

GENERAL FLOOD STANDARDS

GF-1 Scope of the Computer Flood Model and Its Implementation

- A. The computer flood model shall project loss costs and probable maximum loss levels for insured damage to personal residential property from flood events.***
- B. The modeling organization shall maintain a documented process to assure continual agreement and correct correspondence of databases, data files, and computer source code to slides, technical papers, and modeling organization documents.***

Purpose: This standard gives a high level view of the scope of the flood model to be reviewed, namely projecting flood loss costs and flood probable maximum loss levels for insured damage to personal residential property from flood events. The definition of flood as used in this standard is defined in Section 627.715(1)(b), Florida Statutes. The scope of the computer flood model shall apply to all types of flooding determined to be scientifically feasible at a location (that is, where frequencies and severities of such events are available and can be projected) and shall not be limited to any specific subsets or types of flood peril. Nothing in the flood standards or purpose statements shall preclude a model from projecting loss costs and probable maximum loss levels from the flood peril using separate sub-models for various components of the peril (e.g., inland precipitation flood is modeled separately from storm surge flooding).

It is recognized that “models” are complex and may include models within models which can be known as “sub-models” or “component models.” This would be expected for some approaches to flood modeling, although not a necessary requirement. And, it is recognized that such models, sub-models, or component models may be part of other models such as hurricane models or wave models, etc. This would not preclude their use as “part” of the flood modeling process. The Commission will take a broad view of the process or methodology that “ties” together the various models, sub-models, or component models. As such, the broader and more general model will be considered as the “flood model” under review given that it should result in one set of loss costs and one probable maximum loss curve. It is important that the general modeling approach be found acceptable and that any failure to meet a standard by the various models, sub-models, or component models necessary to model the nature of the flood peril would be viewed as unacceptable for flood modeling purposes. Therefore, a model, sub-model, or component model capable of modeling one aspect of the flood peril, such as coastal storm surge flooding or fluvial flooding, and otherwise meeting all the Commission standards could not be found acceptable without being combined

with other models, sub-models, or component models that in their entirety accurately or reliably model the full scope and nature of the flood peril.

Relevant Form: GF-1, General Flood Standards Expert Certification

Disclosures

1. Specify the flood model version identification and software program version identification. If the flood model submitted for review is implemented on more than one software platform, specify each flood model software platform. Specify which software platform is the primary software platform and verify how any other software platforms produce the same flood model output results or are otherwise functionally equivalent as provided for in the “Process for Determining the Acceptability of a Computer Simulation Model” in VI. Review by the Commission, I. Review and Acceptance Criteria for Functionally Equivalent Model Software Platforms. (Review this section in the Acceptability Process to update for flood and flood forms.)
2. Provide a comprehensive summary of the flood model. This summary shall include a technical description of the flood model, including each major component of the model used to produce personal residential loss costs and probable maximum loss levels associated with personal residential flood damage in Florida. Describe the theoretical basis of the flood model and include a description of the methodology, particularly the meteorological/hydrological components, the vulnerability components, and the insured flood loss components used in the flood model. The description shall be complete and shall not reference unpublished work.
3. Provide a flow diagram that illustrates interactions among major flood model components.
4. Provide a comprehensive list of complete references pertinent to the submission by flood standard grouping using professional citation standards.
5. Provide a list and description of any potential interim updates to underlying data relied upon by the flood model. State whether the time interval for the update has a possibility of occurring during the period of time the flood model could be found acceptable by the Commission under the review cycle in this *Report of Activities*.
6. Identify and describe the exposure dataset used for determining flood loss costs and flood probable maximum loss levels.

Audit

1. The intent of the audit is to determine the capabilities of the flood model and to assess its implementation for purposes of projected insured flood loss costs and flood probable maximum loss levels for Florida. Copies of all primary technical papers that describe the underlying flood model theory and implementation (where applicable) shall be made available.

2. Compliance with the process prescribed in Standard GF-1.B in all stages of the flood modeling process will be reviewed.
3. All software and data (1) located within the flood model, (2) used to validate the flood model, (3) used to project modeled flood loss costs and flood probable maximum loss levels, and (4) used to create forms required by the *Report of Activities*:
 - a. Shall fall within the scope of the Computer Flood Standards,
 - b. Shall be located in centralized, flood model-level file areas, and
 - c. Shall be reviewable interactively (capable of being viewed simultaneously by all Professional Team members in conjunction with the review of each flood standard).
4. Modeling organization specific publications cited must be available in hard or electronic copy or via a web link.
5. Maps, databases, and data files relevant to the modeling organization's submission will be reviewed.
6. Provide the following information related to changes in the flood model since the initial submission for each subsequent revision of the submission under review.
 - A. Flood model changes:
 1. A summary description of changes that affect, or are believed to affect, the personal residential flood loss costs or flood probable maximum loss levels,
 2. A list of all other changes, and
 3. The rationale for each change.
 - B. Percentage difference in average annual zero deductible statewide flood loss costs based on a modeling organization specified, predetermined and comprehensive exposure dataset for:

Options for Exposure dataset:

1. A modeler specified, predetermined and comprehensive exposure dataset
2. Sample dataset of exposures from the NFIP for Florida
3. A notional dataset developed by modelers analogous to the notional dataset for the Logical Relationship to Risk form for hurricane

1. All changes combined, and
 2. Each individual flood model component and subcomponent change.
- C. Color-coded maps by rating area or zone reflecting the percentage difference in average annual zero deductible statewide flood loss costs based on the [to be determined] for each flood model component change:

1. Between the initial submission and the revised submission, and
 2. Between any intermediate revisions and the revised submission.
7. The exposure dataset used for determining flood loss costs and probable maximum loss levels will be reviewed.

GF-2 Qualifications of Modeling Organization Personnel and Consultants Engaged in Development of a Flood Model

- A. Flood model construction, testing, and evaluation shall be performed by modeling organization personnel or consultants who possess the necessary skills, formal education, and experience to develop the relevant components for flood loss projection methodologies.**
- B. The flood model and model submission documentation shall be reviewed by either modeling organization personnel or consultants in the following professional disciplines: hydrology (advanced degree), meteorology (advanced degree), statistics (advanced degree), structural engineering (licensed Professional Engineer or advanced degree with experience in coastal and inland flooding), actuarial science (Associate or Fellow of Casualty Actuarial Society), and computer/information science (advanced degree). These individuals shall certify Forms GF-1 through GF-6 as applicable.**

Purpose: Professional disciplines necessary to construct a flood model shall be represented among modeling organization staff and consultants. Academic or professional designations are necessary but not sufficient requirements of the personnel involved in flood model development, implementation, and preparation of material for review by the Commission.

Relevant Forms:

- GF-1, General Flood Standards Expert Certification
- GF-2A, Meteorological/Hydrological Flood Standards Meteorologist Expert Certification
- GF-2B, Meteorological/Hydrological Flood Standards Hydrologist Expert Certification
- GF-3, Statistical Flood Standards Expert Certification
- GF-4, Vulnerability Flood Standards Structural Engineer Expert Certification
- GF-5, Actuarial Flood Standards Expert Certification
- GF-6, Computer Flood Standards Expert Certification

Disclosures

1. Organization Background

- A.** Describe the ownership structure of the modeling organization engaged in the development of the flood model. Describe affiliations with other companies and the nature of the relationship, if any. Indicate if the organization has changed its name and explain the circumstances.

- B. If the flood model is developed by an entity other than a modeling company, describe its organizational structure and indicate how proprietary rights and control over the flood model and its components is exercised. If more than one entity is involved in the development of the flood model, describe all involved.
 - C. If the flood model, or any of its sub-models and component models, is developed by an entity other than a modeling company, describe the funding source for the development of the flood model or any of its sub-models and component models.
 - D. Describe any services other than flood modeling provided by the modeling organization.
 - E. Indicate if the modeling organization has ever been involved directly in litigation or challenged by a governmental authority where the credibility of one of its U.S. flood model versions for projection of flood loss costs or flood probable maximum loss levels was disputed. Describe the nature of each case and its conclusion.
2. Professional Credentials
- A. Provide in a tabular format (a) the highest degree obtained (discipline and university), (b) employment or consultant status and tenure in years, and (c) relevant experience and responsibilities of individuals currently involved in the acceptability process or in any of the following aspects of the flood model:
 - 1. Meteorology/Hydrology
 - 2. Statistics
 - 3. Vulnerability
 - 4. Actuarial Science
 - 5. Computer Science
 - B. Provide visual business workflow documentation connecting all personnel related to flood model design, testing, execution, maintenance, and decision-making.
 - C. For each individual listed under Disclosure 2.A, provide specific information as to any consulting activities and any relationship with an insurer, reinsurer, trade association, governmental entity, consumer group, or other advocacy group within the previous 5 years.
3. Independent Peer Review
- A. Provide reviewer names and dates of external independent peer reviews that have been performed on the following components as currently functioning in the flood model:
 - 1. Meteorology/Hydrology
 - 2. Statistics
 - 3. Vulnerability
 - 4. Actuarial Science
 - 5. Computer Science

- B. Provide documentation of independent peer reviews directly relevant to the modeling organization's responses to the current flood standards, disclosures, or forms. Identify any unresolved or outstanding issues as a result of these reviews.
 - C. Describe the nature of any on-going or functional relationship the organization has with any of the persons performing the independent peer reviews.
4. Provide a list of rating agencies and insurance regulators that have reviewed the flood model. Include the dates and reasons or purpose of the reviews.
 5. Provide a completed Form GF-1, General Flood Standards Expert Certification. Provide a link to the location of the form [insert hyperlink here].
 6. Provide a completed Form GF-2A, Meteorological/Hydrological Flood Standards Meteorologist Expert Certification. Provide a link to the location of the form [insert hyperlink here].
 7. Provide a completed Form GF-2B, Meteorological/Hydrological Flood Standards Hydrologist Expert Certification. Provide a link to the location of the form [insert hyperlink here].
 8. Provide a completed Form GF-3, Statistical Flood Standards Expert Certification. Provide a link to the location of the form [insert hyperlink here].
 9. Provide a completed Form GF-4, Vulnerability Flood Standards Structural Expert Certification. Provide a link to the location of the form [insert hyperlink here].
 10. Provide a completed Form GF-5, Actuarial Flood Standards Expert Certification. Provide a link to the location of the form [insert hyperlink here].
 11. Provide a completed Form GF-6, Computer Flood Standards Expert Certification. Provide a link to the location of the form [insert hyperlink here].

Audit

1. The professional vitae of personnel and consultants engaged in the development of a flood model and responsible for the current flood model and the submission will be reviewed. Background information on the professional credentials of individuals providing testimonial letters in the submission shall be reviewed.
2. Forms GF-1 (General Flood Standards Expert Certification), GF-2A (Meteorological/Hydrological Flood Standards Meteorologist Expert Certification), GF-2B (Meteorological/Hydrological Flood Standards Hydrologist Expert Certification), GF-3 (Statistical Flood Standards Expert Certification), GF-4 (Vulnerability Flood Standards Structural Expert Certification), GF-5 (Actuarial Flood Standards Expert Certification), GF-6 (Computer Flood Standards Expert Certification), and all independent peer reviews of the flood model under

consideration will be reviewed. Signatories on the individual forms will be required to provide a description of their review process.

3. Discuss any incidents where modeling organization personnel or consultants have been found to have failed to abide by the standards of professional conduct adopted by their profession.

GF-3 Insured Exposure Location

The geographic location, topography, and elevation methodology shall be consistent and scientifically justified.

Purpose: Flood model outputs, including flood loss costs, are sensitive to insured exposure locations, topography, and elevations. Appropriate methods must be used in converting street addresses to geocode locations (latitude-longitude). The methodology to determine the elevation of the insured exposure should be scientifically appropriate.

Relevant Form: GF-1, General Flood Standards Expert Certification

Disclosures

1. Describe the method for determining the insured exposure locations and elevations.
2. Provide the granularity of the geographical grid modeled for flood damage. Explain the reason for the spatial distribution of the grid locations and discuss if there is any variation for populated versus unpopulated areas.
3. Describe the modeling organization's use of Global Information Systems (GIS) in the flood modeling process.
4. Describe the data, methods, and process used in the flood model to convert among street addresses and geocode locations (latitude-longitude) and elevation.
5. List and provide a brief description of each database used in the flood model for determining location and corresponding elevation.
6. Describe the process for updating flood model location and corresponding elevation databases.

Audit

1. Provide geographic displays for all geographic grids or non-grid formats for display of the spatial distribution and geographic characteristics of insured exposures. The treatment of any variations for populated versus unpopulated areas will be reviewed.
2. Provide the third party vendor, if applicable, and a complete description of the process used to create, validate, and justify geographic grids.
3. The treatment of geographic grids over water or other uninhabitable terrain will be reviewed.

4. Examples of geocoding for complete and incomplete street addresses will be reviewed.
5. Flood model location and elevation databases will be reviewed.

GF-4 Independence of Flood Model Components

The meteorological/hydrological, vulnerability, and actuarial components of the model shall each be theoretically sound without compensation for potential bias from other components.

Purpose: This standard requires that each of the primary components of the flood model be individually sound and operate independently. For example, the flood model shall not allow adjustments to the vulnerability components to compensate for apparent deficiencies in other components (e.g., compensation which could inflate damage). In addition to each component of the flood model meeting its respective standards, the interrelationship of the flood model components as a whole must be reasonable, logical, and scientifically justified.

Relevant Form: GF-1, General Flood Standards Expert Certification

Audit

1. Demonstrate that the flood model components adequately portray flood phenomena and effects (damage, flood loss costs, and flood probable maximum loss levels). Attention will be paid to an assessment of (1) the theoretical soundness of each component, (2) the basis of the integration of each component into the model, and (3) consistency between the results of one component and another. For example, a flood model would not meet this standard if an artificial calibration adjustment had been made to improve the match of historical and flood model results for a specific flood event.

GF-5 Editorial Compliance

The submission and any revisions provided to the Commission throughout the review process shall be reviewed and edited by a person or persons with experience in reviewing technical documents who shall certify on Form GF-7, Editorial Review Expert Certification that the submission has been personally reviewed and is editorially correct.

Purpose: This standard requires that the modeling organization engaged in the development of a flood model maintain a quality control process with regard to creating, maintaining, and reviewing all documentation associated with the flood model.

Person(s) with experience in reviewing technical documents for grammatical correctness, typographical accuracy, and inaccurate citations, charts, or graphs must have reviewed the submission and certify that the submission is in compliance with the acceptability process.

Relevant Forms: GF-1, General Flood Standards Expert Certification
GF-2A, Meteorological/Hydrological Flood Standards
Meteorologist Expert Certification
GF-2B, Meteorological/Hydrological Flood Standards
Hydrologist Expert Certification
GF-3, Statistical Flood Standards Expert Certification
GF-4, Vulnerability Flood Standards Structural Engineer
Expert Certification
GF-5, Actuarial Flood Standards Expert Certification
GF-6, Computer Flood Standards Expert Certification
GF-7, Editorial Review Expert Certification

Disclosures

1. Describe the process used for document control of the submission. Describe the process used to ensure that the paper and electronic versions of specific files are identical in content.
2. Describe the process used by the signatories on Forms GF-1 through GF-6 (Flood Standards Expert Certification forms) to ensure that the information contained under each set of flood standards is accurate and complete.
3. Provide a completed Form GF-7, Editorial Review Expert Certification. Provide a link to the location of the form [insert hyperlink here].

Audit

1. Demonstrate that the person or persons who have reviewed the submission has had experience in reviewing technical documentation and such person or persons is familiar with the submission requirements as set forth in the Commission's *Report of Activities as of November 1, 2017*.
2. Demonstrate that the submission has been reviewed for grammatical correctness, typographical accuracy, completeness, and inclusion of extraneous data or materials.
3. Demonstrate that the submission has been reviewed by the signatories on Forms GF-1 through GF-6 (Flood Standards Expert Certification forms) for accuracy and completeness.
4. The modification history for submission documentation will be reviewed.
5. A flowchart defining the process for form creation will be reviewed.
6. Form GF-7 (Editorial Review Expert Certification) will be reviewed.

**Form GF-1: General Flood Standards
Expert Certification**

I hereby certify that I have reviewed the current submission of _____
(Name of Flood Model)

Version _____ for compliance with the 2017 Flood Standards adopted by the Florida Commission on Hurricane Loss Projection Methodology and hereby certify that:

- 1) The model meets the General Flood Standards (GF1 – GF5);
- 2) The disclosures and forms related to the General Flood Standards section are editorially and technically accurate, reliable, unbiased, and complete;
- 3) My review was completed in accordance with the professional standards and code of ethical conduct for my profession;
- 4) My review involved ensuring the consistency of the content in all sections of the submission; and
- 5) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

Name

Professional Credentials (area of expertise)

Signature (original submission)

Date

Signature (response to deficiencies, if any)

Date

Signature (revisions to submission, if any)

Date

Signature (final submission)

Date

An updated signature and form is required following any modification of the flood model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

Signature (revisions to submission)

Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.

<p>Form GF-2A: Meteorological/Hydrological Flood Standards Meteorologist Expert Certification</p>
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I hereby certify that I have reviewed the current submission of _____
 (Name of Flood Model)
 Version _____ for compliance with the 2017 Standards adopted by the Florida
 Commission on Hurricane Loss Projection Methodology and hereby certify that:

- 1) The model meets the Meteorological/Hydrological Flood Standards (MHF1 – MHF6);
- 2) The disclosures and forms related to the Meteorological/Hydrological Flood Standards section are editorially and technically accurate, reliable, unbiased, and complete;
- 3) My review was completed in accordance with the professional standards and code of ethical conduct for my profession; and
- 4) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

 Name

 Professional Credentials (area of expertise)

 Signature (original submission)

 Date

 Signature (response to deficiencies, if any)

 Date

 Signature (revisions to submission, if any)

 Date

 Signature (final submission)

 Date

An updated signature and form is required following any modification of the model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

 Signature (revisions to submission)

 Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.

<p>Form GF-2B: Meteorological/Hydrological Flood Standards Hydrologist Expert Certification</p>
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I hereby certify that I have reviewed the current submission of _____
 (Name of Flood Model)
 Version _____ for compliance with the 2017 Standards adopted by the Florida
 Commission on Hurricane Loss Projection Methodology and hereby certify that:

- 1) The model meets the Meteorological/Hydrological Flood Standards (MHF1 – MHF6);
- 2) The disclosures and forms related to the Meteorological/Hydrological Flood Standards section are editorially and technically accurate, reliable, unbiased, and complete;
- 3) My review was completed in accordance with the professional standards and code of ethical conduct for my profession; and
- 4) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

 Name

 Professional Credentials (area of expertise)

 Signature (original submission)

 Date

 Signature (response to deficiencies, if any)

 Date

 Signature (revisions to submission, if any)

 Date

 Signature (final submission)

 Date

An updated signature and form is required following any modification of the model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

 Signature (revisions to submission)

 Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.

<p>Form GF-3: Statistical Flood Standards Expert Certification</p>

I hereby certify that I have reviewed the current submission of _____
 (Name of Flood Model)

Version _____ for compliance with the 2017 Standards adopted by the Florida Commission on Hurricane Loss Projection Methodology and hereby certify that:

- 1) The model meets the Statistical Flood Standards (SF1 – SF6);
- 2) The disclosures and forms related to the Statistical Flood Standards section are editorially and technically accurate, reliable, unbiased, and complete;
- 3) My review was completed in accordance with the professional standards and code of ethical conduct for my profession; and
- 4) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

Name

Professional Credentials (area of expertise)

Signature (original submission)

Date

Signature (response to deficiencies, if any)

Date

Signature (revisions to submission, if any)

Date

Signature (final submission)

Date

An updated signature and form is required following any modification of the model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

Signature (revisions to submission)

Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.

**Form GF-4: Vulnerability Flood Standards
Structural Engineer Expert Certification**

I hereby certify that I have reviewed the current submission of _____
(Name of Flood Model)

Version _____ for compliance with the 2017 Standards adopted by the Florida Commission on Hurricane Loss Projection Methodology and hereby certify that:

- 1) The model meets the Vulnerability Flood Standards (VF1 – VF3);
- 2) The disclosures and forms related to the Vulnerability Flood Standards section are editorially and technically accurate, reliable, unbiased, and complete;
- 3) My review was completed in accordance with the professional standards and code of ethical conduct for my profession; and
- 4) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

Name

Professional Credentials (area of expertise)

Signature (original submission)

Date

Signature (response to deficiencies, if any)

Date

Signature (revisions to submission, if any)

Date

Signature (final submission)

Date

An updated signature and form is required following any modification of the model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

Signature (revisions to submission)

Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.

<p>Form GF-5: Actuarial Flood Standards Expert Certification</p>

I hereby certify that I have reviewed the current submission of _____
 (Name of Flood Model)

Version _____ for compliance with the 2017 Standards adopted by the Florida Commission on Hurricane Loss Projection Methodology and hereby certify that:

- 1) The model meets the Actuarial Flood Standards (AF1 – AF6);
- 2) The disclosures and forms related to the Actuarial Flood Standards section are editorially and technically accurate, reliable, unbiased, and complete;
- 3) My review was completed in accordance with the Actuarial Standards of Practice and Code of Conduct; and
- 4) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

Name

Professional Credentials (area of expertise)

Signature (original submission)

Date

Signature (response to deficiencies, if any)

Date

Signature (revisions to submission, if any)

Date

Signature (final submission)

Date

An updated signature and form is required following any modification of the model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

Signature (revisions to submission)

Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.

<p>Form GF-6: Computer Flood Standards Expert Certification</p>
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I hereby certify that I have reviewed the current submission of _____
(Name of Flood Model)

Version _____ for compliance with the 2017 Standards adopted by the Florida Commission on Hurricane Loss Projection Methodology and hereby certify that:

- 1) The model meets the Computer Flood Standards (CF1 – CF7);
- 2) The disclosures and forms related to the Computer Flood Standards section are editorially and technically accurate, reliable, unbiased, and complete;
- 3) My review was completed in accordance with the professional standards and code of ethical conduct for my profession; and
- 4) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

Name

Professional Credentials (area of expertise)

Signature (original submission)

Date

Signature (response to deficiencies, if any)

Date

Signature (revisions to submission, if any)

Date

Signature (final submission)

Date

An updated signature and form is required following any modification of the model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

Signature (revisions to submission)

Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.

<p>Form GF-7: Editorial Review Expert Certification</p>
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I hereby certify that I have reviewed the current submission of _____
(Name of Flood Model)

Version _____ for compliance with the “Process for Determining the Acceptability of a Computer Simulation Model” adopted by the Florida Commission on Hurricane Loss Projection Methodology in its *Report of Activities as of November 1, 2017*, and hereby certify that:

- 1) The model submission is in compliance with the Commission’s Notification Requirements and General Flood Standard **GF-5** (Editorial Compliance);
- 2) The disclosures and forms related to each standards section are editorially accurate and contain complete information and any changes that have been made to the submission during the review process have been reviewed for completeness, grammatical correctness, and typographical errors;
- 3) There are no incomplete responses, inaccurate citations, charts or graphs, or extraneous text or references;
- 4) The current version of the flood model submission has been reviewed for grammatical correctness, typographical errors, completeness, the exclusion of extraneous data/information and is otherwise acceptable for publication; and
- 5) In expressing my opinion I have not been influenced by any other party in order to bias or prejudice my opinion.

Name

Professional Credentials (area of expertise)

Signature (original submission)

Date

Signature (response to deficiencies, if any)

Date

Signature (revisions to submission, if any)

Date

Signature (final submission)

Date

An updated signature and form is required following any modification of the model and any revision of the original submission. If a signatory differs from the original signatory, provide the printed name and professional credentials for any new signatories. Additional signature lines shall be added as necessary with the following format:

Signature (revisions to submission)

Date

Note: A facsimile or any properly reproduced signature will be acceptable to meet this requirement.