Synopsis of the September 1966 Report

Insurance and Other Programs of Financial Assistance to Flood Victims Report

I. KEY MESSAGES

The Report cites the national concern to limit flood damages without hampering future economic development.

Unlimited public assistance would be self-defeating encouraging flood plain occupancy, creating a vastly larger problem.

Flood protection works can sometimes be impractical, not always cost-effective, destroy natural aesthetics and/or environmental quality, and have residual flood risk or potential failure that is often underestimated.

Broad alternatives exist to deal with flood loss, ranging from highly individualistic to paternalistic; however only one is really practical - a "self-help" program with a range of constructive public assistance programs.

Any flood insurance program must be "interrelated, coordinated, and complementary" with other flood program, and any insurance program that incorporates land management for SFHAs must be integrated with other public land use plans.

Insurance premiums should be variable by level of risk inherent with each flood hazard risk zone and flood prone area.

Many at-risk individuals are uninformed about their potential flood damage, are unrealistically "grossly optimistic" they will not be flooded, and expect public help if a disaster affects them.

Federal relief aid should diminish as land use changed by removing properties from hazard zones, and the Report suggests that the Government should incur some of the costs to assist such land use changes.

Any insurance program must include a "specific effort to inform citizens in a manner they can understand their flood hazard."

The Report concerns a) property loss only (not business or economic loss or inconvenience arising out of flooding), and b) the issue of availability of necessary funds because, if financial backing is available, post-disaster restoration is primarily a function of construction capacity to meet post-disaster demands.

II. FINDINGS

The concept of individuals entirely bearing flood losses is a largely rejected in the U.S. as unrealistic because:

- Victims cannot perform rehabilitation alone and communities recognize the need for rapid recovery.
- Substantial public relief and assistance are available and people “expect public help” when hit by a disaster.
- Proponents of Government expect some Federal expenditure for public assistance to victims of natural disasters.

"Less than 10% of all dwellings in the U.S. can expect to experience more than half of the average annual flood damage,“ and "only a small portion of the U.S. population has any significant flood hazard“ making the concept of everyone contributing equally to a uniform insurance premium rate approach (e.g., the fire insurance model) “quite inequitable.”

A national system of flood insurance with Government assistance is necessary to assure a workable method of pooling risks, minimizing costs, and distributing burdens equitably among at-risk property owners and the general taxpayers.

A flood insurance program must have two equally important objectives: a financial assistance program to rehabilitate property and incentives to prevent unwise use of SFHAs where damages would mount steadily and rapidly.
The Report identified the requirements for accurate estimate of risk; compensation of the risk bearer; subsidy of premiums; policyholder incentives to reduce risk; state/local government incentives for wise flood prone management (including shifting development to non-flood prone areas); and continuous program reappraisal.

The Report acknowledged the geographic and temporal variability of flooding throughout the U.S.

Factors identified that affect flood risk and annual damage determinations included: [geographical] climate, depth and duration of inundation, velocity, coastal wave wash/tidal surge, sediment flow/deposition, location of structures, type of occupancy (which affects contents), and type and quality of construction. The Report concludes that depth and frequency of flooding, and the [risk] zone location of property are the most significant factors over any individual or combination of other factors.

Risk information must be developed as accurately as possible to avoid any misconception that would lead to “serious misunderstandings,” “controversy later,” and “serious financial reverses.” The Report found that using hydrologic data based on rigorous scientific methods to estimate flood risk and evaluate average annual damages in SFHAs was more acceptable to using annual flood damages either in total or by regions for the U.S.

_Flood Risk Zones_ were defined as “A through F” representing multiple frequencies, that is, <5 year (Zone A), 5-10 year (Zone B), 10-25 year (Zone C), 25-50 year (Zone D), 50-100 year (Zone E), and >100 year (Zone F) as “flooded very often to flooding very rarely” and with different average depths from “greatest average depth in A to least average in F.”

The lack of sufficient flood hazard data and flood loss estimates were a deterrent to determination of adequate property insurance coverage. Most property insurance is based on realized losses over a period of years; this approach was deemed “inapplicable for floods” because of the lack necessary data, and because flood loss is so variable that a short-term average of events may differ greatly from the long-term average.

The Report found that annual insurance premiums should be the “cost equivalent” of the “average annual damages across all flood-prone areas.”

The computation of average annual damages (the basis of a flood insurance premium structure), should be determined by integration of stage-frequency and depth-damage curves, relating depth, stage, frequency, and damage based on depth.

Found that damages to contents should be determined independently of damages to structures. “For residential property, the most feasible and workable solution would be to base the relation on percent of total value, separating structure and contents; and for commercial and industrial property, on percent of value or per square foot of floor area, separating structure and contents.”

The Report concluded that it was doubtful that any proportion of property owners would be willing to pay flood insurance premiums of >$2 per $100 of value, and that more probably a limit of $1 per $100 would be a maximum. “At the higher rate, the raw land on which the building sets has little or no value, the cost of the flood insurance eats up any rent the site might have earned. It seems probable that $1 for actuarial insurance premium, people will be willing to pay the full premium.” Factors that would keep the premiums low include high deductible clauses in policies; an overall claim cap; and reducing rates if supplementary measures are adopted, such as flood proofing, permanent elevation of contents, warning systems, etc.

The Report provides an argument for why insurance premium subsidization may be good public policy:

- Occupants of existing at-risk properties did not understand the risks or were misled as to the extent of the flood hazard.
- Local authorities, builders, and developers may be ignorant of the true hazard; or fraud may have occurred; or the hazard may have increased.
- There may have been no effective public safeguard (e.g., no zoning restrictions) against the proposed occupancy.
- Publicly-built flood protection works may have been misinterpreted as providing more flood protection than planned.
- Capital has been sunk in existing properties in severe flood risk areas; and some part of this investment can be salvaged by continued use. Subsidization could help maintain properties, temporarily save capital, and salvage the capital.
- Subsidies may be a lower cost to the Public than disaster relief as flood insurance premiums will bear some of the costs.
The Report concluded that insurance premiums would have to be subsidized to some degree, particularly in high risk zones but that subsidies to current at-risk owners are defensible only as an interim solution to long-range land use readjustments.

Found that many policies would be written after a flood and recommended that there should be “no retroactive applicability.”

For at-risk owners to be interested in flood insurance, three essential conditions must exist:
1. The hazard must be perceived so that the possibility of suffering damage of sufficient severity warrants taking action.
2. There must be a willingness to consider insurance as a means of protection vs. other approaches.
3. Insurance premiums must be considered affordable (in relation to an individual’s income).

The Report suggested that many groups will oppose a flood insurance program which identifies SFHAs and which publishes rates of insurance which measure the annual cost of living in these areas.

The Report lists the advantages of a flood insurance program as:
- Provides funds to promptly restore damaged property or to permit comparable investment elsewhere.
- Verifiable claims would not need to wait for appropriations, or would pass a means test, to be reimbursed.
- Replaces temporary or partial aids, such as loans at subsidized interest rates with longer-term effects on the borrower.
- Involves minimum net cost to general taxpayers, even if some Government aid was still required.
- Distributes costs of damage equitably since those incurring the greatest risks pay the highest premiums.
- Provides stronger incentives to discourage investment in high-risk areas and encourages protective measures.

III. REPORT RECOMMENDATIONS.

1. Recommendation for a National Flood Insurance Program. Requirements for a flood insurance program were given as:

A. Insurance be limited initially and extended later to other property as experience indicates insurance to be feasible.
B. The Government identifies all SFHAs, establish flood-risk zones, and estimate rates of probable flood loss.
C. Have reasonable premiums in existing SFHAs, with Federal subsidies to cover premiums if less than full actuarial cost, but subsidies should not be made for:
   (1) properties when the full actuarial premiums are reasonable,
   (2) new properties built in high risk zones after flood insurance is effective,
   (3) property rebuilt after the effective date if substantial rebuilding is necessary after a flood, and
   (4) any property substantially improved whether or not incident to a flood disaster.
D. The Government should encourage State and local agencies to restrict future public and private investment in SFHAs and take advantage of disasters to channel resulting new investment into non-SFHAs areas. Subject authority and funds should be available to the Federal Agency and State and local agencies to buy-out and convert flood-prone land to other uses. Sale by owners would be voluntary, but their alternatives would be costly and unattractive if subsidies are not available.
E. Encourage Private Industry participation in a flood insurance program:
   (1) Encourage development of a fully commercial, no-subsidy insurance program for low flood risk hazard areas, and miscellaneous risks not then insurable, such as landslides, mudslides, and subsidence, etc.
   (2) Assist private insurance companies undertaking a flood insurance program as principals by:
      (a) Assumption of claims for losses beyond a catastrophic level in return for a reasonable payment,
      (b) Providing loans at reasonable interest rates to replenish reserves in case of early heavy flood losses, or
      (c) Providing tax deferrals (rather than tax exemptions) to accelerate accumulation of insurance reserves.
   (3) Negotiate a “private flood insurance program but if not achievable, develop an All Federal Insurance Program.”
F. Relation to existing federal flood programs:
   (1) Continue existing federal flood-related programs such as flood forecasting and warning, etc.
   (2) Modify disaster loans at subsidized interest rates to reflect reduced need because of flood insurance.
   (3) Request Congress to declare all lending institutions under Federal supervision of insurance of savings or deposits to require flood insurance in high risk areas at unsubsidized rates on all new mortgages.
G. Public Assistance:

(1) extend financial assistance to uninsured residents only once in the form of subsidized loans for restoration of residential property (but not for refinancing of existing mortgage debt) and only on condition recipient buy and keep current flood insurance on the restored property at unsubsidized premium rates for the life of the loan.

(2) assist any uninsured victim to relocate to a site where average annual flood damage is lower:

(a) perhaps extend the disaster loan program to aid in acquiring a home in new location (but not in refinancing any previous mortgage debt), and
(b) perhaps buy remaining equity in the property (for later disposition), whenever a damage of more than 50% of the pre-flood value of the structure has been suffered, but
(c) in either case, the victim should be required to purchase and keep current flood insurance for the life of the loan in their new location at an unsubsidized premium rate.

Public assistance might be criticized that it unduly rewards the present occupant of flood-prone areas who refuses to buy flood insurance. However proponents argue that the relief is a Federal loan at half or some other fraction of market interest rate, and the borrower would still have their old loan to repay at the old interest rate (unless they file bankruptcy). The new loan is in addition to the old one and thus not a true “reward.”

Arguments against flood insurance:

- Voluntary insurance would be rejected by the majority of homeowners whose flood risk is nominal.
- High premiums in the SFHAs would make it difficult to sell enough policies to spread program risk and expense.
- Requires extensive work to measure/rate risks for different property locations and to establish manageable rates.
- Administrative and selling costs would absorb a relatively large share of the total premium income.
- At-risk property owners would regard either compulsory purchase of insurance or unreasonably high rates as inequitable.
- In the absence of a law, the program would collapse unless every homeowner or residential occupant could be required to pay, and it would be rejected by State insurance commissioners or by the courts as unreasonable.
- If made a mandatory condition of eligibility for other forms of insurance (e.g., fire insurance), insurance companies would reject it, for it would put them at a competitive disadvantage with companies that did not insist on it.
- If the Government were to insure all risks, it would be an invitation to occupy SFHAs, making the situation worse.


The Report recommended this flood insurance program alternative as the “most desirable and feasible alternative” and acknowledged it would require a “close cooperative working relationship” between the Government and private industry.

The Federal Agency would provide flood risk studies; work with State and local governments, and lending institutions, to facilitate development of the program; provide premium subsidies; provide “excess loss” insurance against catastrophic disasters; and some financial backup to insurance companies against heavy losses before reserves could be built up. The Government would provide help to flood victims for relocation after disasters, but not free indemnification of losses. The Federal Administrator’s powers would be extensive, but discretionary. Program participation was voluntary.

The private insurance industry would provide initial capital for the program, sell and service insurance policies, build and manage reserves, and bear flood risks up to carefully defined limits (the “excess loss point”).

Competitive forces within the industry would force all firms to participate in flood insurance. State insurance agencies would probably have to approve the premiums. The premium rates would be reexamined periodically at least every 10 years or less.

Arguments against this Alternative:

- Difficulty of determining reasonable, publically-acceptable level of administrative program costs and profit.
- No single set of cost allowances would be satisfactory to all sectors of the property insurance industry.
- Difficulty in determination of the “excess loss point” where the Government would be responsible for losses.
- Difficulty in determination of the treatment of premiums and reserves for Federal and State income tax.
3. Recommended Alternative: All Federal Program – If the insurance industry rejected the Alternative above (as the Report implies), the Report recommends a Federal Flood Insurance Program "providing all capital and taking all risks."

Proponents of flood insurance argued that insurance is written by the Federal Government against unemployment, old age, etc., without calculation of differences in risk and potentially accrued benefits, and therefore by analogy, flood insurance.

Major concerns cited about this Alternative:
- The Federal Government is fully at risk.
- The need for a Federal Agency with a headquarters, regional, state, and local organization to operate the program.
- Concern the staff would not normally be fully occupied, or of inadequate capacity during disasters.
- Risk of "political intervention" to establish insurance rates at lower than the probable risk demands.

IV. REASONS SOME OPTIONS WERE REJECTED (see Fig.1 for comparison of responsibilities between Alternatives).

Other national flood insurance program alternatives considered by the Report:
A. Federal-State-Private (3-Way) Loss Sharing Program
B. Wholly Private Industry Program
C. Private Industry Operates a Government Program
D. Joint Federal-Private Corporation

Under this alternative the Federal Government covered up to 50% of losses; State agencies would plan and administer the program and cover up to 25% of losses; and victims would absorb 25% of losses (using Government loans if necessary).

Arguments against a 3-Way Loss Sharing Program:
- Majority of program cost (75%) would be borne by general taxpayers not by the beneficiary.
- Since governments carry most of the risk, deterrents to investment in flood-prone areas might be reduced.
- States would need to enact legislation or constitutional amendments, and maintain an adequately financed program.
- States might not be aware of the extent of existing hazards or the extent of the benefits which such a plan might require.

However, the Report states that Loss Sharing could, with modifications, greatly improve protection against flood losses, but then goes on to state that it "fails short in meeting the full requirement for an effective disaster assistance program".

B. Wholly Private Industry Program Alternative
The Report deemed this categorically “unlikely based lack of past industry interest.” As early as May 1952, the property insurance industry expressed its judgment that flood insurance was not feasible on a business basis, a view derived in part from engineering studies authorized and financed by the industry.

C. Private Industry Operates a Government Program
The Report rejected this Alternative because it “raises questions about public policy” and “difficult and complex problems of relationship between the private and the governmental parts of the joint venture would arise.”

The major difference between this alternative and the Wholly Private Industry Program Alternative is that the Federal Government would provide the initial capital and would essentially bear all the risks of loss, instead of only part of them.

Arguments against this Alternative:
- Public confusion about the roles of each party (e.g., who owns the policy, and who resolves problems, etc.).
- Significant concern that private interests may not coincide with the public interest, leading to distortion of the program.
- Significant concern that contract terms to administer the program would be too generous, leading to unwarranted profits.
- Political pressure on the Federal Flood Insurance Agency to “fix premiums” below actuarial cost.
D. Joint Federal-Private Corporation – This alternative is similar to Alternative C above, however, the insurance industry would provide a minor share of initial capital in return for a "share of the management of the program" and "risk of loss might be shared in proportion to the source of capital."

Argument against this Alternative:
1. Problem of fair representation between Government and industry on the Governing Board.
2. Industry would have no control, if the Government chose to exercise full powers.
3. Losses would be shared, but companies would not be protected against premiums that were too low for the risk.
4. No protection for industry in the years of catastrophic losses.

Figure 1 below provides a comparison of the responsibilities between the Federal Government and the private insurance industry for each of the flood insurance alternatives examined by the Report except the Federal-State-Individual 3-Way Loss Sharing Program.

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<td>Advises on availability of insurance and costs</td>
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<td>Establishes premiums and administrative costs</td>
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<td>Receives reimbursement for administrative costs</td>
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<td>Varies premium according to risk zones</td>
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<td>Pays subsidies (where premiums are unaffordable)</td>
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<td>Pays taxes/verified claims</td>
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<td>Financial backup for early program heavy losses</td>
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<td>Build reserves in low loss years</td>
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<td>Bears risk of losses within defined limits</td>
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<td>Provides claims coverage above catastrophic limit</td>
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<td>Pays stockholder dividends from profits (if any)</td>
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<td>Helps develop suitable local govt'x zoning legislation</td>
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<td>Develops land-use plans with state and local govt'x</td>
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<td>Provides relief program modified to prevent recurrence</td>
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<td>Buys out heavily damaged insured properties</td>
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APPENDIX - DISCUSSION OF SPECIFIC ISSUES
CONCERNING IMPLEMENTATION OF FLOOD INSURANCE PROGRAM ALTERNATIVES

Determination of Point at Which the Government Absorbs “Excess Loss” for a Joint Private-Government Program
The Report states “absence of a guarantee for excess loss would be fatal to the insurance industry.”
- Excess loss point might be defined as some multiple of average annual premiums representing loss risk.
- Excess loss point might be defined in terms of flood magnitudes and frequencies (e.g., losses greater than 100-yr flood).
- Excess loss point might be operative on an insurance company by company basis, or on a pool by pool basis (precedent approach is the Price-Anderson Act that provides indemnification of claims arising out of a nuclear accident).

Approach to Early Loan Losses for a Private or Joint Private-Government Flood Insurance Program
The Government must provide financial backup against early program losses that would be larger than average expected losses yet below the “excess loss point.” The financial backup might be loans, secured by industry commitment to continue issuing flood insurance; over a long period, premiums would be high enough to bear losses, and early deficits could be repaid. This might be a form of “negative reserves”; that is, not only might reserves be built up in years of low losses for use in years of high losses, but credit might be used to provide reserves for high loss years and then repaid in years of lower losses.

Taxation of Premiums and Reserve under a Private or Joint Private-Government Flood Insurance Program
A major problem for this Alternative is the treatment of Federal and State income taxation of insurance premiums. If premiums are fully subject to tax, then they must be higher to achieve the same desired level of reserves. Various groups proposed some form of exemption of net premium income from taxation; one involved creation of a joint Industry-Government tax-exempt fund. The Report states there was substantial opposition to extension of any forms of tax exemption.

One approach to the reserve accumulation taxation problem would be to write flood insurance for longer periods than the typical 3 years of most insurance policies, and treat a policy as a contract between insurer and insured, which would not be fulfilled until the term was up. Flood insurance policies might be written for 10 or 20 years; the premium would be for the whole period but installments would be paid annually, and the total premium, might be subject to adjustment during the period; installment payments in excess of annual claims would be payments into reserve, against all future liability and not considered “earned” until the period was up. A modified approach to the problem of reserve accumulation would be to amend the tax laws to permit a longer than normal period for carryback and carryforward of losses on flood insurance.

The IRS Code provides for carryback and carryforward of losses, for 3 and 5 years, respectively. So an insurance company or pool suffering large losses 1 year could not only deduct those losses from its earnings that year, for tax purposes, but also for the 3 preceding and the 5 following years. If the company had sufficient surplus to survive a flood disaster year, these provisions for spreading tax losses over several years would operate much as do accumulated reserves. If companies lacked sufficient reserves, then borrowing from the Government would be required. Objections to this proposal included:
1. If flood insurance was part of the same policy (e.g., fire or extended coverage), then it be of the limited 3-year length.
2. Insurance companies do not want to be stuck with an unalterable premium schedule over long periods. This objection could be overcome by provision for periodic reexamination and revision of premium schedules.
A possible solution to the objections would be that the policy be retained by the lender, payments of premium installments made by the lender, and the monthly payment of the borrower adjusted to amortize the periodic sums in much the same way as other charges (e.g., property costs).

Another approach would be to amend the IRS Code to permit companies to make a special deduction for additions to an extraordinary loss reserve. An amendment could also eliminate any special tax advantage from this unusual deduction.

An alternative solution to the income tax problem is a tax-exempt corporation and in which the Federal Government had a proprietary interest. Corporation interests would be evidenced by purchases of shares of beneficial interest equivalent to their capital subscriptions. The Report proceeds with an elaborate explanation of the relationship and necessary transactions between industry and Government that would be required under this tax-exempt corporation (pgs. 113-114).

Limits to Reserve under a Joint Private-Government Alternative Program
There will be a demand as to the allowable size of a Reserve. The maximum desirable reserve might be a multiple of annual premiums (or of that portion marked for losses), or some number of times the risk portion of the annual premiums. The size of the desirable reserves might well be defined as the same as the excess loss point.