

Recommended Edits to the 7-8-15 Draft Actuarial Flood Standards
Flood Standards Development Committee Meeting
August 11, 2015

AF-2, Flood Events Resulting in Modeled Flood Losses

Standard

Professional Team: **Technical**

Amendatory/Suggested Language:

- B. Time element flood loss costs shall reflect insured flood losses due to infrastructure damage caused by a flood event, including government access restriction.
- C. The modeling organization shall have a documented procedure for addressing double counting or under counting of flood losses from any source.

Purpose

Minchong Mao: **Technical/Editorial**

Explanation: The stricken language is too prescriptive.

Amendatory/Suggested Language:

Flood loss costs and flood probable maximum loss levels should only include insured flood related ~~damages-losses~~ and time element flood losses in Florida resulting from an event modeled as a flood event (as described above) consistent with Section 627.715, Florida Statutes and consistent with the different flood policies, contracts, and endorsements. The event shall include all such insured flood related damage due to a flood event causing loss in Florida and should not be over-estimated ~~due to double counting~~ or under-estimated ~~due to unduly restrictive counting~~.

Audit

Professional Team: **Technical**

Amendatory/Suggested Language:

- 5. The effect on loss costs and probable maximum loss levels arising from flood events that are neither inland nor coastal flooding will be reviewed.

AF-3, Flood Coverages

Standard

Professional Team: **Technical**

Amendatory/Suggested Language:

F. The methods used to account for substantial damage shall be actuarially sound.

Purpose

Professional Team: **Technical**

Amendatory/Suggested Language:

A reasonable representation of personal residential structures, appurtenant structures, contents, time element, and ICC flood losses is necessary in order to evaluate how the different flood policies, contracts, and endorsements handle flood losses.

Certain policies, contracts, and endorsements may include coverage for water intrusion.

Disclosures

Professional Team: **Technical**

Amendatory/Suggested Language:

6. Explain if and how coverage for water intrusion is included in the loss costs methods described in items 1-5 above.

Audit

Professional Team: **Technical**

Amendatory/Suggested Language:

2. The process used for including and quantifying coverage for water intrusion will be reviewed.

AF-4, Modeled Flood Loss Cost and Flood Probable Maximum Loss Level Considerations

Standard

Professional Team: **Technical**

Amendatory/Suggested Language:

- C. Flood loss cost projections and flood probable maximum loss levels shall not include any **explicit** provision for **any** wind losses.
- D. Water damage caused from storm surge ~~resulting from tropical systems~~ shall be included in the flood model's calculation of flood loss costs and flood probable maximum loss levels.
- E. Flood loss cost projections and flood probable maximum loss levels shall be capable of being calculated from exposures at a geocode (latitude-longitude) level of resolution including the appropriate consideration of elevation.
- F. Demand surge shall be included in the flood model's calculation of flood loss costs and flood probable maximum loss levels using relevant data and actuarially sound methods and assumptions.
- ~~G. The methods, data, and assumptions used in the estimation of demand surge for flood shall be actuarially sound.~~

Purpose

Professional Team: **Technical**

Amendatory/Suggested Language:

The flood loss costs and flood probable maximum loss levels from the flood model should reflect flood losses paid by the insurance company as insurance claims resulting from flood damage from an event as defined in Standard AF-2, Flood Events Resulting in Modeled Flood Losses.

Flood loss costs represent the expected annual loss per \$1,000 exposure. Other "expense and profit loads" such as those listed in the standard may be included in rate filings ~~but~~ and are outside the scope of the Commission.

Flood loss severity may be influenced by supply and demand factors applicable to material and labor costs. This is generally known as demand surge which occurs at the time of a large catastrophic event and is recognized as an important element for flood modeling.

Flood insurance may also be influenced (although perhaps differently from demand surge) by general price inflation. This is a type of economic inflation that is associated with past insured flood loss

experience that has been used to construct and validate flood loss projection models. The standard does not allow for prospective recognition of future economic inflation or price inflation.

[Demand surge and storm surge are recognized as important elements of flood modeling.](#)

Disclosures

Professional Team: **Technical**

Amendatory/Suggested Language:

3. Describe how the flood model incorporates demand surge [and storm surge](#) in the calculation of flood loss costs and flood probable maximum loss levels. Indicate if there are any differences in the manner that demand surge is incorporated for coastal and inland flooding.
4. Provide citations to published papers, if any, or modeling organization studies that were used to develop how the flood model estimates demand surge [and storm surge](#).

Audit

Professional Team: **Technical**

Amendatory/Suggested Language:

6. The efforts that have been made to ensure that **any** wind losses ~~other than water damage caused from storm surge associated with tropical systems~~ have not been included in the flood model losses will be reviewed.
9. [The efforts that have been made to ensure that there is no overlap or underlap of damage from coastal and inland flooding included in the flood model losses will be reviewed.](#)

AF-5, Flood Policy Conditions

Standard

Professional Team: **Technical**

Amendatory/Suggested Language:

A. The methods used in the development of mathematical distributions to reflect the effects of deductibles, ~~and~~ policy limits, and flood policy exclusions shall be actuarially sound.

C. Deductibles and loss settlements underlying flood loss costs shall be calculated in accordance with Section 627.715, Florida Statutes.

Purpose

Professional Team: **Technical**

Amendatory/Suggested Language:

For a given flood extent and elevation/depth, wave conditions, and personal residential structure type, there is a range of possible results. For a given deductible, ~~s~~Some flood losses may fall below the deductible. The distribution of flood losses is therefore important to the determination of the effects of deductibles and policy limits.

Section 627.715, Florida Statutes, presents a number of options regarding deductibles and loss settlement options. The modeling organizations will decide which policies, contracts, and endorsements to model.

Flood policy exclusions are also an important consideration.

Disclosures

Minchong Mao: **Technical**

Explanation: Is annual deductible only applicable for hurricane insurance?

Amendatory/Suggested Language:

~~3.—Describe how the flood model calculates annual deductibles.~~

Professional Team: **Technical**

Amendatory/Suggested Language:

2. Provide an example of how insurer flood loss (flood loss net of deductibles) is calculated. Discuss data or documentation used to confirm or validate the method used by the flood model.

Example:

(A)		(B)	(C)	(D)=(A)*(C)	(E)=(D)-(B)
Structure Value	Policy Limit	Deductible	Damage Ratio	Zero Deductible Flood Loss	Flood Loss Net of Deductible
100,000	90,000	<u>1,500</u>	2%	2,000	

3. Describe how the flood model calculates annual deductibles in a manner consistent with s. 627.715, F.S.
4. Explain how the flood model treats policy limits, ~~replacement costs~~ loss settlement, ~~and~~ coinsurance, and policy exclusions.

Audit

Professional Team: **Technical**

Amendatory/Suggested Language:

3. To the extent that historical data are used to validate the flood model results, the treatment of the effects of deductibles, ~~and~~ policy limits, policy exclusions, and loss settlement for flood coverage in the data will be reviewed.

AF-6, Flood Loss Outputs and Logical Relationship to Risk

Standard

Professional Team: **Technical**

Amendatory/Suggested Language:

- E. Flood loss costs cannot increase as the presence of fixtures or construction techniques designed for flood hazard mitigation and flood control increases, all other factors held constant.
- H. The relationship of flood loss costs for individual coverages, (e.g., personal residential structures, appurtenant structures, contents, ~~and~~-time element, and ICC) shall be consistent with the coverages provided.

Audit

Professional Team: **Technical**

Amendatory/Suggested Language:

- 1. The data and methods used for flood probable maximum loss levels for Form AF-8, Flood Probable Maximum Loss for Florida will be reviewed. The Top Event and Conditional Tail Expectations will be reviewed.

Form AF-1, Zero Deductible Personal Residential Flood Loss Costs

Professional Team: **Technical**

Amendatory/Suggested Language:

Notional Standard Policy Specifications

Policy Type

Assumptions

Owners

Coverage A = Building Property

- Replacement cost included subject to Coverage A limit
- Includes detached garage equal to 10% of Coverage A limit
- Water intrusion excluded~~Ordinance or Law not included~~

Coverage B = Personal Property~~Appurtenant Structures~~

- Actual ~~Replacement~~ cost value included subject to Coverage B limit
- Water intrusion excluded~~Ordinance or Law not included~~

Coverage C = Other Coverages~~Contents~~

- Debris removal, loss avoidance, and condominium loss assessment not included~~Replacement Cost included subject to Coverage C limit~~

Coverage D = Increased Cost of Compliance~~Time Element~~

- Coverage limit = \$30,000~~Time limit = 12 months~~
- ~~Per diem = \$150.00/day per policy, if used~~

✧ Flood loss costs per \$1,000 shall be related to the Coverage A limit

Manufactured Housing

Coverage A = Building

- Minimum of (replacement cost, 1.5 x actual cost value~~included~~ subject to Coverage A limit]
- Water intrusion excluded

Coverage B = Personal Property~~Appurtenant Structures~~

- ~~Replacement Cost included~~ Actual cost value subject to Coverage B limit
- Water intrusion excluded

Coverage C = Other Coverages~~Contents~~

- Debris removal, loss avoidance, and condominium loss assessment not included~~Replacement Cost included subject to Coverage C limit~~

Coverage D = Increased Cost of Compliance~~Time Element~~

- Coverage limit = \$30,000~~Time limit = 12 months~~
- ~~Per diem = \$150.00/day per policy, if used~~

✧ Flood loss costs per \$1,000 shall be related to the Coverage A limit

Form AF-6, Flood Output Ranges

Professional Team: **Technical**

Amendatory/Suggested Language:

Flood Output Range Specifications (Standard)

Policy Type

Assumptions

Owners

Coverage A = Building Property

- Coverage A limit = \$100,000
- Replacement cost included subject to Coverage A limit
- ~~Ordinance or Law~~ Water intrusion not included
- Deductible = \$1,500

Coverage B = ~~Appurtenant Structures~~ Personal Property

- Coverage B limit = ~~10% of Coverage A limit~~ \$40,000
- ~~Replacement Cost~~ Actual cash value included subject to Coverage B limit
- ~~Ordinance or Law~~ Water intrusion not included
- Deductible = \$1,000

Coverage C = ~~Contents~~ Other Coverages

- ~~Coverage C limit = 50% of Coverage A limit~~ Debris removal, loss avoidance, and condominium loss assessment not included
- ~~Replacement Cost included subject to Coverage C limit~~

Coverage D = ~~Time Element~~ Increased Cost of Compliance

- Coverage D limit = ~~20% of Coverage A limit~~ \$30,000
- ~~Time limit = 12 months~~ No deductible for Coverage D
- ~~Per diem = \$150.00/day per policy, if used~~

✧ Dominant Coverage = A

✧ Flood loss costs per \$1,000 shall be specified for each ~~related to the Coverage A limit~~

~~✧ Flood loss costs for the various specified deductibles shall be determined based on annual deductibles.~~

~~✧ Flood deductible shall be 2% of coverage limit, applied separately to each coverage.~~

Renters

Coverage ~~C-B~~ = ~~Contents~~ Personal Property

- Coverage ~~C-B~~ limit = \$25,000
- No coverage for tenant improvements
- Water intrusion not included
- Deductible = \$1,000
- ~~Replacement Cost~~ Actual cash value included subject to Coverage ~~C~~ B limit

~~Coverage D = Time Element~~

- ~~Coverage D limit = 40% of Coverage C limit~~
- ~~Time limit = 12 months~~
- ~~Per diem = \$150.00/day per policy, if used~~

- ~~◇ Dominate Coverage = C.~~
- ◇ Flood loss costs per \$1,000 shall be related to the Coverage ~~C~~B limit
- ~~◇ Flood loss costs for the various specified deductibles shall be determined based on annual deductibles.~~
- ~~◇ Flood deductible shall be \$500.~~

Condo Unit Owners

Coverage A = Building Property

- Coverage A limit = 10% of Coverage C limit
- Replacement cost included subject to Coverage A limit

Coverage ~~C~~B = ~~Contents~~Personal Property

- Coverage ~~C~~B limit = \$50,000
- ~~Replacement Cost~~Actual cash value included subject to Coverage ~~C~~B limit

~~Coverage D = Time Element~~

- ~~• Coverage D limit = 40% of Coverage C limit~~
- ~~• Time limit = 12 months~~
- ~~• Per diem = \$150.00/day per policy, if used~~

- ~~◇ Dominant Coverage = C.~~
- ◇ Flood loss costs per \$1,000 shall be related to the Coverage ~~C~~B limit
- ~~◇ Flood loss costs for the various specified deductibles shall be determined based on annual deductibles.~~
- ~~◇ Flood deductible shall be \$500.~~

Manufactured Housing

Coverage A = Building Property

- Coverage A limit = \$50,000
- Minimum of replacement cost, actual cash value ~~included~~ subject to Coverage A limit
- Deductible = \$500

~~Coverage B = Appurtenant Structures~~

- ~~• Coverage B limit = 10% of Coverage A limit~~
- ~~• Replacement Cost included subject to Coverage B limit~~

Coverage ~~C~~B = ~~Contents~~Personal Property

- Coverage ~~C~~B limit = 50% of Coverage A limit
- Replacement cost included subject to Coverage ~~C~~B limit

Coverages C & D = ~~Time Element~~Special Coverages, ICC (not included)

- ~~• Coverage D limit = 20% of Coverage A limit~~
- ~~• Time limit = 12 months~~
- ~~• Per diem = \$150.00/day per policy, if used~~

- ~~◇ Dominant Coverage = A.~~
- ◇ Flood loss costs per \$1,000 shall be related to the ~~Coverage A~~ coverage limit
- ~~◇ Flood loss costs for the various specified deductibles shall be determined based on annual deductibles.~~
- ~~◇ Flood deductible shall be 2% of coverage limit, applied separately to each coverage.~~

Form AF-7, Logical Relationship to Flood Risk (Trade Secret Item)

Professional Team: **Technical**

Amendatory/Suggested Language:

Notional Flood Policy Specifications (Standard)

Policy Type

Assumptions

Owners

Coverage A = Building Property

- Replacement cost included subject to Coverage A limit
- ~~Ordinance or Law~~ Water intrusion not included
- Deductible = \$1,500

Coverage B = ~~Appurtenant Structures~~ Personal Property

- ~~Replacement Cost~~ Actual cash value included subject to Coverage B limit
- ~~Ordinance or Law~~ Water intrusion not included
- Deductible = \$1,000

Coverage C = ~~Contents~~ Other Coverages

- ~~Debris removal, loss avoidance, and condominium loss assessment~~ not included ~~Replacement Cost included subject to Coverage C limit~~

Coverage D = ~~Time Element~~ Increased Cost of Compliance

- ~~Time limit = 12 months~~ No deductible for Coverage D
- ~~Per diem = \$150.00/day per policy, if used~~

◇ Flood loss costs per \$1,000 shall be specified for each ~~related to the Coverage coverage A~~ limit

Renters

Coverage ~~C-B~~ = ~~Contents~~ Personal Property

- No coverage for tenant improvements
- Water intrusion not included
- Deductible = \$1,000
- ~~Replacement Cost~~ Actual cash value included subject to Coverage ~~C~~ B limit

~~Coverage D = Time Element~~

- ~~Time limit = 12 months~~
- ~~Per diem = \$150.00/day per policy, if used~~

◇ Flood loss costs per \$1,000 shall be related to the Coverage ~~C~~ B limit

Condo Unit Owners

Coverage A = Building Property

- Replacement cost included subject to Coverage A limit

Coverage ~~C-B~~ = ~~Contents~~ Personal Property

- ~~Replacement Cost~~ Actual cash value included subject to Coverage ~~C~~ B limit

~~Coverage D = Time Element~~

- ~~Time limit = 12 months~~
- ~~Per diem = \$150.00/day per policy, if used~~

✧ Flood loss costs per \$1,000 shall be related to the Coverage ~~C-B~~ limit

Manufactured Housing

Coverage A = Building Property

- Minimum of replacement cost, actual cash value ~~included~~ subject to Coverage A limit
- Deductible = \$500

~~Coverage B = Appurtenant Structures~~

- ~~Replacement Cost included subject to Coverage B limit~~

Coverage ~~C-B~~ = ~~Contents~~ Personal Property

- Replacement Cost included subject to Coverage ~~C-B~~ limit

Coverages C & D = ~~Time Element~~ Special Coverages, ICC (not included)

- ~~Time limit = 12 months~~
- ~~Per diem = \$150.00/day per policy, if used~~

✧ Flood loss costs per \$1,000 shall be related to the ~~Coverage A~~ coverage limit