional information on ICC see the following website:

<https://www.fema.gov/pdf/plan/floodplain/fema301.pdf>

E. SECTION 5: USE OF BEST AVAILABLE FLOOD HAZARD INFORMATION FOR MITIGATION AND RECOVERY DECISIONS

Outcome: FEMA will use the best available flood hazard information to determine the flood zone and Base Flood Elevation (BFE) when making mitigation and recovery decisions for construction and repair.

Information about Preliminary FIRMs and the FIS or Advisory Flood Hazard Information referenced in this section is described in Section 1 and Attachments A.1 and A.4.

1. This section provides guidance for FEMA in complying with requirements in 44 CFR Section 9.7(c) and Executive Order (EO) 11988 Section 2(a)(1) on the use of best available flood hazard information for FEMA actions.
2. For Public Assistance, this policy applies to projects for which funds have not yet been obligated as of the date of this Policy. For Hazard Mitigation Assistance, this policy applies to disasters declared on or after the date of this Policy or application periods that start on or after this Policy.
3. The best available flood hazard information must be determined for each proposed project site.
4. To determine the best available information, FEMA will first identify the available sources of flood hazard information for a proposed project site by consulting:
 - a. the Effective and/or Preliminary FIRMs and FIS as identified in the latest Available Flood Hazard Information Table, and
 - b. the Advisory Flood Hazard Information, if developed.
5. **If only one source of flood hazard information is available for the proposed project site, then that source is the best available information.**



6. Where multiple sources of flood hazard information are available for a proposed project site, such as where there is both an Effective and Preliminary FIRM or both an Effective FIRM and Advisory Flood Hazard Information, FEMA will compare each source. **The best available information is the source which provides the more restrictive flood hazard zone, the highest Base Flood Elevation, and/or the greatest discharge.**
7. Projects funded by FEMA must be designed to the best available information or a State or local floodplain management standard, whichever is more restrictive.
8. If additional flood hazard information is needed, FEMA will seek additional information from Federal, State, or local sources. Examples of situations where additional flood hazard information may be needed are where a proposed project site is in an area where FEMA has not conducted a flood study, where a FIRM and FIS do not provide a Base Flood Elevation, or where a FIRM and FIS do not delineate the flood hazard boundaries in the vicinity of the proposed site. If no flood hazard information can be found from existing sources, FEMA will seek the services of a professional engineer with the ability to develop information about the floodplain.

F. SECTION 6: USE OF BEST AVAILABLE INFORMATION FOR UNIFIED FEDERAL REVIEW PROCESS

Outcome: The Unified Federal Review Advisor will message and share flood hazard information standards and sources of available information to ensure all agencies completing EHP compliance reviews have a unified understanding of agencies' standards.

1. The Unified Federal Review (UFR) Process enhances the ability of federal agencies to collaborate and expedite the reviews of disaster recovery projects for compliance with environmental and historic preservation (EHP) requirements.
2. The UFR Advisor serves as a liaison and coordinator between disaster recovery agencies in the field, and helps to identify opportunities to expedite environmental and historic preservation compliance and promote unification during disaster recovery.
 - a. The UFR Advisor serves an important role in the messaging and sharing of flood hazard information standards and sources of available information with other federal agencies' EHP compliance staff, ensuring all agencies completing EHP compliance reviews have a unified understanding of agencies' standards.



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- b. The UFR Advisor may also assist/coordinate federal agencies' application of available information for specific projects when necessary, facilitating agreements between multiple agencies funding the same/similar facilities to allow for a unified review standard.

More information on the Unified Federal Review Process can be located at the following web link:

<http://www.fema.gov/unified-federal-environmental-and-historic-preservation-review-presidentially-declared-disasters>.

Roy E. Wright

Deputy Associate Administrator for
Insurance and Mitigation

October 11, 2016

ADDITIONAL INFORMATION

REVIEW CYCLE

FEMA Policy, *insert FEA #, Guidance on the Use of Available Flood Hazard Information*, will be reviewed, reissued, revised, or rescinded within four years of the issue date.

AUTHORITIES

- A. National Flood Insurance Act of 1968 as amended
- B. Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988
- C. Flood Disaster Protection Act of 1973, as amended
- D. National Environmental Policy Act of 1969

REFERENCES

- A. Executive Order 11988 – Floodplain Management, as amended
- B. Executive Order 13690 Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, January 30, 2015
- C. Guidelines for Implementing Executive Order 11988 - Floodplain Management as amended and Executive Order 13690 Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, issued January 30, 2015
- D. Floodplain Management Bulletin 1-98 – Use of Flood Insurance Study (FIS) Data As Available Data

ATTACHMENTS

- A. Attachment A.1: Flood Hazard Mapping Project Phases and Available Work Products
- B. Attachment A.2: Available Flood Hazard Information Table (Internal)
- C. Attachment A.3. Memorandum on Available Flood Hazard Information
- D. Attachment A.4. Advisory Flood Hazard Information and Advisory Base Flood Elevations

DEFINITIONS

- A. For purpose of Sections 1, 2, 3, and 4, this Policy will refer to “community” which is defined in 44 CFR §59.1 Definitions as:

“...any state or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.”

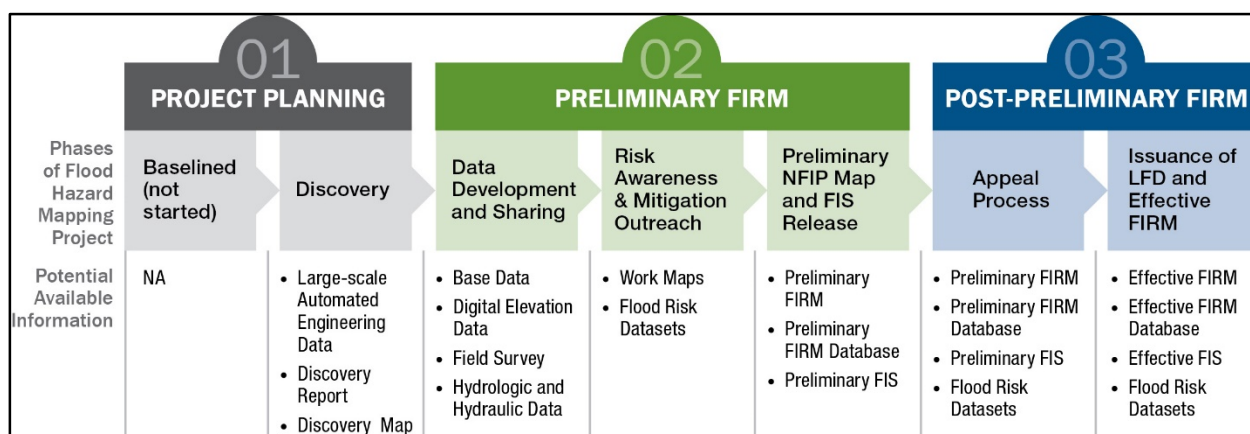
MONITORING AND EVALUATION

Monitoring of this policy will take place throughout implementation of the policy. An evaluation will take place at the close of the disaster to determine if any adjustment needs to occur with the policy.

QUESTIONS

Direct questions to FEMA-Floodplain-Management-Division@fema.dhs.gov

Attachment A.1: Flood Hazard Mapping Project Phases and Available Information



Project Planning: With input from State, tribal and local leaders, a watershed (or other project area definition) is reviewed to determine the need for new or updated flood hazard information. The data developed may be used to revise or update existing Flood Insurance Rate Map (FIRM) and/or create other flood risk products and datasets. The decision to initiate a project is based on the current flood risk in the area, available data, increases in development, population growth, population affected and other related factors.

Discovery: Discovery occurs when watersheds of interest have been selected for further examination in coordination with Federal and State-level stakeholders. Discovery activities include data collection and engagement with local stakeholders, the State, Tribal nations, Other Federal Agencies, non-profit entities, and others. Discovery provides for the exchange of information among various stakeholders. The process includes one or more meetings with stakeholders to better understand the watershed, deciding whether a Flood Hazard Mapping Project is appropriate, and, if so, collaborating on the scope of the project in detail. A Discovery Map and Discovery Report are produced as part of the Discovery Phase. If a Flood Hazard Mapping Project is appropriate for the watershed, a large scale automated engineering (LSAE) analysis may be performed and a project scope and charter will also be finalized. Datasets and information available at this point in the Flood Risk Project timeline include:

- a. **Large Scale Automated Engineering (LSAE) Data** – The LSAE process uses available data and automated modeling techniques early in the Flood Hazard Mapping Project process to produce estimated flood hazard boundaries for the 1% annual chance recurrence interval at a minimum. In some cases, the LSAE datasets are prepared for multiple storm frequencies providing additional flood recurrence intervals for the watershed of interest. The LSAE data may be leveraged to provide more detailed analysis and inform a future update of regulatory and/or non-regulatory flood risk datasets and products.
- b. **Discovery Report & Maps** – A Discovery Map and Discovery Report are produced that documents the local knowledge and insight related to existing flood risk and includes potential projects, detailing data existing in the watershed of interest. Locally generated study and engineering analysis identified during Discovery is also captured within the Discovery Report and Map.

Data Development and Sharing: Once a Flood Hazard Mapping Project is initiated, FEMA and its mapping partners move forward with preparing the data, maps, and flood risk products. These may include the regulatory FIRM and Flood Insurance Study (FIS) report used for floodplain management and insurance requirements and *non-regulatory* flood risk products and datasets which can be used by local officials to support mitigation and community planning and public outreach efforts.

- a. **Base Data** – The planimetric, or horizontal representation, of map features that show georeferenced locations and contain attribute information (i.e., names) about the items. A base map does not include topographic or elevation data
- b. **Digital Elevation Data** – Includes topographic data and ground survey acquired and/or collected for the purpose of hydrologic and hydraulic analysis, floodplain delineation, and the development of Flood Risk Datasets.
- c. **Field Survey** – Includes cross section and structure (i.e. bridges, culverts, etc) survey information acquired and/or collected for the purpose of hydrologic and hydraulic analysis, floodplain delineation, and the development of Flood Risk Datasets.
- d. **Hydrologic and Hydraulic Data** – Hydrologic analysis determines the discharge-frequency relations along the flooding source and hydraulic analysis determines the extent of the flooding and the elevations associated with the water surface of each recurrence interval studied.
- e. **Coastal Data** – Offshore coastal analyses typically include a characterization of extreme water levels associated with hurricanes, storms, high tides, El Nino, and other large-scale coastal phenomenon contributing to major coastal flooding. These analyses may also include contributions from wave setup. Results are typically multi-frequency water level data. Onshore coastal analyses typically include analysis of erosion, wave runup and overtopping, and the overland propagation of waves but may also include analysis of other coastal hazards. Results are typically the identification of the Primary Frontal Dune, Base Flood Elevations, Coastal High Hazard Areas and other Flood Hazard Zones, and the Limit of Moderate Wave Action.

Risk Awareness and Mitigation Outreach: An optional Flood Risk Review Meeting may be organized prior to the issuance of preliminary FIRMs to provide community officials a chance to review and provide early feedback on draft versions of the work maps and in some cases flood risk products and datasets. Using the information provided, community officials can begin identifying mitigation opportunities in their community and communicating with the public about possible changes in flood risk. Communities may also be engaged in a Resilience Meeting that may take place before or after the release of preliminary FIRMs to help communities plan for the future. During this meeting, FEMA, State, and local leaders discuss factors contributing to flood hazard mapping updates in the project area, ways the flood risk products and datasets can support ongoing risk assessment and planning efforts, and work to identify additional ways to reduce flood risk. Relationships built during the course of Flood Hazard Mapping Projects can and should be leveraged to support disaster recovery.

- a. **Work Maps** – Prior to issuing Preliminary FIRMs, FEMA may provide work maps during a Flood Risk Review Meeting to give community officials the opportunity to review the results of the flood hazard information.
- b. **Flood Risk Datasets** - Flood Risk Datasets are a component of the flood risk products. Flood risk products help community members and officials view and visualize their local

flood risk, allowing communities to make informed decisions about reducing flood loss and mitigating potential damage from flood hazards. Flood Risk Datasets may include;

- i. Changes Since Last FIRM shows where the Special Flood Hazard Area (SFHA) has changed since the last effective FIRM;
- ii. Areas of Mitigation Interest communicates where conditions have contributed to the severity of flooding losses, allowing for better prioritization of flood mitigation efforts and use of funds;
- iii. Flood Depth and Analysis Grids communicate the depth and velocity of floodwaters as well as the probability of an area being flooded over time;
- iv. Flood Risk Assessment Data provides an assessment of potential financial consequences and other impacts associated with structures located in a SFHA. This data also enables communities to make informed decisions regarding future land development and community infrastructure.
- v. Other Flood Risk Datasets that communicate additional hazard information such as the location and relative size of Primary Frontal Dunes, areas exposed to floods greater than the 1% annual chance, and identification of Coastal A Zones.

Preliminary NFIP Map Release: At this stage of the Flood Hazard Mapping Project, FEMA releases a Preliminary FIRM which provides the public with an early look at the updated flood hazards in the community and how their effective FIRM might change when the updated information becomes effective. Community officials are provided the opportunity to review and comment on the Preliminary FIRM, Database and FIS Report. These Preliminary products are available at the FEMA Map Service Center (MSC) www.msc.fema.gov.

- a. **Preliminary FIRM** - The Preliminary map of a community on which FEMA has delineated the boundaries of the SFHA and base flood elevation (where determined), and the risk premium zones applicable to the community.
- b. **Preliminary FIRM Database** - The Preliminary FIRM Database stores the preliminary digital GIS data used in the FIRM production process, as well as tabular information inside the Preliminary FIS Report. The Preliminary FIRM Database provides a standard, systematic method for FEMA to distribute comprehensive details of flood hazard identification studies to the public and others in digital format.
- c. **Preliminary Flood Insurance Study (FIS)** - A compilation and presentation of flood hazard data for specific watercourses, lakes, and coastal flood hazard areas within a community. The Preliminary FIS Report contains detailed information of the FIS including flood elevation data in flood profiles and data tables.

Community Engagement: After the release of preliminary FIRMs and FIS reports, FEMA often holds meetings to present them first to community officials (Consultation Coordination Officer [CCO] Meeting) and then the general public (Open House). Any changes in flood risk will be explained and participants will have an opportunity to provide feedback on the products.

Appeal Process: After the Final CCO Meeting, a 90-day appeal period for communities with new or updated flood hazards begins after a public notification process is completed. During this period, communities or the public (through their community officials) may submit data to revise the FIRM if they believe the Preliminary FIRM is scientifically or technically incorrect. FEMA will review all appeals and, if necessary, make changes to the Preliminary FIRM, FIRM Database, and/or FIS, based on the information submitted.

Issuance of Letter of Final Determination (LFD): After all appeals are resolved, FEMA sends community officials the LFD six months before the new FIRM and FIS report become effective. During this six-month period, communities must adopt or amend their floodplain management ordinance to reflect the new maps.

Effective FIRM: Once the new effective FIRM takes effect, the FIRM and FIS are available through FEMA's Flood Map Service Center (MSC) and will affect floodplain development requirements and/or flood insurance rates.

- a. **Effective FIRM** – The official map of a community on which FEMA has delineated the boundaries of the SFHA and base flood elevation (where determined), and the risk premium zones applicable to the community.
- b. **Effective FIRM Database** - The FIRM Database stores the digital GIS data used in the FIRM production process, as well as tabular information inside the FIS Report. The FIRM Database provides a standard, systematic method for FEMA to distribute comprehensive details of flood hazard mapping studies to the public and others in digital format.
- c. **Effective FIS** - A compilation and presentation of flood hazard data for specific watercourses, lakes, and coastal flood hazard areas within a community. When a flood study is completed for the NFIP, the information and maps are assembled into an FIS. The FIS Report contains detailed information of the FIS including flood elevation data in flood profiles and data tables.

**TABLE 1. FEMA Flood Hazard Information Available in [Insert STATE] Counties****[Insert FEMA-####-DR]**

Current as of: [Insert DATE]

County	Effective FIRM Date	Preliminary FIRM Date	Ongoing Study	In Declared Area (Y/N)	Flood Hazard Mapping Project Phase	Detailed Status within Flood Hazard Mapping Project Phase	Next Milestone and Projected Date
County Name	Effective Date	Preliminary FIRM Date	Watershed Name, PMR Name, Countywide				
County Name	Effective Date	Preliminary FIRM Date*	Watershed Name, PMR Name, Countywide				
County Name	Effective Date	**	Watershed Name, PMR Name, Countywide				
County Name (NI)	Effective Date						
Available Flood Insurance Rate Maps (FIRM) can be obtained at FEMA's website: www.msc.fema.gov * estimated preliminary FIRM date; preliminary FIRMs not yet available ** no estimated preliminary FIRM date; preliminary FIRMs not yet available (NI) County not included in Federal Disaster Declaration [Insert FEMA-####-DR]							



FEMA

DATE

MEMORANDUM FOR: [Insert FCO]

FROM: [Insert FEMA Region and JFO HM Branch Director]

SUBJECT: Available Flood Hazard Information for [Insert STATE] re: [Insert FEMA-####-DR] in complying with FEMA Policy [Insert Policy Number 2016-X...]

Purpose of memorandum

Background

Flood Hazard Information in STATE Affected Communities

The status of the effective the Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM), active or completed Letters of Map Revision (LOMR), and available Preliminary FEMA flood hazard information for all [Insert counties/communities/other jurisdictions] in [Insert state] are identified on Table 1 and Exhibit 1. It should be noted that available data may change over the course of time, and this information may be updated periodically in the future to reflect these changes. The most current versions of Table 1 and Exhibit 1 are available at this website: [Insert appropriate FEMA/state/local website]

FEMA is committed to providing Available Flood Hazard Information to guide recovery. In situations where the effective or Preliminary FIS and FIRM may not be adequate for use in the recovery process, FEMA may develop Advisory Flood Hazard Information and release Advisory Base Flood Elevations (ABFE) in coordination with state officials.

Table 1: Available Flood Hazard Information

County	Effective FIRM Date	Preliminary FIRM Date	Ongoing Study
County Name	Effective Date	4/1/2016*	Watershed Name, PMR Name, Countywide
County Name (NI)	Effective Date		
County Name	Effective Date	**	Watershed Name, PMR Name, Countywide

Available Flood Insurance Rate Maps (FIRM) can be obtained at FEMA's website: www.msc.fema.gov/

* estimated preliminary FIRM date; preliminary FIRMs not yet available

** no estimated preliminary FIRM date; preliminary FIRMs not yet available

(NI) County not included in Federal Disaster Declaration [Insert FEMA-####-DR]

Attachment

cc:

Attachment A.3

Page 1 of 3

Example TABLE 1:



TABLE 1. FEMA Flood Hazard Information Available in South Carolina Counties (FEMA-4241-DR)

Current as of: 11/13/2015

County	Effective FIRM Date	Preliminary FIRM Date	Ongoing Study
Abbeville	3/3/2011	4/1/2016*	Upper Savannah Watershed
Aiken	6/19/2012	5/27/2016*	Middle Savannah Watershed
Allendale	7/22/2010		
Anderson	9/29/2011	12/18/2015*	Seneca Watershed
Bamberg	9/29/2010		
Barnwell(NI)	9/29/2010		
Beaufort	9/29/1986	4/30/2016*	County-wide
Berkeley	10/16/2003	1/14/2016*	County-wide
Calhoun	4/16/2007		
Charleston	11/17/2004	8/1/2016*	County-wide
Cherokee(NI)	9/16/2011		
Chester(NI)	9/16/2011	1/16/2015	Lower Catawba Watershed
Chesterfield	9/16/2011		
Clarendon	8/19/2013		
Colleton	11/7/2001	11/20/2015*	County-wide
Darlington	2/6/2013		
Dillon	5/24/2011		
Dorchester	4/15/1994	5/26/2014	County-wide
Edgefield(NI)	3/3/2011	5/27/2016*	Middle Savannah Watershed & Stephens Watershed
Fairfield	5/3/2011	1/29/2016*	Wateree Watershed
Florence	12/16/2014		
Georgetown	3/16/1989	11/13/2015	County-wide
Greenville	8/18/2014	**	Tyger Watershed
Greenwood	5/3/2011		
Hampton(NI)	9/29/2010		
Horry	8/23/1999	9/11/2015	County-wide
Jasper(NI)	9/29/1986	**	County-wide
Kershaw	12/19/2006	1/29/2016*	Wateree Watershed
Lancaster	6/16/2011	1/16/2015 1/29/2016*	Lower Catawba Watershed Wateree Watershed
Laurens	8/16/2012		
Lee	11/19/2008		
Lexington	2/20/2002	10/30/2015	County-wide
Marion	10/18/2011		
Marlboro	6/16/2011		
McCormick	4/4/2011	5/27/2016*	Stevens Watershed
Newberry	9/16/2011		
Oconee (NI)	9/11/2009	12/18/2015*	Seneca Watershed
Orangeburg	1/16/2014		
Pickens(NI)	4/16/2008	12/18/2015*	Seneca Watershed
Richland	9/29/2010	4/30/2015	County-wide
Saluda	6/18/2007		
Spartanburg	1/16/2011	**	Tyger Watershed
Sumter	2/16/2007	1/29/2016*	Wateree Watershed
Union(NI)	8/2/2011	**	Tyger Watershed
Williamsburg	11/16/2012		
York(NI)	9/26/2008	1/16/2015	Lower Catawba Watershed

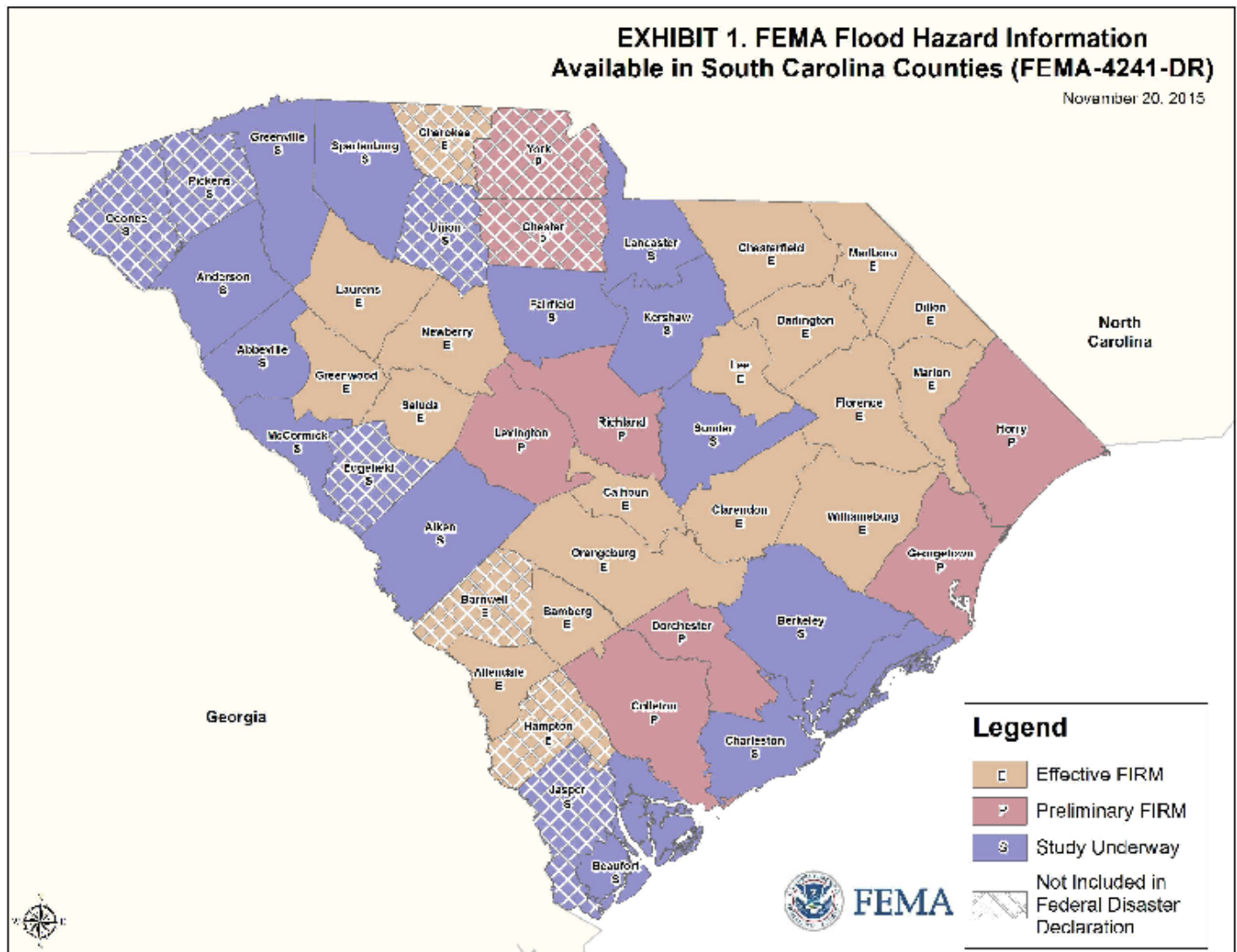
Available Flood Insurance Rate Maps (FIRM) can be obtained at FEMA's website: www.msc.fema.gov

* estimated preliminary FIRM date; preliminary FIRMs not yet available

** no estimated preliminary FIRM date; preliminary FIRMs not yet available

(NI) County not included in Federal Disaster Declaration FEMA-4241-DR

Example EXHIBIT 1



Introduction

Following a Presidential declared disaster, FEMA strives to provide communities with the most current hazard information to consider in supporting the repair and rebuilding of public infrastructure and non-residential and residential structures. The decision to develop Advisory Flood Hazard Information, which may include Advisory Base Flood Elevations (ABFEs), is informed by the ability to deliver advisory information in a timely manner to influence recovery. This requires collaboration between the FEMA Regional Office, the Joint Field Office (JFO) including the Federal Coordinating Officer (FCO), the State Coordinating Officer (SCO), and the impacted communities. The decision to develop new Advisory Flood Hazard Information shall require approval from the Deputy Associate Administrator of Insurance and Mitigation, and if the development of these associated products will be funded by the Disaster Fund through the JFO, then concurrence from the FCO is essential.

The timely decision making process should be based on an assessment of the need for such information, a review of the event and the available data to assess the adequacy of the Effective or Preliminary Flood Hazard Information, and an understanding of the communities anticipated use of the data. This document highlights three main phases to assist in making the decision to develop Advisory Flood Hazard Information: the Decision-Making Process, the Final Decision, and the Release of Advisory Information.

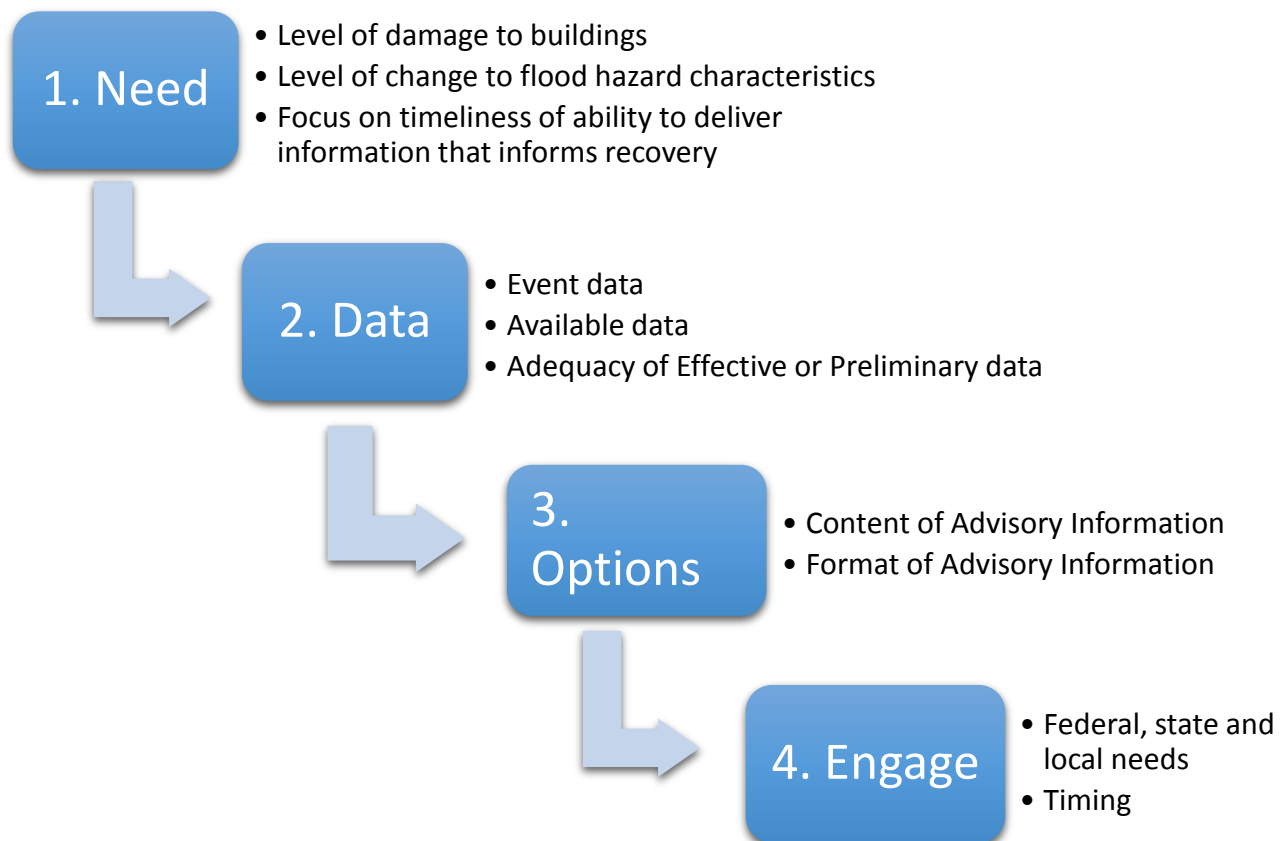
I. Decision-Making Process

In general, the uses of Advisory Flood Hazard Information include supporting rebuilding efforts and providing the available data at the time of reconstruction for siting and elevating critical facilities and other Public Assistance projects, planning and evaluating Mitigation Grant projects, informing any new and substantially improved/substantially damaged structures in the areas receiving the data, and increasing community resiliency. Knowing how Advisory Flood Hazard Information may be used by different stakeholders can assist in determining whether the data should be developed and in what format. The users and uses of Advisory Flood Hazard Information may differ depending on the type of severe weather event; the Tribal Nations, state(s), Commonwealths, or territories affected; the region of the country; and other factors. A list of stakeholders and how they may use Advisory Flood Hazard Information are described below:

- Building and permit officials, local floodplain administrators, local elected officials, and community planners can use the information to make key decisions on how their communities plan for the future and guide rebuilding efforts. States can use the information to assist communities and address their structures and infrastructure. These stakeholders also have a role in ensuring compliance with the National Flood Insurance Program (NFIP) floodplain management requirements and may be used by other programs.
- Builders (architects, engineers, and the construction community) can use this information to assist their clients, such as business-owners and home-owners, with rebuilding decisions. Builders and property owners are required to obtain building permits from the local permit office and to work alongside local officials in using this information when rebuilding.

- Recovery Support Functions for community planning and capacity building, infrastructure, and housing may rely on hazard information to guide overall planning efforts during the rebuilding and recovery process under the National Disaster Recovery Framework, supporting communities in their recovery efforts.
- Federal agency partners may use the information to comply with the Federal Flood Risk Management Standard (FFRMS) of Executive Order 11988, as amended.
- Local insurance agents in affected areas may use this information to inform business- and property-owners who are making decisions on insurance coverage that may be needed if/when this information is depicted on Effective Flood Insurance Rate Maps (FIRMs).

The decision to develop Advisory Flood Hazard Information is a four-step process. If it is determined that there is not a need for Advisory Flood Hazard Information in Step 1, or that advisory information cannot be delivered in a timely manner to support recovery, then there may be no need to move on to Step 2; if there is a need identified in Step 1, but the review of the data in Step 2 shows that the current available data is sufficient for recovery, then there may be no need to move on to Step 3, and so on.



Step 1: Need for Advisory Flood Hazard Information

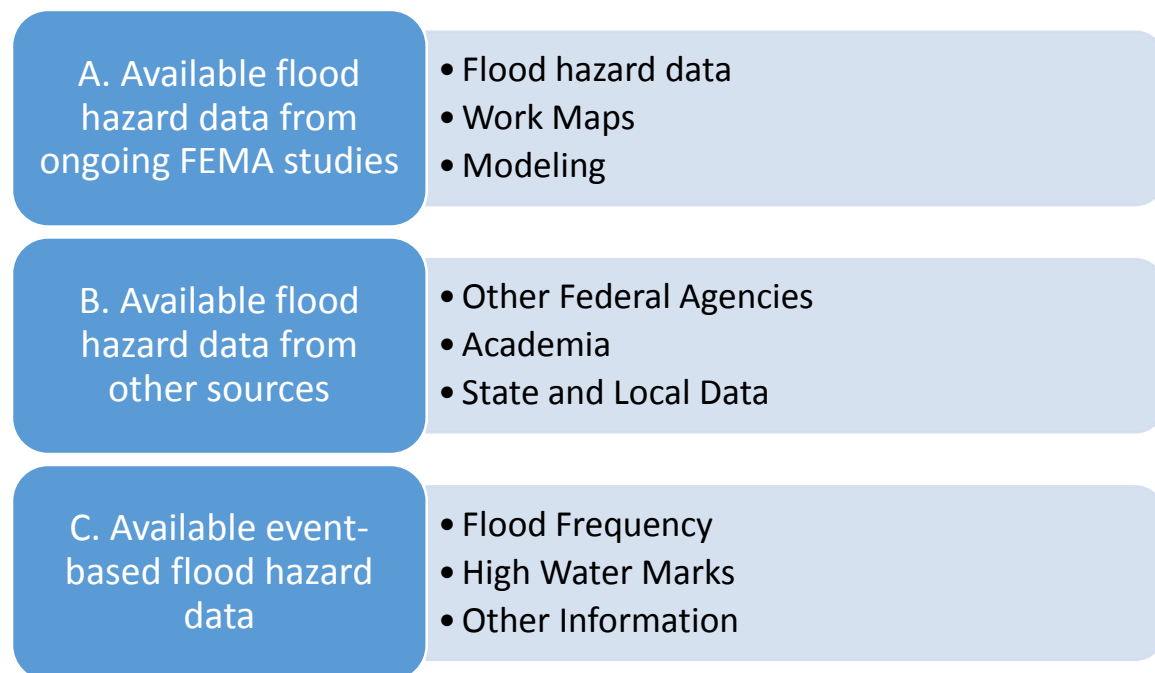
Advisory Flood Hazard Information may be needed when the Region determines that there has been significant damages and when there will therefore be efforts during recovery to repair and rebuild public infrastructure and non-residential and residential structures.

At this stage, the topography and geographic conditions must be considered. For example, if there were a large fire or mudslide that dramatically changed the geomorphological components of the area and thus influences the flow dynamics in a manner different than what is represented by the current Base (1-percent-annual-chance) Flood Elevations (BFEs), then there may be a need to develop Advisory Flood Hazard Information to inform long-term recovery.

If the damages were not considered to be significant causing large scale rebuilding in the impacted area, if the event did not change the characteristics of the 1-percent-annual-chance-event, if data are not needed for compliance with other requirements, and/or if advisory information cannot be developed within a relatively short amount of time to inform recovery decisions, then the need for Advisory Flood Hazard Information may be low and the decision process may end at this stage.

Step 2: Review of Data and Assessment of the Adequacy of the Effective or Preliminary FIRM

If it is determined that there is a need (Step 1), then an assessment of the available data must be conducted which will assist in an assessment of the adequacy of the Effective or Preliminary FIRM. In addition, an inventory of existing topography and available engineering models and methodologies can assist in determining the existing technical data that can be leveraged for Advisory Flood Hazard Information, if developed. There are generally three types of data that may be available for review: FEMA project data, data from outside sources, and event-related data.



- A. Even if a Preliminary FIRM has not been recently issued, data may be available from ongoing FEMA studies. If an ongoing FIRM update project is in process, there may be flood hazard data available or data may be able to be quickly generated for the affected area that depicts a better understanding of the 1-percent-annual-chance event or that can be leveraged for the development of Advisory Flood Hazard Information. See Attachment A.1 for more information about the types of data available at different stages in the process. If the data under development is determined to be better or more appropriate than the Effective FIRM and the hazard event does not change our understanding of the base flood extent and depth (for instance, if the hydrology has changed due to the event), then it may be decided at this stage that accelerated delivery of Preliminary FIRMs is the best path forward and that Advisory Flood Hazard Information is not necessary.
- B. If there is no ongoing FEMA-led study, data may be available from states, communities, private, academic, or other federal agency sources (for example, modeled hindcasting of the storm event) that impact our understanding of the 1-percent-annual-chance flood event and/or can be leveraged for the development of Advisory Flood Hazard Information.
- C. A review of post-event data must include an assessment of the nature of the severe weather event, including information about the type of event and its relation to other types of hazards. If the event changes our understanding of the 1-percent-annual-chance flood hazard, including all its complementary requirements, or impacts other natural hazards (such as a fire event impacting flood or erosion risk), Advisory Flood Hazard Information may be needed. Identifying the frequency of a flood event is critical for assessing the adequacy of the Effective FIRM. In addition, high-quality high water mark (HWM) data, surveyed debris lines, and damage assessments may be available after a flood event. Note that the quantity, quality, and distribution throughout the area of HWM data and its event correlation to the 1-percent-annual chance event is critical in creating event-based ABFEs. Efforts to identify, request, and organize perishable data that is being collected (e.g., gage data, HWM locations and elevations, aerial imagery, weather event analysis, debris lines, damage assessments, dune erosion assessments, dam breach and flood protection structure failure information, etc.) after the flood or other hazard event must be coordinated with federal, state, communities, academic, and other stakeholders. If the event produced flooding that differed from the 1-percent-annual-chance flood in certain areas, a frequency analysis can assist in understanding and communicating the estimated frequency of the event in those areas.

Assessment of the Adequacy of the Effective Flood Hazard Data

In the absence of Preliminary FIRMs or Advisory Flood Hazard Information, participating NFIP communities must use the Effective FIRM and FIS to make development decisions in Special Flood Hazard Areas (SFHAs) in the post-disaster environment. Therefore, an assessment of the limits and extent of the Effective (or Preliminary, if applicable) flood hazard data is an important part of the decision of whether to create Advisory Flood Hazard Information. In areas where there is no mapped SFHA (Zone D, unmapped areas, or NSFHA communities), Advisory Flood Hazard Information may be the only resource to inform recovery.

If there are significant damages outside the SFHA or the initial post-event data indicates that the BFEs, SFHA extents, zone designations, or other information important for recovery on the Effective or Preliminary FIRMs are not reflective of the 1-percent-annual-chance hazard, Advisory Flood Hazard Information will be considered.

If the frequency of a flood event has been determined to be close to a 1-percent-annual-chance flood, an understanding about how the affected areas compare with the Effective FIRM is important, as this comparison may prove/disprove the adequacy of the Effective FIRMs. For instance, if the flood event inundation limit and/or flood elevations exceed the limit and extent of the SFHAs shown on the Effective or Preliminary FIRMs (i.e., the event was much larger or included larger damages than expected), providing Advisory Flood Hazard Information may be vital to supporting reconstruction efforts. This is also critical to understanding by stakeholders of the need for Advisory Flood Hazard Information (applicable in Step 4).

Note that disaster events impact areas differently; an event that is determined to be close to a 1-percent-annual chance event in one area may not necessarily be considered a 1-percent-annual chance event in the entire impacted area. Also note that an older FIRM will not necessarily contain outdated flood hazard information and a newer FIRM and FIS will not necessarily contain updated modeling information in all areas of coverage. It is recommended that this assessment be led by the FEMA Regional Office partnering directly with, and requesting participation from the state, regional technical experts (such as river authorities or other stakeholder groups) and local subject matter experts (engineering firms, academia, etc.) and entities. This assessment must include a review of Coordinated Needs Management Strategy data to determine whether any study needs have been identified in the affected area and whether the flood hazard information for a flooding source was considered to be “valid” prior to the event.

Step 3: Advisory Flood Hazard Information Options

If it has been determined that there is a need (Step 1) *and* the event or other available information changes our understanding of the flood risk and/or the Effective or Preliminary FIRMs and FIS are not sufficient for recovery (Step 2), then the type of Advisory Flood Hazard Information that is possible to produce with the resources available will be considered. If there are no data available to leverage in the affected area, the timeline to produce the Advisory Flood Hazard Information may be outside of the window of influence for recovery operations (see Step 4). If there is a need to develop additional data in order to ensure that other requirements are met in the post-event environment, it could precipitate the need for Advisory Flood Hazard Information.

Advisory Flood Hazard Information can take many forms. ABFEs can be accompanied by revised SFHAs, zone designations, Limits of Moderate Wave Action (LiMWA), velocity zones, and other information; Advisory data can also include storm event information, depth grids, updated hydrology, debris-flow information, and many other types of information. There are several sources of data that may be leveraged for use in releasing Advisory Flood Hazard Information, including FEMA data, data from other sources, and event-based information.

Examples of Advisory Products include, but are not limited to the following:

- ABFEs for the 1-percent-annual-chance event and additional flood frequencies
- Advisory Flood Zones that provide a representation of the ABFEs and additional flood frequencies
- Products that include storm surge and wave components in coastal areas
- Advisory Limit to provide the limits of Advisory Information coverage
- Advisory Zone V and Zone A Boundary to approximate the landward limit of the 3-foot breaking wave in coastal areas

- Advisory LiMWA to approximate the landward limit of the 1.5-foot breaking wave and the associated Area of Moderate Wave Action (MOWA) to approximate the extent of breaking waves less than 3 feet but greater than 1.5 feet in height in coastal areas
- Advisory Limit of ABFEs to define the transition of coastal advisory data and riverine Advisory Data
- Storm Event information (i.e. HWM, debris lines, gage data, surge contours, model results, or other information)
- 1-percent-annual-chance and 0.2-percent-annual-chance Depth Grids
- Multi-Profile Water Surface Elevation Grids (for use in online displays or for informational purposes)
- Areas of Expanded or Reduced Flood Risk (i.e., Changes Since Last FIRM)
- ABFE Water Surface Elevation Profiles
- 1-percent-annual-chance Velocity Grids
- An ABFE + 2 feet layer to assist federal, state, tribes, and local officials for recovery planning
- An ABFE + “n” feet layer to depict flood elevations from larger storms or future sea level rise scenarios
- Burn area flood hazard information
- Post-event wildfire, debris flow, alluvial fan, and increased flooding maps
- Erosion corridors or landslide zones
- Primary Frontal Dune location and relative size
- Other advisory information as needed

Step 4: Engaging With States and Communities

If there is a need (Step 1), coupled with a lack of sufficient information to effectively support recovery (Step 2), and an understanding of the type and format of Advisory Flood Hazard Information that might be issued (Step 3), then the final step is to determine the extent to which the information is desired and how the data will be received and understood by the state, tribes, and local officials. This can be impacted by timing, coverage area, stakeholder understanding of the adequacy of the Effective or Preliminary FIRMs and FIS, and support of Advisory Flood Hazard Information.

The timeline to data availability is one of the most important factors impacting the decision to develop Advisory Flood Hazard Information. If there is no FEMA flood hazard study or data available from other sources in the affected area, the time needed to produce the Advisory Flood Hazard Information may impact timelines such that the data are not available during recovery operations. Data development timelines must be discussed among state, communities, academic, or other federal agencies to determine if Advisory Flood Hazard Information should be addressed in the next map update.

The limit and extent of possible Advisory Flood Hazard Information will be reviewed. The coverage area should include only those areas impacted significantly, as identified in Step 1. Producing Advisory Flood Hazard Information for areas outside the significantly-impacted locations is not an efficient use of resources. For example, hurricanes can have major impacts but frequently only in relatively specific geographic locations, so a decision to develop Advisory Flood Hazard Information for the entire coast of a state may be unnecessary.

FEMA will research Stakeholder perception of the adequacy of the Effective or Preliminary FIRMs and FIS with respect to the flood event’s actual frequency. This may be informed by the assessment completed in Step 2.

In heavily impacted areas that may require Advisory Flood Hazard Information, feedback from stakeholders should also be considered in order to determine whether or not Advisory information is needed, and if so, where it is most needed, what format it should take, and how it will be utilized.

FEMA will evaluate State, tribal, and local input and interest in Advisory Flood Hazard Information. If the state and/or tribes and affected communities request such information, it is more likely to be received positively and used on the local level. The level of interest in/willingness to adopt the Advisory Flood Hazard Information including ABFEs for rebuilding purposes is also an important factor.

II. Final Decision

Focusing on the availability of data and timeliness to develop information, the FEMA Regional Office (Regional Administrator and Mitigation Division, Risk Analysis Branch) shall collaborate with the Federal Coordinating Officer (FCO) and Hazard Mitigation Branch Director (and other appropriate staff) at the Joint Field Office (JFO), the State Coordinating Officer (SCO), and tribal and/or local jurisdictions to determine the need for Advisory Flood Hazard Information to support recovery.

The decision *to not* develop new Advisory Flood Hazard Information shall be made by the Regional Administrator and Mitigation Division, Risk Analysis Branch, in consultation with the FCO and SCO. The decision *to develop* new Advisory Flood Hazard Information shall require approval by the Deputy Associate Administrator for Insurance and Mitigation.

If the development of Advisory Flood Hazard Information and associated products will be funded by the Disaster Fund through the JFO, then concurrence from the FCO is essential.

It is important to document the reasons for (or against) the development of Advisory Flood Hazard Information. The team members shall document:

- Available data and on-going study information for the disaster-affected area
- Areas of interest/concern to review for possible Advisory Flood Hazard Information preparation
- Preliminary and Effective FIRM dates
- Available data that could be used to prepare Advisory Flood Hazard Information
- Local, tribal, Regional, and state inputs and considerations for Advisory Flood Hazard Information preparation
- Data timeline for Advisory Flood Hazard Information to aid discussions
- Final decision regarding Advisory Flood Hazard Information preparation

Consider conducting a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to assist in the decision making process to develop Advisory Information and to identify potential communication challenges. An example SWOT is provided below:

Attachment A.4: Advisory Flood Hazard Information

Sample Strengths	Sample Weaknesses	Sample Opportunities	Sample Threats
High level of support from state leadership and local communities	Negative perception of FEMA/the Federal Government	New and enhanced ways to share risk information	Communities are trying to rebuild quickly and Advisory Information may slow/complicate this process
Political support from Congressional representatives and other locally influential political entities	Lack of political support from local Congressional representatives	Data sharing can enhance transparency and inform stakeholders how Advisory Information can benefit them before release	Lack of support from local citizens
Available funding and resources in post-disaster environment	Timeline: Communities are trying to rebuild quickly and there is minimal state/community support to slow the rebuilding process	Community Rating System points for regulating to a higher standard available	Confusion about who needs flood insurance and why
Flood hazard studies are already underway	Challenges for local officials to understand how to administer floodplain management regulations in light of Advisory Information	Resiliency: now is the time to build back stronger	Perception that advisory data is only being issued due to the magnitude of the event, and not because it is truly best available data on the 1-percent-annual-chance flood
Effective maps that are known by state and local entities, and even the public, to underestimate the 1-percent-annual-chance flood hazard	Negative connotations of prior Advisory Information in other areas	Substantially damaged, insured structures outside the SFHA may receive extra money through Increased Cost of Compliance to rebuild if communities adopt Advisory Information	Desire to get Advisory Information out quickly could result in failure to take enough time to get all stakeholders on board and in support before public release of the Information
Multiple disaster events in the area	Uncertainty inherent in the results—the impression is that FEMA now wants local governments to regulate to a higher standard than the 1-percent-annual-chance flood by issuing advisory mapping	Increased coordination with OFAs/state agencies	The persistent discussion of structural solutions to protect the area could distract from the conversation on appropriate reconstruction

III. Release of Advisory Flood Hazard Information

If the decision is made to produce Advisory Flood Hazard Information, important considerations include timing, format and dissemination of the information, stakeholder engagement, and internal messaging and preparation. There are also several resources available to assist in the effort to release Advisory Flood Hazard Information.

Timing

If the decision is made to produce Advisory Flood Hazard Information, it is understood that this information will need to be produced on an expedited schedule. However, the quality of the advisory products cannot be sacrificed to expedite the release of the data. All advisory products will be based on sound engineering and science, should leverage any current restudy efforts to the maximum extent possible, and must include a consistent and tiered quality review process to ensure product releases are of the highest quality and defect free.

Consider the timing of various activities as short-term, mid-term, and long-term. Examples of each are provided below:

Short-Term (2 weeks post-event, for example):

- Provide Advisory Flood Hazard Information messaging for FCO, JFO, External Affairs (EA), Public Assistance (PA), Mitigation, and other JFO recovery partners.
- Hold information/education sessions for PA, Mitigation, and other JFO recovery partners as well as states, communities, and other entities including elected officials, floodplain administrators, insurance professionals, Federal agencies, and other identified stakeholders to inform them about the recovery process and how to use the Advisory Flood Hazard Information.
- Identify questions about and provide clear answers to potential recovery policy challenges associated with the development and implementation of Advisory Flood Hazard Information.
- Develop an ABFE delivery platform and begin disseminating information and support for users

Mid-Term (2-4 weeks post-event, for example)

- Develop and provide Advisory Flood Hazard Information to PA, Mitigation, and other JFO recovery partners. Allow adequate time to ensure that a defined and consistent quality review process has been developed and followed for data development.
- Develop a dataset highlighting the differences between the Effective and Advisory Flood Hazard Information (Similar to Changes Since the Last FIRM Risk MAP dataset).
- Provide Advisory Flood Hazard Information and other related products for the project area that communities can adopt and enforce for floodplain management purposes and other recovery purposes.
- Provide information, messaging, and usage resources.

Long-Term (4-8 weeks post-event, for example)

- Provide continuing support to stakeholders as they use the Advisory Flood Hazard Information.
- Provide continuing community support as they adopt and implement Advisory Flood Hazard Information to minimize future flood damages.

Format and Dissemination

Consider how best to format and disseminate the information both internally and externally, using methods that best serve the communities in the focus area, assist stakeholders in using the data for the intended purposes (paper, geospatial, both), and is compatible with the platforms used to disseminate the information. Consider using technology to assist in communicating updated risk information, and innovative delivery channels to get Advisory Flood Hazard Information into the hands of key audiences. These could include online tools for locating a property and determining its ABFE vs. effective BFE or other options. In addition, a product similar to the Changes Since the Last FIRM can help to visually and spatially identify areas of greatest concern. Consider using the FEMA geoportal or other state, regional, or partner websites and/or viewers if possible.

Stakeholder Engagement

Stakeholder and community engagement is extremely important when delivering Advisory Flood Hazard Information. An Advisory Information Team consisting of key staff from FEMA Headquarters, the FEMA Regional Office, and the JFO staff, as well as state staff (NFIP State Coordinator, State Hazard Mitigation Officer, Emergency Management Staff, and other partners) will be considered. The Advisory Information Team must prioritize and plan for community engagement throughout the project timeline. Many pre-existing relationships are likely to exist and should be leveraged for these efforts. The Team will identify existing community engagement contacts and relationships, tools, and other resources through coordination with the Region and flood hazard mapping project teams, if applicable. Internally, assign and prepare team members to engage key community stakeholders and decision-makers, and implement an approach to engaging communities that will increase understanding, acceptance, and productive use of the information.

Conduct meetings and other consultative visits/contacts with states and communities before, during, and after releasing Advisory Flood Hazard Information to raise their awareness, understanding, and use of the information in making building decisions during recovery. Engage multiple community stakeholders to build their understanding of Advisory Flood Hazard Information to inform responsible recovery decisions. Identify and leverage existing relationships to validate and assist with the dissemination of Advisory Information.

Establish continuity of engagement with key community stakeholders, providing clear, consistent, simplified communication to generate positive interest in Advisory Flood Hazard Information within a broad group of stakeholders.

Along with the Advisory Flood Hazard Products themselves, develop and include consistent information about the products and how they can be used (key messaging, fact sheets, user guides, web content, engagement scripts, and other needed items) before and during their release. Identifying the audiences for Advisory Flood Hazard Information and understanding their needs will assist in the development of Advisory Flood Hazard Information and accompanying messaging that meet these needs. Include specific information about the products in your communication and messaging plan, such as whether the datum is different from the current effective information and datum conversion information, if necessary, so that stakeholders can more easily discern the most conservative information if required by their program.

Team members must be well-versed in the Advisory Flood Hazard Information to ensure communications with stakeholders is clear, honest, consistent, and transparent. Stakeholder engagement should seek to ensure that states and communities have the same understanding and support of the Advisory Flood Hazard Information.

In addition, team members must plan for community and stakeholder input once the data is released, including a detailed and systematic approach that allows a community to comment and/or change the data. Communities and others may be able to identify problems or issues with the data that can be quickly revised or updated, especially if the data is delivered in an online format and updates are easily made.

To ensure appropriate messaging, teams will familiarize themselves with best practices and lessons learned to communicate risk in areas where FEMA has previously developed Advisory Flood Hazard Information.

Internal Messaging

Internal messaging and communications is just as important as external messaging and communications. Assuring that all internal parties have the same information and are providing the same consistent messages is an important consideration. It is important to build an understanding of the data availability and use within the JFO, Region and Headquarters. Review the need for internal communications and trainings across the teams within the JFO to best support the data roll out. Include state staff and others who will be in regular communication with affected communities and assure that these staff have the most up to date information that has been released. Environmental and Historic Preservation, Hazard Performance Analysis, Community Education and Outreach, and Floodplain Management and Insurance groups within the JFO are important to supporting the data release and successful implementation of Advisory Flood Hazard Information.

Resources

The development of Advisory Flood Hazard Information is often an iterative process. If the decision is made to produce Advisory Flood Hazard Information, several resources are available including the Hazard Mitigation Field Operations Guide, which includes templates of presentations and provides guidance on Advisory Flood Hazard Information roll-out strategies. Other resources include best practices from past data releases of Advisory Flood Hazard Information that detail format and content examples; implementation plans; internal and external communications plans and messaging; methods to obtain stakeholder comments on the data; template presentations, sample emails, letters, and media materials; task force/team development considerations and approaches; business cards, trifolds, fact sheets, tough questions, checklists, and other materials. In addition, a communications and implementation plan has proven beneficial in past Advisory Information releases and should be consulted to identify additional best practices and updated presentation contents. These and other materials are available on <https://rmd.msc.fema.gov/>.