

PROCESS FOR DETERMINING THE ACCEPTABILITY OF A COMPUTER SIMULATION FLOOD LOSS MODEL

Due to the complex and unique nature of the flood and hurricane perils, and recognizing that a modeling organization may submit only a flood loss model or only a hurricane loss model, the Commission has determined that the review of flood and hurricane loss models for acceptability shall be independent of each other. Hence, a flood loss model and a hurricane loss model shall be submitted separately and reviewed separately. The Commission has determined, if a model is found acceptable or fails under one set of standards applicable to flood or hurricane, it shall have no bearing or impact on the other type of model's acceptability or failure under the respective set of standards. A modeling organization submitting both a flood loss model and a hurricane loss model shall have each model reviewed separately and independently under the respective unique set of standards applicable to flood or hurricane.

It should be understood that if a modeling organization submits both a flood loss model and a hurricane loss model, and in the course of a review (e.g., internal review, Professional Team on-site review, Commission review) of the flood loss model or the hurricane loss model, an error is discovered that is also likely to co-exist in the hurricane loss model or the flood loss model, then it is incumbent on the modeling organization to report this error in accordance with section **III. Review of the Readiness Notification** or **VI. Review by the Commission, F. Discovery of Differences in a Model after a Model has been Determined to be Acceptable by the Commission**, as appropriate. Consequently, the onus is on the modeling organization to make this correction if it exists, in keeping with the independence of the two model reviews.

This section specifies the Commission's process for the determination of acceptability of a computer simulation flood loss model (model).

After the initial adoption of flood standards (standards) effective July 1, 2017, the Commission has determined that prior to November 1 of every other odd-numbered year, it will adopt new standards, revise existing standards, and if necessary, revise this process. The effective date of new or revised standards will be November 1 unless otherwise specified by the Commission. The standards and procedures published in the *Flood Standards Report of Activities as of November 1, 2017*, will not be scheduled for revision until 2021.

The Commission has determined that "significant revisions" to the standards or to the model are those that either change or have potential to change the flood loss costs or flood probable maximum loss levels. On the other hand, any minor revisions to the standards, or any revisions to the model by the modeling organization that do not result in changes to flood loss costs or flood probable maximum loss levels are not considered significant. The Commission may determine in its judgment whether a revision is significant.

The Commission has determined that any modeling organization that desires to have a model reviewed for compliance with the July 1, 2017 flood standards adopted by the Commission shall notify the Commission in accordance with the requirements set out below by November 1, 2019.

The Commission has further determined that the period between the effective date of new and revised standards and November 1 of the following odd-numbered year (the deadline for notification by the modeling organization) is a reasonable length of time for any modeling

organization to comply with the standards adopted by the Commission. If the Commission determines that this time frame is not sufficient, based on the nature of the revisions to the standards or based on other circumstances that might necessitate a longer period of time for compliance, then the Commission will adjust this period of time accordingly. If requested by a modeling organization, the Chair shall have the authority to grant a reasonable extension should the Chair determine that an emergency or unusual situation exists that warrants an extension and is determined to be beyond the control of the modeling organization.

I. Scheduling

The following is an anticipated schedule:

May 2017	Flood Standards committee meetings
June 2017	Adopt 2017 Flood Standards
November 1, 2017	<i>2017 Flood Standards Report of Activities</i> published
November 1, 2019	Deadline for notification by modeling organization
December 2019	Commission meeting to review flood model submissions
January – April 2020	Flood model on-site reviews
April – May 2020	Additional flood model verification reviews, if necessary
May – June 2020	Commission meetings to review flood models for acceptability under 2017 Flood Standards
August – October 2020	Flood Standards committee meetings
September 2021	Flood Standards committee meetings, if necessary
October 2021	Adopt 2021 Flood Standards
November 1, 2021	<i>2021 Flood Standards Report of Activities</i> published
November 1, 2023	Deadline for notification by modeling organization
December 2023	Commission meeting to review flood model submissions
January – April 2024	Flood model on-site reviews
April – May 2024	Additional flood model verification reviews, if necessary
May – June 2024	Commission meetings to review flood models for acceptability under 2021 Flood Standards
August – October 2024	Flood Standards committee meetings
September 2025	Flood Standards committee meetings, if necessary
October 2025	Adopt 2025 Flood Standards
November 1, 2025	<i>2025 Flood Standards Report of Activities</i> published

The Commission will endeavor to expedite the review of a model if the Professional Team is able to verify all standards during the initial on-site review.

II. Notification Requirements

- A. Notification of Readiness for Review.** Any modeling organization desiring to have its model reviewed for acceptability by the Commission shall notify the Chair of the Commission in writing, by November 1, 2019, that the modeling organization is prepared for review. The notification shall consist of (1) a letter to the Commission, (2) a summary

statement of compliance with each individual standard, (3) all required disclosure and form information, and (4) a completed Model Submission Checklist.

The notification letter shall include a reference to the signed Expert Certification Forms GF-1, General Flood Standards, GF-2, Meteorological Flood Standards, GF-3, Hydrological and Hydraulic Flood Standards, GF-4, Statistical Flood Standards, GF-5, Vulnerability Flood Standards, GF-6, Actuarial Flood Standards, GF-7, Computer/Information Flood Standards, and GF-8, the Editorial Review Expert Certification, a statement that professionals having credentials and/or experience in the areas of meteorology, hydrology, hydraulics, statistics, structural engineering, actuarial science, and computer/information science have reviewed the model for compliance with the standards, and that the model is ready to be reviewed by the Professional Team. Any caveats to the certifications shall be noted in the letter and accompanied by a detailed explanation.

Notification to the Commission shall include:

1. A summary statement of compliance with each standard and the data and analyses required in the disclosures and forms.
2. A general description of any trade secret information that the modeling organization intends to present to the Professional Team and the Commission.
3. Eight bound copies (duplexed) and a link e-mailed to SBA staff where all required documentation can be downloaded from a single ZIP file. Submission documentation shall be provided in the following manner:
 - a. Form VF-3, Flood Mitigation Measures, Range of Changes in Flood Damage, Form AF-2, Total Flood Statewide Loss Costs, Form AF-3, Personal Residential Standard Flood Loss Costs by ZIP Code, Form AF-4, Flood Output Ranges, and Form AF-6, Flood Probable Maximum Loss for Florida, shall be provided in Excel format. Form AF-1, Zero Deductible Personal Residential Standard Flood Loss Costs, shall be provided in both Excel and PDF format;
 - b. The remaining portions of the submission shall be provided in PDF format;
 - c. All data file names shall include the abbreviated name of the modeling organization, the standards year, and the form name (when applicable);
 - d. The PDF submission document file shall support highlighting and hyperlinking, and shall be bookmarked by standard, form, and section.
4. Format of the Submission:
 - a. Table of Contents shall be included;

- b. Materials submitted shall be consecutively numbered from the first page (including cover) using a single numbering system from the beginning to the end of the submission and shall include the date and time in the footnote;
- c. All tables, graphs, and other non-text items shall be consecutively numbered using whole numbers, specifically listed in the Table of Contents, and clearly labeled with abbreviations defined;
- d. State the standard, disclosure, or form in *italics* and give the response in non-italics. **The Purpose and Audit portion should not be restated.** The modeling organization response shall include a statement in support of compliance following each standard. The response to the standard shall explain how the model meets the requirements of the standard by including (1) a statement in support of compliance with the standard, and if applicable (2) a reference to a disclosure(s), and/or (3) a general description of trade secret information that will be shown to the Professional Team during the on-site review and how it supports compliance with the standard.

The Disclosure section of each standard is not designed to require trade secret information. Therefore, the response to a disclosure shall not contain a statement similar to “will be shown to the Professional Team” unless a response to the disclosure has been provided and additional test results and documentation will be available for the Professional Team during the on-site review.

If a standard or disclosure has multiple sections, respond to each section separately;

- e. All spreadsheets shall be created without explicit rounding or truncation of floating point values prior to generating the submission documentation;
- f. Graphs shall be accompanied by legends and labels for all elements:
 - 1. Individual elements shall be clearly distinguishable, whether presented in original or copy form;
 - 2. Maps shall use three colors – blue, white, and red, including shades of blue and red, with dark blue and dark red designating the lowest and highest quantities, respectively. The color legend and associated map shall use the maximum and minimum values as the range and shall be comprised of an appropriate number of intervals, with at least seven, to provide readability and no interval shall contain both negative and positive values. Relevant geographic boundaries (e.g., counties, ZIP Codes) shall be shown in black. The maximum and minimum values and their locations shall be plotted on the maps;
 - 3. For data indexed by latitude and longitude, by county or by ZIP Code, a map with superimposed county and ZIP Code boundaries shall be produced. Additional map specifications are indicated on individual form instructions;

- g. NA shall be used in cells to signify no exposure;
 - h. All units of measurement for model inputs and outputs shall be clearly identified;
 - i. All model outputs related to flood extent and elevation or depth, velocity, length, windspeed, and pressure are preferred to be in units of feet, feet per second, statute miles, statute miles per hour, and millibars, as appropriate;
 - j. Unless otherwise specified, windfields generated by the model shall be used for completing relevant forms and tables in the submission;
 - k. All forms with the exception of those indicated as a Trade Secret Item shall be included in a submission appendix. A link to the location of the form shall be provided in the corresponding disclosure;
 - l. If used, acronyms shall be defined on their first use in the submission. A list of all acronyms defined in the submission shall be listed and defined in a submission appendix;
 - m. All column headings shall be shown and repeated at the top of each subsequent page for forms and tables.
5. The modeling organization should contact SBA staff for any needed clarification of submission instructions, especially if the instructions necessitate additional assumptions.
6. All modifications, adjustments, assumptions, or other criteria that are included in producing the information required by the Commission in the submission shall be disclosed and will be reviewed.

B. Revisions to the Standards or the Model – Not Significant. If the Commission does not revise any standards or makes only minor revisions to some standards so that existing models would otherwise be in compliance with all the standards, and the modeling organization subsequently notifies the Commission in writing that there have been no significant revisions to the model previously determined acceptable, then the Commission will meet and review the modeling organization's letter and any other documentation provided to determine whether the model will be considered acceptable for an additional four years, whether an on-site review by the Professional Team is warranted, or whether a further meeting with the Commission to review the model for acceptability is warranted.

C. Revisions to the Standards or the Model – Significant. If the Commission makes significant revisions to any existing standards and/or adopts new standards so that a model already determined to be acceptable is still in compliance with some, but not necessarily all of the standards, then the modeling organization shall inform the Commission in writing as to whether it believes the model is still in compliance with the standards that have been substantially revised or are new.

If an existing modeling organization makes significant revisions to the version of the model previously found acceptable by the Commission, then at the time it notifies the Commission that it is ready to have its model reviewed for acceptability, the modeling organization shall notify the Commission in writing of the revision(s) and describe the magnitude of the revision(s). The Commission will then meet and review the modeling organization's notification and any other documentation provided to determine whether the model is acceptable for an additional four years, whether an on-site review by the Professional Team is warranted, or whether an on-site review is not necessary but additional documentation must be provided which will then be reviewed at a Commission meeting.

D. Notification of Unusual Circumstances. The modeling organization shall notify the Chair of the Commission in writing, as soon as possible, of any unusual circumstances that may impact the model submission.

III. Review of the Readiness Notification

Once modeling organization submissions are received by the November 1, 2019 deadline, the Commission will hold a meeting to review the submissions as discussed under the Commission Structure section of the *Flood Standards Report of Activities*.

Prior to the Professional Team's on-site review and in accordance with the time frame specified by the Commission, the modeling organization shall submit corrections for the deficiencies identified during this meeting in electronic format via e-mail correspondence to SBA staff. In response to the deficiencies identified, only revised pages and forms shall be provided with revision marks as specified under **V. Submission Revisions**. If more than ten pages are impacted by the corrections to the deficiencies, then an entire submission shall be submitted (eight bound copies (duplexed) and a link e-mailed to SBA staff where all required documentation can be downloaded from a single ZIP file). All revised file names shall include the revision date, the abbreviated name of the modeling organization, the standards year, and the form name (when applicable) in the file name.

If, in addition to responding to the deficiencies specifically, the modeling organization opts to make further minor corrections elsewhere in their submission, it may do so but shall provide an annotated list of the additional revisions along with the corrections to the deficiencies.

Failure of the modeling organization to correct any deficiencies within the time frame specified shall result in the termination of the review process. The modeling organization will be notified in writing that the review process has been terminated. Upon termination of the review process, the modeling organization shall be required to wait until after the next revision or review of the standards before requesting the Commission to review the model.

In the event that a modeling organization realizes the initial submission or the model has material errors and needs revision prior to the scheduled on-site review, the modeling organization shall immediately notify the Chair of the Commission in writing. The notification shall detail the nature of the errors and revisions to the submission and the model, why it occurred, what is needed or has been done to correct the problem, the time frame needed for making the corrections, and any other relevant documentation necessary to describe both the errors and the corrections.

The Commission Chair shall (1) review the notification and inform the Commission members as soon as possible, and (2) assess, with at least three members of the Professional Team, the severity of the error, and (3) determine whether to postpone the on-site review pending consideration of potential deficiencies and the overall schedule of on-site reviews.

If it is determined to proceed with the originally scheduled on-site review, the modeling organization shall submit revised documentation no less than fourteen days prior to the scheduled on-site review by the Professional Team. If the modeling organization cannot correct the problems and submit revised documentation fourteen days prior to the scheduled on-site review, then all associated standards shall not be verified during the initial on-site review.

IV. Professional Team On-Site Review

If a determination has been made that a modeling organization is ready for an on-site review, SBA staff will schedule the on-site review by the Professional Team as discussed under the On-Site Review section of the *Flood Standards Report of Activities*.

There are two possible outcomes of the on-site review regarding auditing for compliance with the standards, disclosures, forms, and trade secret items.

1. The Professional Team determines that, in its opinion, the model is likely to comply with the standards, disclosures, and forms, and so reports to the Commission. The trade secret items to be presented during the closed meeting portion of the Commission meeting to review models for acceptability shall be presented to the Professional Team for review.
2. The Professional Team determines that, in its opinion, the model is unlikely to comply with the requirements in the disclosures, forms, and trade secret items or with one or more standards.
 - a. The Professional Team may react to possible corrections proposed by the modeling organization but will not tell the modeling organization how to correct the non-compliance. If the problems can be remedied while the Professional Team is on-site, the Professional Team will review the corrective actions taken, including revisions to the original November 1, 2019 submission, before determining verification of a standard.

- b. If the problems cannot be corrected while the Professional Team is on-site, then the modeling organization shall have seven days from the final day of the on-site review to notify the Chair in writing that it will be ready for an additional verification review within thirty days of the notification. The modeling organization shall submit all revised documentation as specified under **V. Submission Revisions**.

The SBA staff will assemble the Professional Team or an appropriate subset of the Professional Team for only one additional verification review to ensure that the corrections have been incorporated into the current, running version of the model.

- c. If a discrepancy(s) in the model or model submission is discovered by the modeling organization after the Professional Team has completed its on-site review, then the modeling organization shall without delay notify the Chair in writing describing the discrepancy(s), request an additional verification review, and indicate when it will be ready for the review. The modeling organization shall submit all revised documentation as specified under **V. Submission Revisions**.

If an additional verification review has not been conducted, the SBA staff will assemble the Professional Team or an appropriate subset of the Professional Team for an additional verification review to ensure that the corrections have been incorporated into the current, running version of the model.

If a second verification review has been previously conducted, the Chair shall place the modeling organization's request for an additional verification review on the agenda for a special or regularly scheduled meeting of the Commission.

- d. If any problem necessitates the re-generation of the flood output ranges, the modeling organization shall submit revised flood output ranges to be received by the Commission no less than fourteen days prior to the initial date of the on-site review or additional verification review. If this is not the case, then Standard AF-6, Flood Loss Outputs and Logical Relationships to Risk, shall not be verified during the initial on-site review or additional verification review.

In the event that (1) Form AF-4, Flood Output Ranges, was modified after the initial November 1, 2019 submission and prior to the on-site review, or (2) an additional verification review is required and Form AF-4, Flood Output Ranges, must be re-generated, the modeling organization shall provide the percentage change in flood output ranges from the initial November 1, 2019 submission of Form AF-4, Flood Output Ranges.

In the event that (1) Form AF-5, Logical Relationship to Flood Risk (Trade Secret Item), was modified after the initial November 1, 2019 submission and prior to the on-site review, or (2) an additional verification review is required and Form AF-5, Logical Relationship to Flood Risk (Trade Secret Item), must be re-generated, the modeling organization shall provide the percentage change in logical relationship to risk, from the initial November 1, 2019 submission of Form AF-5, Logical Relationship to Flood Risk (Trade Secret item).

- e. If the modeling organization disagrees with the Professional Team as to likelihood of compliance, the modeling organization has two options: (1) it can proceed to the scheduled Commission meeting to review models for acceptability under the 2017 Flood Standards and present its arguments to the Commission to determine acceptability, or (2) it can withdraw its request for review. Such a withdrawal shall result in the modeling organization waiting until after the next revision or review of the standards before requesting the Commission review its model.

V. Submission Revisions

Revised documentation shall include the revision date on the submission cover page, the Model Identification page, and in each revised page footnote. All revised file names submitted shall include the revision date, the abbreviated name of the modeling organization, the standards year, and the form name (when applicable) in the file name.

Revisions shall be noted with revision marks, i.e., words stricken are deletions (~~deletions~~) and words underlined are additions (additions). If revision marks are provided in color, material deleted and stricken shall be in red, and material added and underlined shall be in blue.

The Professional Team and the Commission Chair will review the new material upon receipt for deficiencies. The Commission Chair shall notify the modeling organization of any deficiencies and the time frame for correction. An additional verification review will not be held until all deficiencies have been addressed. The Professional Team may provide to SBA staff a second pre-visit letter to be sent to the modeling organization outlining specific issues to be addressed during the additional verification review.

If an additional verification review is requested, complete documentation shall be received within thirty days of the request.

Complete final revised documentation shall be received no less than ten days prior to the Commission meeting to review the model for acceptability.

The modeling organization shall provide a link where complete final revised documentation with and without revision marks can be downloaded from a single ZIP file. If more than ten pages are revised, eight bound copies (duplexed) of all required documentation with revision marks for all revisions made to the original November 1, 2019 submission shall be provided.

If ten pages or fewer (exclusive of the forms in the Appendix) are revised, only eight bound copies (duplexed) of the revised pages and forms (if revised) shall be submitted. The format of the revised documentation shall be as specified under **II. Notification Requirements, A. Notification of Readiness for Review, 3 and 4.**

A note will be posted on the Commission website with instructions for obtaining submission documents. Final submission documents for a model that has been found acceptable by the Commission will be posted on the Commission website (www.sbafla.com/methodology).

VI. Review by the Commission

- A. General Review of a Model.** For any modeling organization seeking the Commission's determination of acceptability, the Commission may request a meeting with the modeling organization prior to the Commission's review of the model's compliance with the standards. The meeting would provide for a general discussion about the model or its readiness for review and would also provide an opportunity for the Commission and the modeling organization to address any other issues. This meeting may be conducted concurrently with the meeting to determine acceptability. If trade secrets used in the design and construction of the model are discussed, such discussions shall be held in a closed meeting.
- B. Meeting to Determine Acceptability.** The Commission shall meet at a properly noticed public meeting to determine the acceptability of a model once the modeling organization has provided all required material and the Professional Team has concluded its on-site review or any additional verification review. If the Commission Chair determines that more preparation time is needed by Commission members, the Chair may reschedule the meeting date to review a model for acceptability, taking into consideration public notice requirements, the availability of a quorum of Commission members, the availability of a meeting room, and the availability of the particular modeling organization.

All materials shall be reviewed by the Professional Team prior to presentation to the Commission.

If the Commission determines that meeting one standard makes it impossible to meet a second standard, the conflict shall be resolved by the Commission, and the Commission shall determine which standard shall prevail. If at the meeting a unique or unusual situation arises, the Commission shall determine the appropriate course of action to handle that situation, using its sound discretion and adhering to the legislative findings and intent as expressed in s. 627.0628(1), F.S.

Each modeling organization's model will be reviewed independently of any other modeling organization's model presently applying for review.

Trade secrets used in the design and construction of the model shall be discussed during a closed meeting prior to the Commission voting on the acceptability of the model. No voting regarding the acceptability of a model shall occur during a closed meeting.

C. Modeling Organization Presentation. All modeling organizations shall make a presentation to the Commission with respect to the model as used for personal residential ratemaking purposes in Florida. The presentation shall use a medium that is readable by all members of the Commission. The modeling organization presentation is for the purpose of helping the Commission understand outstanding issues, how the modeling organization has resolved various issues, and to explain the basis as to how the model meets the standards. Various issues may relate to:

1. Informational needs of the Commission as provided in the disclosures and forms,
2. The theoretical soundness of the model,
3. Use of reasonable assumptions,
4. Other related aspects dealing with accuracy and reliability.

A modeling organization shall give a detailed overview presentation to the Commission explaining how the model is designed to be theoretically sound, meets the criteria of being accurate and reliable, and indicate which parts of the model are considered proprietary.

Following the overview presentation, the Commission will hold a closed meeting where trade secrets used in the design and construction of the model will be discussed and reviewed.

Closed Meeting Portion

During the closed meeting where trade secrets used in the design and construction of the model are discussed, the modeling organization shall present Form HHH-3, Coastal Flood Characteristics by Annual Exceedance Probabilities (Trade Secret Item), Form HHH-5, Inland Flood Characteristics by Annual Exceedance Probabilities (Trade Secret Item), VF-4, Coastal Flood Mitigation Measures, Mean Coastal Damage Ratios and Coastal Flood Damage/\$1,000 (Trade Secret Item), Form VF-5, Inland Flood Mitigation Measures, Mean Inland Flood Damage Ratios and Inland Flood Damage/\$1,000 (Trade Secret Item), Form AF-5, Logical Relationship to Flood Risk (Trade Secret Item), and trade secret items identified and recommended by the Professional Team during the on-site and additional verification reviews to be shown to the Commission which will be documented in the Professional Team's report to the Commission.

The modeling organization shall provide a detailed discussion of Form VF-4, Coastal Flood Mitigation Measures, Mean Coastal Damage Ratios and Coastal Flood Damage/\$1,000 (Trade Secret Item) and Form VF-5, Inland Flood Mitigation Measures, Mean Inland Flood Damage Ratios and Inland Flood Damage/\$1,000 (Trade Secret Item), in support of acceptability of Standard VF-4, Flood Mitigation Measures, including but not limited to the following:

- Individual mitigation measures for each flood depth above ground and damage/\$1,000 exhibiting logical mitigation impacts within categories and across structure types,
- The fully mitigated building results relative to the contributions of the various mitigation measures, and
- Omission of any individual mitigation measures.

The modeling organization shall provide a detailed discussion of Form AF-5, Logical Relationship to Flood Risk (Trade Secret Item), in support of acceptability of Standard AF-6, Flood Loss Outputs and Logical Relationships to Risk, including but not limited to the following:

- The logical relationship to risk relative to each Notional Set 1-9,
- Geographic displays (color-coded maps) or graphical displays as appropriate for each Notional Set 1-9,
- Color-coded contour or high-resolution map of the flood loss costs for slab foundation owners frame buildings (Notional Set 6),
- Scatter plot of the coastal flood loss costs (y-axis) against distance to closest coast (x-axis) for slab foundation owners frame buildings (Notional Set 6), and
- Any apparent anomalies in the results in completed Form AF-5, Logical Relationship to Flood Risk (Trade Secret Item).

A hard copy of the modeling organization's prepared presentation and the trade secret forms shall be provided to the Commission and Professional Team members (nineteen hard copies numbered 1 through 19) at the start of the closed meeting. The trade secret forms shall be printed separately rather than as a part of the presentation. The hard copies shall be returned to the modeling organization at the conclusion of the closed meeting and prior to anyone leaving the meeting room.

All material presented in the closed meeting shall be complete, e.g., all axes on graphs labeled.

Proprietary comments initially redacted from the Professional Team report shall be made available by the modeling organization to the Commission.

Items that the modeling organization is precluded from releasing due to third party contracts may be excluded.

In order to meet the public meeting notice requirements for the following public meeting portion, two hours shall be scheduled for the closed meeting.

Public Meeting Portion

At the conclusion of the closed meeting, the Commission will resume the public meeting to continue the review of the model for acceptability. The modeling organization presentation for this portion of the meeting shall begin with an explanation of corrections made for deficiencies noted by the Commission. The presentation shall then contain the following:

1. Each standard number and title shall be stated,
2. An explanation of how each standard was met, with reference to any appropriate disclosures or forms that support compliance,
3. If relevant and non-proprietary, material not in the submission but presented to the Professional Team for verification,

4. Any non-trade secret information that can be provided in order to facilitate a general understanding of the trade secret information presented to the Commission during the closed meeting.

Two hours shall be scheduled for review of a model during a public meeting.

A hard copy of the modeling organization's prepared presentation shall be provided to the Commission and Professional Team members (nineteen copies) at the start of the public meeting.

All materials presented to the Commission during the public portions of the meeting to determine acceptability shall be provided to SBA staff in electronic format.

- D. Acceptability and Notification.** To be determined acceptable, the model shall have been found acceptable for all standards. If the model fails to be found acceptable by a majority vote for any one standard, the model shall not be found acceptable. The modeling organization shall have an opportunity to appeal the Commission's decision as specified under **VI. Review by the Commission, E. Appeal Process to be Used by a Modeling Organization if a Model is Not Found to be Acceptable by the Commission.**

Once the Commission has determined that a model is acceptable in accordance with the procedures in the acceptability process and that all required documentation as specified in the acceptability process has been provided to the Commission, the Chair of the Commission shall provide the modeling organization with a letter confirming the Commission's action.

The letter shall be in the following format.

Date

(Name and Address of Modeling Organization)

Dear _____:

This will confirm the finding of the Florida Commission on Hurricane Loss Projection Methodology on (date), that the (name of modeling organization) flood loss model has been determined acceptable for projecting flood loss costs and flood probable maximum loss levels for personal residential rate filings. The determination of acceptability expires on November 1, 2024.

The Commission has determined that the (name and version identification of the model) limited to the options selected in the input form provided in Standard AF-1, Flood Modeling Input Data and Output Reports, Disclosure 4 complies with the flood standards adopted by the Commission on (date of adoption), and concludes that the (name and version identification of the model) limited to the Florida flood model options selected (Standard AF-1, Flood Modeling Input Data and Output Reports, Disclosure 4) is sufficiently accurate and reliable for projecting flood loss costs and flood probable maximum loss levels for personal residential property in Florida.

On behalf of the Commission, I congratulate you and your colleagues. We appreciate your participation and input in this process.

Sincerely,

(Name), Chair

A copy of the acceptability letter shall be provided to the Commissioner of the Office of Insurance Regulation.

- E. Appeal Process to be Used by a Modeling Organization if a Model is Not Found to be Acceptable by the Commission.** If a model is not found to be acceptable by the Commission, the modeling organization shall have up to thirty days to file a written appeal of the Commission's finding. The appeal shall specify the reasons for the appeal, identify the specific standard or standards in question, provide appropriate data and information to justify its position, and may request a follow up reconsideration meeting with the Commission to present any relevant or new information and data to the Commission in either a public or closed meeting format.

Within sixty days of receiving the appeal, the Commission shall hold a public meeting for the purpose of reviewing the appeal documentation, formulate additional questions to be responded to by the modeling organization, and request additional data and information if necessary. If the Commission determines additional data and information is necessary for reconsideration of the model, the Commission's questions, data, and information request shall be provided to the modeling organization in a letter from the Chair no later than ten days after the meeting to consider the appeal request. The modeling organization shall respond to the Commission within ten days of receiving the Commission Chair's letter. Any proprietary responses, data, or information shall be noted by the modeling organization indicating the response will be discussed in a closed session with the Commission.

The Commission will meet at a properly noticed public meeting to reconsider the acceptability of the model under the standards established by the Commission. If the Commission Chair determines that more preparation time is needed by Commission members, the Chair may reschedule the meeting date to reconsider the model for acceptability, taking into consideration public notice requirements, the availability of a quorum of Commission members, the availability of a meeting room, and the availability of the modeling organization.

Once the Commission has completed its reconsideration of acceptability and determined that the model has met all the standards being reconsidered and that all required documentation as specified in the acceptability process has been provided to the Commission, the Chair of the Commission shall provide the modeling organization with a letter confirming the Commission's action as specified under **VI. Review by the Commission, D. Acceptability and Notification.**

If the model fails to be found acceptable by a majority vote for any one standard, the model shall not be found acceptable and the appeal of the modeling organization shall have failed. In this regard, the findings of the Commission shall be final. The modeling organization shall be required to wait until after the next revision or review of the standards before requesting the Commission to review its model.

- F. Discovery of Differences in a Model after a Model has been Determined to be Acceptable by the Commission.** If the modeling organization discovers any differences between the model as found acceptable by the Commission and the model as provided to and used by its clients, the modeling organization shall without delay notify the Commission in writing describing the differences and the impact on flood loss costs and flood probable maximum loss levels. The notification shall be accompanied by Form VF-3, Flood Mitigation Measures Range of Changes in Flood Damage, Form AF-1, Zero Deductible Personal Residential Standard Flood Loss Costs, Form AF-4, Flood Output Ranges, and Form AF-6, Flood Probable Maximum Loss for Florida.

The modeling organization shall state the level of the differences based on the classification scheme below as either Type I, Type II, or Type III differences.

For purposes of complying with this requirement, a “difference” is anything that results in a model not being exactly the same as the model found acceptable by the Commission under the standards as adopted in this *Flood Standards Report of Activities*, but does not include interim model updates/revisions as addressed in **VI. Review by the Commission, G. Interim Model Updates after a Model has been Determined to be Acceptable by the Commission**, updates to geographical data or other interim data updates as addressed in **VI. Review by the Commission, H. Interim Updates to Geographical or Other Data after a Model has been Determined to be Acceptable by the Commission**, model updates as addressed in **VI. Review by the Commission, J. Model Update for Consistency of Hurricane and Flood Loss Models after the Model has been Determined to be Acceptable by the Commission**, or other developmental revisions to the model that are of the nature that would be appropriately reviewed according to the standards and procedures in the next *Flood Standards Report of Activities* scheduled for publication in 2021.

Upon receipt of the modeling organization’s notification and documentation as specified above, the Chair shall consult with at least three members of the Professional Team in order to investigate, determine, and verify the impact of the differences as reported by the modeling organization.

Differences in flood loss costs or flood probable maximum loss levels within spreadsheets shall be computed without explicit rounding or truncation of floating point values prior to generating the documentation specified above. The type of differences noted shall be classified as falling into one of the following categories:

Type I: The model is not the exact same model as found acceptable or the submission needs to be revised due to the discovery of inaccuracies or errors, but there are no differences in flood loss costs for any five digit ZIP Code area and there are no differences in flood probable maximum loss levels for any return period.

Type II: There are differences in one or more flood loss costs for a five digit ZIP Code area, but such differences do not exceed $\pm 1\%$ and there are changes in flood probable maximum loss levels for one or more return periods, but such differences do not occur at the rounded third significant digit of the probable maximum loss number.

Type III: There are differences in one or more flood loss costs for a five digit ZIP Code area or there are changes in flood probable maximum loss levels for one or more return periods that exceed the threshold levels set in Type II.

In the case of Type I differences:

1. The Chair, in consultation with at least three members of the Professional Team, shall verify the impact of the differences as reported by the modeling organization, and identify any additional documentation needed by the Commission. In its investigation and review of the issue, the Commission shall focus solely on the need for documentation explaining and describing the differences and ensuring that there is no impact on flood loss costs and flood probable maximum loss levels. The modeling organization's response related to differences noted at the Type I level shall only involve providing adequate documentation and shall not involve any further revisions to the model. The modeling organization shall submit an addendum to the submission for the model previously found acceptable by the Commission thereby documenting the reasons, causes, and explanations for the differences. The addendum shall also encompass a discussion of why flood loss costs and flood probable maximum loss levels remain valid and have not changed from the previous model which the Commission found acceptable.
2. If the Chair determines that the documentation and explanations provided by the modeling organization are sufficient, no further review is necessary by the Commission. The Chair shall provide a letter to the modeling organization acknowledging the notification of differences and noting that the Commission accepts the modeling organization's addendum to its previous submission. The letter shall note that a change in the model version identification is not required and that the model's acceptability shall expire as originally provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable**, unless additional differences are discovered prior to expiration.
3. If the Chair determines that a new model version identification may be needed or that complexity of the reported differences needs to be addressed by the Commission at a special or regularly scheduled meeting, the Chair shall provide the Commission with detailed recommendations, such as the need for additional documentation or the need for further investigations, the potential need for a revised model version identification, or other appropriate recommendations given the circumstances. Additionally, the Chair shall propose what would constitute adequate documentation and when such documentation shall be provided to the Commission.

At the Commission meeting, the Vice Chair or, if not available to chair the meeting, a Committee Chair appointed by the Chair, shall preside at the meeting. The Chair shall make a motion for approval of the recommendations which shall require a second. The Commission shall then vote on the recommendations of the Chair, and any other alternative recommendations or amendments that are raised in the form of a motion that has been duly made and seconded by another Commission member.

If backup documentation required is of a proprietary nature involving trade secrets, the Commission shall discuss only such items in a closed session. All votes shall be taken in a public meeting.

4. The acceptability of the model shall not be suspended on the basis of Type I differences as long as appropriate documentation is provided to the Commission in a timely fashion. No additional actions or revisions to the model shall be required by the modeling organization with respect to Type I differences.
5. If the modeling organization fails to provide documentation that the Commission deems satisfactory within a time frame specified by the Commission, the acceptability of the model shall be suspended pending submission of the necessary documentation. The Chair shall notify the modeling organization by letter of such suspension. Once the documentation is provided by the modeling organization, the Chair shall review the documentation with at least three members of the Professional Team, and if the Chair determines that the documentation is appropriate, shall send a letter to the modeling organization indicating that the documentation is acceptable and the suspension is lifted.

In the case of Type II differences:

1. The Chair, in consultation with at least three members of the Professional Team, shall determine whether the modeling organization has already revised the model to address the differences to conform to the standards or is capable of addressing the differences within fourteen days after notifying the Commission of the discovery of Type II differences. If the model has been revised or can be revised within the fourteen day time frame, the modeling organization shall submit an addendum to the submission for the model previously found acceptable thereby documenting the revisions, explaining the reasons for the differences, and providing any necessary backup documentation. If trade secret information is involved, the modeling organization shall include this fact in its notification to the Commission.
2. The Chair shall place the modeling organization's notification on the agenda for a special or regularly scheduled meeting of the Commission. The scheduling of the Commission meeting shall depend on the nature of the differences and the time frame for appropriate revisions to be made. The Chair shall provide Commission members with a copy of the modeling organization's notification and report the status related to the modeling organization's revision plan if on-going actions are required.

3. If the modeling organization has not made the necessary revisions to the model to conform to the standards, the Chair shall provide in advance of the meeting a proposed plan of action for the Commission's consideration. The Vice Chair or, if not available to chair the meeting, a Committee Chair appointed by the Chair, shall preside at the meeting. The Commission shall consider the Chair's proposal and, upon the proposal being moved and seconded, vote on the plan of action of the Chair, and any other alternative recommendations or amendments that are raised in the form of a motion that has been duly made and seconded by another Commission member. All plans of action shall include specific time frames including deadlines and the required documentation regarding the necessary revisions to conform to the standards.
4. Once the modeling organization has made the appropriate revisions within the Commission's specified time frames, as verified by the Chair in consultation with at least three members of the Professional Team, the Chair shall call a special meeting or include an agenda item on the Commission's next regularly scheduled meeting for the purpose of reviewing the revisions to the model needed in order for the model to comply with the standards. The Commission shall review the model as it deems necessary and may go into a closed session for discussion of trade secrets. The Commission shall conduct a minimum of seven votes (one for each grouping of standards) with the option of any member being allowed to request a carve out of a specific standard or standards (without the requirement for a second to such motion). The basic process adopted in the *Flood Standards Report of Activities* regarding the "Process for Determining the Acceptability of a Computer Simulation Flood Loss Model" in **VI. Review by the Commission, A. General Review of a Model, B. Meeting to Determine Acceptability, C. Modeling Organization Presentation, and D. Acceptability and Notification**, will be followed.

The notification letter regarding the acceptability of the model shall be revised to acknowledge the type of differences discovered and the revisions from the original model related to the previously acceptable model version. The new model version identification as assigned by the modeling organization shall be noted, and the revised model shall supersede the previously acceptable model. The acceptability of the revised model shall expire at the end of the current cycle as provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable**, unless additional differences are discovered prior to expiration.

5. If the modeling organization fails to make the appropriate revisions within the Commission's specified time frame, the model shall be suspended until the appropriate revisions are made to conform the model such that it meets the standards. The Chair shall send a letter to the modeling organization indicating that the acceptability of the model has been suspended until the Commission votes on the acceptability of the revised model and a new model version identification has been assigned by the modeling organization. Once the Commission has determined acceptability of the revised model, the revised model shall supersede the previously acceptable model. The acceptability of the revised model shall expire at the end of the current cycle as provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable**, unless additional differences are discovered prior to expiration.

In the case of Type III differences:

1. The acceptability of the model shall be suspended upon receipt of the notification of Type III differences or at any time during a Commission review where the magnitude of such differences are discovered and can be documented. The Chair shall send the modeling organization a letter indicating that the acceptability of the model by the Commission has been suspended immediately upon such notification or discovery and shall remain suspended until the Commission investigates and takes action regarding the modeling organization's steps necessary to address the differences in order to bring the model in compliance with the standards as adopted in this *Flood Standards Report of Activities*.
2. The Chair, in consultation with at least three members of the Professional Team, shall determine whether the modeling organization has already revised the model to address the differences necessary to conform the model to the standards or is capable of addressing the differences within fourteen days of notifying the Commission or discovery of the Type III differences by the Professional Team or Commission. If the model has been revised or can be revised within the fourteen day time frame, the modeling organization shall submit an addendum to the submission for the model previously found acceptable thereby documenting the revisions, explaining the reasons for the differences, and providing any necessary backup documentation. If trade secret information is involved, the modeling organization shall so indicate in its notification to the Commission.
3. The Chair shall place the modeling organization's notification or discovery by the Professional Team or Commission on the agenda for a special or regularly scheduled meeting of the Commission. The scheduling of the Commission meeting shall depend on the nature of the differences and the time frame for appropriate revisions to be made. The Chair shall provide Commission members with a copy of the modeling organization's notification and report the status related to the modeling organization's revision plan if on-going actions are required.
4. If the modeling organization has not made any revisions to the model to conform to the standards, the Chair shall provide in advance of the meeting a proposed plan of action for the Commission's consideration. The Vice Chair or, if not available to chair the meeting, a Committee Chair appointed by the Chair, shall preside at the meeting. The Commission shall consider the Chair's proposal and, upon the proposal being moved and seconded, vote on the Chair's proposed plan of action, and any other alternative recommendations or amendments that are raised in the form of a motion that has been duly made and seconded by another Commission member. All plans of action shall include specific time frames including deadlines and documentation regarding the needed revisions for the modeling organization in order for the model to conform to the standards.

5. If the modeling organization has already revised the model or once the modeling organization has made the appropriate revisions within the Commission’s specified time frames, as verified by the Chair in consultation with at least three members of the Professional Team, the Chair shall call a special meeting or include an agenda item on the Commission’s next regularly scheduled meeting for the purpose of reviewing the revisions to the model needed in order for the model to comply with the standards. The Commission shall review the model as it deems necessary and may go into a closed session for a discussion of trade secrets. The Commission shall conduct a minimum of seven votes (one for each grouping of standards) with the option of any member being allowed to request a carve out of a specific standard or standards (without the requirement for a second to such motion).

The basic process adopted in the *Flood Standards Report of Activities* regarding the “Process for Determining the Acceptability of a Computer Simulation Flood Loss Model” in **VI. Review by the Commission, A. General Review of a Model, B. Meeting to Determine Acceptability, C. Modeling Organization Presentation, and D. Acceptability and Notification**, will be followed.

The notification letter regarding the acceptability of the model shall be revised to acknowledge the type of differences discovered and the revisions from the original submission related to the previously acceptable model version. The new model version identification as assigned by the modeling organization shall be noted, and the revised model shall supersede the previously acceptable model. The acceptability of the revised model shall expire at the end of the current cycle as provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable**, unless additional differences are discovered prior to expiration.

6. If the modeling organization fails to make the appropriate revisions within sixty days of the Commission being notified or the date where the Commission discovered the Type III differences, the acceptability of the model shall be withdrawn subject to the appeal process as specified in **VI. Review by the Commission, E. Appeal Process to be Used by a Modeling Organization if a Model is Not Found to be Acceptable by the Commission**. If there is no appeal or the appeal is unsuccessful, the modeling organization shall be required to wait until the next review cycle as determined by time frames established in the next *Flood Standards Report of Activities* scheduled for publication in 2021.

G. Interim Model Updates after a Model has been Determined to be Acceptable by the Commission. If a modeling organization makes updates/revisions to the model where (1) the model update scope and utility is unrelated to flood loss costs or flood probable maximum loss levels for Florida and does not include the Florida model component, and (2) there are no changes to the flood loss costs or flood probable maximum loss levels for Florida, the modeling organization shall notify the Chair of the Commission in writing. The notification shall detail the nature of the model updates/revisions, the effect on the underlying acceptable model, and the effect on the modeled results.

The notification shall also include Form VF-3, Flood Mitigation Measures Range of Changes in Flood Damage, Form AF-1, Zero Deductible Personal Residential Standard Flood Loss Costs, Form AF-4, Flood Output Ranges, and Form A-6, Flood Probable Maximum Loss for Florida, completed for the current accepted model and the proposed updated/revised version of the model, and a percentage change comparison between the two versions to demonstrate no change. The proposed updated/revised model shall be clearly identified with a new/unique model version identification under the modeling organization's model revision policy.

Depending on the nature of the interim updates/revisions, the Chair in consultation with the Professional Team could recommend that the Professional Team conduct an on-site review, or a virtual review provided the modeling organization is in agreement and can provide access to full modeling material.

The Chair shall review the notification and inform the Commission members as soon as possible, and assess, with at least three members of the Professional Team, the regression test results. If there is no change in the underlying acceptable model and no change in the modeled results, the Chair shall send an updated acceptability notification letter to the modeling organization denoting that the interim model updates/revisions do not produce significant differences in flood loss costs and flood probable maximum loss levels from the current accepted model and the same expiration date shall apply as for the current accepted model. The new model version identification as assigned by the modeling organization shall be noted.

If the Chair, in consultation with at least three members of the Professional Team, determines there is a change in the underlying acceptable model or a change in the modeled results, then the Chair shall send a letter to the modeling organization as soon as practical notifying the modeling organization of a pending review by the Commission. The Chair shall determine the need for a special meeting or whether the issue can be addressed at the next regularly scheduled meeting of the Commission. The purpose of the special Commission meeting shall be to review the interim model updates/revisions and any other aspect of the model which might have changed in order to ensure that the model continues to comply with the standards. The Commission shall conduct a minimum of seven votes (one for each grouping of standards) with the option of any member being allowed to request a carve out of a specific standard or standards (without the requirement for a second to such motion). The basic process adopted in the *Flood Standards Report of Activities* regarding the "Process for Determining the Acceptability of a Computer Simulation Flood Loss Model" in **VI. Review by the Commission, A. General Review of a Model, B. Meeting to Determine Acceptability, C. Modeling Organization Presentation, and D. Acceptability and Notification**, will be followed.

The notification letter regarding the acceptability of the model shall be revised to acknowledge the interim model updates/revisions to the previously acceptable model. The new model identification as assigned by the modeling organization shall be noted. Once the Commission has determined acceptability of the revised model, the revised model shall supersede the previously acceptable model. The acceptability of the revised model shall expire at the end of the current cycle as provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable**.

If the revised model's proposed interim model updates/revisions are not found to be acceptable by the Commission, the Chair shall send a letter to the modeling organization noting such and that the model previously found to be acceptable by the Commission shall continue to be acceptable and expires as originally provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable.**

The appeal process as specified in **VI. Review by the Commission, E. Appeal Process to be Used by a Modeling Organization if a Model is Not Found to be Acceptable by the Commission,** shall not be applicable. This will require the modeling organization to make any contemplated model updates/revisions for the Commission's consideration in the next review cycle as determined by time frames established in the next *Flood Standards Report of Activities* scheduled for publication in 2021.

H. Interim Updates to Geographical or Other Data after a Model has been Determined to be Acceptable by the Commission.

If a modeling organization updates geographic location data within the model or makes other updates to data where the underlying model determined acceptable by the Commission has not been updated or revised, the modeling organization shall notify the Chair of the Commission in writing. The notification shall detail the nature of the updates and the effect on the modeled results.

The notification shall include Form VF-3, Flood Mitigation Measures Range of Changes in Flood Damage, Form AF-1, Zero Deductible Personal Residential Standard Flood Loss Costs, Form AF-4, Flood Output Ranges, and Form A-6, Flood Probable Maximum Loss for Florida, completed for the current accepted model and the proposed updated/revised version of the model, and a percentage change comparison between the two versions. The proposed interim data update designation as assigned by the modeling organization shall be clearly identified.

If a modeling organization updates geographic location data within the model, the modeling organization shall also provide maps showing ZIP Code centroids (previous and updated) for the entire state of Florida. The modeling organization shall provide a sorted list of all ZIP Code centroid movements of one mile or more, the top ten movements (if fewer than ten move at least one mile), and a list of new and retired ZIP Codes. The corresponding primary county for each ZIP Code listed shall be provided. The modeling organization shall provide a list of all ZIP Code related databases used by the model and describe the impact to these databases due to the updated ZIP Codes (including roughness factors, building construction, and ZIP Code specific vulnerability functions).

If backup documentation required is of a proprietary nature involving trade secrets, the Commission shall discuss only such items in a closed session. If trade secret information is involved, the modeling organization shall include this fact in its notification to the Commission.

In situations involving other data updates as indicated in the modeling organization submission in response to Standard GF-1, Scope of the Flood Model and Its Implementation, Disclosure 5, the modeling organization shall describe the impact of the data updates on flood loss costs and flood probable maximum loss levels and indicate why such interim data updates are considered necessary. The modeling organization shall provide a list of all databases used by the model related to the data updates and describe the impact to these databases due to the updates. The Commission shall not consider other interim data updates to the model unless such possible updates have been disclosed by the modeling organization in the submission response to Standard GF-1, Scope of the Flood Model and Its Implementation, Disclosure 5.

The Chair shall review the notification and inform the Commission members as soon as possible, and assess, with at least three members of the Professional Team, the regression test results. If the regression test results confirm that the model has not changed with regard to flood loss costs and flood probable maximum loss levels, the Chair shall send an updated acceptability notification letter to the modeling organization denoting that the interim data updates do not produce significant differences in flood loss costs and flood probable maximum loss levels from the current accepted model. The same model version identification and a distinction made for the interim data update(s) as assigned by the modeling organization shall be noted. The acceptability of the model with the interim data update(s) shall expire at the end of the current cycle as provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable.**

If the Chair, in consultation with at least three members of the Professional Team, determines that there are changes due to the geographical data updates reported or other interim data updates as provided for in Standard GF-1, Scope of the Flood Model and Its Implementation, Disclosure 5, then the Chair shall send a letter to the modeling organization as soon as practical notifying the modeling organization of a pending review by the Commission. The Chair shall determine the need for a special meeting or whether the issue can be addressed at the next regularly scheduled meeting of the Commission. The purpose of the special Commission meeting shall be to review the data updates and any other aspect of the model which might have changed in order to ensure that the model continues to comply with the standards. The Commission shall conduct a minimum of seven votes (one for each grouping of standards) with the option of any member being allowed to request a carve out of a specific standard or standards (without the requirement for a second to such motion). The basic process adopted in the *Flood Standards Report of Activities* regarding the “Process for Determining the Acceptability of a Computer Simulation Flood Loss Model” in **VI. Review by the Commission A. General Review of a Model, B. Meeting to Determine Acceptability, C. Modeling Organization Presentation, and D. Acceptability and Notification,** will be followed.

The notification letter regarding the acceptability of the model shall be revised to acknowledge the nature of the data updates to the previously acceptable model version. The new model version identification and a distinction made for the interim data updates as assigned by the modeling organization shall be noted. Once the Commission has determined acceptability of the revised model, the revised model shall supersede the previously acceptable model. The acceptability of the revised model shall expire at the

end of the current cycle as provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable.**

If the revised model's proposed data updates are not found to be acceptable by the Commission, the Chair shall send a letter to the modeling organization noting such and that the model previously found to be acceptable by the Commission shall continue to be acceptable and shall expire as originally provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable.**

The appeal process as specified in **VI. Review by the Commission, E. Appeal Process to be Used by a Modeling Organization if a Model is Not Found to be Acceptable by the Commission,** shall not be applicable. This will require the modeling organization to make the contemplated data updates for consideration by the Commission in the next review cycle as determined by time frames established in the next *Flood Standards Report of Activities* scheduled for publication in 2021.

I. Review and Acceptance Criteria for Functionally Equivalent Model Platforms. If a modeling organization has designed its model to operate on two or more platforms, the Commission may find the model as run on the various platforms acceptable under the following circumstances and procedures.

1. The various model platforms shall be submitted for review at one time by the designated submission deadline and shall be capable of being reviewed concurrently by the Commission, including the Professional Team's on-site review, such that all platforms can be reviewed as to their functional equivalence.
2. Functional equivalence shall be recognized as long as no flood lost costs differ with regard to any platform at the rounded third decimal place (thus there should be no changes in the published Form VF-3, Flood Mitigation Measures Range of Changes in Flood Damage, Form AF-1, Zero Deductible Personal Residential Standard Flood Loss Costs and Form AF-4, Flood Output Ranges), and flood probable maximum loss does not differ by more than $\pm 1\%$ for any flood probable maximum loss level (Form AF-6, Flood Probable Maximum Loss for Florida).
3. The model as implemented on the various platforms shall have the same model version identification with a notation to designate the specific model platform(s). The modeling organization shall specify which platform is the primary platform and which platform(s) are the functionally equivalent platform(s). This information shall be disclosed in the modeling organization submission in response to Standard GF-1, Scope of the Flood Model and Its Implementation, Disclosure 1.
4. The modeling organization shall not be allowed to make separate submissions during a review cycle and any difference between model platforms shall be required to be fully described in the modeling organization's original submission.
5. The only differences in modeled results shall be demonstrated to be solely due to the nature of the model platform(s) or any other technological constraint that would account for no more than the designated variations noted above.

Once the Commission has determined functional equivalence of the model platform(s), the Chair shall send an acceptability notification letter to the modeling organization designating specifically which model platform(s) were found to be functionally equivalent and acceptable by the Commission.

- J. Model Update for Consistency of Hurricane and Flood Loss Models after the Model has been Determined to be Acceptable by the Commission.** If the modeling organization proposes to update a hurricane or flood loss model previously determined acceptable by the Commission as a result of changes to the other model, the modeling organization shall notify the Chair of the Commission in writing. The notification shall detail the nature of the proposed updates, the effect on the modeled results (i.e., the impact on flood loss costs and flood probable maximum loss levels), and include all submission materials that are impacted. If trade secret information is involved, the modeling organization shall include this fact in its notification to the Commission.

Depending on the nature of the updates, the Chair in consultation with at least three members of the Professional Team, will review the notification and materials provided to determine whether to process the proposed updates immediately or defer until the next scheduled review cycle. Depending on the nature of the update, the Chair could recommend that the Professional Team conduct an on-site review, or a virtual review provided the modeling organization is in agreement and can provide access to full modeling material.

If the Chair, in consultation with at least three members of the Professional Team, determines that the documentation and explanations provided by the modeling organization are sufficient, no further review is necessary by the Commission. The Chair shall provide an updated acceptability notification letter to the modeling organization acknowledging the update notification and noting that the model update produces minor differences in flood loss costs and flood probable maximum loss levels from the current accepted model, that the Commission accepts the modeling organization's addendum to its previous submission, and that the same expiration date shall apply as for the current accepted model.

If the Chair, in consultation with at least three members of the Professional Team, determines there are significant differences in the underlying acceptable model or there are significant differences in the modeled results, then the Chair shall send a letter to the modeling organization as soon as practical notifying the modeling organization of a pending review by the Commission. The Chair shall determine the need for a special meeting or whether the issue can be addressed at the next regularly scheduled meeting of the Commission. The purpose of the special Commission meeting shall be to review the model update and any other aspect of the model which might have changed in order to ensure that the model continues to comply with the standards. The Commission shall conduct a minimum of seven votes (one for each grouping of standards) with the option of any member being allowed to request a carve out of a specific standard or standards (without the requirement for a second to such motion). The basic process adopted in the *Flood Standards Report of Activities* regarding the "Process for Determining the Acceptability of a Computer Simulation Flood Loss Model" in **VI. Review by the Commission, A. General Review of a Model, B. Meeting to Determine Acceptability,**

C. Modeling Organization Presentation, and D. Acceptability and Notification, will be followed.

The notification letter regarding the acceptability of the model shall be revised to acknowledge the model update to the previously acceptable model. The new model identification as assigned by the modeling organization shall be noted. Once the Commission has determined acceptability of the revised model, the revised model shall supersede the previously acceptable model. The acceptability of the revised model shall expire at the end of the current cycle as provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable.**

If the revised model's proposed model update is not found to be acceptable by the Commission, the Chair shall send a letter to the modeling organization noting such and that the model previously found to be acceptable by the Commission shall continue to be acceptable and expires as originally provided for in **VI. Review by the Commission, K. Expiration of a Model Found Acceptable.**

The appeal process as specified in **VI. Review by the Commission, E. Appeal Process to be Used by a Modeling Organization if a Model is Not Found to be Acceptable by the Commission,** shall not be applicable. This will require the modeling organization to make any contemplated model update for the Commission's consideration in the next review cycle as determined by time frames established in the next *Flood Standards Report of Activities* scheduled for publication in 2021.

K. Expiration of a Model Found Acceptable. The determination of acceptability of a model found acceptable under the standards contained in the *Flood Standards Report of Activities as of November 1, 2017*, expires on November 1, 2024.

Model Submission Checklist

1. Please indicate by checking below that the following has been included in your model submission documentation to the Florida Commission on Hurricane Loss Projection Methodology.

Yes	No	Item
		1. Letter to the Commission
		a. Refers to the signed Expert Certification forms and states that professionals having credentials and/or experience in the areas of meteorology, hydrology, hydraulics, statistics, structural engineering, actuarial science, and computer/information science have reviewed the model for compliance with the standards
		b. States model is ready to be reviewed by the Professional Team
		c. Any caveats to the above statements noted with a complete explanation
		2. Summary statement of compliance with each individual standard and the data and analyses required in the disclosures and forms
		3. General description of any trade secret information the modeling organization intends to present to the Professional Team and the Commission
		4. Model Identification
		5. Eight Bound Copies (duplexed)
		6. Link e-mailed to SBA staff containing all required documentation that can be downloaded from a single ZIP file
		a. Submission text and Form AF-1, Zero Deductible Personal Residential Standard Flood Loss Costs in PDF format
		b. PDF submission file supports highlighting and hyperlinking, and is bookmarked by standard, form, and section
		c. Data file names include abbreviated name of modeling organization, standards year, and form name (when applicable)
		d. Forms VF-3, Flood Mitigation Measures, Range of Changes in Flood Damage, AF-1, Zero Deductible Personal Residential Standard Flood Loss Costs, AF-2, Total Flood Statewide Loss Costs, AF-3, Personal Residential Standard Flood Loss Costs by ZIP Code, AF-4, Flood Output Ranges, and Form A-6, Flood Probable Maximum Loss for Florida in Excel format
		e. Forms VF-4, Coastal Flood Mitigation Measures, Mean Coastal Flood Damage Ratios and Coastal Flood Damage/\$1,000 (Trade Secret Item), VF-5, Inland Flood Mitigation Measures, Mean Inland Flood Damage Ratios and Inland Flood Damage/\$1,000 (Trade Secret Item), and AF-5, Logical Relationship to Flood Risk (Trade Secret Item) in Excel format if not considered as trade secret
		7. All hyperlinks to the locations of forms are functional
		8. Table of Contents
		9. Materials consecutively numbered from beginning to end starting with the first page (including cover) using a single numbering system, including date and time in footnote
		10. All tables, graphs, and other non-text items consecutively numbered using whole numbers, listed in Table of Contents, and clearly labeled with abbreviations defined
		11. All column headings shown and repeated at the top of every subsequent page for forms and tables

Yes	No	Item
		12. Standards, disclosures, and forms in <i>italics</i> , modeling organization responses in non-italics
		13. All graphs and maps conform to guidelines in II. Notification Requirements A.4.f.
		14. All units of measurement clearly identified with appropriate units used
		15. All forms included in submission appendix except Trade Secret Items. If forms designated as Trade Secret Item are not considered as trade secret, those forms are also to be included in the submission appendix
		16. Hard copy documentation identical to electronic version
		17. Signed Expert Certification Forms GF-1 to GF-8
		18. All acronyms listed and defined in submission appendix

2. Explanation of “No” responses indicated above. (Attach additional pages if needed.)

Model Name and Identification

Modeler Signature

Date