

Actuarial Rates in the Context of National Flood Insurance Program (NFIP) Hazard Mapping

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Actuarial Rates Generally

- Basic Principle – an actuarial rate should reflect the hazard of the insured risk
- Casualty Actuarial Society (CAS) Statement of Principles Regarding Property and Casualty Insurance Ratemaking
- Actuarial Standards Board Standard of Practice No. 12 – Risk Classification



CAS Statement of Principles Regarding Property and Casualty Insurance Ratemaking

- Principle 1: A rate is an estimate of the expected value of future costs.
- Principle 2: A rate provides for all costs associated with the transfer of risk.
- Principle 3: A rate provides for the costs associated with an individual risk transfer.
- Principle 4: A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.



ASOP No. 12 – Risk Classification

- “A relationship between a risk characteristic and an expected outcome, such as cost, is demonstrated if it can be shown that the variation in actual or reasonably anticipated experience correlates to the risk characteristic.”



NFIP's Flood Map Modernization Program

- Remapping of Flood Zones
 - New information on likelihood of flooding
 - Old flood control infrastructure (dams, levees, etc.) may no longer be adequate
 - Some flood plains more prone to flooding due to development
 - New levees or dams need proper reflection
 - One common result
 - Properties move from moderate-low-risk flood zone to high-risk flood zone
 - Resulting in substantially higher rate
 - Some properties will show lower hazard



NFIP's Flood Map Modernization Program

- Actuarial Soundness
 - NFIP is required by law to promulgate rates that have “actuarial soundness”
 - This term has no universally accepted definition
 - NFIP actuaries develop rates that fairly discriminate among policy holders, within the constraints that Congress has placed on them
 - Among these constraints are grandfather provisions and the PRP Eligibility Extension
 - In the next two slides, “actuarial soundness” is used in this context



NFIP'S Flood Map Modernization Program

- However ...
 - Preferred Risk Policy (PRP) Eligibility Extension
 - For those properties moved from moderate-low to high-risk
 - Two years' extension at the lower rates
 - FEMA maintains the actuarial soundness of PRP Eligibility; this just postpones the effect for two years
 - Other grandfathering provisions also could result in lower rates than the hazard indicates for some policy holders
 - FEMA attempts to keep overall premium actuarially sound
 - Without grandfathering, some policyholders would see decreases, some increases



Conclusion

- An actuarial rate should reflect the hazard of the insured risk
- These new mappings are more reflective of current flood potential
- Thus, they should result in more actuarially sound rates
- PRP Extension postpones impact for two years
- Contributes to mismatch between the premium taken in and the potential losses paid out





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