INFORMED DECISIONS ON CATASTROPHE RISK

Addressing Affordability in the National Flood Insurance Program
Means-Tested Vouchers Coupled with Mitigation Loans

The National Flood Insurance Program (NFIP) is in debt to the U.S. Treasury. As of July 2013, this debt stood at $24 billion. One reason for the NFIP's financial imbalance is that many homeowners historically received premium discounts below risk-based rates.

Last July, the President signed the Biggert–Waters Flood Insurance Reform Act with overwhelming bipartisan support from Congress. This bill included provisions to phase out many of the premium discounts.

Some legislators are now wavering on their commitment to risk-based pricing for flood insurance because of concerns their constituents will not be able to afford flood insurance.

We propose a means-tested voucher program coupled with a loan program for investments in loss reduction measures, made affordable by reductions in the NFIP risk-based premiums.

- Risk-based premiums are needed for the NFIP to be financially self-sustaining. Risk-based pricing is also important to emphasize to policyholders the magnitude of the risk that they face, as well as to encourage them to invest in mitigation measures in return for premium reductions. FEMA estimates that about 20 percent of flood insurance policies currently receive premium discounts of about 40–45 percent of full-risk rates.

- The GAO estimates that roughly 438,000 policies nationwide will see higher rates immediately as a result of Biggert-Waters. Starting in October 2014, routine rate revisions will also include a 5 percent assessment to help the program build a catastrophe reserve fund.

- A delay in implementing the legislation could further impede the financial soundness of the NFIP and discourage policyholders from investing in cost-effective risk mitigation measures. The NFIP must address affordability, but this should not be done through discounted premiums.

- A combination voucher and loan program can save homeowners money by lowering their insurance premiums. Homeowners would receive a loan to make their property more resistant to flood damage, which in turn would lower the cost of their flood insurance. This program will also reduce the NFIP's exposure and improve its financial soundness through risk-based pricing.

Means-Tested Vouchers Coupled with Mitigation Loans

We propose a program to couple means-tested vouchers with required hazard mitigation, financed with low-interest loans. By requiring hazard mitigation, future disaster losses would be reduced both for the National Flood Insurance Program (NFIP) and for families. The proposed voucher program has two key features. First, it is based on risk-based insurance premiums which are essential for communicating information about flood risk. Second, the vouchers not only cover a portion of the insurance premium, but also would cover the costs of the loan to reduce future damage to the residence.

The amount of the combined insurance and loan voucher would be based on annual family income, taking into account financial assets and family size. Policyholders would be given a low-interest loan to invest in the necessary flood loss reduction measure. We propose that the insurance voucher be tied to the policyholder's income, and the mitigation loan be tied to the property. Such a program could be modeled on similar HUD voucher programs and could be administered outside of FEMA.

Illustrative example

One important determinant of insurance premiums that reflect risk is the height of the house in relation to the Base Flood Elevation (BFE). As shown in Table 1, raising a house above BFE could save thousands, if not tens of thousands, of dollars on annual flood insurance costs.

Table 1. 2013 NFIP Annual Premiums for a One-to-Four-Family Residence for $250,000 Coverage

	3 feet below BFE	*1 foot below BFE*	*At BFE*	*1 foot above BFE*	*4 feet above BFE*
A zone	Not rated	$2,199–$4,483	$778–$1,315	$429–$616	$296
V zone	$13,950–$23,150	$8,950–$15,925	$6,750–$12,050	$4,675–$8,725	$2,050–$4,150

Source: Federal Emergency Management Agency [FEMA]. 2013. National Flood Insurance Program: Flood Insurance Manual, Revised January, 2013. Washington, DC. http://www.fema.gov/media-library/assets/documents/29840?id=6713 (accessed August 19, 2013).

Note: These premiums are for houses that were built after FEMA Flood Insurance Rate Maps were established. Premiums for A zone properties vary based on the number of stories and whether the property has a basement. Premiums for V zone properties vary based on the ratio of the amount of coverage relative to the replacement value of the property. Rates in V zones are higher than in A zones because of surge risk.

Consider two property owners – one in an A zone and one in a V zone – that want to reduce future damage from flooding and storm surge caused by hurricanes by elevating their homes. Both purchase an NFIP policy for $250,000 coverage. Assume that each property is three feet below BFE, and that the annual premium for the A zone resident is $4,000, and the annual premium for the V zone resident is $18,550. Further assume that each homeowner is eligible for a flood insurance voucher and currently makes $50,000 a year. Using 5 percent of gross income as our measure, these individuals would be expected to pay $2,500 toward flood insurance. If no loss reduction measures were undertaken, the A zone resident would receive a flood insurance voucher for $1,500, and the V zone resident would receive a voucher for $16,050. (See top panel of Table 2.)

**Table 2. Example Calculation of Costs of Mitigation Loan and NFIP Premiums**

	A Zone Property	V Zone Property
Insurance voucher without mitigation		
Premium for house 3 feet below BFE	$4,000	$18,550
Homeowner pays	$2,500	$2,500
Flood insurance voucher provided by federal government	$1,500	$16,050
Insurance voucher with mitigation		
Cost to elevate house to 1 foot above BFE	$25,000	$55,000
Annual loan payment (3%, 20 years)	$1,680	$3,660
Premium for house 1 foot above BFE	$520	$6,700
Homeowner pays	$2,200	$2,500
Combined insurance and loan voucher provided by federal government	$0	$7,860
Total savings from mitigation	**$1,800**	**$8,190**

Now, link the insurance voucher program to hazard mitigation. To qualify for the insurance voucher, the homeowner would be required to elevate the house to one foot above BFE and would be given a loan for this purpose. The voucher would cover the combined costs of the annual loan payment and the insurance premium in excess of $2,500.

We assume that the cost of elevation is $25,000 for the A zone property and $55,000 for the V zone property. Both residents receive a 20-year loan at a 3 percent rate to cover these costs. The resulting annual payments are $1,680 and $3,660, respectively. Once the homes are elevated, the annual NFIP premiums drop to $520 for the A zone resident and $6,700 for the V zone resident.

After elevation, no voucher is required for the A zone resident because the coupled loan payment and premium, at $2,200, is less than the $2,500 that the homeowner is required to pay (based on income) for insurance. For the V zone resident, after mitigation, the combined payment for the loan and premium payment is $10,360; the homeowner pays $2,500 and the federal government pays $7,860. (See bottom panel of Table 2.) The savings from coupling mitigation with the insurance voucher are quite substantial, as shown in the last row of Table 2 and in Figure 1. During the life of the loan, the annual savings (the difference between the premium with no mitigation and the combined loan and premium after mitigation) are $1,800 for the A zone property and $8,190 for the V zone property.

Figure 1. Cost of Program to the Federal Government and Homeowner (Example)
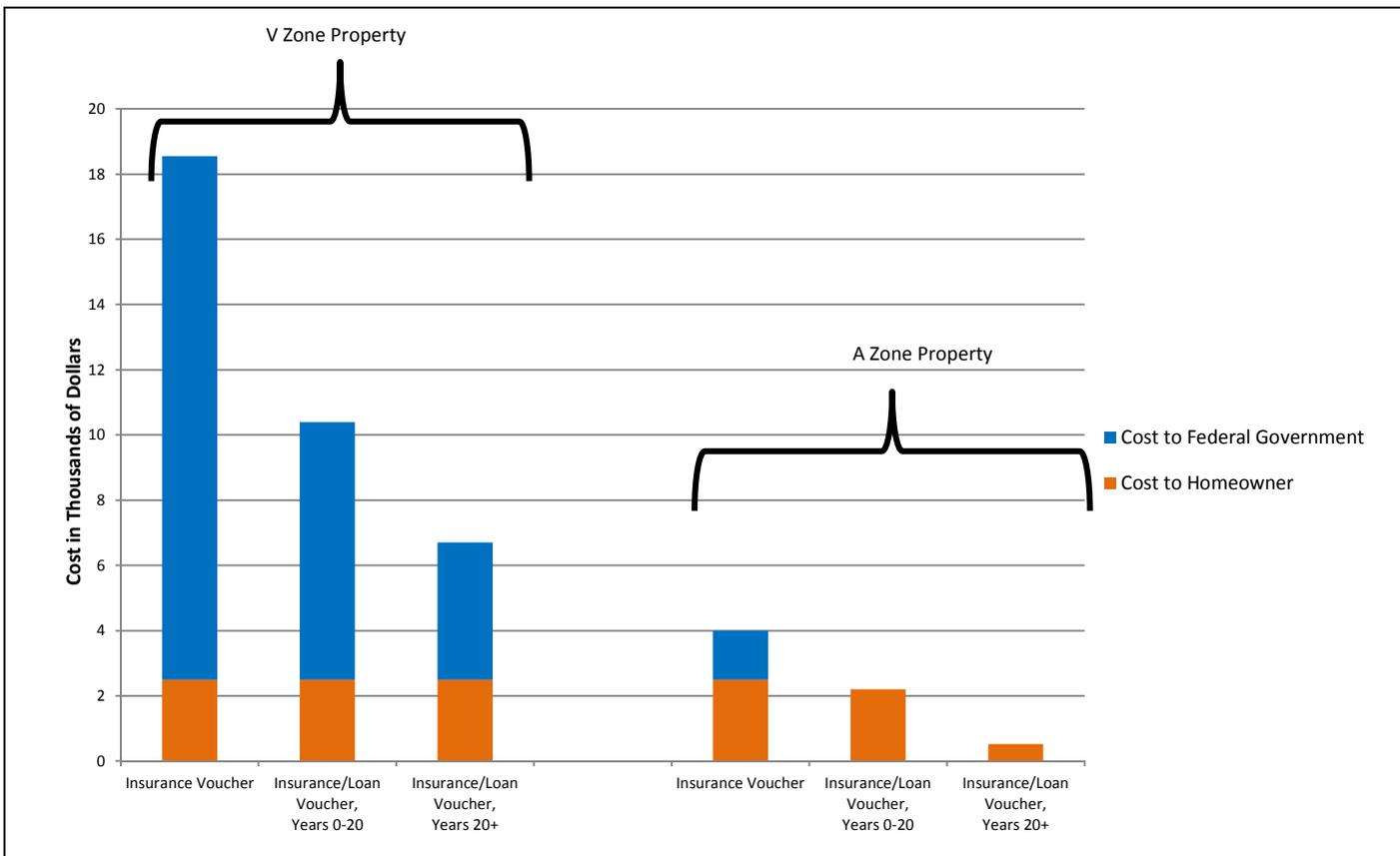
For any pre-mitigation premium in the A zone greater than $2,200 and in the V zone greater than $10,360, it is less expensive to elevate the property and obtain the lower NFIP premium. The insurance and loan voucher program is financially attractive for higher costs of elevation as well, and for a range of loan terms.

FEMA may also want to consider the cost-effectiveness of other hazard mitigation measures and provide premium discounts to reflect the reduced flood-related damage to the property and contents. These may include raising electrical outlets, installing a backflow valve, and making sure the grading in the property directs water away from the building (see: http://www.disastersafety.org/flood/prepare-respond-recover/).

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