



ارائه به روزترین منابع، کتابها و جزوات مهندسی عمران
به زبان فارسی و انگلیسی به صورت کاملاً رایگان

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Guidance for Flood Risk Analysis and Mapping

Accepting Numerical Models for Use in the NFIP

November 2023



FEMA

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

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

Table of Revisions

Affected Section or Subsection	Date	Description
All	November 2023	General updates to all sections, clarifying the process to request new models be added (or potentially removed) for consideration on a Risk MAP study.

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1. Introduction

To aid in compliance with Title 44, Chapter 1, Subchapter B of the Code of Federal Regulations (44 CFR) Section 65.6(a)(6), FEMA maintains website lists of numerical models meeting the minimum regulatory requirements as a means of ensuring consistency in implementing the National Flood Insurance Program (NFIP) regulations. Section 65.6(a)(6) explains conditions under which a computer model can be used for flood hazard mapping in the NFIP (see Chapter 3).

Numerical models meeting the minimum requirements of the NFIP are broken into four model types, which are:

1. Coastal,
2. Hydraulic,
3. Hydrologic, and
4. Statistical models.

For each of these model types, a computer model may fall into two categories, either Nationally Accepted or Locally Accepted Models. Locally Accepted Models are only allowed for the specific local areas for which they have been accepted and are not applicable nationwide.

For a comprehensive list of Nationally and Locally Accepted Models visit the “Numerical Models Meeting the Minimum Requirements of the National Flood Insurance Program” website at: <https://www.fema.gov/flood-maps/products-tools/numerical-models>. Links are available at this site for:

- **Coastal Numerical Models**
- **Hydraulic Numerical Models**
- **Hydrologic Numerical Models**
- **Statistical Numerical Models**
- **Numerical Models No longer Accepted**

By federal law, FEMA cannot accept Flood Insurance Study (FIS) or map revision requests that are performed with numerical models other than those on the aforementioned lists.

2. Applicable NFIP Regulations

This guidance document, along with the Numerical Models Meeting the Minimum Requirements of the National Flood Insurance Program” website and the resources referenced within, ensure that FEMA adheres to the federal laws relating to hydrologic and hydraulic analyses in support of flood insurance studies and map revisions meet the criteria set forth in Title 44, Chapter 1, Subchapter B of the Code of Federal Regulations Section 65.6(a)(6). This section of 44CFR states that:

(6) Any computer program used to perform hydrologic or hydraulic analyses in support of a flood insurance map revision must meet all of the following criteria:

(i) It must have been reviewed and accepted by a governmental agency responsible for the implementation of programs for flood control and/or the regulation of flood plain lands. For computer programs adopted by non-federal agencies, certification by a responsible agency official must be provided which states that the program has been reviewed, tested, and accepted by that agency for purposes of design of flood control structures or flood plain land use regulation.

(ii) It must be well-documented including source codes and user's manuals.

(iii) It must be available to FEMA and all present and future parties impacted by flood insurance mapping developed or amended through the use of the program. For programs not generally available from a federal agency, the source code and user's manuals must be sent to FEMA free of charge, with fully documented permission from the owner that FEMA may release the code and user's manuals to such impacted parties.

3. Compliance with the Regulations

3.1. 44 CFR Paragraph 65.6(a)(6)(i): Model Review, Testing, and Acceptance by Certifying Agency

The following procedures should be used to add a model to FEMA's lists of "Numerical Models Meeting the Minimum Requirements of the NFIP." In accordance with Paragraph 65.6(a)(6)(i), any computer program used to perform hydrologic or hydraulic (including coastal and statistical) analyses in support of a map revision must meet the following criteria:

- The model must be reviewed and accepted by a governmental agency responsible for the implementation of programs for flood control and/or regulation of floodplains.
- For computer programs adopted by non-federal agencies, certification by a responsible agency official must be provided which documents the program has been reviewed, tested, and accepted by that agency for purposes of design of flood control structures or floodplain land use regulations.

FEMA does not provide technical review or testing of models. The following section provides guidance on the certification of computer programs for performing coastal, hydrologic, and hydraulic analyses for map revisions and other NFIP purposes. A template for a local model certification letter is provided in Appendix 1 of this guidance document.

Hydrologic and hydraulic models developed by federal agencies responsible for the implementation of flood control programs, floodplain regulation, and/or flood hazard analysis explicitly meet the criteria stated in 44 CFR Paragraph 65.6(a)(6)(i) of the NFIP regulations. These criteria can be

extended to include federal agencies, such as the U.S. Geological Survey, which are not responsible for flood-control programs and floodplain regulations but are active in developing and advancing hydrologic and hydraulic models. Models developed by non-federal agencies or private entities must be certified by a governmental agency responsible for the implementation of programs for flood control and/or regulation of floodplain lands. The certifying agency can be a federal agency or non-federal agency (e.g., NFIP participating community, a state water conservation board, regional flood control district, or similar). If the certifying agency is not a federal agency, the certifying agency must review, test, and accept the model. Models developed by non-federal agencies or private entities must be certified by a governmental agency responsible for the implementation of programs for flood control and/or regulation of floodplain lands.

3.1.1. REQUIREMENTS FOR CERTIFICATION OF A MODEL

In order for a numerical model to be accepted for use in the NFIP, certain requirements must be met by the governmental agency certifying its use for National or Local Acceptance. The requirements for certification are more rigorous than simply applying the model for a given project, and include:

- The certifying agency must review the model in sufficient detail to conclude that the model is scientifically correct and technically sound. The model must be based on sound hydrodynamic, hydrologic, or hydraulic principles. For this review, the certifying agency may rely on published technical papers by authors other than the model developers that demonstrate the model is technically sound. FEMA may request the certifying agency to provide the list of reviewed technical references.
- The certifying agency must test the model with measured data or compare the model to other similar models on FEMA's list of "Numerical Models Meeting the Minimum Requirements" to determine whether the model can adequately reproduce the measured data or provide results comparable to other models accepted by FEMA. A summary of the testing methods and results should be provided to FEMA.
- The certifying agency must accept the model for its use in administering programs for the design of flood control structures and/or the regulation of floodplain lands.
- With the request for approval of the model submitted to FEMA, the certifying agency must cite and describe specific examples of using the model to demonstrate the applicability of the model to the NFIP for the purpose of the design of flood control structures and/or the regulation of floodplain lands.
- If necessary, FEMA may request the certifying agency to provide assistance, such as providing answers to technical questions, relative to the use of the certified model for Flood Insurance Studies and appeals in the NFIP.
- The certification must be provided by a responsible agency official who has the authority to certify the model on behalf of the agency.

Models developed by non-federal agencies or private entities must be certified by a governmental agency responsible for the implementation of programs for flood control and/or regulation of floodplain lands, and such models must meet the following criteria:

- The model must be used or be planned to be used by communities for NFIP studies;
- The model must provide for new capabilities beyond any non-proprietary model on the existing accepted models lists; and
- The model must be "reviewed, tested, and accepted" with respect to its use in the design of flood-control structures or floodplain land use regulation. A written certification must be provided by the review agency to FEMA. Certification criteria are described in detail in Section 2.1 of this document, "Model Review, Testing, and Acceptance."

Appendix 2 contains a checklist to be used in the review, testing (if applicable) and acceptance of a numerical model that is proposed to meet the minimum requirements of the NFIP. This checklist should be completed and submitted with the Local Model Certification Letter (see Appendix 1). In lieu of submitting the checklist with the Local Model Certification Letter, the certifying agency may include a statement of certification that the checklist has been addressed.

Historically, FEMA has on occasion reviewed and tested a proprietary model for possible inclusion in the list of Numerical Models Meeting the Minimum Requirements of the NFIP. However, as of August 16, 2004, FEMA does not review or test any proprietary model. Another government agency that is familiar with the model should be contacted to certify its use. FEMA will provide necessary assistance to the certifying agency upon request. The certifying agency must review and test, if applicable, the model to determine whether the model is scientifically correct and technically sound, and whether the model can provide adequate information to support NFIP study and mapping. While federal agencies can certify a model for nationwide use, state and regional agencies can certify a model for use within their jurisdiction. The certification document must be provided by an agency official with authority to certify the model on behalf of that agency. FEMA will review and evaluate the certification materials provided by the certifying agency to make the final determination on whether the model meets the minimum requirements of the NFIP.

3.2. 44 CFR Paragraphs 65.6(a)(6)(ii) and (iii): Model Documentation and Availability

With regard to requirements in Paragraphs 65.6(a)(6)(ii) and (iii), FEMA understands that many models developed by private entities, such as software developers, are often proprietary in nature. The conditions listed are not meant to infringe upon the software developer's rights. Under Paragraph 67.8(e) of the NFIP regulations, FEMA is obligated to ensure that parties affected by floodplain mapping have the right to appeal map actions. Computed Base (1-percent-annual-chance) Flood Elevations (BFEs) can be appealed only if they are believed to be scientifically or technically incorrect. As part of an appeal resolution, it may be necessary for the source code and user's manuals for the computer program used to develop or revise the BFEs be made available to affected

parties who can demonstrate the need to review the model. This is necessary to allow the affected parties to evaluate the methodology used to compute the BFEs.

FEMA has developed two sample disclosure agreements that both protect the interests of software developers and meet the procedural and technical guidelines of 44CFR, Sections 65 and 67. Sample disclosure agreements can be found in Appendix 4. The disclosures are not required to be notarized, but they may be. The first, entitled "Conditional Permission to Disclose Source Code and User Manual," is a general agreement between FEMA and a model developer, stating that the model developer will release the source code and user's manual to any appellant who demonstrates the need to review the model. This agreement will be executed before a model is added to the acceptable model list. The second, entitled "Disclosure Agreement Between Model Developer and Impacted Party," is an agreement between the model developer and an appellant that provides for release of the source code and user's manual to the appellant and requires the appellant to protect the proprietary rights of the model developer. This second agreement is used only when an appeal is received.

Once FEMA has determined that the conditions outlined in this chapter have been met, the conditions outlined in 44 CFR Paragraphs 65.6(a)(6) are considered satisfied. FEMA will accept the model and include it on the list of "Numerical Models Meeting the Minimum Requirements of the NFIP". The geographic area of acceptance for the model will be consistent with the area of responsibility of the certifying agency (i.e., local or national acceptance).

3.3. FEMA Coordination

To determine where to send a certification application, or questions relating to the certification process for inclusion in the Numerical Models Meeting the Minimum Requirements of the NFIP, contact a service representative at FMIX at: http://floodmaps.fema.gov/fhm/fmx_main.html.

4. Maintenance of the Accepted Models Lists

4.1. FEMA Acceptance Letter and Website Update

Once FEMA agrees a model complies with the regulations, FEMA will issue a letter of acceptance addressed to the certifying agency. This acceptance letter is used as the basis for updating FEMA's list of accepted models; therefore, as we make updates to our lists on FEMA.gov, please reference and include the FEMA acceptance letter in any NFIP mapping projects (studies or revision requests) using the model. You can visit the FEMA.gov website for the most up-to-date version of the lists, as it will be updated, as necessary.

4.2. Version Updates to An Accepted Model

Model version updates are relatively routine in the software field of a model developer. When a new version of an accepted model is available, and the certifying agency/model developer requests to have the new model version accepted, relevant data and documentation for the new version must be

submitted to FEMA. The submittal must describe how this new version is different, and what (if any) differences in output may be expected compared to the previously accepted version. FEMA will review the submitted data and documentation to determine whether the updated model version should be accepted. Final production model versions must be used for regulatory NFIP mapping products (testing and/or developmental model versions (e.g., beta versions) will not be considered).

Models developed by federal agencies routinely release version updates. The Numerical Models Meeting the Minimum Requirements of the NFIP website may include the tag “And Up” to the version listed. This tag indicates that the model is accepted in the version indicated, as well as all subsequent versions.

Proprietary models will not receive the “And Up” tag. It is up to the software vendor to seek FEMA acceptance when a new version is released. If a new model version involves changes in the hydrologic or hydraulic computation routines, such that the same inputs produce different results, then the model version must be certified as explained in Section 4.1.1. If a new model version does not involve any changes to the hydrologic or hydraulic computation routines, such that the identical model inputs produce the same results, then the model version does not need to be certified. The software vendor must provide written confirmation to FEMA that a new version uses the same computation routines in order for FEMA to add the version to the accepted models list.

4.3. Removing Models from List

A model may be removed from the Acceptable Models list if it meets one of the following conditions:

- The model is no longer supported by the agency that developed, supported, or certified the model;
- The model has not been used for an NFIP study or revision for five years, and no effective NFIP study is based on the model; or
- The model is no longer supported by current computer hardware or operating systems.

4.4. Local Model Acceptance by Certifying Agency

For a model to become locally accepted the model must be reviewed and accepted by a local governmental agency responsible for the implementation of programs for flood control and/or the regulation of local floodplain lands. If a model is currently locally accepted in a jurisdiction, the model may become locally accepted by proxy in another jurisdiction. FEMA has developed a certifying agency certification letter template (See Appendix 1), which communities may use to achieve acceptance of locally applied models. FEMA has also developed a template communities may use to achieve local model acceptance based on an existing local model acceptance in another jurisdiction, which is provided in Appendix 3.

5. Automation Tools and Their Relationship to Accepted FEMA Models

Geographic Information Systems (GIS) enhanced hydrologic and hydraulic modeling tools, and computer software can be used to efficiently develop and update flood hazard information for the NFIP. These tools facilitate model building, perform data processing and storage tasks, improve graphics and visualization, and often provide user-friendly graphical interfaces.

A wide variety of GIS tools have been developed to facilitate hydrologic and hydraulic modeling. These tools range from simple graphical user interfaces that help input model parameters to highly advanced GIS-based tools that contain state-of-the-science software and modeling approaches with fully integrated automated data processing, and visualization capabilities. The most commonly used tools are organized into three categories below based on their relationship to accepted FEMA models.

5.1. Category 1

These automation tools can be either pre-processing or post-processing. Pre-processing tools are independent modules that perform input data pre-processing tasks to estimate model input parameters and/or help build hydrologic and hydraulic model input files. Post-processing tools are independent modules that perform model output data post-processing tasks to help plot, display, visualize, or manipulate hydrologic and hydraulic model results. They may simply be graphical user interfaces (GUIs) designed to help format, analyze, or display modeling input and output data. Additionally, they may be GIS-or CAD-based, have data storage capabilities and animation techniques, or help integrate a variety of different modeling components. In all cases, they function in conjunction with, but separately from, the executable file of a computer model that is on FEMA's accepted models list.

The tools in this category are considered acceptable for use in the flood hazard mapping program because they are not computer models themselves but are used to prepare data for input to the model or process data output from the model. Since they function independently from a computer model already on the accepted models list, and are not the basis for map revisions, they are acceptable. FEMA will not maintain a list of tools that fall into this category.

When map revision requests or flood insurance studies are submitted to FEMA for review that utilize one of these "Category 1" tools for hydrologic and hydraulic modeling, all required model input and output must be made readily available. This would include all input model parameters and output data, which is required for QA/QC purposes in reviewing, maintaining, and revising the modeling data.

5.2. Category 2

These software tools are computer models that perform modeling routines that emulate a model on FEMA's accepted model list; however, their source code has been re-written to perform these tasks,

instead of using the accepted model's source code. For example, they may reproduce basic HEC-1 hydrology functions, but do not use the HEC-1 executable computer code. In general, they usually provide additional functionality, such as data pre-and post-processing, enhanced graphics, GUIs, or visualization techniques. They are considered computer models because they perform hydrologic and hydraulic calculations similar to other accepted FEMA models. Therefore, Category 2 software tools need to meet 44 CFR Paragraphs 65.6(a)(6)(i), (ii), and (iii) of the NFIP regulations. If accepted, these models will be added to FEMA's acceptable model list.

5.3. Category 3

These software tools use new hydrologic and hydraulic modeling methods and/or models not currently on the FEMA accepted numerical models list. They may add pre-or post-processing functions similar to the other categories of tools as well. Therefore, since these software tools use new modeling methods, they are considered new computer models, and Category 3 software tools need to meet 44 CFR Paragraphs 65.6(a)(6)(i), (ii) and (iii) of the NFIP regulations. If accepted, these models will be added to FEMA's acceptable model list.

Appendix 1: Local Model Certification Letter Template

[Governmental Agency]
[Gov't Agency Contact], [Title]
[Address]
[City, ST Zip]
[GOV'T AGENCY LOGO]

[DATE]

[FEMA Contact Name]

[Title]

U.S. Department of Homeland Security
500 C Street, SW
Washington, DC 20472

RE: Certification of [**locally proposed model**] for Application in the National Flood Insurance Program

Dear [Name]:

The following information is in response to [**your/the letter or your/the email**] dated [**Date of Letter/email**], requesting additional information for certification of [**entity's**] [**locally accepted model**].

- The model was reviewed, tested, and accepted by [**governmental agency**]. [**Entity**] is responsible for the implementation of programs for flood control and/or regulation of floodplains throughout [**area/region/district**].
- The model is well documented, including source codes and user's manuals.
- The model [**is public domain and**] has been made available to the Department of Homeland Security's Federal Emergency Management Agency (FEMA) and all present and future parties affected by flood insurance mapping that is developed or amended through the use of the model.
- The model is based on [methodology] for determining [data] and is currently being used for flood studies in [**area/region/district**].
- The model should only be used in [**area/region/district**], under the guidelines of the [**entity**].

As the [**title**] for the [**entity**], I certify that the [**locally proposed model**] meets the requirements of FEMA's criteria for certification of coastal, hydrologic, and hydraulic models as stated by the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping.

A summary of the model is attached for inclusion in the FEMA list of Numerical Models Meeting the Minimum Requirements. If you require additional information with regard to the capabilities and applications of the [**model**], please contact me by telephone at [(XXX) XXX-XXXX] or by email at [**email**].

Sincerely,
[Digital Signature]

[Local Contact] [Title]
[Entity]

cc: [Name], [Title]
[Name], [Title]

**SUMMARY OF THE
[ENTITY] [MODEL]
COMPUTER MODEL**

PROGRAM	DEVELOPED BY	AVAILABLE FROM	COMMENTS
<p>[model] [version date]</p>	<p>[entity] <i>("Flood County Watershed Management District")</i></p>	<p>[entity] [address]</p>	<p>[model description] [model] is only accepted for usage within [area/region/district], under the guidelines of the [entity].</p> <p><i>("ModelX is based on the Modified Rational Method (MRM) and calculates a hydrograph of runoff at all sub-area collection points within the watershed, combines hydrographs from each subarea, and routes the combined hydrograph through the channel system. ModelX is only accepted for usage within Flood County, under the guidelines of the Flood County Watershed Management District.")</i></p> <p>Public Domain: ___Y ___N</p>

Appendix 2: Checklist for New Model Acceptance

Checklist - Proposed Model, FEMA Numerical Models Meeting the Minimum Requirements			
Proposed Model Name	Reviewer	Date (mm/dd/yyyy)	
<i>model name</i>	<i>name</i>	<i>date</i>	
ID		Pass / Fail	Reviewer Comment
1	The model has been reviewed, tested, and accepted by a government agency responsible for the implementation of programs for flood control and/or regulation of floodplains.		
1.1	The model will be used or is planned to be used by communities for NFIP studies;		
1.2	The model provides new capabilities beyond any non-proprietary model on the existing accepted models lists; and		
1.3	The model has been “reviewed, tested, and accepted” with respect to its use in the design of flood-control structures or floodplain land use regulation. A written certification must be provided by the review agency to FEMA. ¹		
1.3.1	The certifying agency must review the model in sufficient detail to conclude that the model is scientifically correct and technically sound. The model must be based on sound hydrodynamic, hydrologic, or hydraulic principles. For this review, the certifying agency may rely on published technical papers by authors other than the model developers that demonstrate the model is technically sound. FEMA may request the certifying agency to provide the list of reviewed technical references.		
1.3.2	The certifying agency must test the model with measured data or compare the model to other similar models on FEMA’s list of “Numerical Models Accepted for Use in the NFIP” http://www.fema.cog/mitltsd/ENmodl.htm to determine whether the model can adequately reproduce the measured data or provide results comparable to other models accepted by FEMA. A summary of the testing methods and results should be provided to FEMA.		
1.3.3	The certifying agency must accept the model for its use in administering programs for the design of flood control structures and/or the regulation of floodplain lands.		
1.3.4	With the request for approval of the model submitted to FEMA, the certifying agency must cite and describe specific examples of using the model to demonstrate the applicability of the model to the NFIP for purpose of the design of flood control structures and/or the regulation of floodplain lands.		

Checklist - Proposed Model, FEMA Numerical Models Meeting the Minimum Requirements			
Proposed Model Name	Reviewer	Date (mm/dd/yyyy)	
<i>model name</i>	<i>name</i>	<i>date</i>	
ID		Pass / Fail	Reviewer Comment
1.3.5	If necessary, FEMA may request the certifying agency to provide assistance, such as providing answers to technical questions, relative to the use of the certified model for Flood Insurance Studies and appeals in the NFIP.		
1.3.6	The certification must be provided by a responsible agency official who has the authority to certify the model on behalf of the agency.		
2	The model must be well documented, including source codes and user's manuals.		
3	The model must be available to the Department of Homeland Security's Federal Emergency Management Agency (FEMA) and all present and future parties affected by flood insurance mapping that is developed or amended through the use of the model.		
3a	First disclosure agreement, "Conditional Permission to Disclose Source Code and User's Manual" has been executed by model developer and provided to FEMA. ²		
3b	Second disclosure agreement, "Disclosure Agreement Between Model Developer and Impacted Party" has been agreed to by model developer and provided to FEMA. This second agreement is used only when an appeal is received. ²		
<p>¹Certification criteria are per FEMA's criteria for certification of hydrologic and hydraulic models (including coastal and statistical) as stated by the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping. The FEMA Local Model Acceptance Letter Certification Letter template may be used.</p> <p>²These agreements, the "Conditional Permission to Disclose Source Code and User Manual" document and the "Disclosure Agreement Between Model Developer and Impacted Party," are available at https://www.fema.gov/media-library/assets/documents/13091.</p>			

Appendix 3: Local Model Certification Letter Template (for Currently Accepted Models)

[Governmental Agency]
[Gov't Agency Contact], [Title]
[Address]
[City, ST Zip]
[GOV'T AGENCY LOGO]

[DATE]

[FEMA Contact Name]

[Title]

U.S. Department of Homeland Security 500
C Street, SW
Washington, DC 20472

RE: Certification of [current locally accepted model] for Application in the National Flood Insurance Program for [area/region/district]

Dear [Name]:

The following information is a request for local model acceptance based on a current local certification in a separate jurisdiction.

- The model is currently locally accepted for [area/region/district] and was previously reviewed, tested, and accepted by a governmental agency.
- [Entity] is responsible for the implementation of programs for flood control and/or regulation of floodplains throughout [area/region/district].
- The model should only be used in [area/region/district], under the guidelines of the [entity].

As the [title] for the [entity], I request local acceptance by proxy of [currently locally accepted model], which meets the requirements of FEMA's criteria for certification of coastal, hydrologic, and hydraulic models as stated by the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping.

Sincerely,
[Digital Signature]

[Local Contact]

[Title]

[Entity]

cc: [Name], [Title]
[Name], [Title]

Appendix 4: Sample Disclosure Agreements

CONDITIONAL PERMISSION TO DISCLOSE SOURCE CODE AND USER MANUAL

[redacted] [Software Developer] hereby releases the source codes and user manual for the [redacted] [model name] computer model, as required by

44 CFR Section 65.6(a)(6)(iii) under the following conditions:

A. Upon the FEDERAL EMERGENCY MANAGEMENT AGENCY's (hereafter "FEMA") receipt of a valid request for [redacted]'s [Software Developer] source code and user manual by an "impacted party," FEMA shall forthwith deliver a certified copy of the request to [redacted]'s [Software Developer] escrow agent, who shall be in possession of the [redacted] [model name] source code and user manual. The

escrow agent shall be instructed by the escrow agreement to deliver to the Requester the [redacted] [model name] source code and user manual within fourteen (14) days of escrow agent's receipt of the certified request. The Requester shall be charged a nominal sum for postage, copies, and handling and shall deliver said sum to the escrow agent as a condition of the release by escrow agent of the source code and user manual.

B. Impacted party shall mean an agent of an owner or lessee of land in a community who has filed an appeal under the provisions of 44 CFR, Part 65 or Part 67, and can demonstrate that the preparation of appeal materials requires review of the source code and user manual. As a condition precedent to release, [redacted] [Software Developer] shall be provided all information used by FEMA in its determination of whether a Requester qualifies as an impacted party immediately upon FEMA's receipt of same and no later than five (5) days prior to delivery of the request described in Paragraph A above to [redacted]'s [Software Developer] escrow agent. As an additional condition precedent to release, Requester shall fully execute and deliver to [redacted] [Software Developer] an original of the Disclosure Agreement Regarding Source Codes and User Manual (hereafter "Disclosure Agreement"), a copy of which is attached and marked as Exhibit "A".

A. Notwithstanding anything herein to the contrary, [redacted] [Software Developer] may take any action it deems necessary, including, but not limited to, the prosecution of any protective order to protect its trade secrets and other rights contained in and associated with the source codes and user manual.

B. [redacted] [Software Developer] grants this conditional permission in consideration of FEMA's acceptance of the [redacted] [model name] computer model as an approved computer model as provided in National Flood Insurance Program and Related Regulations and in consideration of the terms, covenants, and conditions assumed by Requester, as described in the Disclosure Agreement.

[redacted]
[Software Developer]

Witness

By: _____
[representative of Software Developer]

Witness

Date: _____

Federal Emergency Management Agency

Witness

By: _____

Its: _____
[title of FEMA representative]

Witness

Date: _____

EXHIBIT "A"

DISCLOSURE AGREEMENT BETWEEN MODEL DEVELOPER
AND IMPACTED PARTY

This Agreement is entered by and between [redacted] [Software Developer] and [redacted] [Requester's name] (hereafter "Requester") regarding the release of [redacted]'s [Software Developer] source codes and user manual for [redacted]'s [Software Developer] [redacted] [model name] computer model, as required by 44 CFR Section 65.6(a)(6)(iii).

A. Requester has filed an appeal with the Federal Emergency Management Agency (hereafter "FEMA") under the provisions of 44 CFR, Part 65 or Part 67, and requires [redacted]'s [Software Developer] source code and user manual for [redacted] [model name] to prepare appeal materials for FEMA's review. In consideration of FEMA's acceptance of the [redacted] [model name] computer model as an approved computer model as provided in the National Flood Insurance Program and Related Regulations and in consideration of the terms, covenants, and conditions herein assumed by Requester, [redacted] [Software Developer] has released the source code and user manual pursuant to the certain Conditional Permission to Disclose Source Code and User Manual (hereafter "Conditional Permission"), the terms and conditions by which Requester agrees to be bound. Said Conditional Permission is incorporated herein by reference.

B. [redacted]'s [Software Developer] source codes and user manual contains confidential information and trade secrets that were developed solely at [redacted]'s [Software Developer] expense. Confidential information means [redacted]'s [Software Developer] information of a proprietary, trade secret, or confidential nature, disclosed pursuant to this agreement, which may include but is not limited to research data, technical information, software, samples, specifications, laboratory or engineering

techniques or manuals, or other intellectual property or its physical embodiments.

[Redacted] [Software Developer] is disclosing this Confidential Information to Requester for the sole purpose of permitting Requester's evaluation of it related to the appeal referenced above and as described in the Conditional Permission. Requester agrees to protect [Redacted]'s [Software Developer] rights with respect to the Confidential Information and to take all steps necessary to protect the Confidential Information from unauthorized use or disclosure. Requester shall not copy, duplicate, reproduce, or transcribe [Redacted]'s [Software Developer] Confidential Information. All Confidential information shall be and remain the property of [Redacted] [Software Developer], and no present or future intellectual property rights or licenses are offered, granted, or implied by [Redacted] [Software Developer] in the disclosure of any Confidential Information hereunder.

A. Requester agrees not to disclose [Redacted]'s [Software Developer] Confidential Information in any way or in any form to third parties without [Redacted]'s [Software Developer] prior specific written authorization, and Requester agrees to disclose the Confidential Information only to those of its administrators, employees, or others under its control who have a need to know the Confidential Information to achieve the purpose set forth above, all of whom will be required by Requester to protect it in accordance with this Agreement.

B. Requester shall have 120 days from the receipt of [Redacted]'s [Software Developer] Confidential Information within which to conduct its review. At the expiration of the 120 day period, Requester shall forthwith return all Confidential Information to [Redacted] [Software Developer], unless the Requester has received prior written consent to the contrary.

C. This agreement shall be construed under the laws of the State of [Redacted] [location of requester]. In the event of litigation, venue shall lie in

_____, _____ [county, State], or in any other venue chosen by

[Software Developer] at its sole option.

A. In the event any party engages an attorney to enforce the terms and conditions herein, whether suit is brought or not, such party shall be entitled to an award of reasonable attorneys and costs, at trial and appellate levels.

B. This agreement shall be binding on the parties, their successors, and assigns.

[Software Developer]

Witness

By: _____
[representative of Software Developer]

Witness

Date: _____

“Requester”

Witness

By: _____

Its: _____
[title of Requester’s representative]

Witness

Date: _____

STATE OF _____ [location of requester]
COUNTY OF _____ [location of requester]

The foregoing instrument was acknowledged before me this _____[date] day of _____, _____[month, year] by _____[representatives of Software Developer], _____[title] of _____[Software Developer], a _____[State] corporation, on behalf of the corporation. He/She is personally known to me, or he/she produced _____[item] as identification.

NOTARY PUBLIC
My Commission Expires:

STATE OF _____
COUNTY OF _____