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Senate Hearings ✓

Before the Committee on Appropriations

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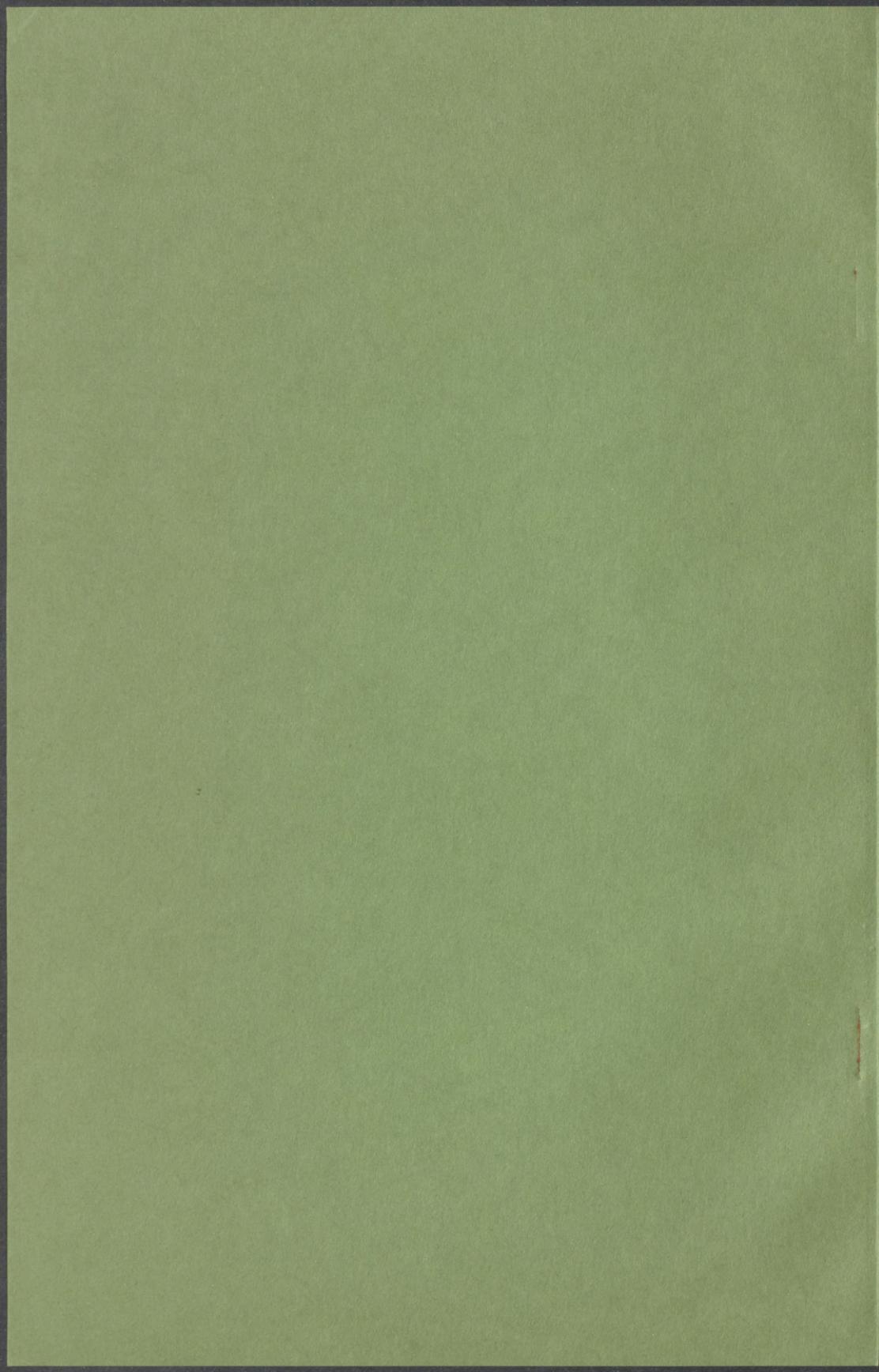
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SPECIAL HEARING

Federal Emergency Management Agency
Nondepartmental Witnesses



FEDERAL FLOOD INSURANCE PROGRAM

HEARING
BEFORE A
SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE
NINETY-SEVENTH CONGRESS
FIRST SESSION

SPECIAL HEARING
FEDERAL EMERGENCY MANAGEMENT AGENCY
NONDEPARTMENTAL WITNESSES

Printed for the use of the Committee on Appropriations



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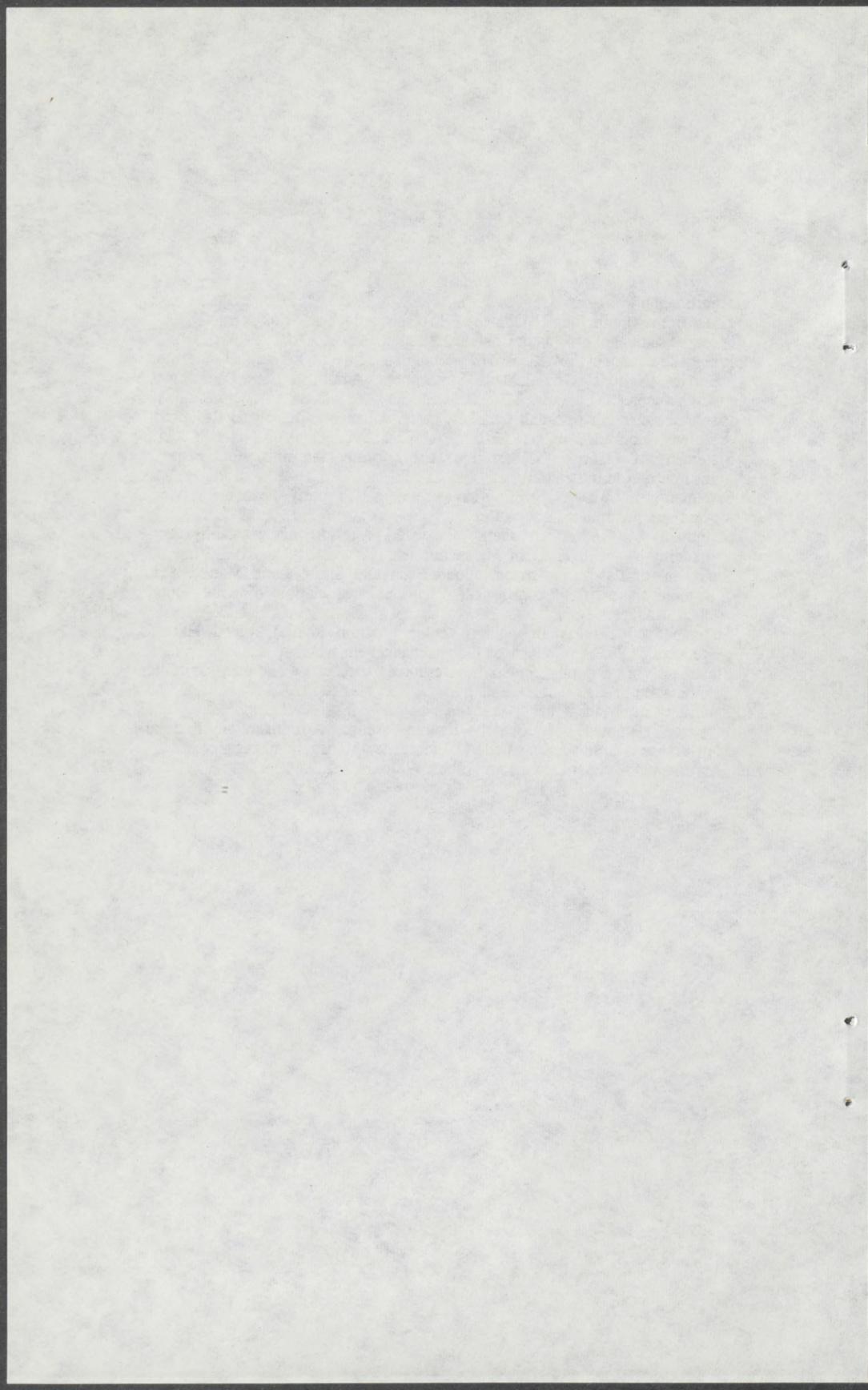
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FEDERAL FLOOD INSURANCE PROGRAM

WEDNESDAY, MAY 6, 1981

U.S. SENATE,
SUBCOMMITTEE ON HUD-INDEPENDENT AGENCIES
OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 9:30 a.m. in room S-126, the Capitol, Hon. Arlen Specter presiding.

Present: Senator Specter.

NONDEPARTMENTAL WITNESSES

SUBCOMMITTEE PROCEDURE

Senator SPECTER. Good morning, ladies and gentlemen.

This is a continued hearing of the Subcommittee on HUD and Independent Agencies on the 1982 budget request of the Federal Insurance Administration of the Federal Emergency Management Agency.

At the prior hearing, I was committed to chair the Juvenile Justice Subcommittee and could not be present and, therefore, have scheduled this additional hearing to make certain inquiries into this subject matter. I regret any inconvenience, but I think the subject matter here is worth our attention this morning.

I have received the consent from our subcommittee chairman, Senator Garn, to proceed on this hearing.

I have a somewhat elaborate opening statement to make, which I think may set the parameters for the issues which I find of concern.

FLOOD INSURANCE OBJECTIVES

There are three issues which have been formulated for this hearing. First, is the flood insurance program meeting its objective of discouraging development of the floodway and flood plain?

In the National Flood Insurance Act of 1968, Congress found that:

A program of flood insurance can promote the public interest by * * * encouraging sound land use by minimizing exposure of property to flood losses * * *.

Clearly, this is a central purpose of the flood insurance program. Yet there is little agreement and no reliable data as to what has actually occurred. Perhaps some insights on this can be gained this morning with more explicit review at a later date.

For example, Dr. Gilbert G. White, director of the National Hazards Research and Application Information Center at the University of

Colorado, testifying before a congressional committee last year, found the effect of the insurance program on occupancy of vulnerable areas as difficult to judge. However, he felt that the program has begun to influence land use. Representatives of a land-use consulting firm at another hearing argued that other Federal agencies had contributed much more to property losses due to coastal flooding by subsidizing public works developments followed by private housing and commercial development in flood prone areas.

Texas State Senator Schwartz, who is also chairman of the Texas Coastal and Marine Council, vigorously argued before a Senate committee in support of the flood insurance program, generally, but concluded that in many cases it had provided an invitation to people to build expensive second homes along the flood plain shore at somebody else's expense. In the case of flood insurance, the "somebody else" may be the Federal taxpayer paying, as Senator Schwartz worded it, "that great subsidy."

Gloria Helfand, testifying for the National Resources Defense Council said:

In general, we fear that the flood insurance program, particularly along the coast, may be increasing flood plain development because of the availability of insurance if damage does occur.

Under these circumstances, I think it appropriate to cite Congressman Phillip Burton's comments at a March 1980 public hearing because his observations on taxpayers' subsidization of flood insurance seem even more timely for today than when he made them. And he said:

It is a little difficult for me when I see all of the budget-cutting proposals before us, reducing summer employment for our young people, bobtailing some of the school lunch programs; perhaps cutting back on some of the services for our elderly, postponing judgment day on acquisition of environmentally critical properties, and I see this kind of a loss to the taxpayers, a cost to the taxpayers. It is pretty difficult to reconcile permitting construction, if we, all of us, are subsidizing this construction. Either it should be able to carry its own weight or the development should not go forward. It should not have, in my view, a subsidy of this total proportion.

The then Federal Insurance Administrator responded:

I cannot argue with you.

Obviously this is a complex issue where the data base seems insufficient for appropriate policy decisions. Yet, as the 1966 report of the Task Force on Federal Flood Control Policy wrote:

* * * To the extent that insurance were used to subsidize new capital investment—on the flood plain—it would aggravate flood damages and constitute gross public irresponsibility.

FISCAL YEAR 1982 APPROPRIATION

The second question which has been formulated for this morning's hearing is: Is the fiscal year 1982 appropriation requested by the Federal Insurance Administration to reduce the debt of the flood insurance fund necessary and appropriate, given the expenditure constraints identified by President Reagan in the overall budget?

In 1967, when Robert C. Wood, then Under Secretary of HUD, testified in support of the National Flood Insurance Act, he said that the insurance program to the benefit of property owners now occupying the flood plain is defensible only as part of an interim solution to long-range re-adjustments in land use.

Mr. Wood further said the program would be self-defeating if the assistance prejudiced needed long-range adjustments.

I understand that some efforts have been made in recent years to acquire, with public dollars, title to homes frequently flooded, a necessarily expensive process, but the "adjustments" suggested by Secretary Wood seem to have been mainly to seek larger amounts of aid for the program from the general taxpayers.

One can only wonder, had the Congress in 1967 known the ultimate expense of this program to the taxpayers and the present uncertainty as to the program's impact on flood plain development, whether the act would have been approved. We may have here another Federal program which was thought to cost the Federal taxpayer a bit to get into place but in the end has expanded at great cost.

In any event, the national flood insurance fund by the end of 1980 had borrowed over \$900 million from the U.S. Treasury. Despite the fact that an increase in rates for 1982 has been proposed by OMB, the cumulative Federal subsidy is expected to grow from \$903 million at the end of fiscal year 1980 to \$1.228 billion by the end of fiscal 1982.

The Federal Insurance Administration is seeking \$373 million from the Congress for the fund in fiscal year 1982 which is expected to leave the fund with an unobligated balance at the end of 1982 of over \$700 million. Given the budgetary stress being placed on other programs, the necessity for an appropriation to create this large unobligated balance in this fund is unclear.

Perhaps we can clarify this in this hearing today.

INCREASED PREMIUMS

The third issue is: Are the increases in flood insurance premiums proposed by the Office of Management and Budget appropriate?

The OMB budget document of April 7, 1981, proposes to increase flood insurance rates back to their pre-1972 levels, the net effect being to reduce the fiscal year 1982 subsidy to \$115 million from an estimated \$210 million for fiscal year 1981. As the OMB report notes:

Average claim size, numbers of persons covered, and numbers of claims—not to mention general inflation levels—have all increased over the past few years while uneconomical rates have not changed.

The question arises, Why not return to pre-1972 rates, adjusted to inflation?

While no witness need feel limited to the three questions I have posed, they represent, as we see it, the central budgetary concern faced by the Congress at this time. And I very much appreciate the presence of you ladies and gentlemen here this morning to testify on this subject.

LETTER AND STATEMENT FROM SENATOR CHAFEE OF RHODE ISLAND

Senator Chafee has responded to an invitation to make comments as he sees fit for this subject matter with a letter dated May 5, 1981, and a statement on the national flood insurance program dated May 6, 1981, which will be made a part of the record.

Without objection.

[The letter and statement follow:]

LETTER FROM SENATOR CHAFEE

MAY 5, 1981.

Hon. ARLEN SPECTER,
U.S. Senate, Washington, D.C.

DEAR ARLEN: Thank you for your kind invitation to appear at your hearing on the Federal flood insurance program. Unfortunately, I will not be able to attend the hearing because of a prior commitment.

As you know, I have a strong interest in the Federal flood insurance program, particularly its policy of insuring buildings on hazardous barrier beaches and islands along our Atlantic and gulf coasts.

Recently I introduced legislation that would prohibit Federal flood insurance for new or substantially improved structures on undeveloped barrier islands. It just doesn't make economic sense for the Federal Government to be in the business of subsidizing development through the flood insurance program in these fragile areas. It makes sense to me for people to build on hazardous barrier islands and beaches at their own risk—not at the risk of the U.S. taxpayer.

Attached is a copy of a statement I would hope you could place in the hearing record. Also, for your own reference, I have attached a copy of my legislation which I invite you to cosponsor.

Best regards,
Sincerely,

JOHN H. CHAFEE,
U.S. Senator.

STATEMENT OF SENATOR JOHN H. CHAFEE

Mr. Chairman, the national flood insurance program was created to help restrain the increasing draw on the Federal Treasury from flood control projects and disaster relief. It was designed to insure existing property owners from flooding and storm damage and to encourage new construction to locate out of the flood plain or to build according to standards which would protect it from loss.

It was through the insurance premium that the program would transfer a substantial portion of flood-related costs borne by taxpayers to those who lived in the flood-prone areas. Through this mechanism, it was envisioned that the program would eventually become fiscally self-sustaining. But today, that is not the case. The facts show that the subsidies have been increasing. Over the past 3 years the Federal Government doled out twice as much in subsidies as it has collected from premiums.

Although I think it is important that we take a close look at the entire flood insurance program, my concern this morning specifically stems from the policy of the Federal Insurance Administration to insure buildings on the hazardous barrier islands and beaches along our Atlantic and gulf coasts.

It just doesn't make economic sense for the Federal Government to be in the business of subsidizing development in these fragile areas. Virtually any coastal geologist will tell you that these barriers are highly unstable landforms, susceptible to hurricanes and other forms of great force, making them unsuitable for permanent structures.

Although precise figures are not available on the Federal cost of subsidizing insurance on all the barrier island and beach areas, the Federal Insurance Administration does have a breakdown of the costs in the so-called velocity zones, or V zones, in these coastal areas.

These zones are the most hazardous, where wind-driven wave crests can climb to 10 or more feet above the still water flood elevation. The Federal cost of providing insurance in these areas is dramatic when compared to the program as a whole.

There are only about 50,000 structures in V zones, compared to the 1.8 million structures insured in other areas. The average annual subsidy for a V zone policy is around \$280—about 50 percent higher than the national average subsidy. Thus, it is costing the Federal Government about \$14 million a year to subsidize housing costs in these highly hazardous areas—the cost of subsidizing insurance policies for new construction is about \$425 per policy. Add the cost of insurance in less volatile but still highly unstable barrier islands and beaches outside these V zones, and subsidies run millions of dollars higher. When another major hurricane hits the east and gulf coasts it is fair to say that the value of these claims will rise dramatically.

Once a storm hits and destroys the buildings in these barrier areas, the Federal Government will step in and help rebuild them, only to have another storm eventually

destroy them again—and again. And what is Uncle Sam doing about this? He is writing check after check to cover the cost of reconstruction.

I think the committee should take a hard look at the cost-effectiveness of this program and explore alternatives to this waste of the taxpayers' dollars.

One option would be to deny flood insurance for new or substantially improved structures on undeveloped barrier islands and beaches. It makes sense to me for people to build at their own risk in these highly hazardous areas.

Another option would be to increase Federal insurance premiums so they would make the program fiscally self-sustaining.

Mr. Chairman, I commend you for taking a close look at the Federal flood insurance program and look forward to working with you in any way I can.

PREPARED STATEMENT

Senator SPECTER. And there is a statement for the record submitted by Richard Hallgren, Director of the National Weather Service, National Oceanic and Atmospheric Administration, Department of Commerce, which will be made, without objection, a part of the record.

[The statement follows:]

STATEMENT OF RICHARD E. HALLGREN, DIRECTOR, NATIONAL WEATHER SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

This statement is submitted for the committee's record in response to the request of Senator Arlen Specter regarding the program of the National Oceanic and Atmospheric Administration—NOAA—National Weather Service—NWS—of the Department of Commerce as it relates to the flood insurance program of the Federal Emergency Management Agency—FEMA.

NOAA is responsible for flood forecasts and warning services to the Nation. The primary goal of our flood warning service is to minimize the loss of life and mitigate property losses from floods through an effective flood warning program. The NWS river forecast centers continuously monitor meteorological and hydrological conditions and make water level predictions for more than 2,500 specific points on our Nation's rivers. Annually, more than 600,000 forecasts are issued. Over 75 percent of the forecasts provide more than 6 hours general warning and for the larger rivers they provide warnings from days to even weeks in advance. Weather Service officers are staffed around the clock to provide flood warnings to threatened communities.

NOAA also promotes nonstructural approaches to flood mitigation by working with local communities to encourage the use of local flood warning systems. Currently, several hundred communities have flood warning systems provided by NOAA. NOAA also provides technical support to other agencies in addition to our own extensive program in the support of the national program for flood plain management.

Specific studies were prepared for the flood insurance program to determine storm frequencies and risk analyses for several hundred communities in the South Atlantic and gulf coast areas. These studies, however, were terminated in 1976. However, we continue to review water resource plans of other Federal agencies to assure the flood warning systems are considered in the mitigation of flood damages.

The flood insurance program encourages communities to meet certain flood plain regulations such as identification of flood hazard areas, development of appropriate response to preparedness plans, and to develop responsible flood plan management practices. We work closely with FEMA as a technical consultant in these developments.

PREPARED STATEMENT OF SARAH CHASIS, COASTAL ALLIANCE AND NATURAL RESOURCES DEFENSE COUNCIL

Senator SPECTER. And there is a statement by Sarah Chasis of the Coastal Alliance of the Natural Resources Defense Council, on the Federal flood insurance program, which will be made, without objection, a part of the record.

[The statement follows:]

STATEMENT OF SARAH CHASIS

I appreciate the opportunity to submit this testimony on the Federal Flood Insurance Program to this Subcommittee. The testimony is submitted on behalf of both the Coast Alliance and the Natural Resources Defense Council. The Coast Alliance is a non-profit organization dedicated to advancing public understanding and protection of the coast. It was formed in 1979 with the support of the major national environmental organizations (Sierra Club, Friends of the Earth, National Audubon Society, Natural Resources Defense Council, Environmental Defense Fund, National Wildlife Federation, American Littoral Society, Oceanic Society, and others). The Coast Alliance sponsored the Year of the Coast in 1980. As chairperson of the Coast Alliance, I am submitting this statement because of our concern that the Flood Insurance Program is failing to discourage unwise development in coastal areas with resulting harm to life, property and the environment.

I am also testifying on behalf of the Natural Resources Defense Council (NRDC), a national environmental organization with a membership of over 45,000 and offices in New York, Washington, D.C., and San Francisco. NRDC has worked to promote the implementation of an environmentally and fiscally sound flood insurance program for the last several years.

Introduction

The National Science Foundation Report on Flood Hazard Mitigation (Washington, D.C., September 1980) states that floods are the most consistently destructive natural hazards in the United States and that there is an upward trend in flood damage despite the nation's investment in structural and nonstructural measures.

Of all the federal programs directed at ameliorating the risks and effects of flood damage, the National Flood Insurance Program provides the single largest nonrepayable source of assistance to flood victims. It also represents the second largest liability of the federal government after social security. (As of the Fall of 1980, coverage totalled approximately \$88 billion in face value). Flood insurance is heavily subsidized by the federal government and represents a substantial annual government expenditure. For example, \$427 million in claims-payments were made in calendar year 1979, more than twice the amount brought in through premiums. The difference, of course, was subsidized by the federal taxpayer.

In view of the substantial federal subsidies involved and in view of concern about the effects that the availability of cheap insurance coupled with inadequate regulation of floodplain development may be having, it is essential that Congress carefully scrutinize the extent to which the Flood Insurance Program is meeting its goals and consider changes which would make the Program more effective.

- I. Does the National Flood Insurance Program encourage development in the floodplain.

The federal government should not be in the business of supporting unsound development in hazardous areas. We believe that the Flood Insurance Program, particularly along the coast, is doing just that.

FIA admitted during the 1980 review of federal programs affecting the coast, conducted pursuant to Presidential directive by the National Oceanographic and Atmospheric Organization, that the Flood Insurance Program has not restricted coastal development to any measurable degree. For example, the V-zone is the most critical area of the coastal floodplain in terms of natural coastal processes and the risks of human development. Yet the only locational requirement contained in FIA's regulations is that new construction be located landward of mean high tide. In effect, new construction is permitted in this area of risk where the potential for disruption of natural flood-protective processes are the greatest. Development in the V-zone also aggravates storm damage to other areas by diminishing natural sand replenishment systems and altering the natural shore profile, which acts as a natural storm buffer. When a storm hits, the sands on shore are often pulled back into the ocean, creating a wide, shallow shelf leading to the shoreline. This shelf makes waves break further out from shore, limiting their destructive potential. If the shoreline is developed, this natural process can be interfered with.

Not only are the floodplain management controls for development in the V-zone inadequate, so too are the actuarial rates for V-zone development. All policies in the coastal high hazard zones are subsidized -- even those in the Regular Program -- since neither wave heights, erosion rates nor loss experience are taken into account in setting the rates. Of the 1100 coastal communities with V-zones, only 6 have rates that include wave heights. None of the rates include past loss experience or erosion rates. Moreover, regulations to individually rate policies in coastal high hazard areas have been put off.

The consequences of FIA's inadequate practices with respect to coastal areas is evidenced by the fact that in 1979, property in the coastal high hazard zones (V-zone) accounted for only 3.3% of flood insurance policies, but 22% of the dollar value of claims paid. Unless present trends are altered, the losses from hurricanes and storm surges affecting coastal areas are predicted to increase from over \$3 billion to \$5 billion annually, due to accelerating coastal development in hazardous areas and mounting building costs.

Encouragement of floodplain development is exacerbated by the fact that so many communities are still in the emergency phase of the Program. In this phase, the floodplain management restrictions are not precise, since the exact flood hazards have not yet been calculated; and any new construction receives the subsidized flood insurance rates. The emergency phase allows development to occur almost unheeded, since the federal government is picking up the tab for a large part of the insurance, and the building requirements are not that stringent. At this time, most communities (2/3) are still in the emergency phase of the program.

RECOMMENDATIONS

1. We recommend that FIA not make flood insurance available for new development in coastal high hazard areas. For similar reasons, we support eliminating insurance for undeveloped barrier islands.
2. We also recommend that FIA revise its regulations to require that local floodplain regulations prohibit new or substantially improved construction in the V-zone except for needed water dependent structures or structures that facilitate public recreational access to the shore. Structures which require

siting in the V-zone to the extent possible should be required to be sited landward of the primary dune system and the projected 50-year erosion line.*/

3. In order not to encourage floodplain development in the emergency phase, we suggest that any construction built after the reauthorization of the Act be on notice that, once the community moves into the Regular Phase, it will have to pay full actuarial rates. That the building is in a hazard zone is known; that hazard must be considered, even in the emergency phase.

4. In order to diminish the amount of taxpayer subsidy for the program which has been increased because of the duration of the emergency phase in so many communities, we recommend that the program become more self-sustaining through the following:

- (a) rates on subsidized insurance should be raised;
- (b) rates on development built during the emergency phase should be raised each time a claim is made;
- (c) actuarial rates should be based, *inter alia*, on wave height (in coastal areas), loss experience and erosion rates;
- (d) a study should be set up to examine FIA's rate structure, determine its adequacy, and recommend changes in both the methodology used for determining risk and the actual risk premiums.

5. Finally, coastal areas should be mapped immediately, with all maps incorporating wave heights.

II. Is the \$373 million requested by FIA for the Flood Insurance Fund necessary, particularly in light of other budget cuts which are occurring.

The present amount in the fund, approximately \$400 million, is adequate to cover next year's claims payment unless all but the most dire series of floods occur. If appropriation is needed at all, the maximum needed to cover the difference between projected premium income and claims payment is \$214 million. We submit that if more money than this is needed for the fund it come from increased rates, not from increased taxpayer subsidy.

III. Are the proposed increased rates in the subsidy portion of the program sufficient.

The rates on subsidized insurance, during the emergency phase, have recently been raised to the levels which existed in 1972. They could be raised further and perhaps should be, particularly if the emergency phase continues to last for so long in so many communities.

An equally important issue is the inadequacy of the actuarial rates charged once a community enters the regular phase. Because they are not based on loss experience or erosion rates, they in no way reflect the true risk. In fact, in many areas, the payments made on properties covered by actuarial rates are more heavily subsidized than payments

*/ This recommendation was made by NOAA as part of its Federal Coastal Programs Review.

on properties covered by subsidized rates! Clearly, a close review of these rates is called for, as well as a revision of the rates to incorporate such factors as loss experience and erosion rates (as well as wave heights). We strongly recommend that GAO be asked to conduct a review of the present rates and make proposals for their adjustments. These changes are needed, otherwise this program will never meet Congress' intent that it eventually become self-sustaining.

Thank you for this opportunity to testify.

**STATEMENT OF GEORGE K. BERNSTEIN, ESQ., FORMER ADMINISTRATOR,
FEDERAL INSURANCE ADMINISTRATION**

SUMMARY OF HIGHLIGHTS

Senator SPECTER. At this juncture, I would like to call on George Bernstein to offer his testimony and, in accordance with the subcommittee practice, Mr. Bernstein, we have your prepared statement, for which we thank you. It will be made a part of the record at the close of your oral presentation.

As is our practice, we would appreciate if you would summarize the highlights to leave as much time as possible for questions.

Mr. BERNSTEIN. Thank you, Senator.

In view of your opening remarks, perhaps I will vary a bit, too, from my prepared statement.

HISTORY OF LEGISLATION

The only thing I point out at the beginning of my prepared statement is the fact when the Congress enacted this bill in 1968, there was no illusion about this being a true insurance program. Everyone knew that heavy Federal dollars would have to be put at risk under this program if there was any hope of ever getting land use under control.

The Congress actually passed the first flood insurance program back in 1956, and all of a sudden the Appropriation Committee woke up after the authorization and decided not to fund it. They never funded it for 12 years and, after Hurricane Betty in 1965, a new study was authorized and the spectre of the program was changed. It was enacted when the riot insurance program was passed. At that time, I was with the New York Insurance Department and involved in some of the discussions down here in Washington. It is clear the two programs would not have passed independently. At the time the riot program got some rural votes and the flood program got some urban votes and people decided we will bail out the homeowner in the rural area and we will bail out the homeowner and the renter in the city. That is how the program really came about.

OUTLINE OF PROGRAM

Congress recognized and structured the program, I think, wisely, to require appropriate land use flood hazard mitigation.

It is clearly a bailout. This is a bailout of people who make a mistake of moving into areas that had high flood hazards at the time they moved in.

The tradeoff was that new construction supposedly would be built to better standards and in areas where the flood hazard was less severe.

What was required was a whole new education program of such agencies as the Corps of Engineers, which traditionally believed in concrete. If you build a levee, you build a levee; the hell with the community upstream or downstream.

We would contract out studies to the Corps of Engineers to define the flood hazard. We would have fights with them to stop thinking in terms of concrete and in terms of land use, the floodway, the flood plain. It was a tough education process.

I am not sure it is totally completed, but the point is, unless that tradeoff is successful, unless future construction is wisely built with the knowledge of an awareness and structural relationship to the type of flood hazard, this Congress is throwing out the taxpayers' money.

INSURANCE VERSUS DISASTER ASSISTANCE

The question you are interested in, because you know that basically is whether or not we, in fact, have got even our money's worth. I don't know if we have gotten our money's worth. There is one thing I would like to refer to first. That is disaster relief. I was around here in 1969 as Federal Insurance Administrator when Hurricane Camille hit. It took Congress about 1 day to pass its disaster relief with all the forgivenesses and the low-interest loans. After Agnes in 1972, it took Congress probably an hour to pass even greater forgiveness. The point is, I do not care what any Congressman says about how tough he is going to be after the next flood and hold off disaster relief, every Congressman folds under the pressure from people who have been flooded out and disaster relief will come if there is no flood program. All those who say, "Let's have a quid pro quo, if you don't do this, you won't get disaster relief"; that is nonsense. The history of this country and congressional bills after a disaster have proven that.

Senator SPECTER. What do you mean by "forgiveness"?

Mr. BERNSTEIN. Let's assume there is a \$5,000 loan. Of that, x thousand may be forgiven, actually wiped off the books.

Senator SPECTER. \$5,000 from whom?

Mr. BERNSTEIN. The Federal Government, with perhaps a 3-percent interest rate on the \$2,000 remaining, whatever the exact figure is. Those forgivenesses, until the flood insurance program really took hold, was the rule rather than the exception. I think the extent to which you can expect to be able to resist the political pressures for liberal disaster relief with no strings is if you have sufficient flood insurance in place at the time to cover that with the strings that are involved with flood insurance.

I don't know, and I have submitted in my prepared testimony a series of questions as to whether or not there is a degree of enforcement of the land-use requirements. We know that the political reality is that local communities don't want to do a darned thing more than they have to do to restrict construction. If they could build in the floodway and build in the cheapest possible area, that is exactly where they would. It is only the pressure of the Federal flood insurance program, withholding the availability through the 1973 legislation of mortgage

money to turn over properties in flood-identified areas, that get those communities in—and Mr. Wilcox knew so well—when Agnes hit, we had piddling amounts of insurance in Pennsylvania and the rest of the United States. We felt we tried an extensive sales campaign throughout the country, but people don't buy it voluntarily. We learned that lesson, Congress learned that lesson, and passed the mandate of the 1973 Act.

The mandate took effect. If you have that coverage and FIA isn't enforcing the land-use requirements, making sure not only do the communities have on the books the zoning and building code provisions, but that they are enforcing it, that they are not giving variances to every man who walks in and asks for one, unless that is being enforced, then the money is going down the tubes.

I don't see at this point, reading the list of questions—

Senator SPECTER. What is your objection as to the current enforcement?

Mr. BERNSTEIN. I think there is an insufficient number of field people out there to enforce.

I understand no community has been suspended from the flood insurance program in recent memory, and I can't believe every one of the 17,000 communities in the flood program is in strict compliance with the rulings. Therefore, I do not think there has been adequate enforcement. There can be only with the backing of the Congress, only with the backing of the administration.

As I am sure you appreciate, when we used to sustain communities, the first thing we would get would be a phone call from the Congressman and two Senators representing that community—"How could you do that to my community?" That is the pressure that the flood program is under every day. It is under pressure from the developers, local officials, and Congressmen. Unless Congress has the guts to put its enforcement where the money is, this program is going to go down the tube.

Senator SPECTER. In your prepared testimony you stated that the insurance program is insurance in name only. Can you suggest some other terms which may be more descriptive of the program if it is realistically not insurance, simply a bailout?

Mr. BERNSTEIN. It is an incipient insurance program. It is a program that projects insurance principles into the future. It uses some insurance principles. I can't think of an offhand name for it. It is not insurance to the extent they are arbitrarily established rates deemed to be affordable, not an actuarially sound rate. Even the actuarial rate is predicated on the factors of a natural catastrophe of low frequency and high severity. Low frequency and high severity are antitheses of flood insurance. We have millions of policies and relatively few accidents in automobile insurance. It is hard to make a rate for a few incidents when you have a relatively few number of insured policies.

Senator SPECTER. Lloyds of London does that all the time.

Mr. BERNSTEIN. Well, they give the impression that they do. In fact, their insurance is far more sound than people think. There are very few Marlene Dietrich legs that are insured.

Senator SPECTER. That is a low-frequency situation, unfortunately.

Mr. BERNSTEIN. And they do that almost for advertising purposes, more than anything else.

Senator SPECTER. Applying whatever actuarial principles there are, are you suggesting the rates would be much higher?

Mr. BERNSTEIN. The rates would be significantly higher.

Senator SPECTER. Is there commercially available insurance for these risks?

Mr. BERNSTEIN. No, there is not. With the exception of a couple of aborted efforts in the 1940's and early 1950's by insurers, private insurers have never written flood insurance. The reason is, it is deemed to be—and the Federal Government deemed it to be when it set up this program—an uninsurable risk. It will only be insurable when you get enough structures that have some exposure to flood and who are required to buy the coverage that will withstand the flood.

When the act was passed, most of the structures in the flood plain were probably at the 20- to 30-year flood level. Today I guess it is estimated that most of the coverage in the program is the 40-year level. That is an improvement. When the program started, I would say maybe a handful, probably under 10 States, used the 100-year flood standard as a mandate for its construction. That is a hell of an improvement. That is a real accomplishment of this program and the State would not have been able to do that without the guidance of the Federal flood program. But this program will continue to be a bailout, if you use that word, or a subsidy, which I would prefer until we know the program doesn't work, at which point I would use bailout, a subsidy until new construction catches up with existing construction, new construction which is built in areas that are not subject to the severe flooding or which are built at elevations that will resist the flood.

Until you catch up with that, this program will continue to be a tremendous subsidy, and I would think, certainly in my lifetime, we will not see—

Senator SPECTER. What is the incentive for people who build in those areas of relatively low risk to purchase insurance?

Mr. BERNSTEIN. There is no incentive. I have learned the hard way.

Senator SPECTER. You are starting to postulate construction which is not really subject to risks. If they pay premiums, then there will be greater income which may make it a nonloss situation.

The builders in those areas are fully aware of the lesser risks. So are they insuring, in fact?

Mr. BERNSTEIN. There is no incentive, but there is a mandate. Under the 1973 Act, if the structure is located in a flood hazard area, that structure must buy insurance if it purchases a federally insured mortgage or takes out a federally insured mortgage or is involved with that type of situation.

Senator SPECTER. The definition covers areas which are less subject to risk.

Mr. BERNSTEIN. Exactly. They are not all floodways or high-velocity areas. Some of those have relatively less exposure to flood, but enough exposure to flood to warrant involvement in the program, but, on balance, with a properly structured new construction program, there

should be enough of a balance, very bad properties, some bad properties and enough good properties not only to make this program desirable, but to get the private insurance business into that to make it profitable for the first time, which they haven't been able to do.

Senator SPECTER. To get it to the insurance of those properties which are less subject to risk.

Mr. BERNSTEIN. All of them; take the bad with the good. Obviously it would be outrageous if they could just pick off the best properties. But taking the bad with the good, if there are enough good to balance the bad to have some sort of actuarial hold to make a profit, is a far better situation than we have today, which is all bad.

Senator SPECTER. How would you require that? Have a mandate that private insurance companies give coverage regardless of the risk factor?

Mr. BERNSTEIN. The first step would be for the Federal program to end, and the Federal program will only end if the subsidy diminishes or disappears. At that point, I would think one could structure in any number of ways, either by contract with private companies or by some sort of mandate—I don't know which is preferable—that is, you write flood insurance, you write it on a broad basis.

Earthquake insurance is written privately today. It is written on good properties, bad properties. It is a significant hazard. They think there is enough protection, structural, locational knowledge of the earthquake hazard that they can write that business and take the bad with the good. The rates in the Imperial Valley will be higher than San Francisco or Los Angeles, but it is written. It may come without any mandate because insurers, as Lloyds of London, do take chances on an actuarially sound basis. I do not know if you will need a mandate, but that is so far in the future before the private insurance industry gets into this picture except, perhaps, being brought in on the same basis it was in before, similar basis in 1978, which was in on a minimal risk-sharing basis; having a piece of the action but being really insured by the Federal Government. That is not a private insurer writing the business.

If you are talking about a purely private program, it will mean that this Federal program has worked first and, if that happens, I do not think Congress is going to have to worry about the private industry.

Senator SPECTER. Mr. Bernstein, in the interest of time, we will submit some questions to you for response to the record.

I would like to explore one more question with you further about your thinking on ways to test the enforcement of the administration of the current law. How can the Congress, the Senate, be satisfied that there are not many violations out there which the administration is not currently enforcing?

Mr. BERNSTEIN. I suppose there are two routes. One is to direct FIA to make a detailed study setting out the questions that you want answered in terms of policing, such as enforcement of zoning laws and building codes, or perhaps you might turn the GAO loose on a spot check basis on some of the communities and see whether or not this program is really being enforced and then you will have a dispassionate third-party view.

I don't know if they are sufficiently manned to do it, but if you think of relatively few people in FIA who are doing it, I think GAO can handle something like that on a spot-check basis.

Senator SPECTER. You wouldn't disagree with a call from a Congressman from time to time to get a little extension of time for one of his own communities, but would like to see it corrected with a reasonable extension of time, given that latitude the Senators have?

Mr. BERNSTEIN. Exactly.

Senator SPECTER. I thought that might be an appropriate addition to the record, not to suggest the congressional call is necessarily out of line, but can be if it exceeds a reasonable extension.

Mr. BERNSTEIN. The program is a very political program that needs a very careful balance. You can't go around kicking communities in the teeth, but to the extent there are gross violations or basic violations of the principles of the program, the taxpayers' money should not subsidize that.

Senator SPECTER. Thank you very much, Mr. Bernstein. We appreciate very much your testimony.

[The statement follows:]

STATEMENT OF GEORGE K. BERNSTEIN

The Subcommittee requested that I testify today in my personal capacity, as one who was deeply involved in the development of the National Flood Insurance Program, and who retains an interest in its goals. You indicate particular concern with the question of whether the Flood Insurance Program is meeting its objective of discouraging development of the floodway and flood plain.

The Flood Insurance Program was established only after Congress recognized that the flood hazard is essentially uninsurable. Floods combine the elements of low frequency and high severity that are inimical to a sound insurance program because of the inability to spread the risk, and the resultant extreme adverse selection. As relatively few persons expect flood losses, the premiums required from those relatively few who purchased coverage would have to be prohibitively expensive in order to cover the losses on insured properties.

In the face of this dilemma, Congress developed the federal program with no illusions. The 1968 Act was a trade off. It provided that the federal government would provide subsidized insurance to property that had already been constructed in flood-prone areas. With respect to new construction in areas where the flood hazard was documented, flood insurance would be available only at actuarially sound rates. No insurance whatsoever would be made available unless action was taken by local communities and individuals to avoid improper use of the floodplains and floodways.

As Federal Insurance Administrator, I testified before this Subcommittee, the Senate and House program Subcommittees, and the House Appropriation Subcommittee over a period of five years. Each time, I advised the committees that the flood insurance program was "insurance" in name only. Even the setting of actuarial rates continues to be far from a science because of the unpredictability of the wind and wave elements, the low frequency, high severity factors and the need to use such estimates as the "100-year

flood" as a standard for both rate-making and hazard mitigation.

Accordingly, massive losses and costs were expected under the program for the foreseeable future, but it was anticipated that in the long run the cost to taxpayers would be less under a systematic flood insurance program than under the haphazard, ad hoc. approach characterized by disaster relief.

Congress was aware that unless the hazard mitigation requirements of the Act were strictly enforced, the massive costs of the program would not only be unjustified, but federally subsidized premiums--cheap insurance--would actually encourage irresponsible construction in flood-prone areas, and result in greater losses than would have occurred in the absence of federal flood insurance.

At this time, with paid losses of more than a billion dollars and with hundreds of millions of dollars spent for mapping and administration, it is appropriate for Congress to ask if the program is working. Certainly, with the \$100 billion in current federal insurance exposure, which will continue to grow under the mandate of the 1973 Flood Hazard Protection Act, the question of the effectiveness of the land-use and hazard mitigation requirements is timely and critical.

There are dedicated people in the Federal Insurance Administration (FIA), many of whom have been with the program since its early stages, and who are committed to enforcement of hazard mitigation. Nevertheless, there are very real counter-pressures from private, local, state and federal sources who would prefer that enforcement take place in someone else's community.

It has been more than six years since I left the Federal Insurance Administration, so I am unable to testify firsthand on the extent to which the hazard mitigation and land-use measures of the program are being enforced, and unwise development of our floodplains and floodways is being discouraged. However, I am able to speak to the principles of the program and, accordingly, I would suggest that this Subcommittee ask questions along the following lines:

(1) Has a systematic procedure been established by FIA to evaluate the effectiveness of and compliance with the eligibility requirements, hazard mitigation, land-use criteria, and other provisions of the flood insurance regulations?

(a) Does FIA verify the enactment by communities of the required local regulations and plans, including zoning and building code provisions?

(b) Does FIA verify the enforcement by communities of those provisions technically on their books? To what extent does FIA verify that elevation requirements are complied with?

(c) Are building permits issued by communities reviewed and analyzed by FIA? If so, to what extent?

(d) Does FIA have sufficient, competent and independent personnel allocated to review and enforcement responsibilities?

(2) How many communities have been suspended from the program in the last five years for failure to enforce required measures?

(3) When a community enters the regular flood insurance program, all new construction after that date must pay actuarial as opposed to subsidized premium rates for the flood insurance coverage.

(a) To what extent, if at all, has FIA verified that new structures in the almost 6,000 regular program communities are paying the proper actuarial premium?

(b) Who polices this aspect of the program, and what remedies and penalties for violation have been established and implemented?

(4) Are claim adjustment practices consistent with the goals of the program?

(a) Do such practices verify assumptions of property value and elevations?

(b) Are such practices policed to assure equity and propriety in loss payments?

Establishment of appropriate rules to discourage unwise use of flood-prone land involves a delicate balance between firm enforcement by the federal government of its statutory responsibilities and respect for the vital role which must be played by local communities and the states. It is unrealistic not to expect some antagonism towards FIA, especially from local officials who are subject to developmental pressures, but, although the program should not become a popularity contest, with the exercise of sound judgment, necessary cooperation can be maintained.

In this regard, the flood insurance program has been of real assistance to the states in their own hazard mitigation efforts. I am advised that just about all states now use the FIA's 100-year flood as the standard for flood plain management. I doubt that this upgrading of hazard mitigation standards by the states would have occurred without the example set by the federal government. It represents a significant accomplishment in federal-state cooperation. Again, however, a crucial question is the extent to which state laws on the books are actually enforced.

I believe the National Flood Insurance Program was soundly conceived and is capable of effective implementation. If, however, there is any reluctance to enforce the hazard mitigation and land use requirements of the Act, the program will degenerate into a windfall for irresponsible construction, and the bill to the taxpayers will be far greater than if we continued to rely on disaster relief alone. The support of both the Congress and the Administration in the enforcement of these requirements is essential.

Whatever its potential, the flood insurance program has not yet proved that the principles of subsidized insurance and loss preventive measures can mesh effectively to provide a cost efficient program. Until such proof exists, the Congress should be particularly wary of efforts to expand the program to include other hazards such as earthquake and landslide. Enough federal dollars are already at risk through flood insurance without asking the taxpayers to foot the bill for additional coverages that may be less appropriate to a federal program.

SUBMITTED QUESTIONS

Q. Will you expand on the sentence near the end of your prepared testimony that "the flood insurance program has not yet proved that the principles of subsidized insurance and loss preventive measures can mesh effectively to provide a cost effective program."

A. Depending upon whose ox is being gored, the flood insurance program is viewed as either "too tough" or "too weak". Those who view the program as "too tough" in its restrictions on development of flood-prone property claim the program is a federal intrusion in areas of local responsibility and private enterprise.

Those who view the program as "too weak" would impose even greater restrictions on the use of flood-prone land. Based upon my five and a half years experience as Federal Insurance Administrator, I believe these two sets of diametrically opposed positions will continue to work against each other. However the struggle comes out, I have serious reservations as to whether the Congress is about to permit further land-use type restrictions such as prohibiting flood insurance and/or new construction on Barrier Islands. In fact, I would not be surprised if the greater pressure were from the other direction, and if there were further attempts to weaken the flood insurance program.

While members of Congress often talk a tough line, they are not unreceptive to individual constituent complaints that the land-use and flood plain management provisions of the flood insurance program are an improper governmental interference with their right to build as they please wherever they please. I do not believe that we have had enough time since the enactment of the 1973 Flood Hazard Protection Act to be able to conclude whether Congress and the Executive Branch truly believe in the loss prevention principles of the flood insurance program and whether they have the guts to stand by them.

Q. You mention \$100 billion in current Federal insurance exposure. You also define floods as "low frequency" and "high severity" events. Considering the randomness of floods, what would you guess as the worst case scenario over 10, 50 and 100 year periods as to claim payments in a single year? Is there any point at which the government should limit its exposure?

A. I have no way of making even a guess as to a "worst case scenario".

The first point at which the government should limit its exposure is when it becomes convinced that flood losses, including subsidized insurance coverage and such disaster relief as is still made available is, after evaluating the long term potential for loss prevention effected through the program, more costly than the laissez-faire and disaster relief approach that prevailed prior to the enactment of the National Flood Insurance Program.

STATEMENT OF WALTER SWIFT, VICE PRESIDENT, PROPERTY CLAIMS SERVICE, AMERICAN INSURANCE ASSOCIATION

Senator SPECTER. Our next witness is Mr. Walter Swift.

Mr. Swift, welcome. We will be pleased to hear your comments.

Mr. SWIFT. Thank you. I, too, have submitted testimony. I will waver a little bit from that.

I would like to kind of philosophically get into some of the things that George has talked about. As George says, the private sector is in the business of providing insurance where it can be written on an actuarially sound basis on terms that are acceptable to the public. There have been some experiments, and I think that these were generated by rumblings in the Congress back in the 1960's when the first flood program was being looked at. The Insurance Co. of North America, for one, experimented over on the Jersey coast and North Carolina, and maybe one or two other States. On a limited basis, they were providing what I would call wave-wash insurance. I am speaking of the storm surge that comes in a hurricane or with a Northeasterner. The combination of the waves and the wind destroys the buildings. So this was a modified form of flood insurance. They had a rate of \$4 on the high-risk, down to \$2. It was written in conjunction with fire insurance policies.

PROBLEMS OF MOTIVATION

Interestingly, and I think this is the human nature problem of getting people to buy low-frequency, high-intensity insurance, people would want to buy the policy after a hurricane, then if there was no hurricane for 2 or 3 years, the insurance would be dropped. This experiment was a loser. The few storms they did have eroded the premiums that had been accumulated over a period of time. They finally abandoned the program.

We had in the old American Insurance Association studies done in the 1950's. There were other studies that were done by Dr. Gilbert White, to whom you have alluded.

We determined that about 90 percent of the land mass of the country is suitable for habitational purposes and the other 10 percent isn't. I am talking about the riverine flooding potentials, coastal flooding potentials, earthquake, and landslide, whereas the private sector has been able to provide earthquake insurance because people don't generally want to buy it.

If all the policies in California, for example, covered earthquakes, there would not be the resources, I don't think, in the private sector to absorb the potential—what, \$25 billion loss, whatever we are talking about.

Senator SPECTER. Are you suggesting the facts are that there is relatively little purchase of earthquake insurance?

Mr. SWIFT. That is right, comparatively.

Senator SPECTER. So when an insurance company has an application, they do not have any concern about insuring on the actuarial cost?

Mr. SWIFT. Not all companies write it, but it is readily available by a number of large companies.

Senator SPECTER. Are you suggesting there wouldn't be the possibility of reinsurance or spreading the risk?

Mr. SWIFT. I doubt it.

Senator SPECTER. You are talking about a total figure of earthquake exposure of \$25 billion?

Mr. SWIFT. That is a figure that has been tossed around. I don't think anybody really knows.

Senator SPECTER. Do you know what the total resources of all the insurance companies in this country are?

Mr. SWIFT. No; I don't know.

Senator SPECTER. It surprises me the private sector would not be able to accommodate it if it made good business sense on actuarial principles. The insurance resource in this country would be gigantic. I would be interested in knowing if there is a figure that you could supply to us.

Mr. BERNSTEIN. \$100 billion—

Senator SPECTER. One hundred what?

Mr. BERNSTEIN. \$100 billion casualty premiums a year, and they are writing it basically a 2-to-1, 3-to-1 ratio. You have to figure they have a total surplus of maybe \$200, \$250 billion in property casualty business and the ratio is regulated by the insurance departments.

I think the \$250 billion figure is probably conservative and probably does not include all commercial coverage that might be exposed. I would think there is actually no way the private insurance industry could possibly cover that.

Senator SPECTER. Could not possibly?

Mr. BERNSTEIN. Could not possibly cover it. We went through this at HUD when I was there, what about mandating through FHA, earthquake coverage. You probably know mandating anything through FHA is very difficult. We couldn't get them to cooperate with the flood program for many years. There was a feeling, and studies done through the California Insurance Department or Commission, there was no capacity in that State.

Mr. SWIFT. Incidentally, we are speaking of property insurance here. A severe earthquake in San Francisco, for example, particularly if it occurred during the daytime, I have seen some figures on it, and it is anybody's guess, but 8,000 or 10,000 deaths, several hundred thousand injuries, if you look at insurance in the sense that probably all of those people had life insurance, probably every one of them had accident and health or workers' compensation, if you throw in the aircraft and the boats, the truck cargos, everything else, we are pyramiding this thing to some astronomical figure in the aggregate.

I was initially speaking only of the property which would be the subject of flood, for example.

I think that a lot of us had the idea when the flood program was initiated that it would take a great many years for the flood plains to be rid of the existing housing and building stock. If those buildings were not able to be replaced in the event of a fire or some other event, as they were; in other words, they had to be upgraded either to be moved to a safer location or they had to be floodproofed. The main thing is to upgrade the forms and then if a new housing start was built in an acceptable flood-resistant manner, over a period of time, that is the old housing was replaced, you would have a viable insurable risk as far as the private sector was concerned.

All of us hope that that would be the result. In other words, the Government would be gradually phased out of the program as it went along.

We have been disappointed at the apparent inattention to the flood plain management and what I would call lost prevention in its total concept.

I think you know that in the private sector the effort is to prevent losses. We all hope we never have a boiler loss. About 85 percent of the premium dollar is spent on engineering and safety checks, the prevention of loss. The same goes into workers' compensation, trying to improve the safety of the workplace and underwriters laboratories, and people like that, who have made a study of building materials, trying to get wind-resistant buildings. Most of that has been insurance money inspired research. I think that there is an opportunity to apply those principles conceptually to the flood insurance program.

LEARNING FROM THE CLAIMS FILES

One of the things that I was mentioning in my formal presentation, there ought to be some way that we could find out what is being damaged and why it is being damaged, building materials or building practices that are more susceptible to flooding. Look at those things from an engineering point of view and try to develop those standards to upgrade as the things are repaired or replaced.

There is a world of information in the claims files that if the engineering information is wanted, if the underwriting information is wanted, if you want to verify the adequacy of the rating procedure that has been employed, the classification of that risk, let the adjustor develop that while he is in the field. Crank it into the computer and massage it anyway you want to. I think there is a wealth of information that can be gotten from the day-in and day-out routine.

I agree that probably there needs to be a great deal more attention to the land-use enforcement and checking on the communities. Are they doing what they say they are doing? There simply has to be some type of field audit to determine that those things are going forward.

Senator SPECTER. I note in your prepared statement, which has been called to my attention, that you bought three properties yourself and would not have taken the risk but for flood insurance.

Mr. SWIFT. I would have bought one of them, but I would not have put all my eggs in one basket. All of them are going to get washed away or none of them are going to get washed away.

Senator SPECTER. What are the circumstances of those acquisitions?

Mr. SWIFT. Two of them were existing structures. One was a five-family house. It is a block from the beach. Another one was a four-family house about a block and a half from the beach, and we discovered on the back of the four-family a lot, very small lot that could be severed and used as a separate construction. It was zoned then for a single family, so we built a one-family house on it. I don't know, but I dare say the elevation of that is no more than about 5 feet, and I wouldn't be surprised to see a 10-, 12-foot wall of water come in there someday.

Senator SPECTER. Should that happen, does the insurance cover the full loss that you will sustain if your property is destroyed?

Mr. SWIFT. The limit I could get on the five-family is \$100,000, plus \$10,000 on the contents. I have \$105,000. I think I could rebuild probably fairly close to that. The others are insured full value. Now the interesting thing is, I voluntarily insured these. I wasn't required to by the mortgagee, but I find in talking to the local people complete indifference about the whole program.

Senator SPECTER. So not many are insured?

Mr. SWIFT. Very few, except those who are required to by the mortgage lender. So this raises an interesting problem.

Senator SPECTER. When did this area last have the kind of wave height you just described?

Mr. SWIFT. They haven't had one in over 100 years. There is a whole subdivision that is under water now and people are paying taxes on this land in hopes that it will be accreted again, ultimately built up again.

Senator SPECTER. How long has that area been under water?

Mr. SWIFT. During my lifetime.

Senator SPECTER. It was above water at some point?

Mr. SWIFT. Yes. There is a constant erosion and massive efforts now are being made to put riprap and groins and all these artificial barriers that will delay the day of reckoning, but you cannot stop that process.

LONG BEACH ISLAND, N.J.

Senator SPECTER. I recollect the heavy storms on Long Beach Island, N.J., I guess, in 1962, where the ocean met the bay at some spots. There was just massive destruction on that island. I do not know when a similar catastrophe occurred prior to 1962, but it would not surprise me if there were another occurrence at any time.

Mr. SWIFT. Senator, you know the thing that terrifies me, so many of those areas, if they are caught with a fairly short notification of a hurricane on Long Beach Island, you are going to have 100,000 people out there in the summer and there is a two-lane road getting off of it and you can't evacuate but 700 cars—what is it, Bill, 700 cars an hour per lane, something like that.

Senator SPECTER. There was such an evacuation, though, in the summer of 1976?

Mr. SWIFT. Yes, right. These things are all part of the frightening potential of life and the property is insignificant compared to the other. The development on the keys, in season there you have 100,000 people.

Senator SPECTER. In the light of that more paramount concern, doesn't it make sense to have Federal insurance or Federal subsidy to encourage people to mass together in what is a highly volatile and risky situation?

Mr. SWIFT. I don't know how you can compel all people to carry the insurance. I do think that you can have tighter control over the land use and the management.

Senator SPECTER. But were there not insurance, there would be fewer people, doubtless, building on Long Beach Island?

Mr. SWIFT. That is a good question. I don't know. I am not sure of that. I have watched the demographic changes and the census tracts,

and you will see that the gulf States, the South Atlantic States, are building up disproportionately to much of the rest of the country like out in Arizona and then on into California, where you are in the landslide and earthquake area. I think Government strategy has had something to do with it. I agree with whomever made the comment that on St. Simons, now, there is a two-lane causeway and there is a drawbridge across the intercoastal waterway. It is a low-lying road. They are repressive to improving that road. So the State department of highways says:

We will provide so much of the funding provided that you build it according to our specifications and our specifications call for doing away with this drawbridge and constructing a high-rise, four-lane bridge that goes across this thing and a four-lane causeway, and then all kinds of interchanges, and so forth, on the mainland.

So we attract more people and then there is an immediate pressure because you have this four-lane road to a parking lot and there is the pressure then to build other roads and to open up subdivisions. Then the Government says:

OK, we will pay part of the expense or all of the expense in the utilities, the sewage facilities, and so forth.

Senator SPECTER. Do you think there would be as much development—you really have answered this question—as applies to themselves, do you think there would be much development, absent the Federal insurance?

Mr. SWIFT. I kind of think so.

I am in the insurance business. I have an awareness of these things and a concern about it that the average person probably has no awareness of, and this is part of the problem. Eighty percent of those people who are moving down to the coast are coming from inland parts of the country where they have never seen a hurricane. They don't have any conception of what they are getting into, and you can bet your bottom dollar that the local people who are selling them the property don't say, "This thing was flooded 10 years ago, or 20 years ago." And that raises another point that might be something to pursue.

Maybe there should be a survey of high-risk areas and some kind of qualification of these things, and maybe there should be a disclosure, even run in with the deed, "This property was flooded," or something.

Senator SPECTER. "Caution, this property may be hazardous to your health."

Mr. SWIFT. Certainly on the coastal property. There certainly is no reason why there shouldn't be on the post office a high watermark of 1942.

Senator SPECTER. "If you can read this sign, you are in risk."

Mr. SWIFT. I am not being facetious. I think people don't know and if they don't know, they don't have an opportunity to know they are in a high-hazard area.

Senator SPECTER. If you take Long Beach Island, the illustration I am familiar with, the people do recollect the flooding of 1962 and there are people who are mere lawyers, not necessarily people from the insurance company who deal with risks all the time. Maybe lawyers do, too.

Mr. SWIFT. How many of those have insurance unless they are required to have flood insurance?

Senator SPECTER. I don't know. I would be interested in knowing that question. How many have insurance unless they are required to? You are the witness, I would like to know the answer to that.

Mr. SWIFT. I think there are very few. Only the people who have the deep concern or the intimate knowledge that, "I am liable to have my investment wiped out. I might not have it if I had one building." You are subsidizing my investment, see?

Mr. BERNSTEIN. Your question is the guts of the program. If this program is encouraging new construction in flood-prone areas, it is counterproductive, period. If your hunch is correct, this program is wrong, it hasn't worked. My belief is the contrary.

Senator SPECTER. How do you find the answer to that question?

Mr. BERNSTEIN. I think you look first at what happened to you without the flood program and with the flood program. Long Beach Island was developed without flood insurance; the gulf coast of the United States was developed without flood insurance.

Senator SPECTER. It has been developed much more extensively since flood insurance has been available.

Mr. BERNSTEIN. Over the dead bodies of the mortgagers, lenders, officials, all of those who found this program as a restriction on the ability to develop that land, they developed it less. I don't think we can only focus on coastal insurance. You have to look at riverine flooding (a) in terms of human nature, people don't believe it can happen to them, and (b) they don't believe it can happen to them again. People flooded on Long Beach Island think, "Well, that's it forever. It won't happen again." It happens in Bismarck, N. Dak., and the Mississippi River.

In the 1974 Disclosure Act there is a requirement of developers that they reveal in their prospectus, property reports if the property is subject to flood hazard. That is one of the few handles the Federal Government has on disclosure.

Senator SPECTER. What is the definition of 100-year flood damage?

Mr. BERNSTEIN. It is a flood that may happen in 100 years. That is the standard on which the Federal Insurance Administration, and now just about every State, set their construction standards.

Senator SPECTER. Thank you very much, Mr. Swift. That is very interesting.

We are running behind time. Your prepared statement will be inserted at this point in the hearing record.

[The statement follows:]

STATEMENT OF WALTER D. SWIFT

I appreciate this opportunity to discuss the flood insurance program with you. Whereas I have been introduced as a representative of the National Research Council's Flood Insurance Research Studies Committee and the American Insurance Association, I would prefer to think of myself as a friend of the court or, in this case, the committee.

During most of my 42-year insurance career, I have made a hobby of studying natural hazard events, ensuing problems, private and public response, and tried to learn from the composite experiences. In my capacity as the administrator of a national insurance catastrophe program, I have been closely involved with the National Flood Insurance Program from its inception. Until the private sector was disassociated from the program in 1978 and the Federal Insurance Administration (FIA) chose to terminate the relationship, the resources and claims experience of the American Insurance Association had been available to the FIA. I might parenthetically add that as a matter of public and policyholder service, my Association has a Memorandum of Understanding with the Federal Emergency Management Agency through which our representatives serve as insurance advisors/consultants in FEMA's disaster field offices. The composite experiences have given our staff first-hand knowledge of riverine and coastal flooding.

In preparing for this meeting, I thought it might be useful to weave back and forth between my experiences with the old National Flood Insurers Association, the American Insurance Association, and the Flood Insurance Studies Research Committee. As respects the latter, it is important

that our draft report, to which I will allude, is neither final nor official. Nevertheless, the tentative orientation of the Committee may be useful to your inquiry.

In my presentation, I shall touch upon private sector concerns, loss prevention and flood plain management, subsidies and rating matters. An attempt will be made to identify problem-oriented issues worthy of project-directed research.

Flood insurance studies conducted on behalf of the old American Insurance Association in the 1950's concluded that 90% of the land mass of the contiguous 48 states was suitable for habitational purposes. The other 10% offers challenges which have not been satisfactorily solved by the private insurance business. These include riverine and coastal flooding. The problems created by low frequency, high intensity events appear to be worsening. The census tracts and demographic changes reveal that a disproportionately large number of people are relocating within the troublesome 10% of the land---the South Atlantic and Gulf Coastal states and those areas, including California, which are especially vulnerable to earthquakes.

Whereas some persons may contend that this migration may have transpired in the absence of flood insurance, I am a walking testimonial to the fact that I would not risk the ownership of three building structures on St. Simons, one of Georgia's barrier islands, without the government subsidizing my very real flood loss potential. I had one loss during Hurricane "David" and know from a review of the literature that the entire island was inundated on two occasions during the 1820's. That can, and probably will,

happen again and, when and if it does, property valued in the hundreds of millions will be devastated. What's worse, during the season the lives of fifteen or twenty thousand people will be in jeopardy. The evacuation route consists of a low-lying, two-lane causeway to the mainland.

Now, whereas the availability of flood insurance may not have influenced newcomers who are unaware of the hazard, or the developers, speculators and other local citizens who are unaware of, or minimize the risk, all of the incredible number of new buildings will be grandfathered into the subsidized program until issuance of the Flood Insurance Rate Map (FIRM). I doubt if this was intended by Congress and will enlarge upon the theme later. I cannot say how much the subsidized insurance availability has influenced new development, but, of greater importance, I am unaware of any building codes, setbacks, minimum elevations, or other restrictions imposed upon the community by the Federal Insurance Administration, or any other governmental entity, as a condition of subsidized flood insurance. I would suggest that if the government has concerned itself with loss prevention, the public should be informed and, if the communities are not living up to their share of the agreement, that they be suspended, without recourse to Disaster Relief. That would defeat the mitigation program. How can the public be expected to respond to unknown hazards? or make informed choices without access to facts? For instance, the FIA spent \$6 million mapping the Minnesota flood plains but made no provision for informing those concerned how to use the information. The State has taken over the function. Maybe, with coordination, that is as it should be. Other South Atlantic and Gulf States barrier islands lead one to conclude that with notable exceptions, construction is taking place at low elevations

close to the water. Here again, even if the construction would have taken place anyway, one might further conclude the important land use and damage mitigation part of the flood insurance program has not been effective in preventing further encroachment on the flood plains.

In the long term, the overall financial health of the NFIP must be of paramount concern. Only Congress can determine the adequacy of program finances because the stated intent is to incorporate some degree of subsidy for a property which existed on or before December 31, 1974, or on the effective date of the initial Flood Insurance Rate Map, whichever is later. I wonder if the Congress realized that in many instances, substantial development would occur during the period of time between the 1973 Act, the development of a Flood Hazard Boundary Map and the Flood Insurance Rate Map? In many cases, this has been years. Should those post-Act structures be charged a higher subsidy or actuarial rates? Some information available to the Committee on Insurance Studies of the National Research Council suggests the magnitude of subsidy now occurring may not be appreciated by either administrative or legislative offices. Nevertheless, I would assume that the Congress expected the program to operate at a deficit and realized that debt would have to be serviced by appropriations. The FIA undoubtedly needs the requested appropriation to stay in business. It is clear that the addition of a substantial number of subsidized policies will, depending upon geographical spread, tend to increase maximum probable losses and, hence, future appropriations. Perhaps the time has come for a re-examination of the long-range issues associated with continued subsidization of flood-prone properties. This program obviously involves a high degree of subsidization. Subsidy maintained

in perpetuity would appear to discriminate unduly against those who do not own flood-prone property.

I believe there is sound reason to explore alternative policies for terminating the subsidized portion of the program. For example, a two-tiered approach through which structures constructed subsequent to the 1973 Flood Insurance Act or the Flood Hazard Boundary Map, whichever is considered appropriate, would pay more than existing structures, or subsidization through a period of time sufficient to amortize existing investments should provide reasonable fulfillment of the need initially visualized by the Congress. Perhaps Congress should also consider the subsidy levels. If 50%, for example, were considered appropriate, then gross premiums might be allowed to "float" in relation to loss and expense experience allocated by rating zone. Maybe the ten-year experience cycle could be shortened. Consequences? Would this be reasonable? Practical?

I wonder, for instance, if there is a realization that the subsidization is increased by IRS tax forgiveness for uninsured casualty (flood) losses, or that rate adjustments are made on a ten-year experience cycle. Moreover, there appears to be some indication that rates now applied to new construction, essentially post-FIRM construction which is supposed to pay full actuarial rates, do not generate revenues commensurate with the potential damage to be incurred by those structures. Whether this arises due to some conceptual error in the rate structure or as a result of erroneous flood hazard designation is not clear.

On the basis of some admittedly very generalized but relatively pragmatic assumptions, I believe reasonable

doubt exists as to the adequacy of the present rate structure, subsidized and actuarial. For example, there appears to be a built-in bias in each of the actuarial rating concepts which tends to understate the flood potential. In riverine situations, I think the Log-Pearson backwater computations may reflect less than the actual flood potential. After maximum river levels have been determined, procedures permit an additional one-foot rise for the floodway. This suggests that buildings constructed with minimum elevations would be one foot under water. The Coastal flooding situation appears worse.

In my experience as an insurance adjuster and later as implementor of the Association's national catastrophe program, I have observed that typically one may expect the storm surge of a hurricane to cause great damage during its on-shore run-up of about 1,000 feet. Naturally, this varies with the intensity and path of the storm, the contour of Gulf floor, and land elevations; nevertheless, the storm surge accompanying most severe hurricanes has waves superimposed upon it in the magnitude of up to 55% of the surge depth. Thus, a 10 storm surge could be increased to a 15-foot wall of water by addition of the waves. It is my understanding that this phenomenon was not generally taken into consideration until last year in the determination of V-zone actuarial rates or in the establishment of minimum elevations.

Earlier portions of this testimony have reference to the need for stronger flood plain management efforts. I would suggest that these include non-federal units and the probable need to explore inter-governmental cost-sharing issues. With proper coordination, funding and monitoring, the locals and states could probably make significant

contributions to the effort. The Post-Flood Interagency Agreement executed by twelve federal departments and agencies is to be commended. It provides hazard and mitigation teams after a flood. I would urge the same highly visible coordinated approach to pre-disaster activity. Richard Krimm, the Acting Administrator of FIA, is to be applauded for his initiatives in these matters. I would urge the private sector to cooperate to the extent practical. At the same time, there is need to note that it is doubtful that the technical capabilities of 17,000 separate jurisdictions which are subject to flooding are adequate to administer fully the necessary comprehensive programs, such as the development, enactment, implementation and enforcement of building codes and standards. Here again, the potential utilization of the private sector and state assistance programs must not be overlooked.

As the National Flood Insurance Program was being formulated, the private sector sought to cooperate in fashioning an initially subsidized program which might eventually become viable and self-sustaining. The private sector's insistence upon land-use management and the establishment of actuarial rates stemmed from a realization that absent those basic business concepts, the program's loss experience would inevitably deteriorate. Whereas both of those requirements were built into the program, enforcement and political sensitivities have been disappointing to date. Indeed, until Mr. Krimm's leadership, evidence available to the Flood Insurance Studies Committee indicates that only 3% of the FIA budget had been allocated to loss prevention.

I shall not attempt to determine reasons for the unfortunate dissolution of the joint National Flood Insurers

Association/Federal Insurance Administration venture; nevertheless, the private sector had, and still has, much experience and understanding of the insurance mechanism, which I believe essential to the success of the National Flood Insurance Program. I would suggest that the private and public sectors make every effort to get together on a mutually satisfactory basis which is acceptable to the Congress. It is understood that when the program was initiated, there were expectations within the private sector of a gradual improvement of the classification of flood risks as the older building stock was eliminated and replaced on safe locations or properly flood-proofed. I doubt if the private sector could visualize the impact of new subsidized buildings on the program's financial integrity. The day is not lost, but the day of acceptable loss ratios is being postponed. Ideally, activities of the public sector would have been phased out as the business could be gradually absorbed by the private insurers. This necessarily envisioned realistic land use controls, the upgrading of structures through adoption and enforcement of building codes, realistic rates, standards and flood-proofing, and the introduction of a quality control unit charged with the responsibility of spot-checking elevations, marketing, classifications of business, adjusters, and so on.

The record shows that floods represent the most costly natural calamity in the United States, causing an average of over \$4 billion in damage each year. John Wiggins Company separated the damage as follows:

Riverine:

"On the basis of annualized averages, overflowing waterways destroy or damage approximately 410,000

buildings across the nation in a typical year, under 1970 conditions, with an aggregate cost of over \$3 billion 1978 dollars.

Coastal:

"When viewed over a typical 20-year period, the combination of storm-surge and hurricane wind accounts for annual building losses of almost \$2 billion 1978 dollars, under 1970 conditions. Computer models indicate that by the year 2000, hurricane-wind and storm-surge losses will increase over \$3 billion to approximately \$5 billion annually in constant dollars, easily exceeding the building damage caused by any other natural hazard."

The Wiggins study offered mitigation programs, which are a matter of record.

There are various ways of mitigating risk. Private sector insurance has found that one of the most effective efforts is directed toward reducing risk by eliminating the cause of the loss. This is the underlying rationale of the loss prevention and loss minimization activities of private sector insurers. Similarly, any loss prevention program, in fact any insurance program, to remain effective must have an adequate quality control component. In the case of flood insurance, this would require efforts to assure compliance with specific land use, building code and other mitigation programs undertaken by the participating communities.

In all forms of property and liability insurance, increasing emphasis is placed upon prevention of loss. Through improved construction, installation of safeguards, and rehabilitation, in contrast with mere "indemnity,"

property and liability insurers make material contributions to society. This is as it should be, because it is much better not to have a loss at all than to have one and receive merely a monetary consideration.

Property and liability insurers are ideally situated to pursue prevention of loss activities because of their interest in the matter, their access to the necessary information, and because they apply the needed remedies. Such activities constitute one of the fundamental functions of the insurance business, and a considerable part of their premium income is devoted to this end. In certain types of property insurance, like boiler and machinery insurance, title insurance, elevator insurance, and others, only a small part of the premium suffices to meet the payment of losses; the largest part by far is devoted to the prevention of loss altogether. There will, of course, always remain an irreducible minimum of loss to be indemnified. But every effort should be made, through prevention services, to make the need for indemnification as small as possible.

The effort to prevent losses has been so stimulated by insurers that it is appropriate to regard it as a component of the institution. This statement applies to a wide variety of prevention activities, all of which are matters of record and could seemingly be adopted to the needs of the Federal Insurance Administration, the Federal Emergency Management Agency, and other governmental entities.

I would urge FEMA (FIA) to re-examine their operations in the light of private insurance procedures and pursue an active research effort related to these matters and their responsibilities as insurance managers.

STATEMENT OF RUTHERFORD PLATT, ASSOCIATE PROFESSOR OF
GEOGRAPHY AND PLANNING LAW, UNIVERSITY OF MASSACHUSETTS

Senator SPECTER. Mr. Rutherford Platt, we welcome you here and will be pleased to hear your testimony.

Mr. PLATT. I am representing the academic profession on this panel. I felt I should provide tables as an adjunct to my written statement. I will try to run through those very quickly as to their import, particularly on the first question of flood plain management.

There are five tables at the end of the report.

HAZARD AREAS

First, if I could restate the question that you have been discussing, we know that much development has occurred in hazard areas, especially on the Atlantic and gulf coasts with the benefit of flood insurance. I don't think there is any doubt about that. But we do not know how much of this development would have occurred in any event with or without flood insurance, and we do not know to what extent the NFIP criteria have influenced the location, the design, the elevation of new construction.

I would add another statement to my written comments. We do not know the differential effect between resale and new construction and would appear, perhaps, that the flood insurance program does promote the resale marketability of flood program property, both inland and coastal. But I have serious reservations as to whether it has promoted new construction, particularly elsewhere in the coastal areas.

TABLE 2

If I could refer to table 2 with reference to the emergency program, I think part of the flood insurance program is probably the least contributing to wise flood plain management. I have always felt very unhappy about the emergency phase, but to my surprise, one study by Burby and French at the University of North Carolina, which was a very methodical, well-researched study funded by the National Science Foundation, came up with some very surprising data which I have summarized in table 2 for both regular and emergency program communities. They took a 20-percent sample of all emergency communities as of the time of their survey.

They had a high rate of response, 85 percent response, and they found, as you can see, that 63 percent of these emergency phase communities were applying minimum elevation; 71 percent zoning, and I honestly don't know whether they mean to include flood plain zoning. But, in other words, there are a large number of emergency phase communities that are engaging in one kind of flood plain management or another, which they are not really required to do under the rules of that part of the program. I think this is very encouraging. But there is no question that the teeth of the program is in the regular program.

Senator SPECTER. In the what?

Mr. PLATT. In the regular phase.

That is where the program really comes to bear on land use and flood plain management. As we know, entry into the regular program

means that two constraints come into play. One is the actuarial rate structure. The other is the self-imposed flood plain management regulations, self-imposed by the community. But due to the long period spent in developing flood insurance studies, many communities have not yet entered the program or have done so very recently. We have a little data on that on table 3. As of the end of 1979, there were approximately 3,000 communities in the regular program with elevations. Another 1,440 came in in 1980, giving a total of about 4,500.

I am sure there are a few more than that now. But most of these 4,500 communities have been in the regular program for only 2 or 3 years.

As we all know, when anyone has a building permit, in effect they are protected for some period of time after rules change, after flood plain management regulations go into effect. So that the impact of the program on new construction would not be felt in most cases for 6 months, maybe a year after the community converts to the regular program. So I find it very difficult to find much evidence that the community has affected new construction one way or the other.

There just simply are not enough communities with enough years of experience to make a statement on that. And, furthermore, I do not think empirical research has been done even where a community has had a long period of experience.

V ZONE CONCERN

I would mention that the V zone is a special concern to me, as to a lot of people. The V zone is defined as the area of highest hazard in the coastal areas. It is defined as an area subject to a 3-foot breaking wave on top of a 100-year storm surge. That is a pretty dangerous place to be because you have waves, you have surge, you have erosion, wind. In the data shown on table 4, looking at the V zone, new construction, we find the most adverse ratio of payments made under the flood insurance program to premiums received, 4.8, as compared to 1.8 for existing construction in V zones. It would appear in these two areas that the flood insurance program, in fact, far less actuarially sound for new construction than for existing construction, the V zone is perhaps a place where the program is encouraging new development. At any rate, the rates are far too low.

Senator SPECTER. How does it work? If you have an area which is in the V zone, does the insurance program have as its policy to discourage building there or not?

Mr. PLATT. Unfortunately, it does not outright prohibit building there. There are requirements as to anchoring of structures.

Senator SPECTER. Those are calculated to work out with the risk with those structural considerations to minimize or eliminate the risk?

Mr. PLATT. To try to minimize the risk.

Senator SPECTER. Is that realistic?

Mr. PLATT. It is not realistic. The very definition itself indicates the risk is essentially an uninsurable risk. We are talking about facing the open ocean. Inland a little further it would be an A zone.

Senator SPECTER. So is it discouraging construction in high-risk areas or encouraging construction in the high-risk areas?

Mr. PLATT. I am talking about in the V zone; I am not talking about inland flooding or floodways, but in the V zone. I am not prepared to say it encourages new construction per se because, as you can see, there are only 4,300 policies covering new construction in the V zone. That is not very many.

Senator SPECTER. Otherwise, there are probably many, many times that without policies because people don't care.

Mr. PLATT. Then we cannot blame that on the flood insurance program. But what I am saying is the rates are far too low in the V zone. This 4.8 ratio here indicates that. There is a typographical error in this table. You should reverse the second and third lines, amount of insurance, the number of claims. There have only been 204 claims, according to this data, which is very small, but they have amounted to \$405 million due to the high value of coastal property. So there is obviously a tremendous loss in terms and a vulnerability considering the total number of possible claims in V zones and in the areas just behind them in the A zones. There is a double problem with the V zone. One, the rate is too low, and the other is the V zone is often too narrow. It should be more accurately delineated.

Senator SPECTER. Your testimony here is in line with what you are saying, your statement at page 2, that it is difficult to prove the accusation that flood insurance occurs with developing flood prone areas. How do we make a determination of that critical question?

Mr. PLATT. As I have suggested, we need to do some research, and that may sound self-serving as an academic, but one of the obstacles to research is that the Privacy Act prohibits the release of detailed property-by-property data on who receives how much assistance for damaged structures. That is one problem. And I actually took this up with the former Administrator of FIA and did not get very far.

The other problem is the various Federal agencies do not necessarily have the same recordkeeping procedures, and so it is very hard, for instance, to get SBA data on a structure-by-structure basis.

There are some, I think, fairly simple ways of improving the researchability of the problem.

DATA BASE PROBLEMS

Senator SPECTER. Does the agency itself have access to those statistics?

Mr. PLATT. The agency, of course, would.

Senator SPECTER. Do you know whether they are making any studies which would be relevant to answering that question?

Mr. PLATT. I really don't know at the moment whether they are or not. And they might have a problem dealing with data from SBA and other agencies. We must keep in mind we are dealing with a whole package, a market basket of Federal assistance, not just flood insurance, when a disaster occurs. But I did want to make a point while I was on table 4 that under the numbered A zones, which is a much larger body of flood insurance activities than the V zones, that the ratio of payments to premiums decreases from existing to new construction from 2.04 to 1.42. I think that is a very encouraging statistic that the program is doing better with new construction than the existing construction, and that is the direction it should be going.

Senator SPECTER. What would be an illustration of the A zone?

Mr. PLATT. Pardon?

Senator SPECTER. What would be an illustration of an A zone?

Mr. PLATT. The numbered A zones are really all of the other hazard areas that have been mapped up to the 100-year level, that would be flooded by a 100-year flood, minus the V zones. It does include coastal areas and it includes riverine flood plains, the entire 100-year flood plain. Beyond the A zone is less than a 1-percent chance of flooding. So that is the bulk of the program right there, I think, in terms of the regular program activity. That is a very good statistic.

I would just like to make the statement that is in my written testimony, I feel the flood insurance program should not give any insurance at all in the V zone, that it should reconsider its delineations of the V zone to broaden it where appropriate.

In other areas, I think they are doing quite well. Inland floodways, I think there is a prospect of good, sound flood plain management in many of the regular program communities.

I do support, however, the continuation of the mapping effort. It is extremely important for FIA to continue providing flood plain maps and studies to local communities. Without the maps, they do not know where the flood plains are. I very strongly support the continuation of that effort.

Senator SPECTER. Thank you very much, gentlemen. We very much appreciate your testimony this morning.

[The statement follows:]

STATEMENT OF RUTHERFORD H. PLATT

My name is Rutherford H. Platt. I am Associate Professor of Geography and Planning Law at the University of Massachusetts at Amherst. I am also a member of the Committee on Flood Insurance Studies of Building Research Advisory Board of the National Academy of Sciences and have been involved with the National Flood Insurance Program in a number of capacities: researcher, consultant, critic and ally.

For the record, let me begin with a general comment. The National Flood Insurance Program is far from perfect but it is conceptually the best approach ever devised to cope with the problem of rising flood losses. On the one hand, NFIP theoretically assigns the costs of flood losses to those who occupy flood hazard areas, through the mechanism of insurance. On the other hand, no one is eligible for flood insurance or other federal disaster benefits unless their community adopts measures to restrict the location and/or design of new development or "substantial improvement" of existing development in its floodplain. This in essence is the concept of the NFIP. It is a sound concept, the problem is to make it work in practice.

NFIP in fact has accomplished much in the twelve years since its adoption. Among approximately 20,000 communities with identified flood hazards (coastal and riverine), nearly 17,000 have elected to enter the Program. About 4,500 of these are enrolled in the Regular Program; the others are in the provisional emergency program. Some 16,000 approximate flood hazard boundary maps have been prepared and distributed. Flood insurance studies for over 10,000 communities have been initiated, with 5,800 completed as of January 1, 1981. Some 2 million flood insurance policies are currently in effect covering nearly \$100 billion worth of structures and contents. (Table 1.)

What does all this mean in terms of the goals of the Program. For the record, it is appropriate to review the original purpose of NFIP as indicated in the statement of its proponents and the language of the National Flood Insurance Act itself (See Appendix A). Clearly from this brief review of legislative history, two fundamental goals of NFIP have been 1) reduction of flood losses through floodplain management and 2) fiscal soundness leading

toward eventual elimination of federal subsidy. The following comments largely address the first concern.

FLOODPLAIN MANAGEMENT

The accusation is often made that NFIP has encouraged rather than reduced new investment in flood hazard areas. This weighty charge requires careful attention. It is difficult to prove or disprove this statement in the absence of massive empirical research. Basically, we know that much development has occurred in hazard areas, especially along the Atlantic and Gulf coasts, with the benefit of flood insurance. But we do not know how much of this development would have occurred in any event, with or without flood insurance. Furthermore, we do not know to what extent NFIP criteria have influenced the location design and/or elevation of such development so as to reduce its vulnerability to flood damage.

Emergency Program

It is widely assumed that the emergency program has done little to encourage sound floodplain management. The requirements as set forth in 24 CFR § 1910.36 do not significantly influence location or elevation of new construction and have only modest effect upon design. But on the other hand, the low limits of coverage available under the emergency program are not major incentives to expensive new construction, particularly in coastal areas where the average new home would normally far exceed the \$35,000 limit of coverage.

One study by Burby and French at the University of North Carolina reveals a surprising level of floodplain management activity in emergency program communities (Table 2). Their survey was administered to regular program and 20 percent of emergency program communities, randomly selected. With a response rate of 85 percent, the results indicate many of the emergency program communities exceeding the basic NFIP criteria.

Regular Program

The regular program is of course what the NFIP is all about. With entry into the regular program, a community is subject to the dual constraints on unwise new development in flood hazard areas: actuarial rates and self-imposed floodplain management regulations. Concern as to the impact of NFIP, therefore, must address experience in regular program communities.

But this experience has been relatively modest in terms of community years in the regular program. The lengthy and tedious process of preparing flood insurance studies and flood insurance rate maps has retarded the conversion of emergency program communities to regular status. By the end of 1979, about 4,500 studies were completed and 3,837 communities were enrolled in the regular program "with elevations" (as distinct from about 800 communities converted with ^{no} studies of elevations). In 1980, these figures jumped substantially to 5,818 studies completed and 4,477 communities in the regular program (Table 3).

This recent surge in the completion of studies and conversion of communities means that relatively little time has elapsed in most cases since floodplain regulations and actuarial rates have gone into effect. Since construction begun under building or zoning permits issued before the effective date of the Flood Insurance Rate Map for a community is "grandfathered," the impact of NFIP requirements would normally not be felt for at least six months or more after conversion. It is, therefore, too early on a national scale to judge whether regular program requirements and actuarial rates are in fact discouraging unwise new development.

There is cause for concern in particular regions, especially coastal areas. The much higher limits of coverage in the regular program may well be an inducement to coastal construction, unless counteracted by sound actuarial rates and adequate controls on location, elevation and design of new structures. It is disturbing to realize that 38 percent of all NFIP policies are in four coastal metropolitan areas, with most communities in the regular program: Miami-Fort Lauderdale, Tampa-Ft. Myers, New Orleans, and Houston-Galveston.

V Zones: A Special Problem

An important contrast emerges between coastal high hazard areas (V zones) and other coastal and riverine areas (A zones). The latter display improvement in the ratio of NFIP payments on claims to premiums received as one considers "new construction" as compared with "existing construction". This suggests that NFIP is working in A zones, (which accounted for 500,000 policies as of April 23, 1980). (Table 4).

But data for V zones shows a drastically different result. The ratio

of payments to premiums increases from 1.8 for existing structures to 4.8 for new structures. This does not necessarily mean that NFIP is inducing development in V zones which would not otherwise occur - the number of policies on new construction (4,314) and number of claims (204) are relatively small to support such a conclusion. But it is clear that rating for V zones is fiscally unsound. Rates are far too small in proportion to the sizeable claims involved.

NFIP policy toward V zones needs to be entirely reconsidered. The V zone by definition is an area of extreme hazard - its landward boundary is established by the reach of a three foot wave on top of a 100 year storm surge. Such areas are exposed to full fury of storm surge, storm waves, high winds, and rapid erosion. In my opinion, NFIP should not be insuring anything in the V zone. It is an area of uninsurable risk.

NFIP Activity in Nonmetropolitan Areas

Flooding in urban metropolitan areas receives most of the publicity in the media but America's rural nonmetropolitan areas have serious flood problems. The question arises, therefore, as to how well NFIP is addressing nonmetropolitan communities where landuse planning skills and experience are likely to be modest. At my request FIA recently did a computer run on program activity within and inside SMSA's with surprising results (Table 5).

Non-SMSA's with only 32% of the U.S. population account for 49 percent of NFIP regular program communities, 30 percent of all flood insurance policies, and 23 percent of total coverage. Twenty-seven percent of all flood insurance claims arise in nonmetropolitan floods, accounting for 20 percent of NFIP payments. It would appear then that FIA/FEMA has been doing a very respectable job in attracting participation by outlying and rural communities, which in the past have included some of the Program's most outspoken critics.

Need for Maps

The Federal Insurance Administration should be commended for its efforts to date in fostering the preparation and dissemination of flood insurance maps and studies. Since the advent of NFIP in 1968, some 16,000 flood hazard boundary maps have been prepared and distributed indicating approximate flood hazard areas within specific communities. FIA has initiated over 10,000 detailed flood insurance studies of which 5,800 have been completed (Table 3).

In the aggregate, this constitutes one of the great geographical information efforts of our nation's history. But much remains to be done, studies and maps need to be updated in some cases, and to be presented in a form that is readable, meaningful and economical to reproduce. Availability and usefulness should be paramount concerns in NFIP mapping efforts. Advanced and costly engineering procedures are of secondary concern.

A central "map information facility" (MIF) is no substitute for available and useable floodplain maps. MIF is conceived to serve a specific purpose, namely to verify whether a particular property is flood prone and to assist insurance agents in the computation of actuarial rates for such property. Even in this role, MIF should be viewed strictly as a back-up resource by which an agent may check his or her estimate as to whether a property is flood prone. Maps of local flood hazards should still be in the hands of insurance agents, realtors, lending institutions and others who participate in the day-to-day investment decision process.

There is reason for doubt as to the accuracy and reliability of MIF. Even when the system is fully established and working smoothly, there is considerable potential for error. Street addresses, for instance, may be incorrectly communicated to MIF. Data stored within MIF may be inaccurate as to specific flood hazard areas. It is essential, therefore, that floodplain maps continue to be readily available so that MIF determinations may be cross-checked with maps read at the local scene.

Post Flood Recovery

The immediate aftermath of a flood is a crucial time to mitigate future flood losses. Relocation of residents, removal of floodproofing of structures, and land acquisition are among various measures which may reduce future losses. It is now federal policy to assess opportunities for hazard mitigation after a flood occurs according to two mandates:

1. Section 406 of the Disaster Relief Act of 1974 (PL 93-288) which requires preparation of a long-term hazard mitigation plan following a grant of federal disaster assistance; and
2. An Office of Management and Budget Directive of July 10, 1980, ordering relevant federal agencies to agree on coordination of their post-flood recovery efforts so as to assess and implement

hazard mitigation recommendations to be developed by FEMA within 15 days after a flood. An interagency agreement pursuant to this Directive was executed by 12 federal departments and agencies on December 15, 1980.

FEMA should be commended for its vigorous advocacy of the interagency agreement. It should be encouraged to pursue its efforts on post-flood mitigation to the end that future losses and federal costs will decline.

CONCLUSION

In conclusion, I would suggest that it is too early to resolve whether NFIP is reducing flood losses or in fact contributing to their increase. Empirical research by impartial investigators should be undertaken in randomly selected regular program communities to determine the answer to this question. Modification of existing practices is, however, indicated in certain circumstances. First, FEMA should discontinue providing any flood insurance in V zones and should reexamine its methodology for delineating V zones. Second, FEMA should expedite the completion of flood insurance studies currently in progress so as to convert an additional 5,000 communities from emergency to regular status. It should then continue to update existing maps and studies. New studies should be undertaken using the most cost effective means available and maps should be widely disseminated to appropriate sectors in total communities including local government, insurance agents, lenders and attorneys. Third, FEMA should pursue its efforts to improve procedures for mitigating future losses in the process of post-flood recovery.

Thank you for this opportunity to testify on this important program.

Table 1

NATIONAL FLOOD INSURANCE PROGRAM

(1971--1980)

<u>Fiscal Year</u>	<u>Participating Communities</u>	<u>Policies in Effect</u>	<u>Coverage (\$ Billion)</u>
1971	158	75,864	\$1.1
1972	637	95,123	1.5
1973	2,271	272,448	4.6
1974	4,090	385,478	8.4
1975	9,625	539,888	13.7
1976	14,502	793,779	22.7
1977	15,585	1.1 million	33.6
1978 ^a	16,000 ±	1.2 million	37.1
<u>Calendar Year</u>			
1978	16,000 ±	1.3 million	NA
1979	16,488 ^b	1.6 million	60
1980	16,957 ^c	2 million +	85

^a July 1 - December 31, 1977.^b As of July 11, 1979. This figure includes 3,381 communities in the Regular Program and 13,107 in the Emergency Program.^c As of November 15, 1980, including 5,571 Regular and 11,386 Emergency.

NA - Not Available.

Source: Federal Emergency Management Agency Data

Compiled by Rutherford H. Platt

Table 2

FLOODPLAIN MANAGEMENT MEASURES
USED BY NFIP COMMUNITIES

	Regular Phase (N=798)	Emergency Phase (N=405)
Minimum Elevation	84%	63%
Zoning	77	71
Subdivision Regulations	76	75
Floodproofing Requirements	68	40
Floodway Regulations	60	35
Sedimentation and Erosion Controls	31	24

Source: Raymond J. Burby and Steven P. French, "Coping with Floods: The Land Use Management Paradox" Journal of the American Planning Association (forthcoming)

Table 3

FLOOD INSURANCE STUDIES: NUMBER AND COST 1969-80

	Number of Studies Initiated	Number Completed	Regular Program Communities with Elevations	FIS Appropriation (\$ Million)	FIS Average Cost
FY 1969-74	1614				
1975	1156	550 ^a			
1976 (TQ)	2323	541			
1977	1473	1088			
1978	2121	896		349 ^d	27,000
1979	791	1413	3037 ^b	85	39,000
1980	<u>530</u>	<u>1330</u>	<u>1440^c</u>	<u>69.5</u>	55,000
	10,008	5818	4477 ^c	503.5	62,000 (1981 est.)

^aFY 1969-75^bFY 1969-79

(Source: 1981 FEMA Budget Justification)

^cEstimated (Source: 1981 FEMA Budget Justification)^dFY 1969-1978

Source: Federal Emergency Management Agency Data
 Compiled by Rutherford H. Platt for Committee on
 Flood Insurance Studies, National Research Council
 November 23, 1980

Table 4. NATIONAL FLOOD INSURANCE PROGRAM
PROGRAM ACTIVITY BY SELECTED ZONES^a
(April 23, 1980)

	V Zones		A1-A30 Zones		Emergency
	New	Existing	New	Existing	
No. of Policies	4,314	52,087	46,201	476,243	661,914
Amt. of Insurance	204	1,995	789	21,979	55,973
No. of Claims ^b	\$405 million	\$3.1 billion	\$3.2 billion	\$20.1 billion	\$19.8 billion
Premiums Received ^b	\$685,000	\$11.7 million	\$5.6 million	\$75.5 million	\$132 million
Payments on Claims ^b	\$3.3 million	\$20.1 million	\$8 million	\$153 million	\$273 million
Ratio of Payments/ Premiums	4.8	1.8	1.42	2.04	2.0

^a Excludes unnumbered A Zones, B and C Zones

^b 1/1/78 - 4/23/80

Source: Compiled from FIA data by
Rutherford H. Platt
May 4, 1981

Table 5
National Flood Insurance Program
Activity By SMSA/Non-SMSA Location
(April 8, 1981)

	Total	SMSA	Non-SMSA	% Non-SMSA
Population	210 million	142 million	68 million	32%
Regular Program (No. of Communities)	6,194	3,139	3,055	49%
Emergency Program (No. of Communities)	10,834	2,598	8,236	76%
No. of Policies	1.4 million	1.4 million	600,000	30%
\$ Amount of Coverage	\$95 billion	\$73 billion	\$22 billion	23%
No. of Claims	68,134	145,110	53,024	27%
\$ Amount of Claims	\$978 million	\$781 million	\$197 million	20%

APPENDIX A

Floodplain Management and the NFIP

The role of floodplain management in the National Flood Insurance Program (NFIP) may best be understood by reference back to the statements of those who were most closely concerned with the establishment of the Program. In the absence of private insurance coverage against flood losses, public deliberation concerning the possible need for a national flood insurance program arose in the early 1950's. In 1956 Congress adopted a national flood insurance act which, however, was never funded or implemented. Efforts to revive the concept occurred in the early 1960's, culminating in a directive in the Southeastern Hurricane Disaster Relief Act of 1965 that the Department of Housing and Urban Development prepare a feasibility study on flood insurance. At about the same time, the Bureau of the Budget commissioned a special task force to review all aspects of national flood policy. These two reports, prepared under the direction of Marion Clawson and Gilbert F. White respectively, were prepared in tandem and submitted to Congress in late 1966. Both reports recommended establishment of a national flood insurance program with important qualifications.

The Clawson report¹ recommended establishment of a national flood insurance program to serve two purposes: (1) to spread the costs of financial assistance to flood victims among all occupants of flood hazard areas and (2) to help prevent unwise use of land where flood damages would increase in the future. The report stressed the importance of two safeguards to limit future growth in floodplains. First, the use of actuarial rates to charge floodplain occupants a premium consistent with the risk inherent in their location. (However, the report admitted that rates might have to be subsidized by the federal government for existing buildings in order to attract widespread participation.) Second, "There should be incentives for state and local governments to practice wise management of flood-prone areas, by means

of such devices as effective channel encroachment laws, good land use zoning, and others."

The White report² considered the feasibility of flood insurance as one of many possible public adjustments to floods. This report was even more cautious than the Clawson report regarding the danger of unwarranted floodplain encroachment:

A flood insurance program is a tool that should be used expertly or not at all. Incorrectly applied, it could exacerbate the whole problem of flood losses. . . . It would not be improper to subsidize flood loss insurance for existing property. That might be done, provided owners of submarginal development were precluded from rebuilding destroyed or obsolete structures on the floodplain. However, to the extent that insurance were used to subsidize new capital investment, it would aggravate flood damages and constitute gross public irresponsibility. (pp. 17-18)

The White report went on to identify floodplain management as critical to a national flood insurance program:

Planning and coordinating the development of the flood plain is required as part of any significant effort to break the pattern being fostered by present federal policies concerning flood damage prevention, namely the continuing sequence of losses, protection, and more losses. This requires leadership of the federal government in a fashion that will gain effective participation by the state and local governments. Although the federal agencies can exercise direct control over federal installations in the flood plain, the far greater number of decisions affecting new development are made by private individuals and corporations within the limits set by state and local plans and regulations. (p. 25)

The theme that flood insurance must be contingent upon floodplain management was restated by Robert C. Wood, Undersecretary of Housing and Urban Development, at committee hearings on the proposed program in 1967:

It would not be logical as a matter of public policy to permit insurance to be made available in localities which did not, on their own initiative, or on the initiative of state or local authorities, take whatever steps would be appropriate to assure that their citizens would not unknowingly acquire and develop property where it is subject to known flood hazards.³

Statutory Authority

Congress in the National Flood Insurance Act of 1968⁴ agreed with Clawson, White, and Wood. If incorporated floodplain management and actuarial rates into the national program. With respect to insurance rates, Section 1307 authorizes the Secretary of HUD to "undertake and carry out such studies and investigations . . . as may be necessary to estimate, . . . risk premium rates for flood insurance . . . based on

consideration of the risk involved and accepted actuarial principles," The Act, however, in Section 1308 authorizes the charging of rates less than actuarial "where necessary." According to the Legislative History, Congress intended that rates "will be reasonable and will encourage persons to purchase flood insurance."⁵ This has been interpreted by the Federal Insurance Administration to permit the establishment of a dual rate procedure involving subsidized rates for "existing construction" in the floodplain before a certain cutoff date and actuarial rates for new construction or "substantial improvements" made after such date.

As for floodplain management, the National Flood Insurance Act, Section 1360, authorized the Secretary of HUD (now the Director of the Federal Emergency Management Agency) to:

- (1) identify and publish information with respect to all flood-prone areas, including coastal areas located in the United States, which have special flood hazards, within five years following . . . this Act, and
- (2) establish flood-risk zones in all such areas . . . within fifteen years following such date.

Section 1360 has yielded a two-stage program of floodplain mapping and flood insurance studies. The first stage was the preparation of Flood Hazard Boundary Maps for all identified flood-prone communities (approximately 16,000). The second stage is the preparation of detailed Flood Insurance Studies including Flood Insurance Rate Maps and Floodway Maps.

Section 1361 authorizes the establishment of "criteria for land management and use" in floodplains. Specifically FIA/FEMA is required to:

- (a) . . . carry out studies and investigations . . . with respect to the adequacy of state and local measures in flood-prone areas as to land management and use, flood control, flood zoning, and flood damage prevention, and may . . .
- (c) . . . develop comprehensive criteria designed to encourage, where necessary, the adoption of adequate state and local measures which, to the maximum extent feasible, will --
 - (1) constrict the development of land which is exposed to flood damage where appropriate,
 - (2) guide the development of proposed construction away from locations which are threatened by flood hazards,
 - (3) assist in reducing damage caused by floods, and
 - (4) otherwise improve the long-range land management and use of flood-prone areas, and . . . provide any necessary technical assistance to State, interstate, and local

governmental agencies, to encourage the application of such criteria and the adoption and enforcement of such measures.

It is highly significant in construing the statute to notice that the authority to prepare floodplain maps and studies under Section 1360 and the authority to encourage floodplain management through criteria and technical assistance under Section 1361 are independent. The task promoting floodplain management need not be tied to the time schedule or priorities of the mapping and flood insurance study program. Congress clearly intended that floodplain management should be pursued regardless of the status of detailed flood insurance studies.

Two subsequent amendments have vastly affected the level of NFIP activity and the nature of its impact. In 1969, the Act was amended to permit the sale of insurance "without regard to any estimated risk premium rates" pending the completion of detailed flood insurance studies for a particular community. This led to the creation of the "emergency program" under which communities were administratively accepted into the Program upon satisfaction of minimal repeat minimal floodplain management measures and their property owners could qualify for limited levels of insurance coverage at flat rates subsidized by the federal government.

The other major amendment to NFIP occurred in the adoption of the Flood Disaster Protection Act of 1973 (PL 93-234). This Act made purchase of flood insurance mandatory as a condition to approval of federal or federally-related loans for acquisition or development of property in identified flood hazard areas. It also prohibited federal disaster assistance in communities not enrolled in NFIP.

Subsequent to these modifications George K. Bernstein, then Federal Insurance Administrator reaffirmed the Program's dedication to sound floodplain management:

It is the combination of effective land use controls and full actuarial rates for new construction that makes the national flood insurance program an insurance program rather than a reckless and unjustifiable giveaway program that could impose an enormous burden on the vast majority of the nation's taxpayers without giving them anything in return.

REFERENCES

¹U.S. Senate, Committee on Banking and Currency, Insurance and Other Programs for Financial Assistance to Flood Victims (89th Congress, 2d Session, committee print: September 1966).

²U.S. House of Representatives, Committee on A Unified National Program for Managing Flood Losses (House Document 465, 89th Congress, 2d Session), 1966.

³U.S. House of Representatives, Committee on Banking and Currency, Subcommittee on Housing, Hearings on the National Flood Insurance Act of 1967 (90th Congress, 1st Session)

⁴Title XIII, Housing and Urban Development Act of 1968 (Public Law 90448).

⁵1968 U.S. Code, Congressional and Administrative News, Vol. II p. 2969.

⁶U.S. House of Representatives, 1973. Committee on Banking and Urban Affairs, Subcommittee on Housing and Community Development, Hearings on the National Flood Insurance Program (93rd Congress, 1st Session).

⁷U.S. Congress, 1973, House Committee on Banking and Urban Affairs, May 8, 1973 Hearings (93rd Congress, 1st Session).

STATEMENTS OF:

LAWRENCE LARSON, FLOOD PLAIN AND SHORE LAND MANAGEMENT SECTION, STATE OF WISCONSIN, AND CHAIRMAN, ASSOCIATION OF STATE FLOOD PLAIN MANAGERS

SHARON NEWSOME, RESOURCE SPECIALIST, NATIONAL WILDLIFE FEDERATION

THOMAS BRESENHAN, SENIOR PROGRAM ANALYST, FLOOD HAZARD REDUCTION, SEDA, COUNCIL OF GOVERNMENT, PENNSYLVANIA

STATEMENT OF LAWRENCE LARSON

Senator SPECTER. I would like to call Sharon Newsome, Lawrence Larson, and Thomas Bresenhan.

Is Sharon Newsome here?

Mr. Larson, we have your statement. It shall be made a part of the record at the close of your oral presentation. If you could summarize, we would appreciate it.

Mr. LARSON. Thank you, Senator.

I want to start off by indicating I am representing not only the State of Wisconsin's Flood Plain and Shore Land Management Section and the Association of State Flood Plain Managers, but I am also speaking for the National Flood Insurance Researchers, an association comprised of all of these flood plain management agencies of all of the States.

STATE'S SUPPORT

First of all, I want to indicate our support of the national flood insurance program and explain why we feel it is important in the States.

As an example, in Wisconsin, we have had a Flood Plain Management Act since 1965. Our law requires that all counties, cities, and villages adopt and regulate their flood plains. That includes 550 such communities. We have worked for years on studies, ordinances, on adopting and administering these ordinances.

Many of our communities prohibit all structures in the entire flood plain. But even in Wisconsin, where we are considered to have one of the stronger programs in the Nation, the flood insurance program is an important element for us and an important asset. It coordinates many Federal activities, especially following disaster. It insures that the Federal Government and all of the States are consistent in their approach toward flood plain management. And it does provide an incentive for our communities to adopt regulations because they cannot obtain insurance on existing structures. So that incentive is important.

It does help to provide maps, which Rut mentioned, and it gives us a national standard.

George Bernstein mentioned the importance now that all States in the Nation do use the 100-year standards. Before that, we had a lot of problems, because Wisconsin proposed 100 years and adjoining States proposed 50 years. We had a lot of problems with industry and builders telling us, "Gee, if you are that restrictive here, we are going to move to the next State." Providing that national standard was very important.

With regard to your first question, Has the NFIP discouraged development? I would follow Rut's reasoning. In the floodways, the high flood-prone areas along rivers, the answer is definitely "Yes," flood plain areas prohibit construction in the flood plain. If you go inland, I think you will find very little construction.

Remember now, the program is not designed to prohibit all development, only in floodway areas and those flood fringe areas which, unfortunately, includes some of that high-hazard coastal area. It is not intended to prohibit; it is merely intended to guide and floodproof that new development.

Senator SPECTER. You say it is not designed to prohibit?

Mr. LARSON. Yes, to try to make it safe from damage during that 100-year event, or that 1-percent event. I think in fringe areas, that has happened. That is to elevate and floodproof so when the flood comes up, you simply don't get wet. That is much harder to do in a coastal area because you are subject to that velocity and wave height.

The question that comes up then is, Are the regulations strict enough in that coastal area?

Senator SPECTER. You are suggesting that all past construction be required to pay actuarial rates for flood insurance once the rate map is established. That is your thought?

Mr. LARSON. That is an alternative. For example, that is one of the problems now in the emergency program. You could build a new structure with insurance at substantial rates and that insurance would continue ad infinitum at the moment.

Senator SPECTER. And you think that insurance should be changed to require the payment of the actuarial sound rates?

Mr. LARSON. Yes, I think that is one of the ways you make sure we don't continue to subsidize new construction.

Senator SPECTER. If that were to be done, would you need the Federal insurance program or do you think the private sector would come in?

Mr. LARSON. I have to go back to George's and Pete's testimony and say, it doesn't seem the private insurance is looking at the flood insurance program until the whole program becomes actuarially sound, and I think it will eventually.

Senator SPECTER. How would you establish the actuarial rate if it is not, as you put it, actuarially sound? Do we have enough experience to realistically establish an actuarial rate to take out the subsidy component?

Mr. LARSON. I think you establish the actuarial rate on the best information. What we have tried to establish as actuarial rates now apparently is not. I think Mr. Platt mentioned that.

In coastal areas it definitely is not high enough. Using a better base of information, if we established a new actuarial rate—and I think as any private insurance company would do—we would see what the experience would be after a few years and if, in fact, claims were proportionate to premiums, then we have an actuarially sound program.

RAISING THE RATES

Senator SPECTER. You have an interesting observation in your statement about raising the rate 20 percent on the structure after each claim is filed until it is at the actuarial rate. Would you care to expand more on that?

Mr. LARSON. I think that is another alternative of saying do we continue to subsidize existing development forever, and one way to discourage the amount of claims that continue to come in or one way to move them toward actuarial rates would be to do like insurance companies do on cars. A lot of people don't turn in insurance claims because if they do they know their insurance premiums would go up. If that was used with the flood insurance, some claims would not be filed.

Senator SPECTER. How far do you think the rates are from actuarial rates?

Mr. LARSON. I don't think we have enough experience to tell us that. The data in the charts Mr. Platt provided are a couple years of data. I am not sure the experience we have shown there would demonstrate we are that far from actuarial. Some of the claims that were paid there probably occurred from floods that were larger than the 100-year flood. We are only requiring people to protect themselves from the 100-year level. If you have a flood that exceeds that, you are going to get claims and claims that askew your data.

I don't know how far away we are. I think we need a longer period to define that.

Senator SPECTER. Are there any other key points to make, Mr. Larson, before we turn to the next witness?

FLOOD INSURANCE STUDIES

Mr. LARSON. Yes. I would like to support, again, Mr. Platt's statement, that one way to get communities out of the problem area of the emergency program is to get them into that regular program, put regulations into effect. That movement does not occur until you have a study showing the flood plains and flood elevations. I do think we have to complete the flood insurance studies. At least Congress will have to support the completion of those studies for the 60,000 communities that do not yet have them. Then we can get them into the program and work with them.

The States are providing as much technical assistance to make sure they are doing the job out there and doing as much monitoring as we can to find out if they are implementing those regulations properly. That is the other half of the problem, monitoring and making sure they do administer the regulations properly.

Senator SPECTER. What is your sense on that? Is that being done now?

Mr. LARSON. My experience has been that we have a strong State program, the States are insuring that is being done.

Senator SPECTER. It is not being done by the Federal Government?

LIMITED FEDERAL STAFF

Mr. LARSON. The Federal Government simply does not have the resources. FEMA has a very, very skeletal staff throughout this Nation, one person usually to handle a State. With our State of 550 communities, I have a staff of 20 people to handle the State program.

Senator SPECTER. Is that adequate?

Mr. LARSON. No; but it is certainly better than one.

Senator SPECTER. What is adequate?

Mr. LARSON. I would say we are approaching adequate.

Senator SPECTER. How close are you?

Mr. LARSON. I would say another five to six people scattered in our field offices where the communities are close to them, where a community person can call up somebody they know and say, "John, I have this problem; help me."

Senator SPECTER. How long have you been at this work, Mr. Larson?

Mr. LARSON. About 10 years.

Senator SPECTER. Thank you very much. I very much appreciate your testimony.

[The statement follows:]

STATEMENT OF LARRY A. LARSON

The Association of State Flood Plain Managers—ASFPM—is composed of representatives from the State flood plain management agencies in the United States. Many States have had active flood plain management programs for years while others are just starting to develop that capability in response to the national flood insurance program—NFIP. In all States, the NFIP has been an important unifying element of a total Federal-State-local coordinated effort in flood plain management.

We strongly support the national flood insurance program because it is the most cost-effective means of providing flood damage reduction on a large scale in the Nation and it provides the basis for States and local government to assume their rightful roles in flood plain management.

Flood plain management, including flood hazard mitigation, must be implemented at the local level. It's important that local communities receive assistance in two major

categories: (1) technical assistance to adopt and administer flood plain regulations, and (2) adequate maps showing delineation at flood plains and floodways. The States can best provide the bulk of the technical assistance because we are closer to the communities and can integrate the many State and Federal programs for the local communities. The Federal agencies most appropriately can provide essential mapping to the local community. FEMA has been accomplishing this through its flood insurance studies.

As you can see, States and our local communities have a vital interest in the shape and content of the national flood insurance program.

Has the NFIP accomplished its objective to discourage development in the floodway and flood plain?

It certainly has discouraged development in riverine floodways. In order to obtain flood insurance for existing structures, the local community must adopt flood plan regulations that prohibit most structures in floodways. This, combined with the flood insurance rate structure has virtually eliminated floodway encroachment in those communities in the regular program. Even in the flood fringe areas of regular program communities, all new construction must be built so it would not sustain damage during the 100-year flood. If flood insurance claims are still occurring here, it would be for the following reasons:

1. The flood was greater than 100-year flood: for example, Mobile, Ala., or;

2. The community is not properly administering its flood plain regulations. This can be overcome by: (a) The State or FEMA providing better technical assistance to that community for better understanding and implementation of the regulations; (b) monitoring the communities closer, and suspending those communities that are intentionally violating the regulations, thereby eliminating the availability of flood insurance and Federal assistance.

Remember, the NFIP is not intended to prohibit new construction in the entire flood plain, only in high-hazard areas.

In the emergency program, flood insurance for new construction might subsidize improper construction if there is no regulation, since there is no detailed study map. However, many communities do regulate construction based upon (1) studies by States or other Federal agencies, or (2) a simple ordinance that prohibits all development in the approximate flood hazard area.

The alternatives to eliminating this subsidy include:

1. Moving communities to the regular program as quickly as possible—the States will assist in this effort and Congress must recognize this will require that FEMA have the financial resources to complete flood insurance studies for about 7,000 communities.

2. Require a case-by-case determination of the actuarial rate for new construction even though there is no detailed flood insurance rate map available.

3. Require that all post-1981—or 1982—construction will be required to pay actuarial rates once the rate map is furnished. This should encourage proper construction in order to avoid unreasonable future flood insurance costs.

Is the transfer of funds to the flood insurance funds necessary and appropriate?

The flood insurance program should ultimately be self-supporting. We should not expect that to happen before the regular program is fully implemented in all communities. We do feel the deficit can be reduced in the future by some revision of the insurance rate structure.

Should the flood insurance rate structure be increased as recommended by OMB?

Yes. Flood insurance rates should be increased in certain areas and, ultimately, all structures should pay actuarial rates. However, existing structures should not be expected to pay actuarial rates immediately. Remember, the fact that citizens with existing structures in the flood plain can get flood insurance at reasonable rates provides a considerable incentive for communities to join the program. Without insurance, there will be more communities not joining the program. A community not in the program will have little incentive and guidance for proper regulation of new construction.

Insurance rates for existing structures could move from the subsidized rate to the actuarial rate by some means, such as:

1. Fixed date—By a predetermined date: for example, the year 2020: or

2. Increase after each claim—Each time a claim is filed on a structure the rate would increase 20 percent until it is at the actuarial rate. This will also discourage small claims.

OTHER KEY ISSUES

From the above information, it can be seen that communities must be moved to the regular program as quickly as practicable. To do that, there needs to be sufficient funds to complete flood insurance studies for the remaining 7,000 communities. We urge your support of those funds in the next few years. Until that time, the emergency program must be continued so it can provide the incentive for communities to move into the regular program.

We, the States, will continue to work with Congress and FEMA to insure that flood insurance rates and regulations prevent unwise development in high-risk areas, such as floodways and vulnerable barrier islands. Development in the remainder of the flood plain must be guided in such a manner that damages do not occur during the 100-year event.

Our experience shows strong State programs result in better flood plain management. The States will continue to build capabilities in flood plain management and will assist, as feasible, to assess the effectiveness of the NFIP. Thank you for the opportunity to provide our ideas.

STATEMENT OF THOMAS BRESENHAN

Senator SPECTER. Mr. Bresenhan, you may proceed.

Mr. BRESENHAN. First of all, you have my testimony. I would like to highlight some points.

Senator SPECTER. Thank you very much. It will be made a part of the record following your summation.

Mr. BRESENHAN. The organization of SEDA, Council of Government, is a sub-State regional planning and development agency serving 11 countries in central Pennsylvania.

We have been pursuing a flood recovery plan since Agnes in 1972. One of the things we have done with the local river basin commission is developed an integrated program. I would like to talk about the role of flood insurance in that program.

First of all, it is important as a recovery tool to the community and individuals in Pennsylvania. Flood insurance has been a very good friend to Pennsylvania.

Senator SPECTER. A very good friend to Pennsylvania?

Mr. BRESENHAN. Flood insurance; yes. There were \$3 million worth of claims in 1978, \$5 million in 1979.

INSURANCE AND DEVELOPMENT

Mr. BRESENHAN. There are three questions. Has subsidized insurance discouraged development? I queried quite a few people and the answer is uncertain. I think a better question would be, Have municipalities implemented their regulations? My answer is, "Yes." I am astounded at what happened. In rural Pennsylvania, people went from no regulations to flood plain regulations first. Overall, they have done a splendid job. A strong State interest, as Larry said, is helpful. Mr. Wilcox was director of the department of Pennsylvania community affairs. They haven't continued an active role.

They are having two problems I was able to identify. Flood insurance regulations come into an area that already has flood plain regulations and the Federal regulations are less stringent.

In one case, in Montgomery County, they mapped their flood plains according to soils. The flood insurance program doesn't do that, first of all. Second of all, the county ordinance suggested local governments prohibit development within the flood plain.

The Federal Government came in and then the prohibition wasn't there. The communities decided to go with the Federal standards rather than staying with the county.

That is one problem.

Another one is conversion of the communities from the emergency program to the regular program. In Pennsylvania, about half of the municipalities are going to have studies under way or completed and will move into the regular program in a traditional way. The other half we are not so sure of. There is talk now of not continuing the studies, not providing communities with detailed descriptions of their flood plain, floodway. There is talk of just slipping them into a program with a letter saying, "Now you are in the regular program," which means they increase coverage without the technical capabilities that were available to other communities to manage their flood plains.

That might be a way to reduce growth.

Senator SPECTER. A way to reduce growth from one program another without sufficient supervision to see to it they qualify?

Mr. BRESENHAN. Right.

Senator SPECTER. What are the essential differences between the two programs?

Mr. BRESENHAN. Many emergency communities do not regulate growth at all. They have building codes or zoning ordinances and level D. They require a whole spectrum of things they must do.

Senator SPECTER. Level D?

Mr. BRESENHAN. Level D. Level D communities are provided with a flood plain map, flood fringe map, good profile of the community. It is easy for the local building code officer to implement the program. If they are asking him to implement a program with a map in which there is just sort of a gray area, that is more difficult to do; they are not going to do the implementation fairly.

Half of Pennsylvania's communities will be provided with technical information through the flood insurance program, which is great. We are worried about the second half which will be converted to the regular program without the studies. I would advocate development of the maps.

MOBILE HOMES

There is an area I am afraid the flood insurance program has not induced growth and that is with mobile homes. What happens in a flood event, mobile homes have the steepest state of damage occurred. It does not take much to get them off their cinder block platform and send them down river. Then they go in and get flood insurance and put a new mobile home right back there. So you have induced growth. You have improved the damage there.

The private sector does the same thing. In my experience, I did some research on this in Pennsylvania. The private sector also has an interesting wrinkle to it. Very often parkowners and insurance companies, to make sure those units don't burn down and stay there, they provide the owners with insurance and during a flood threat period, the owner of the park is in there hustling those units out of the park, away from the flood waters, reducing the claims. Some companies station agents at the park. Let's say they are covering 90 percent of the units in the park; they don't want to pay those fees.

You need to cut the deficit, just reduce the capability of mobile homes to purchase flood insurance under the Federal program. The rates, depending where you are at—

Senator SPECTER. The rates are what, depending on where you are at?

Mr. BRESENHAN. In Pennsylvania they were comparable to flood insurance rates for mobile home units. If you are looking at actuarials, you would say they are comparable.

Senator SPECTER. The private sector does it at about the same costs?

INSURANCE RATES

Mr. BRESENHAN. There were arguments it is a little more expensive. I think it is about the same. There is also a loss investment scheme involved.

On the idea of rate increase, as you know, Pennsylvania communities that are on the flood plain, very often they are retired, fixed-income families. They have bought insurance, sometimes because they had to, sometimes because they recognized the need to. FIA has claimed that the rates are too low and they can extend a number of policies from \$1.8 million in the Nation to \$7 million.

Two things will happen as rates go up. One is the fixed-income folks will be more pressed. The second thing, the people on the margins and low-risk areas are going to drop their policies. The policies are not going to be maintained by people in the high-risk areas except under those conditions where the bank requires them to have it, or the lending institutions. You are going to increase the probability of high claims. You have people up higher who are not going to have policies, they are going to have low claims.

I am not so sure by raising the rates they will pump those out and lose that more profitable premium.

FLOOD WARNINGS

Now I want to go on with Mr. Swift's comment of loss reduction. Throughout the central part of Pennsylvania, it is clearly the case, people are building new residences to code heights and some innovative techniques. We have also found a very significant way to reduce losses in Pennsylvania is to effect flood warning systems and tie the two together. I initially began my comments with flood insurance as part of an integrated approach and now I am going to do some integration. In a couple of cases where people went back in and investigated after an event—for instance, outside of Middletown, there was \$600,000 documented reductions in damages by the warning system.

Senator SPECTER. Warning system reported by whom?

Mr. BRESENHAN. Susquehanna River Basin Commission. A similar situation occurred in Lycoming County, Pa. I want to take that a little further. Lycoming County operates a warning system. It is a cooperative system between the Weather Service office in Williamsport and private industry. It is an extraordinary combination. They have 80 observers throughout the watershed. I would argue that with an effective warning preparedness program that the actuarial rates probably enforced in that area are really less than they are charged because of the effectiveness of

the warning program. In fact, to increase their rates would go against the effectiveness of the warning program.

Senator SPECTER. How does the warning program work in reducing the damages? Do people leave?

Mr. BRESENHAN. You have enough time to get things out of the basement. We are talking about contents, nonstructure. You are not going to move the building, except mobile homes.

Senator SPECTER. Are mobile homes moved with a warning?

Mr. BRESENHAN. Yes. Yes and no. It depends on the initiative of the parkowner, and sometimes you can't. We have 200 mobile home units in 6 hours of warning, that is not. Two hundred mobile home units and 3 days' warning, that is possible.

Senator SPECTER. Some mobile homes are not very mobile, either, are they?

Mr. BRESENHAN. Not at all. In fact, there is an argument to flood preparedness and flood insurance. It might be wise—if you don't mind, I would like to get back into the testimony and make my point clear—it might be wise for the flood insurance program to invest in flood preparedness warning programs so as to reduce cost of flood insurance.

Since a large share of flood losses are ultimately borne by the Federal Government, the result on the Federal side of the reduction in the amount of subsidy now provided for the flood insurance program and lower expenditures for disaster aid. For communities, the cost for the warning and preparedness program would be offset by savings in flood insurance.

The warning and preparedness programs created in response to this incentive will reduce loss of life, injury, hardship, and damage to uninsured property, all of which are not presently addressed in the flood insurance program.

Senator SPECTER. How systematic are the warning systems in their application?

Mr. BRESENHAN. It depends on where you are at all across the State.

Senator SPECTER. Any way to improve that system?

Mr. BRESENHAN. In Pennsylvania the State civil defense mandated after the second Johnstown flood—

Senator SPECTER. When was that?

Mr. BRESENHAN. In 1977—that every county would have a flood warning system—July 1977—every county would have a flood warning system. That was kind of a push. That plus some recognition by local governments of a need for it have promoted these systems. In the central part of the State we are also participating in an incentive by the Appalachian Regional Commission to implement flood warning systems and automatic radio reporting rain gauges and computer terminals. The Pennsylvania Legislature decided to fund the maintenance of the system.

Senator SPECTER. That would not necessarily have to be a State matter. That could be a subject of Federal legislation.

Mr. BRESENHAN. For the flood insurance program, it only makes sense. That is one of the deficiencies in the program on the loss reduction side.

Two other points I want to make on that—and I didn't bring additional copies, but I wanted to show you this to start with something. We can take the flood insurance map and use it as a flood warning device by taking the information provided by that and hydrologic information and develop forecast zones.

A forecast is made from a spot on a gauge. They take a spot on the gauge—31 feet, 32 feet—and relate it to an area in the community.

The flood insurance mapping program provides the base data for this. We can provide on here prominent features, evacuation routes, things like that.

I will leave this with you.

Senator SPECTER. Thank you very much. Do you have any other points you would like to make because we are running late.

Mr. BRESENHAN. One other point. This is directed to you. I am going to take the opportunity to do it.

I mentioned earlier the warning system is a cooperation of industry—in fact, they initiated the system—county government and Weather Service. Along with the budget cuts in the wind now, the Weather Service is proposing to remove the Weather Service near Williamsport. It will lessen their warning time, their leadtime. In fact, it can only lead to increased deficit of the flood insurance program.

Thank you.

Senator SPECTER. I appreciate your comments. It was directed to me in terms of a constituent program. We have been aware of that. We appreciate your calling it to our attention.

[The statement follows:]

STATEMENT OF THOMAS P. BRESENHAN

SEDA-COG IS A SUB-STATE REGIONAL PLANNING AND DEVELOPMENT AGENCY SERVING 11 COUNTIES IN CENTRAL PENNSYLVANIA. SEDA-COG IS ABLE TO PROVIDE A FULL RANGE OF FINANCIAL AND TECHNICAL ASSISTANCE DUE TO ITS DESIGNATION AS A DEVELOPMENT DISTRICT UNDER BOTH THE APPALACHIAN REGIONAL COMMISSION (ARC) AND THE ECONOMIC DEVELOPMENT ADMINISTRATION (EDA). SEDA-COG OPERATES AN ACTIVE FLOOD HAZARD REDUCTION PROGRAM WHICH IS A DIRECT OUTGROWTH OF THE REGIONAL FLOOD RECOVERY PLAN PREPARED AFTER THE FLOOD CAUSED BY HURRICANE AGNES IN JUNE 1972. THAT PLAN WAS FUNDED BY THE APPALACHIAN REGIONAL COMMISSION AND A COMPREHENSIVE PLANNING GRANT FROM HUD.

IN THE YEARS FOLLOWING DEVELOPMENT OF THE PLAN, SEDA-COG HAS ENDEAVORED TO GUIDE AND ASSIST CITIZENS, INDUSTRIES, AND LOCAL GOVERNMENTS TO REDUCE FLOOD HAZARDS USING A VARIETY OF TECHNIQUES, INCLUDING SENSIBLE LAND USE DEVELOPMENT, FLOOD WARNING SYSTEMS, STORMWATER MANAGEMENT, FLOOD PREPAREDNESS, AND FLOOD INSURANCE ALL WITH THE ADVICE OF A CITIZEN'S FLOOD HAZARD REDUCTION ADVISORY COMMITTEE (ATTACHMENT 1). AFTER A THOROUGH REVIEW OF THE FLOODING CIRCUMSTANCES IN THE REGION AND ANALYSIS OF THE SUSQUEHANNA FLOOD CONTROL REVIEW STUDY PREPARED IN 1980 BY THE BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS, IT BECAME APPARENT THAT A MORE FULLY INTEGRATED FLOOD HAZARD MITIGATION EFFORT WAS NECESSARY. SUCH AN EFFORT IS ESSENTIALLY CALLED FOR IN THE U.S. WATER RESOURCES COUNCIL'S UNIFIED NATIONAL PROGRAM FOR FLOOD PLAIN MANAGEMENT. TO ACCOMPLISH THIS END, SEDA-COG REQUESTED THAT PRESIDENT CARTER INITIATE SUCH AN EFFORT IN 1978. IN RESPONSE TO THAT REQUEST, THE U.S. WATER RESOURCES COUNCIL REQUESTED THE SUSQUEHANNA RIVER BASIN COMMISSION (SRBC) TO TAKE THE LEAD IN DEVELOPING SUCH A PROGRAM.

SINCE THEN, THE SRBC/SEDA-COG FLOOD HAZARD MITIGATION PROGRAM HAS MOVED FORWARD GRADUALLY. A FEDERATION/STATE/LOCAL INTERAGENCY TASK FORCE HAS BEEN FORMED AND HAS MET SEVERAL TIMES. MOST RECENTLY, THE TASK FORCE HAS REVIEWED AN EXTRAORDINARY PROBLEM IN PHILIPSBURG, PENNSYLVANIA, WHERE FLOODING, POOR SURFACE DRAINAGE, ACID DRAINAGE FROM ABANDONED COAL MINES, AND SETTLEMENT PATTERNS HAVE COMBINED TO PRODUCE NOT ONLY FLOOD DAMAGES, BUT ALSO HIGH RISK OF VECTOR BORNE ENCEPHALITIS. SOLUTIONS TO PROBLEMS IN THIS COMMUNITY WILL REQUIRE A MULTI-FACED APPROACH.

AN EFFECTIVE INTEGRATED FLOOD HAZARD MITIGATION PROGRAM FOR ANY COMMUNITY CONTAINS AS ONE OF ITS BULWARKS THE ABILITY OF CITIZENS AND BUSINESSES TO PURCHASE FEDERAL FLOOD INSURANCE. CHANGES TO THE FLOOD INSURANCE PROGRAM WILL BE VIEWED IN THE CONTEXT OF ITS

INFLUENCE ON THE DEVELOPMENT AND CONTINUATION OF AN INTEGRATED PROGRAM,

GENERAL COMMENTS ON FLOOD INSURANCE

FLOOD INSURANCE PROTECTS AGAINST FLOOD LOSSES AND PROVIDES FAMILIES AND BUSINESSMEN WITH A DEPENDABLE ARSENAL OF WEAPONS FOR PLANNING FLOOD DEFENSE AND RECOVERY STRATEGY. IT IS ESSENTIAL TO EXAMINE PRESENT COVERAGE AND PAYOUTS TO UNDERSTAND THE SITUATION AS IT IS NOW, AND THUS, PROVIDE A BASIS FOR JUDGING PROPOSED CHANGES TO THE PROGRAM. IT IS ALSO ESSENTIAL TO BALANCE THE ANTICIPATED BENEFITS OF THE PROPOSED CHANGES AGAINST THOSE THAT MIGHT BE ACHIEVED THROUGH ACCELERATED EMPHASIS ON LOSS REDUCTION. THIS LATTER POINT WILL BE EMPHASIZED THROUGHOUT, SINCE IT APPEARS TO BE AN APPROACH NOT FULLY EXPLORED.

BY VIEWING A SUMMARY OF FLOOD INSURANCE CLAIMS PREPARED BY THE SUSQUEHANNA RIVER BASIN COMMISSION, ONE GETS A READY PROFILE OF THE EXISTING SITUATION IN THE SUSQUEHANNA RIVER BASIN. IN THE PENNSYLVANIA PORTION OF THE SUSQUEHANNA IN 1978, THERE WERE 858 FLOOD INSURANCE CLAIMS AND \$3.3 MILLION IN PAYMENTS. IN 1979, THOSE FIGURES INCREASED TO 2,313 CLAIMS RECEIVING A TOTAL OF \$5.4 MILLION IN PAYMENTS. THESE ARE VERY SIZABLE PAYMENTS IN YEARS WITH ONLY MINOR FLOOD EVENTS.

HAS THE AVAILABILITY OF SUBSIDIZED FLOOD INSURANCE DISCOURAGED FLOODPLAIN DEVELOPMENT?

A DIRECT ANSWER TO THAT QUESTION IS NOT NOW POSSIBLE BECAUSE THE EXPERIENCE OF COMMUNITIES IN RURAL PENNSYLVANIA HAS BEEN MIXED. DISCUSSIONS WITH PERSONNEL FROM PENNSYLVANIA, REGION III-FIA, SUSQUEHANNA RIVER BASIN COMMISSION AND LOCAL OFFICIALS REVEAL NO GENERAL CONSENSUS. IN MY VIEW, THE NFIA HAS DISCOURAGED DEVELOPMENT. AN EASIER QUESTION IS: "HOW HAVE MUNICIPALITIES IMPLEMENTED THEIR FLOODPLAIN REGULATIONS?" ANSWER - PRETTY WELL, CONSIDERING IT WAS THE FIRST STEP IN LAND USE MANAGEMENT FOR MOST.

FEDERAL FLOOD INSURANCE IS ALWAYS VIEWED IN COMBINATION WITH FLOODPLAIN REGULATIONS REQUIRED OF THE COMMUNITY. THE AVAILABILITY OF INSURANCE PER SE DOES NOT SEEM TO ENCOURAGE DEVELOPMENT. THERE ARE TWO ASPECTS OF THE NFIP, HOWEVER, THAT SHOULD BE NOTED.

IN ONE EXAMPLE, MONTGOMERY COUNTY, PENNSYLVANIA, THE COUNTY FLOODPLAIN ORDINANCE AND MUNICIPAL VERSIONS OF IT WERE IN PLACE BEFORE NFIP. MOST ORDINANCES ESTABLISHED FLOODPLAIN DELINEATIONS BY SOIL CHARACTERISTICS AND MUNICIPALITIES FOR THE MOST PART

PROHIBITED DEVELOPMENT WITHIN THE FLOODPLAIN. THE NFIP REGULATIONS, WHEN PROMULGATED, WERE LESS RESTRICTIVE, AND HAVE IN A FEW CASES PERSUADED COMMUNITIES TO RETREAT FROM COUNTY STANDARDS TO FEDERAL ONES, THUS, ALLOWING FLOODPLAIN DEVELOPMENT.

ANOTHER PROBLEM AREA IS THE CONVERSION OF COMMUNITIES FROM THE EMERGENCY PROGRAM TO THE REGULAR PROGRAM. IN PENNSYLVANIA'S 2,200 MUNICIPALITIES, FLOOD INSURANCE STUDIES ARE COMPLETED OR UNDERWAY FOR NEARLY ONE-HALF AND THESE COMMUNITIES SOON WILL MOVE INTO THE REGULAR PROGRAM. THE REMAINING FLOOD-RISK COMMUNITIES WILL CONTINUE IN THE EMERGENCY PROGRAM. AT PRESENT, THERE IS UNCERTAINTY AS TO HOW THESE COMMUNITIES WILL BE CONVERTED TO THE REGULAR PROGRAM. THIS IS AN IMPORTANT CONCERN TO PENNSYLVANIA FOR THE STATES' FLOODPLAIN MANAGEMENT ACT IS CLOSELY TIED TO FEDERAL REQUIREMENTS.

I EXPECT THAT FLOOD INSURANCE STUDIES WILL NOT BE CONDUCTED FOR MANY COMMUNITIES. THEY WILL SIMPLY BE CONVERTED TO THE B-LEVEL OF NFIP AND ASKED TO DEVELOP B-LEVEL ORDINANCES. THERE ARE PROBLEMS WITH THIS, IN MY VIEW. COMMUNITIES MOVED THROUGH THIS "SPECIAL CONVERSION" WILL BE ABLE TO OFFER INCREASED FLOOD INSURANCE COVERAGE, EVEN THOUGH THEIR ORDINANCES MAY BE POORLY BASED. THIS WOULD APPEAR A CASE WHERE GROWTH MIGHT BE ENCOURAGED. THERE IS ANOTHER FACT TO CONSIDER THAT INVOLVES COMPARING COMMUNITIES WITH DIFFERENT DEVELOPMENT STANDARDS. IN COMMUNITIES WITH LEVEL-D ORDINANCES, THE FLOODWAY HAS BEEN IDENTIFIED AND A WEALTH OF TECHNICAL INFORMATION IS AVAILABLE TO LOCAL OFFICIALS. IN COMMUNITIES CONVERTED TO THE REGULAR PROGRAM WITHOUT STUDIES, NO FLOODWAY WILL BE IDENTIFIED AND NO TECHNICAL DATA WILL BE AVAILABLE. THIS PLACES THAT MUNICIPALITY AT A DISADVANTAGE IN ITS ABILITY TO REGULATE NEW DEVELOPMENT EFFECTIVELY. THIS DISPARITY WOULD BE MOST BURDENSOME IF IT WERE BETWEEN CROSS-STREAM NEIGHBORS OR IN ADJACENT WATERSHEDS. THIS ALSO POSES A PROBLEM IN ESTABLISHING STORMWATER MANAGEMENT STANDARDS.

IN ANOTHER OBSERVATION, SUBSIDIZED FLOOD INSURANCE APPEARS TO HAVE STABILIZED OLDER SETTLEMENT PATTERNS. BASED ON EVIDENCE RELATING TO FOUR COMMUNITIES, AS GATHERED BY DR. JAMES LORELLI OF BLOOMSBURG STATE COLLEGE, PENNSYLVANIA, RESIDENTS VIEW FLOOD INSURANCE AS ONE OF THE REASONS THEY ARE WILLING TO REMAIN IN THE FLOODPLAIN. SHAEFFER AND ROLLAND HAVE REPORTED THAT FLOOD INSURANCE APPEARS TO RETARD THE NATURAL EVOLUTION OF COMMUNITIES, IN THAT HOUSING STOCK THAT MIGHT THROUGH A NATURAL COURSE OF EVENTS BE REMOVED FROM THE FLOODPLAIN THROUGH SELECTIVE ATTRITION IS NOW, BECAUSE OF THE AVAILABILITY OF FLOOD INSURANCE, ABLE TO BE REPAIRED, THUS EXTENDING THE LIFE OF THE BUILDING.

THERE IS ONE AREA WHERE FLOOD INSURANCE SEEMS CLEARLY TO FOSTER DEVELOPMENT--THAT IS WITH MOBILE HOMES AND MOBILE HOME PARKS. MOBILE HOME PARKS ARE AN EXTREMELY HAZARDOUS USE OF FLOOD PLAINS. NOT ONLY DO MOBILE HOMES HAVE THE STEEPEST OF STAGE-DAMAGE CURVES FOR RESIDENTIAL STRUCTURES, THEY HAVE THE ABILITY TO BREAK FREE FROM CINDER-BLOCK FOUNDATIONS AND CRASH INTO OTHER UNITS OR TO CLOG BRIDGE OPENINGS AND RAISE FLOOD LEVELS. FLOOD INSURANCE FOR MOBILE HOMES CAN BE OBTAINED FROM PRIVATE FIRMS AND THE NFIP.

I CONDUCTED RESEARCH ON THE FLOOD HAZARD REDUCTION POSSIBILITIES FOR MOBILE HOME PARKS AND DISCOVERED SOME INTERESTING INFORMATION. PRIVATE FLOOD INSURANCE SOLD IN A MOBILE HOME PARK IS OFTEN SOLD BY AND REQUIRED BY THE PARK OWNER, WHO REPRESENTS ONE INSURANCE FIRM. IN THE WARNING PERIOD PRECEDING A FLOODING EVENT, THE OWNER (OFTEN AT THE REQUEST OF AND WITH THE ASSISTANCE OF PERSONNEL OF THE PRIVATE INSURANCE FIRM) WILL TAKE EMERGENCY EVACUATION MEASURES TO PROTECT MOBILE HOME UNITS. THIS IS CLEARLY A LOSS REDUCTION INCENTIVE THAT IS ABSENT FROM THE FEDERAL INSURANCE PROGRAM. ADJUSTERS WERE OFTEN STATIONED NEAR PARKS FOR QUICK CLAIM PAYMENTS. IT MAY BE WISE TO CONSIDER REMOVING MOBILE HOMES FROM ELIGIBILITY IN FEDERAL PROGRAMS AND TO LET THE PRIVATE SECTOR SET RATES AND ESTABLISH COVERAGE.

FLOOD INSURANCE RATE INCREASES

IT HAS BEEN SUGGESTED THAT RAISING FLOOD INSURANCE RATES IS A SOUND STEP TOWARD MAKING THE NATIONAL FLOOD INSURANCE PROGRAM SELF-SUPPORTING. I HAVE SEVERAL THOUGHTS ON THIS MATTER.

MANY HAVE ARGUED THAT FLOOD INSURANCE RATES ARE MUCH TOO LOW AND THAT EVEN AT THIS LOW PRICE AN APPROPRIATE NUMBER OF PEOPLE HAVE NOT TAKEN ADVANTAGE OF THE PROGRAM. FIA HAS STATED THAT COVERAGE COULD BE EXPANDED FROM 1.8 MILLION TO 7 MILLION POLICIES.

WHO THEN WILL BE IMPACTED BY RATE INCREASES? OF COURSE, THE FIXED-INCOME HOMEOWNER WILL FIND THE COST BURDENSOME. IN RURAL PENNSYLVANIA, MUCH OF A COMMUNITY AND ITS FLOODPLAIN ARE HOMES FOR RETIRED, FIXED-INCOME FAMILIES. AN INCREASE IN PREMIUMS MAY LEAD TO LARGE SCALE POLICY LAPSES.

AS INSURANCE RATES RISE, IT CAN BE EXPECTED THAT PEOPLE WITH LOWER RISKS WILL LET POLICIES LAPSE UNLESS REQUIRED TO MAINTAIN THEM BY BANKS OR FOR OTHER REASONS. THESE MARGINAL, LOW-RISK PROPERTIES WOULD BE PAYING SIMILAR PREMIUMS (SUBSIDIZED) TO THOSE OF HIGH-RISK PROPERTIES. DROPPING THEM WILL REDUCE THE PREMIUM POOL AND

AT THE SAME TIME INCREASE THE PROBABILITY OF HIGH DEMANDS ON THE POOL.

THERE ARE, OF COURSE, OTHER WAYS TO REDUCE THE DEFICIT SUCH AS REQUIRING PEOPLE TO PURCHASE LARGER POLICIES. FIA REPORTS THAT THE PERCENTAGE OF UNDER-INSURED (LESS THAN 80 PERCENT TO VALUE) INCREASES AS THE VALUES OF PROPERTY INCREASES. A CAMPAIGN TO INCREASE COVERAGE, AT ACTUARIAL RATES FOR THE SECOND LAYER OF COVERAGE, WILL INCREASE REVENUES.

ANOTHER IMPORTANT WAY TO REDUCE THE OPERATING DEFICIT OF THE PROGRAM IS TO REDUCE LOSSES. LOSS REDUCTION, IN MY OPINION, HAS NOT BEEN GIVEN THE DEGREE OF SCRUTINY IT WARRANTS. I OFFER THE FOLLOWING SUGGESTIONS TO REDUCE LOSSES, TO REDUCE FLOOD INSURANCE PAYOUTS, AND TO REDUCE OPERATING NFIP FUND DEFICITS.

IN PENNSYLVANIA, WE HAVE SEEN IMPRESSIVE LOSS REDUCTION THROUGH IMPROVED FLOOD FORECASTING AND WARNING SYSTEMS. IN THE SWARTARA CREEK BASIN, THE SRBC REPORTS THAT \$600,000 IN LOSSES WERE AVOIDED DUE TO PROMPT RESPONSE TO WARNINGS. IN LYCOMING COUNTY, PENNSYLVANIA, SIMILAR BENEFITS FROM FLOOD FORECASTING AND WARNING SYSTEMS WERE ACHIEVED.

THE LYCOMING COUNTY SITUATION DESERVES FURTHER ATTENTION. FLOOD FORECASTS FOR THE SUSQUEHANNA RIVER FLOWING THROUGH THE COUNTY ARE ISSUED BY THE NATIONAL WEATHER SERVICE RIVER FORECAST CENTER IN HARRISBURG. FORECASTS FOR SMALL STREAMS ARE ISSUED THROUGH A COOPERATIVE EFFORT OF THE LYCOMING COUNTY GOVERNMENT, THE NATIONAL WEATHER SERVICE OFFICE, NEAR WILLIAMSPORT, AND BY A PRIVATE INDUSTRY - SPROUT-WALDRON DIVISION OF THE KOPPERS COMPANY, INC., USING RAINFALL AND STREAM REPORTS FROM A CADRE OF 80 OBSERVERS. FORECASTS ARE ISSUED FOR MAJOR WATERSHEDS IN THE COUNTY. APPROPRIATE RESPONSE TO THE FORECASTS AND WARNINGS HAS REDUCED LOSSES AND SAVED LIVES. THIS, OF COURSE, RELATES DIRECTLY TO THE NFIP'S DEFICIT. IT COULD BE ARGUED THAT AREAS WITH EFFECTIVE WARNING AND PREPAREDNESS PROGRAMS HAVE MUCH LOWER ACTUARIAL RATES THAN THOSE USED BY FIA, PERHAPS EVEN AS LOW AS THE PRESENT SUBSIDIZED RATES AND MAY NOW BE PAYING THEIR OWN WAY.

IT IS OUR OPINION THAT COMMUNITIES WHICH ARE SERVED BY THIS WARNING SYSTEM SHOULD NOT BE REQUIRED TO PAY THE SAME PREMIUMS AS THAT PAID BY AREAS WITHOUT WARNING SYSTEMS. IN FACT, A CONSULTING ENGINEER WITH BROAD EXPERIENCE IN FLOOD PREPAREDNESS, H. JAMES OWEN, HAS PROPOSED PROVIDING INCENTIVES FOR COMMUNITIES TO INVEST IN FLOOD WARNING AND PREPAREDNESS PROGRAMS BY MODIFYING THE NFIP SO AS TO REDUCE THE COST OF FLOOD INSURANCE BY A FEW CENTS/\$100 IN AREAS PROTECTED BY PROGRAMS WHICH MEET CRITERIA

ASSURING THEIR EFFECTIVENESS. THE COST REDUCTION COULD BE MADE EITHER DIRECTLY TO A POLICY HOLDER, THROUGH THE REDUCTION OF PREMIUM RATES, OR AS A REBATE TO COMMUNITIES. MR. OWEN ARGUES

"WELL DEVELOPED FLOOD WARNING AND PREPAREDNESS PROGRAMS CAN GENERALLY BE EXPECTED TO RETURN MORE THAN THEIR COST THROUGH REDUCED FLOOD LOSSES. SINCE A LARGE SHARE OF FLOOD LOSSES ARE ULTIMATELY BORNE BY THE FEDERAL GOVERNMENT, THE RESULT ON THE FEDERAL SIDE WOULD BE A REDUCTION IN THE AMOUNT OF SUBSIDY NOW PROVIDED FOR THE FLOOD INSURANCE PROGRAM AND LOWER EXPENDITURES FOR DISASTER AID. FOR COMMUNITIES, THE COST FOR THE WARNING AND PREPAREDNESS PROGRAM WOULD BE OFFSET BY SAVINGS IN THE AMOUNT PAID FOR FLOOD INSURANCE. IN ADDITION, THE WARNING AND PREPAREDNESS PROGRAMS CREATED IN RESPONSE TO THIS INCENTIVE WOULD REDUCE LOSS OF LIFE, INJURY, HARDSHIPS, AND DAMAGE TO UNINSURED PROPERTY, ALL OF WHICH ARE NOT PRESENTLY ADDRESSED IN THE FLOOD INSURANCE PROGRAM. THIS POTENTIAL LINKAGE OF PROGRAMS IS UNUSUAL IN THAT ALL OF THE PARTIES AND PROGRAMS INVOLVED STAND TO GAIN FROM ITS IMPLEMENTATION. THE OUTLOOK IS ALSO GOOD THAT GREATER NATIONAL BENEFITS THAN ARE NOW BEING REALIZED CAN BE OBTAINED AT A REDUCED OVERALL COST." (H. JAMES OWEN AND HERBERT S. LIEB, "FLOOD WARNING AND PREPAREDNESS: NEEDED ACTIONS AT THE FEDERAL LEVEL", PRESENTED AT THE SECOND CONFERENCE ON FLASH FLOODS OF THE AMERICAN METEOROLOGICAL SOCIETY, MARCH 18-20, 1980, ATLANTA, GEORGIA.

THERE ARE ADDITIONAL WAYS TO REDUCE FLOOD LOSSES. ONE IS THE DEVELOPMENT OF RIVER STAGE FORECAST MAPS, ORIGINALLY A CONCEPT DEVELOPED BY THE SUSQUEHANNA RIVER BASIN COMMISSION FROM DATA PREPARED WHILE CONDUCTING A FLOOD INSURANCE STUDY. FORECASTED FLOOD HEIGHTS ARE PLOTTED ON MAPS PROVIDED TO CITIZENS AND BUSINESSES. ALSO NOTED ARE EVACUATION ROUTES, MASS CARE CENTERS, AND NOTABLE LAND MARKS. THE PREPARATION OF THESE MAPS WAS SUPPORTED BY THE SRBC, THE BALTIMORE DISTRICT CORPS OF ENGINEERS, AND THE PENNSYLVANIA DEPARTMENT OF COMMUNITY AFFAIRS. THESE MAPS HAVE A PROVEN HISTORY OF USEFULNESS, ENABLING A COMMUNITY TO GUIDE EVACUATION IN FLOOD PERIODS.

THE EFFECTIVENESS OF INDUSTRIAL FLOOD PREPAREDNESS HAS ALSO BEEN PROVEN. IN A SEMINAR SPONSORED BY SEDA-COG, INDUSTRIES RELATED HOW THE DEVELOPMENT OF FLOOD PREPAREDNESS PLANS, ALONG WITH SUCH IN-PLANT MODIFICATIONS AS ELECTRICAL QUICK DISCONNECTS, ELEVATION OF ELECTRICAL SERVICES, HELPED SUBSTANTIALLY TO REDUCE FLOOD LOSSES.

ONE COMPANY WAS ABLE TO REDUCE ITS LOSS FROM TWO SIMILAR FLOODS (AGNES 1972 AND ELOISE 1975) FROM \$2 MILLION TO \$80,000 AND DOWNTIME FROM 30 DAYS TO THREE DAYS. THESE ACHIEVEMENTS ARE DESCRIBED IN THE PROCEEDINGS OF THE SEMINAR, INDUSTRIAL FLOOD PREPAREDNESS, AND ALSO IN A FILM PRODUCED BY SEDA-COG AND U.S. WATER RESOURCES COUNCIL, ENTITLED "WATCH ALONG THE WATERSHED." IN ADDITION TO THE SAVINGS JUST MENTIONED, THE FIRM WAS ALSO ABLE TO RECOVER EMERGENCY COSTS FROM THE NATIONAL FLOOD INSURANCE PROGRAM. SEDA-COG HAS AN ARC PROJECT PENDING WHICH WILL ASSIST OTHER FIRMS WITH FLOOD PREPARATIONS.

COUNTIES IN CENTRAL PENNSYLVANIA ARE MOVING FORWARD TO REDUCE LOSSES BY PARTICIPATING IN THE NATIONAL FLASH FLOOD PROGRAM JOINTLY SPONSORED BY NWS AND ARC. IN THE SEDA-COG AREA, THIS PROGRAM WILL PROVIDE AUTOMATIC RADIO REPORTING RAIN GAUGES, COMMUNICATION EQUIPMENT, AND MICRO-PROCESSORS AND COMPUTER TERMINALS. COMMUNICATION COVERAGE WILL BE PROVIDED BY USING THE REGIONAL EMS SYSTEM DEVELOPED BY SEDA-COG WITH AN ARC GRANT. THE GAUGES ARE LOCATED IN REMOTE LOCATIONS, ON WATERSHED DIVIDES AND ARE INTENDED TO PROVIDE A ROUND-THE-CLOCK SUPPLEMENT TO EXISTING VOLUNTEER SYSTEMS. THE PENNSYLVANIA LEGISLATURE HAS AGREED TO APPROPRIATE FUNDS TO MAINTAIN THE SYSTEM.

IN DISCUSSING THE LOCAL EFFORT TO CUT THE NFIP DEFICIT THROUGH CUTTING LOSSES, IT MUST BE NOTED THAT FEDERAL AGENCIES HAVE NOT ALWAYS BEEN IN CONCERT. IN RESPONSE TO BUDGET LEVELS, THE NATIONAL WEATHER SERVICE IS PROPOSING TO CLOSE THE WEATHER SERVICE OFFICE NEAR WILLIAMSPORT. IT SHOULD BE NOTED THAT THE WSO SERVES AS PART OF THE LYCOMING COUNTY FLOOD WARNING SYSTEM AND PROVIDES EARLY STORM WARNING TO NEIGHBORING COUNTIES. CLOSURE OF THE OFFICE WEAKENS THE ABILITY OF THE COUNTY TO RESPOND TO FLOOD EVENTS AND CAN ONLY LEAD TO INCREASED FLOOD LOSSES, INCREASED INSURANCE PAYOUTS, AND LARGER PROGRAM DEFICITS.

IN ANOTHER APPROACH, INCREASED USE OF THE NFIP RELOCATION TOOLS AND DEVELOPMENT OF LOW-INTEREST FLOOD PROOFING LOANS ARE ADDITIONAL MEANS TO CUT LOSSES.

IN CLOSING, I WISH TO RE-EMPHASIZE THAT I AM NOT AT ALL SURE PROGRAM DEFICITS CAN BE SIGNIFICANTLY REDUCED BY RATE INCREASES. I AM, HOWEVER, CONFIDENT THAT ACTION ON THE OTHER SIDE OF THE EQUATION, FOR LOSS REDUCTION, CAN BE ACHIEVED THROUGH COORDINATED INCENTIVES FOR FLOOD WARNING AND PREPAREDNESS.

STATEMENT OF SHARON NEWSOME

STATEMENT HIGHLIGHTED

Senator SPECTER. Sharon Newsome, we welcome you.

We have your prepared statement, which will be made a part of the record following your summation.

We would appreciate it if you could summarize the highlights.

Ms. NEWSOME. Thank you. I will summarize my statement.

INSURANCE AND DEVELOPMENT

In answer to the three questions that were being raised in this hearing, we feel that the flood insurance program has, in fact, been encouraging development in some areas. We feel that the problem is perhaps the worst on the coast and although a number of studies have been done in which it was not possible to tell that flood insurance was the only cause for encouraging development, the studies do indicate that flood insurance, in combination with other either availability of mortgage financing, changes in State regulations, on site sewage disposal, and other factors, may have occurred at the same time.

Flood insurance was also one of the factors that was contributing. In many States now on the coast there are coastal zone management plans which attempt to either reduce development or avoid development in certain particularly hazardous areas.

A number of States are saying that it is difficult for them to guide development away from these areas when the flood insurance program is continuing to offer flood insurance for the very same areas.

INCREASED RATES

In answer to the question about increasing of subsidized rates, we feel that one of the highest subsidized areas is the coast, particularly the coastal high-hazard zone.

My understanding of the rate increases for the various parts of the flood insurance program are that the subsidized rates, when they are raised to what is being recommended in the Reagan 1982 budget, will be increased by about 35 percent, that rates for the 500-year flood plain and the minimal flood plain for riverine areas, those rate increases will be about 30 percent and for the coastal highway hazard zones, which has some of the highest subsidies, those rates are only proposed to be increased by 16 percent.

Senator SPECTER. So you think there is some discrepancy as to inequitable—

Ms. NEWSOME. Yes.

Senator SPECTER. How do you account for those differing increases depending on risk factors?

Ms. NEWSOME. I can't. I don't know.

Senator SPECTER. No rational explanation?

Ms. NEWSOME. I don't know why.

Senator SPECTER. Who sets the rates?

Ms. NEWSOME. The Flood Insurance Administration sets the rates and they set them by regulation.

One of the factors that they have not, as far as I know, have been including in their ratesetting is past loss experience. These coastal high-hazard zones with some of the highest subsidies are supposedly actuarially rated, yet they are being subsidized by the State.

For that reason, we feel a 6¹/₂-percent rate increase is certainly not adequate.

1982 APPROPRIATION

The question of whether or not the Flood Insurance Administration should get the \$373 million appropriation, we would answer very resoundingly, "No." We would encourage the committee to appropriate the \$117 million projected discrepancy between claims and premiums that is needed by the Flood Insurance Administration for fiscal year 1982. It is our understanding, from looking at the budget documents in the past, that there is approximately a \$400 million cushion left in the flood insurance fund which would cover most catastrophic losses, most increased flooding that was not being projected for, that by only appropriating enough for this projected discrepancy in fiscal year 1982, the Congress would have a better opportunity on an annual basis to review the Flood Insurance Administration's budget.

We feel very strongly that there should be a GAO report.

One of the things I did not include previously in my testimony was a National Science Foundation report that they were asked to do by Congress as part of their authorization last year.

One of their recommendations—I believe it is No. 17—is that there does need to be a very extensive review of ratesetting by FIA, a review of how much the program has actually been subsidized.

LONG BEACH, N.C.

The only other thing I have to offer is some pictures of North Carolina Beach area where a hurricane that was minimal in 1954, there was a hurricane, wiped out most of the buildings, and in 1978, the last picture, as you can see, there are many, many more buildings than there were in the past.

Senator SPECTER. How many of these buildings are insured, do you know?

Ms. NEWSOME. Pardon?

Senator SPECTER. How many of these buildings are insured, do you know?

Ms. NEWSOME. No, I don't know. But that is an area that is covered by the flood insurance program.

Senator SPECTER. Do you think that the flood insurance program encourages building in high-risk areas like Long Beach, N.C.?

Ms. NEWSOME. Yes; the fact the rates are subsidized, even those actually rated, means the Federal Government is assuming the risk.

Senator SPECTER. Do you think if insurance were not be available that a significant number of people would not build in places like Long Beach, N.C.?

Ms. NEWSOME. Before there was a flood insurance program, there were some States where the mortgage banks, the financing banks, would not provide mortgage money for some of these very hazardous

areas, and I believe now that there is more information available on how high the risk is in those areas, that a bank would be hesitant to provide mortgage financing in there were not someone, either the Federal Government or the private industry, willing to cover that mortgage.

Senator SPECTER. Aside from the mortgagees, do you think that individuals would be less inclined to build or buy in these high-risk areas absent federally subsidized insurance?

Ms. NEWSOME. Yes, I do. I believe they also are risk conscious.

Building on the coast is very expensive these days, and they also would want that kind of reassurance before they build.

Senator SPECTER. Thank you very much. We very much appreciate your testimony.

Thank you, Mr. Larson, Mr. Bresenhan, and Ms. Newsome.

[The statement follows:]

STATEMENT OF SHARON NEWSOME

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, MY NAME IS SHARON NEWSOME. I APPRECIATE THE OPPORTUNITY TO TESTIFY BEFORE YOU ON BEHALF OF THE NATIONAL WILDLIFE FEDERATION REGARDING THE NATIONAL FLOOD INSURANCE PROGRAM. THE NATIONAL WILDLIFE FEDERATION IS THE NATION'S LARGEST GRASSROOTS CONSERVATION ORGANIZATION WITH OVER 4.6 MILLION MEMBERS AND SUPPORTERS AND AFFILIATE ORGANIZATIONS IN ALL FIFTY STATES, GUAM, PUERTO RICO, AND THE VIRGIN ISLANDS.

THE QUESTIONS YOU ARE RAISING ARE CENTRAL TO WHAT WE BELIEVE IS WRONG WITH THE NATIONAL FLOOD INSURANCE PROGRAM. WE APPLAUD THIS SUBCOMMITTEE FOR INVESTIGATING THESE ISSUES. IF I MAY, I WILL REARRANGE THE QUESTIONS AND QUICKLY SUMMARIZE OUR RESPONSES BEFORE GOING INTO DETAIL.

ON THE FIRST QUESTION OF WHETHER FLOOD INSURANCE HAS ENCOURAGED OR DISCOURAGED DEVELOPMENT, WE WILL ANSWER WITH THE WORDS OF FIA ITSELF, "WHAT IS INDISPUTABLE IS THAT THE NFIP HAS NOT RESTRICTED COASTAL DEVELOPMENT TO ANY MEASURABLE DEGREE." WE BELIEVE THIS IS A RESULT, IN PART, OF THE LARGE SUBSIDIES THE NFIP IS PROVIDING FOR SUBSIDIZED INSURANCE AND THE SO-CALLED "ACTUARIALLY" RATED POLICIES.

BELOW COST INSURANCE RATES GIVE BUYERS A LOW PERCEPTION OF FLOOD HAZARD AND SHIFT THE RISK TO THE FEDERAL TREASURY. THE SUBSIDY FOR ACTUARIALLY RATED POLICIES AMOUNTED TO ALMOST \$500 PER POLICY CLAIM BETWEEN 1978 AND 80 FOR THE COASTAL HIGH HAZARD ZONE. WHILE PROPOSALS ARE BEING MADE IN THE REAGAN '82 BUDGET TO INCREASE SUBSIDIZED RATES AND FIA IS PROPOSING TO INCREASE THE ACTUARIAL RATES FOR THE 500 YEAR FLOOD ZONE (ZONE B) AND THE MINIMAL FLOODING ZONE (ZONE C), WE KNOW OF NO PROPOSALS BEING MADE TO INCREASE ACTUARIAL RATES FOR THE COASTAL 100 YEAR FLOODPLAIN AND THE COASTAL HIGH HAZARD ZONE (THE AREA WITH SOME OF THE HIGHEST SUBSIDIES). WE URGE THIS SUBCOMMITTEE TO RECOMMEND ALL ACTUARIAL RATES BE INCREASED TO MORE ACCURATELY REFLECT THE TRUE COST OF PROVIDING INSURANCE BY INCORPORATING PAST LOSS EXPERIENCE IN THE RATE SETTING.

THIS BRINGS US TO ANSWER, NO, TO THE QUESTION OF WHETHER A \$374 MILLION APPROPRIATION FOR FIA IS NEEDED. WITH AN APPROPRIATION OF

\$117 MILLION, THE PROJECTED DISCREPANCY BETWEEN CLAIM COSTS AND PREMIUM INCOME FOR FY '82, THERE WOULD STILL BE APPROXIMATELY \$400 MILLION IN THE FLOOD INSURANCE FUND FROM PREVIOUS APPROPRIATIONS. THE COMBINATION OF THE \$400 MILLION CUSHION IN THE FLOOD INSURANCE FUND AND THE \$117 APPROPRIATION FOR THE FY 82 DEFICIT WILL COVER ALL BUT THE MOST CATASTROPHIC OF FLOOD DAMAGES. AN ANNUAL APPROPRIATION REQUEST AND REVIEW BY CONGRESS IS NEEDED TO ENCOURAGE FIA TO BE MORE FISCALLY SOUND IN ITS OPERATIONS. TO ASSIST THE NFIP IN REACHING ITS GOAL OF SELF-SUFFICIENCY, WE URGE THE COMMITTEE TO REQUEST A GAO REPORT ON THE PROGRAM WITH A FULL REVIEW OF ITS LOSS-EXPENSE EXPERIENCE OVER THE LIFE OF THE PROGRAM SO THAT FIA CAN USE THE INFORMATION TO MORE ACCURATELY SET RATES.

ALTHOUGH THE VARIOUS STUDIES ON WHETHER FLOOD INSURANCE AVAILABILITY HAS ENCOURAGED DEVELOPMENT ARE INCONCLUSIVE, THE STUDIES DO SHOW THAT FLOOD INSURANCE COMBINED WITH OTHER FACTORS SUCH AS AVAILABILITY OF MORTGAGE FINANCING, ROAD OR BRIDGE ACCESS, OR OTHER FACTORS DID ENCOURAGE DEVELOPMENT. THE CONCURRENT AVAILABILITY OF FLOOD INSURANCE WITH OTHER FACTORS MADE IT DIFFICULT TO ISOLATE THE INSURANCE AS THE SOLE CAUSE OF INCREASED DEVELOPMENT. LET ME CITE SOME EXAMPLES. RHODE ISLAND COASTAL AUTHORITIES SAID IN 1976,

"THERE WAS A DEFINITE COINCIDENCE OF INCREASED DEVELOPMENT PRESSURE [ON BARRIER BEACHES] IN THE EARLY 1970'S ONCE THE FLOOD INSURANCE PROGRAM WAS INTRODUCED IN THE STATE."¹

CRANE MILLER CITES GALVESTON, TEXAS AS AN EXAMPLE OF DIRECT CAUSE/EFFECT RELATIONSHIP OF DEVELOPMENT, WHEN LENDING INSTITUTIONS THERE MADE MORTGAGE FINANCING AVAILABLE FOR A LOW-LYING, FLAT AREA WEST OF THE SEAWALL BECAUSE FLOOD INSURANCE BECAME AVAILABLE TO SECURE THE MORTGAGES.² MILLER SAYS IN ANOTHER STUDY "THE NATIONAL FLOOD INSURANCE PROGRAM AND BARRIER ISLAND DEVELOPMENT" "WHEN COMBINED WITH OTHER FEDERAL PROGRAMS THAT SUBSIDIZE DEVELOPMENT, THE SUBSIDY [OF THE NFIP] IS A MEASURABLE FORCE IN FAVOR OF DEVELOPMENT." BECAUSE THE NFIP DEPENDS ON STRUCTURAL REQUIREMENTS RATHER THAN LOCATIONAL REQUIREMENTS, EXPERIENCES SUCH AS THAT OF NORTH CAROLINA ARE BECOMING MORE COMMON. IN NORTH CAROLINA THE COASTAL AREA MANAGEMENT PLAN DESIGNATED AREAS WITH HIGH EROSION RATES AS AREAS OF ENVIRONMENTAL CONCERN. EVEN THOUGH SOME OF THESE LANDS MAY BE

EXPECTED TO ERODE AWAY IN A RELATIVELY SHORT TIME, FLOOD INSURANCE IS STILL AVAILABLE.²

IN FLORIDA, A STUDY OF THE STATE'S COASTAL SETBACK LINE HIGHLIGHTED THE EFFECT OF SUBSIDIZED INSURANCE ON COASTAL DEVELOPMENT⁴.

"INSURANCE RATES FOR MINIMUM COVERAGE UNDER THE EMERGENCY PHASE OF THE NFIP ARE CURRENTLY SUBSIDIZED BY THE FEDERAL GOVERNMENT AND RATES FOR THE REGULAR PROGRAM ARE ALSO SUBSIDIZED. IN EFFECT, OWNERS OF DEVELOPMENTS IN HIGH RISK COASTAL ZONES, WHICH QUALIFY FOR FLOOD INSURANCE, SHIFT SOME OF THE COSTS TO THE TAXPAYER."

THE EXTENT OF THIS SUBSIDY CAN BE SEEN BY EXAMINING THE LIMITED AMOUNT OF LOSS-EXPENSE EXPERIENCE AVAILABLE FROM FIA. THE ATTACHED CHART FOR LOSS AND EXPENSE EXPERIENCE BETWEEN 1978 AND 1980 SHOWS AN ANNUAL PER POLICY SUBSIDY FOR ACTUARIALLY RATED INSURANCE RANGING FROM \$100 TO \$500 FOR THE COASTAL FLOODPLAIN. THIS IS THE V AND A1-A30 ZONES, POST FIRM (ACTUARIALLY RATED) CONSTRUCTION. THE ACTUARIALLY RATED COASTAL HIGH HAZARD ZONE (V ZONE) RECEIVES THE LARGEST SUBSIDY OF ALL THE RATES. THERE ARE A NUMBER OF REASONS FOR THIS WHICH COULD ALL BE CORRECTED BY FIA. COASTAL HIGH HAZARD ZONES DO NOT INCLUDE THE EFFECTS OF WAVE HEIGHTS, WAVE RUNUP OR EROSION IN THE RATES. ALL OF THESE FACTORS SIGNIFICANTLY AFFECT THE DEGREE OF FLOOD RISK FOR A STRUCTURE. PRESENTLY FIA HAS THE TECHNICAL ABILITY TO INCORPORATE WAVE HEIGHTS INTO THE RATES. WITHOUT INCLUDING ALL OF THESE FACTORS THOUGH, TRUE ACTUARIAL RATES WILL NOT BE CHARGED.

IF TRUE ACTUARIAL RATES ARE NOT CHARGED, THEN THE RATES ALONE CANNOT DISSUADE PEOPLE FROM LOCATING IN HAZARDOUS AREAS. A GOOD EXAMPLE IS THE CITY OF PORT ORANGE, FLORIDA, LOCATED ON A BARRIER ISLAND AND IN THE REGULAR PHASE (ACTUARIALLY RATED) OF THE PROGRAM. THE ATTACHED NEWSPAPER ARTICLE STATES THAT A \$40,000 HOME IN A SUBDIVISION OF PORT ORANGE PAYS \$4 PER YEAR FOR FLOOD INSURANCE IF ELEVATED TO EIGHT FEET AND \$192 ANNUALLY IF ELEVATED SIX FEET. CERTAINLY SUCH RATES DO NOT ACT AS DISINCENTIVES TO DEVELOP IN COASTAL FLOOD HAZARD AREAS. IT WAS NOT UNTIL JANUARY OF THIS YEAR THAT ADMINISTRATIVE COSTS OF THE PROGRAM (\$25 PER POLICY) WERE ADDED TO THE PREMIUMS.

THE LACK OF DATA ON THE COSTS OF THE PROGRAM SEPARATED OUT FOR COASTAL AND RIVERINE FLOODING, SUBSIDIZED AND ACTUARIALLY RATED

POLICIES, REPETITIVELY FLOODED COMMUNITIES AND PROPERTIES, AND LOSS EXPERIENCE PRIOR TO 1978 IS IN ITSELF AN INDICTMENT OF THE PROGRAM. WHEN ALL FEDERAL PROGRAM BUDGETS ARE BEING REVIEWED FOR COST CUTTING, SURELY THE NFIP SHOULD BE ONE OF THE FIRST. THE NATIONAL WILDLIFE FEDERATION DOES NOT BELIEVE THAT THE FEDERAL TREASURY AND THE AMERICAN TAXPAYER SHOULD BE SUBSIDIZING CONDOMINIUMS AND SECOND AND THIRD HOMES ON THE BEACH WHEN OTHER FEDERAL PROGRAMS ARE BEING PARED BACK.

FOOTNOTES

1. Grant, Malcolm; "The Ocean's Reach, Digest of a Workshop on Identifying coastal Flood Hazard Areas and Associated Risk Zones"; New England River Basins Commission; February, 1976.
2. Miller, H. Crane; "Coastal Flood Hazards and the National Flood Insurance Program"; HUD Purchase Order 1442-77; June, 1977.
3. Heritage Conservation and Recreation Service; Department of the Interior; "Report of the Barrier Island Work Group"; December, 1978.
4. Shows, E. Warren; "The Economic Impact of Florida's Coastal Setback Line, A Study of Bay County, Florida"; University of South Florida; September, 1976.

actuarial
Emergency (subsidized)

NATIONAL FLOOD INSURANCE PROGRAM
LOSS & EXPENSE EXPENDITURE
January 1, 1978 - April 23, 1980

	V Zones		Zones A1 - A30		Zone B	Zone C	Emergency PROGRAM	Program TOTAL
	Post FIRM Construction	Pre FIRM Construction	Unnumbered Zone A	Post FIRM Construction				
1) Number of Policies -								
Current	4,314	52,007	100,070	46,021	151,621	281,730	661,914	1,794,816
2) Average Amount of Insurance -								
Current	\$94,000	\$60,311	\$234,950	\$70,304	\$51,244	\$58,959	\$30,008	\$41,878
3) Average Premium -								
(1/1/78-4/23/80)	\$98.43	\$113.93	\$72.37	\$71.34	\$50.10	\$31.93	\$85.60	\$77.61
4) Number of Paid Claims -								
(1/1/78-4/23/80)	204	1,995	4,748	709	4,284	11,696	55,973	102,765
5) Average Claim Payment								
(1/1/78-4/23/80)	\$16,325	\$10,123	\$7,190	\$10,060	\$6,214	\$7,750	\$4,082	\$6,098
6) Ratio (8) + (3)	4.661	1.73	3.39	1.42	2.96	6.73	2.06	2.37
7) Average Claim Frequency								
(1/1/78-4/23/80)	2.9	1.9	3.4	1.0	1.0	2.9	3.6	3.0
8) Average Loss Cost per Policy (1/1/78-4/23/80)	\$478.48	\$197.10	\$285.43	\$101.01	\$140.22	\$221.55	\$176.48	\$183.62
9) Other Expenses (1/1/78 to 4/23/80 (avg. per policy)								
a) Insurance Agent	\$19.69	\$22.79	\$14.47	\$14.27	\$15.03	\$13.17	\$17.12	\$16.66
b) Loss Adjuster	\$20.37	\$16.48	\$10.55	\$4.34	\$6.37	\$9.53	\$7.59	\$7.90
c) Servicing Facility	\$11.70	\$11.70	\$11.70	\$11.70	\$11.70	\$11.70	\$11.70	\$11.70
10) Average Operating Deficit per Policy								
a) Paid basis (above)	\$432.01	\$126.14	\$209.78	\$49.98	\$131.22	\$23.05	\$121.39	\$162.27
b) Incurred basis **	\$507.61	\$157.28	\$248.56	\$75.94	\$138.64	\$258.03	\$155.17	\$171.27

** Paid basis plus an estimate for pending claims. Amount of pending claims estimated by multiplying line 8 by a factor of .750, derived from historical experience.

NATIONAL FLOOD INSURANCE PROGRAM
LOSS & EXPENSE EXPERIENCE
January 1, 1978 - April 23, 1980

	V Zones New Construction		Unnumbered Totals		Zone A		Zone B		Zone C		Emergency Premiums
	Construction	Competition	Construction	Competition	Construction	Competition	Construction	Competition	Construction	Competition	
1) Number of Policies in Force - Current	4,314	32,047	56,401	100,070	44,201	474,243	521,444	153,611	281,770	661,914	
2) Amount of Insurance - Current	\$405,314,908	\$1,189,000	\$3,357,353,900	\$3,897,774,400	\$3,244,103,000	\$20,139,043,600	\$23,387,969,400	\$7,672,137,700	\$16,410,413,100	\$19,862,847,000	
3) Insurance Premium Earned (1/1/78-4/23/80)	\$445,067	\$11,673,549	\$12,354,467	\$10,044,919	\$5,465,437	\$75,543,313	\$81,187,740	\$11,894,564	\$11,473,297	\$12,544,833	
4) Claims Payments (1/1/78-4/23/80)	\$1,330,216	\$20,194,051	\$23,526,263	\$4,139,367	\$7,924,941	\$153,494,413	\$161,433,594	\$35,184,541	\$90,434,243	\$73,247,253	
5) Number of Paid Claims	204	1,975	2,199	4,748	789	21,979	21,768	4,244	11,694	35,972	
6) Loss Adjuster Expense	\$143,199	\$48,430	\$1,031,629	\$1,467,993	\$411,790	\$6,600,354	\$6,941,444	\$1,513,107	\$3,897,444	\$1,749,422	
Insurance Agents Commissions	\$137,013	\$334,708	\$2,474,721	\$2,013,343	\$1,121,085	\$15,114,443	\$16,237,548	\$3,548,375	\$5,240,319	\$4,508,967	
8) General Expenses	\$81,432	\$198,805	\$1,260,237	\$1,627,517	\$919,351	\$10,011,257	\$10,930,608	\$2,777,697	\$4,746,622	\$4,114,654	
9) Operating Deficit excluding pending claims estimated to be about \$99 million)	\$3,006,787	\$12,924,454	\$15,931,741	\$9,181,341	\$4,713,280	\$109,441,374	\$114,355,654	\$31,153,134	\$91,238,243	\$97,075,673	
10) Number of Policy Years of Exposure	4,940	102,442	169,422	139,104	74,577	835,463	934,240	237,410	409,113	1,544,241	

NATIONAL FLOOD INSURANCE PROGRAM
 SUBSTANTIAL DAMAGES FROM FLOODING
 (Greater than 50% of Market Value)
 Calendar Years 1970 - 1979

State	No. of Paid Claims	Flood Insurance Coverage	Property Value	Damage Sustained	Claim Payments
Alabama	436	\$9,717,200	\$15,093,100	\$11,567,279	\$ 7,782,269
Connecticut	11	167,300	119,700	83,134	67,123
Delaware	1	35,000	28,300	20,275	28,074
Florida	82	2,595,700	2,723,700	2,117,742	1,689,613
Georgia	26	629,400	645,300	420,682	410,077
Louisiana	909	12,404,200	12,157,600	10,556,154	6,909,552
Maine	72	1,721,000	1,282,700	1,008,536	944,129
Maryland	12	366,400	339,900	246,843	231,444
Massachusetts	306	11,917,200	9,579,200	7,287,409	5,516,812
Mississippi	808	12,536,700	16,243,600	11,238,665	10,292,075
New Hampshire	8	115,700	134,900	88,399	77,077
New Jersey	14	432,200	407,100	240,093	215,464
New York	133	2,616,900	2,324,200	1,793,201	1,461,108
North Carolina	1	35,000	38,000	3,800	3,500
Rhode Island	12	549,000	379,600	250,786	137,759
South Carolina	6	229,400	72,000	64,503	62,573
Texas	1,112	37,793,800	43,804,500	28,402,332	25,427,610
Virginia	69	1,648,300	825,200	743,130	452,676
Total	4,018	\$95,511,400	\$106,309,400	\$76,140,963	\$61,788,935
Total U.S.	5,590	\$124,892,900	\$135,349,500	\$97,222,415	\$79,021,870
Coastal % of Total	72%	76%	78.5%	78.3%	78.2%

Source: Federal Insurance Administration
 Federal Emergency Management Agency

[From the Daytona Beach (Fla.) News-Journal, Mar. 3, 1981]

HARBOR POINT PROBLEM AT FIRST—FLOOD INSURANCE ISSUE MAY HIT ALL PT. ORANGE

By John Wisniewski, News-Journal staff writer

Port Orange is in danger of being suspended from the National Flood Insurance Program, according to a letter from the Federal Emergency Management Agency. It was delivered to City Hall late last week.

Suspension could mean problems for everyone in the city who must have federal flood insurance as part of a mortgage agreement. "Somehow, some way," City Manager Les Forney said Monday, "we will not permit that to happen."

In the letter from Richard W. Krimm, of the agency's Federal Insurance Administration, the city is given 30 days to advise the agency of a solution concerning 38 homes in the Harbor Point subdivision built below the federal flood elevation standard.

Just before Krimm's letter arrived, Forney said Monday, he had requested City Attorney Bob Carr to cite those responsible for violation of the applicable city ordinance.

The 38 homes, built by Frank Talbott in Phase 3 of the subdivision developed by Crouch & Teston, Realtors, are below the seven foot standard established by the agency last summer.

That flood standard had existed previously in the area of the subdivision between U.S. 1 and the Halifax River east of Allandale, until raised to eight feet in May, 1977. Originally, 80 housing units (including 21 duplexes built by Jim Carey) were in violation of the eight foot standard.

After a visit by U.S. Rep. Bill Chappell, D-Ocala, with Krimm last April, and the efforts of city officials and engineers, the agency agreed to return the standard to seven feet last August.

Currently, the owners of the 38 single family residences that remain in violation are faced with inflated flood insurance premiums. Eleven of the homes are classified at seven feet and 27 at six feet.

Using a \$40,000 home as an example, flood insurance is available for a home in the subdivision at 8 feet for \$4 per year; at seven feet, \$48 per year; and at six feet, \$192.

In December, the agency asked the city to present a plan for floodproofing the homes and recommended those responsible for the violations subsidize the excess premiums for homeowners over the life of individual mortgages.

These points were communicated to Harold Teston by Forney in a letter dated Dec. 29. In a return letter Jan. 5, Teston replied in part: "I will immediately set up appointments with engineers and my attorney to start to work on trying to resolve this problem."

Last month, Forney again wrote to Teston, stating: "It is my understanding . . . you have determined it is not feasible economically" to floodproof the homes and have "ceased all work along this line."

Forney said he would instruct the city attorney to issue citations for violation of city ordinance and he warned that "failure to correct the violations can result in repetitive citations."

Depending on an interpretation by Attorney Carr, Forney said Monday, either Talbott or Crouch & Teston will be cited—or both the builder and the developers.

According to Krimm's letter, the city must grant a variance from the ordinance for each structure to allow for the suggested floodproofing of the homes.

The floodproofing, however, is not allowed under current insurance rating procedures. But it is suggested because of "the apparent infeasibility of implementing other corrective measures," such as diking the subdivision or rebuilding the homes, according to the agency's December letter.

Noting the agency is "anxious" to resolve the problem, Krimm said the city must reply within 30 days on its efforts.

If the agency is not satisfied with the city's response, it will "be forced to initiate suspension proceedings." Through such proceedings, the city will have another 30 days in which to show cause why it should not be suspended from the National Flood Insurance Program.

FEDERAL EMERGENCY MANAGEMENT AGENCY

STATEMENT OF RICHARD KRIMM, ACTING ADMINISTRATOR, FEDERAL
INSURANCE ADMINISTRATION, FEDERAL EMERGENCY MANAGEMENT
AGENCY

PREPARED STATEMENT

Senator SPECTER. And now, Mr. Richard Krimm, please.

Welcome, Mr. Krimm.

And your title is?

Mr. KRIMM. Acting Administrator, Federal Insurance Administration.

Senator SPECTER. We welcome you here and thank you for your prepared statement. It shall be made a part of the record.

We would appreciate it if you would summarize.

[The statement follows:]

STATEMENT OF RICHARD W. KRIMM

THE FEDERAL INSURANCE ADMINISTRATION, ESTABLISHED BY CONGRESS IN 1968, AND NOW A PART OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ADMINISTERS THREE STATUTORY INSURANCE PROGRAMS, THE NATIONAL FLOOD INSURANCE PROGRAM, THE FEDERAL RIOT REINSURANCE PROGRAM, AND THE FEDERAL CRIME INSURANCE PROGRAM WHICH RESPOND TO LOSSES RESULTING FROM NATURAL AND MANMADE OCCURRENCES.

THUS, THE THREE PROGRAMS ARE FULLY RELATED TO THE DISASTER RESPONSE AND HAZARD MITIGATION FUNCTIONS OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY AND SIGNIFICANT IS THE FACT THAT, BY CONDITIONING THE ELIGIBILITY FOR THE PURCHASE OF POLICIES UNDER THESE PROGRAMS, UPON THE PERFORMANCE OF HAZARD MITIGATION MEASURES, THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THROUGH THE FEDERAL INSURANCE ADMINISTRATION, ADDRESSES SOME OF THE UNDERLYING CAUSES OF LOSS AND EXERTS A POSITIVE INFLUENCE TOWARD REDUCING THE LIKELIHOOD AND SEVERITY OF FUTURE LOSSES.

THE LARGEST OF THE THREE PROGRAMS AND THE ONE WHICH IS THE SUBJECT OF THIS HEARING IS THE NATIONAL FLOOD INSURANCE PROGRAM WHICH HAS APPROXIMATELY 2,000,000 POLICIES IN FORCE PROTECTING BUILDINGS AND OR CONTENTS FROM LOSS BY FLOOD, INCLUDING MUDFLOW AND FLOOD RELATED EROSION.

INDIVIDUAL ELIGIBILITY OF INSURANCE IS CONDITIONAL UPON THE INSURED RESIDING OR DOING BUSINESS WITHIN ONE OF THE COMMUNITIES PARTICIPATING IN THE PROGRAM AS OF APRIL 30, 1981. OF THESE COMMUNITIES, 10,892 ARE IN THE EMERGENCY PROGRAM WHICH REQUIRES COMPLIANCE WITH MINIMUM FLOOD PLAIN MANAGEMENT MEASURES THROUGH THE COMMUNITY'S BUILDING PERMIT SYSTEM AND 6,130 ARE IN THE REGULAR PROGRAM WHICH REQUIRES MORE EXTENSIVE FLOOD PLAIN MANAGEMENT MEASURES. INSURANCE COVERAGE PRESENTLY IN FORCE AMOUNTS TO APPROXIMATELY ONE HUNDRED BILLION DOLLARS.

ACCORDING TO THE FINDINGS OF THE REPORT ENTITLED "INSURANCE AND OTHER PROGRAMS FOR FINANCIAL ASSISTANCE TO FLOOD VICTIMS" SUBMITTED TO CONGRESS

IN 1966; ESSENTIAL TO THE SUCCESS OF A NATIONAL FLOOD INSURANCE PROGRAM WAS THAT TWO OBJECTIVES BE MET. THESE ARE THE CORNERSTONES OF THE PROGRAM TODAY: "TO HELP PROVIDE FINANCIAL ASSISTANCE FOR VICTIMS OF FLOOD DISASTERS IN ORDER TO REHABILITATE THEIR PROPERTY; AND TO HELP PREVENT UNWISE USE OF LAND WHERE FLOOD DAMAGES WOULD MOUNT STEADILY AND RAPIDLY. FLOOD INSURANCE IS A MECHANISM WHICH CAN KEEP BOTH OBJECTIVES IN BALANCE, WITHOUT EITHER OUTWEIGHING THE OTHER."

MEASURED AGAINST THESE HISTORICAL OBJECTIVES, WHICH, ESSENTIALLY, WERE INCORPORATED INTO THE 1968 ACT, IT BECOMES APPARENT THAT THE NATIONAL FLOOD INSURANCE PROGRAM WITH OVER 17,000 COMMUNITIES PRACTICING PRUDENT CONSTRUCTION STANDARDS IN EXCHANGE FOR FLOOD INSURANCE, WITH ITS 2 MILLION POLICYHOLDER BOOK OF BUSINESS, WHICH IS LARGELY THE RESULT OF THE FLOOD INSURANCE PURCHASE REQUIREMENTS OF SECTION 102 OF THE FLOOD DISASTER PROTECTION ACT OF 1973, WITH ITS ON-GOING RELOCATION PROGRAMS UNDER SECTION 1362 OF THE 1968 ACT (AND UTILIZING THE PROCEEDS OF FLOOD INSURANCE CLAIMS TO RELOCATE BUILDINGS IN EXCHANGE FOR THE LAND BEING LEFT TO OPEN SPACE PURPOSES) AND WITH ITS CONTINUING REVIEW OF THE INSURANCE COVERAGE AND RATING STRUCTURE, HAS MORE THAN FULFILLED THE PROPHECY OF THE REPORT CALLED FOR IN THE SOUTHEAST HURRICANE DISASTER RELIEF ACT OF 1965.

APPROXIMATELY 90% OF THE NATION'S POTENTIAL FLOOD VICTIMS ARE LOCATED IN COMMUNITIES IN WHICH FLOOD INSURANCE COVERAGE UNDER THE PROGRAM IS AVAILABLE. THIS, IN TERMS OF OVERALL COVERAGE TRANSLATES IN PENNSYLVANIA, ALONE, FOR EXAMPLE, TO OVER \$2.7 BILLION OF FLOOD INSURANCE COVERAGE.

AGAINST THIS BACKGROUND, I WOULD LIKE NOW TO DISCUSS, BRIEFLY, SOME OF THE MORE SALIENT PROGRAM INITIATIVES PRESENTLY UNDERWAY AND SOME OF THE INNOVATIONS PLANNED FOR THE MONTHS AHEAD.

ON THE FLOOD INSURANCE RATING FRONT, BEING ACUTELY AWARE OF THE STATE OF THE ECONOMY AND THE NEED TO MAKE THE NATIONAL FLOOD INSURANCE PROGRAM MORE FISCALLY SECURE AND RESPONSIVE, FEMA HAS TAKEN OR WILL TAKE THE FOLLOWING ACTIONS:

- o ON JANUARY 1, 1981, THE PROGRAM INCREASED RATES, COUNTRYWIDE, BY 32.5%, WHICH INCLUDED AN ACTUARIAL RATE INCREASE OF 48.9%. THIS LATTER RAISE IN RATES HAD SIGNIFICANT IMPACT IN SOME OF THE PROGRAM'S MORE VULNERABLE AREAS; FOR EXAMPLE, IN COASTAL HIGH HAZARD AREAS, IT TRANSLATES INTO ACTUAL RATES WHICH ARE 1.75 TIMES HIGHER THAN THE CORRESPONDING RATES FOR INLAND FLOODING AREAS.

- o THE FEDERAL EMERGENCY MANAGEMENT AGENCY IS PROPOSING AN ADDITIONAL INCREASE IN THE SUBSIDIZED RATES, ACROSS THE BOARD, AS TO ALL TYPES OF BUILDING, FOR EXAMPLE, THE RATE IN THE CASE OF A RESIDENTIAL BUILDING WILL RISE FROM THE PRESENT \$.25 PER \$100 OF BUILDING COVERAGE TO \$.40 PER \$100 COVERAGE AND FROM \$.35 PER \$100 OF CONTENTS COVERAGE TO \$.50 PER \$100 OF COVERAGE. THESE RATE INCREASES OF 60 & 43% RESPECTIVELY ARE VERY SIGNIFICANT ESPECIALLY SINCE, IN 1972 AND IN 1974, THE SUBSIDIZED RATES HAD BEEN LOWERED.

- o THESE PRESENT AND PROPOSED RATE INCREASES ARE THE FIRST IN THE HISTORY OF THE PROGRAM AND MAY BE CONSIDERED A DEFINITE HARBINGER FOR THE FISCAL FUTURE OF THE NATIONAL FLOOD INSURANCE PROGRAM, WHICH WILL INCLUDE AN ANNUAL REVIEW OF THE RATING STRUCTURE AND, FOR THE NEAR TERM, NEW RATING SYSTEM IN COASTAL HIGH HAZARD AREAS, AN ANNUAL INCREASE IN RATES TO RECOUP SOME OF THE DEFICITS OF RECENT YEARS, AN INCREASE IN SUBSIDIZED RATES FOR NEW CONSTRUCTION IN THE EMERGENCY PROGRAM TO OFFSET THE LONG DELAY IN CONVERSION TO THE REGULAR PROGRAM, AND AN EMPHASIS ON PUTTING THE PROGRAM MORE ON A "PAY AS YOU GO," RATHER THAN A "DEEP POCKET" SUBSIDY BASIS.

OTHER COST REDUCTION METHODS ARE PROMINENT IN OUR NATIONAL FLOOD INSURANCE PROGRAM THINKING AT THIS TIME. THUS, IN STRENGTHENING THE PROGRAM, I CAN REPORT THAT THE FOLLOWING CRITICAL AREAS ARE RECEIVING SUBSTANTIAL EMPHASIS:

- o ENHANCED CLAIMS COST AUSTERITY, IN TERMS OF A RENEWED AND AGGRESSIVE PURSUIT OF SUBROGATION AND SALVAGE POSSIBILITIES; STREAMLINING OF LOSS ADJUSTMENT METHODS, SUCH AS SHARING, WITH PRIVATE INSURER WIND POOLS. THE COST OF ONE ADJUSTER HIRED JOINTLY BY THE NATIONAL FLOOD INSURANCE PROGRAM AND THE POOL IN COASTAL HURRICANE SITUATIONS; AND IN-PROGRESS CLAIMS AUDIT BY OUR INSPECTOR GENERAL; A TIGHTENING OF ALL INSURANCE POLICY COVERAGE DECISIONS; A PLANNED UNIFORM SCHEDULE FOR ADJUSTER SERVICES; AND A GENERAL TIGHTENING OF THE INTERNAL MANAGEMENT OF THE CLAIMS OPERATION WHICH SHOULD RESULT IN SOLID REDUCTIONS IN LOSSES AND EXPENSES.

IN ADDITION, THE FEDERAL EMERGENCY MANAGEMENT AGENCY HAS CONTACTED REPRESENTATIVES OF THE INSURANCE INDUSTRY TO EXPLORE WAYS IN WHICH THEY CAN ASSIST US IN ASSURING THAT PROPER CLAIMS PRACTICES, RATES, AND INSURANCE PRINCIPLES ARE FOLLOWED.

- o BETTER FLOOD PLAIN MANAGEMENT MONITORING ACTIVITIES AT THE LOCAL LEVEL TO ASSURE COMPLIANCE WITH SAFE BUILDING PRACTICES AND THE RESULTANT REDUCTION IN INSURED FLOOD LOSSES. A RUNDOWN OF THE EFFICIENT OF FLOOD PLAIN MANAGEMENT MONITORING INDICATES THAT:
 - THE FEDERAL INSURANCE ADMINISTRATION HAS A NUMBER OF MONITORING SYSTEMS IN PLACE THAT MEASURE COMMUNITY ENFORCEMENT.

- COMMUNITY ASSISTANCE AND PROGRAM EVALUATION REPORTS ARE CONDUCTED ANNUALLY IN 20% OF REGULAR PROGRAM COMMUNITIES.
- COMMUNITY PROVIDED ANNUAL REPORTS HAVE LIKEWISE REVEALED OVERALL COMPLIANCE WITH FLOOD PLAIN MANAGEMENT STANDARDS.
- FOR ENFORCEMENT PROBLEMS THAT SURFACE THROUGH THESE OR OTHER METHODS, THE FEDERAL INSURANCE ADMINISTRATION'S REGIONAL OFFICES HAVE A STRONG PROGRAM OF COMMUNITY ASSISTANCE TO HELP RESOLVE SUCH PROBLEMS.
- THE FEDERAL INSURANCE ADMINISTRATION IS CURRENTLY DEVELOPING A COMPREHENSIVE ENFORCEMENT PROGRAM THAT INCLUDES DETAILED REGIONAL GUIDELINES TO DEAL WITH CASES OF FLAGRANT NON-COMPLIANCE.

THE MONITORING INDICATIONS ARE THAT MOST PARTICIPATING COMMUNITIES ARE ENFORCING THEIR FLOOD PLAIN MANAGEMENT REGULATIONS IN COMPLIANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM STANDARDS. WHEN COMMUNITIES DO NOT ENFORCE FLOOD PLAIN MANAGEMENT ORDINANCES, THEY WILL BE SUSPENDED FROM THE PROGRAM.

SOME SPECIAL PROGRAM INITIATIVES ALSO WARRANT ATTENTION.

ONE IS THE FLOOD HAZARD MITIGATION ORIENTED STATE ASSISTANCE PROGRAM, A PROGRAM DESIGNED TO PROMOTE AN INTERGOVERNMENTAL FLOOD HAZARD MITIGATION PARTNERSHIP BY PROVIDING STATES WITH THE OPPORTUNITY TO STRENGTHEN THEIR ROLE IN THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD HAZARD MITIGATION ACTIVITIES. THE PROGRAM PROVIDES INDIVIDUAL STATES AN OPPORTUNITY TO COMPLEMENT NATIONAL FLOOD INSURANCE PROGRAM ACTIVITIES BY DEVELOPING, IMPLEMENTING, AND EVALUATING APPROACHES TO ACCOMPLISH THE NATIONAL FLOOD INSURANCE PROGRAM OBJECTIVES THROUGH STATE PROGRAMS. THE PRINCIPAL GOAL OF THE STATE ASSISTANCE PROGRAM IS TO INCREASE EXISTING

STATE CAPABILITIES AS WELL AS DEVELOP NEW ONES. THROUGH THIS PROGRAM, STATES ASSIST THE FEDERAL EMERGENCY MANAGEMENT AGENCY IN MEETING THE INCREASED TECHNICAL ASSISTANCE DEMANDS OF THE COMMUNITIES REQUIRED BY THE NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION. A LONG RANGE GOAL OF THE PROGRAM IS TO HAVE ALL STATES AND TERRITORIES WITH STRONG FLOOD PLAIN MANAGEMENT LAWS AND TECHNICAL ASSISTANCE CAPACITY SO THAT THIS EFFORT COULD BE ASSUMED BY THE STATES WITHOUT FEDERAL INVOLVEMENT.

THE LIST OF NATIONAL FLOOD INSURANCE PROGRAM PROJECTS PROPOSED AND ALREADY ACCOMPLISHED BY THE STATE ASSISTANCE PROGRAM IS VERY IMPRESSIVE AND I WOULD LIKE TO INCLUDE THIS EXHIBIT FOR THE RECORD ON THIS POINT (EXHIBIT-"HAS THE STATE ASSISTANCE PROGRAM DEMONSTRATED CAPABILITY-- BUILDING?")

I WOULD LIKE TO MENTION THAT THE COMMONWEALTH OF PENNSYLVANIA HAS A MODEL STATE FLOOD PLAIN MANAGEMENT LAW WHICH WE ENCOURAGE OTHER STATES TO FOLLOW.

ANOTHER NOTEWORTHY PROGRAM AND COST EFFICIENT PROJECT IS THE 1362 ACQUISITION PROJECT. AS YOU KNOW, SECTION 1362 OF THE NATIONAL FLOOD INSURANCE ACT OF 1968 AUTHORIZES THE DIRECTOR OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY TO NEGOTIATE FOR THE PURCHASE OF CERTAIN FLOOD DAMAGED, INSURED, PROPERTIES FOR SUBSEQUENT TRANSFER TO STATE OR LOCAL AGENCIES. LAND SO ACQUIRED IS PLACED IN PERMANENT OPEN SPACE USE, FREE OF VULNERABILITY TO FUTURE FLOOD DAMAGE. THE PURPOSE OF THE SECTION IS THEREFORE TO REDUCE THE COSTS TO THE FLOOD INSURANCE PROGRAM AND DISASTER RELIEF PROGRAM, OF RESPONDING TO REPETITIVE FLOOD LOSSES AND SUBSTANTIAL LOSS AND TO ASSIST INSUREDS IN RELOCATING OUT OF THE FLOOD PLAIN, THUS BREAKING THE CYCLE OF CONTINUING FLOODING AND INSURED REPAIR. DURING FISCAL YEAR 1980, THE INITIAL YEAR OF PROPERTY PURCHASES UNDER THIS SECTION, 94 PROPERTIES IN EIGHT COMMUNITIES WERE ACQUIRED AT A COST OF JUST OVER \$5.5 MILLION. FISCAL YEAR 1980 WAS VIEWED BY THE FEDERAL INSURANCE ADMINISTRATION AS A PILOT YEAR DURING WHICH THE EFFECTS AND BENEFITS OF THE PROGRAM, AS CURRENTLY CONSTITUTED, COULD

BE DEMONSTRATED AND SUBSEQUENTLY EVALUATED, A PROCESS WHICH IS CURRENTLY UNDER WAY.

CONCERNING THE COST EFFECTIVENESS OF THE PROGRAM, OUR RESEARCH HAS DETERMINED THAT THE AVERAGE AFTER INSURANCE COST FOR ACQUIRING ELIGIBLE PROPERTIES ON A NATIONWIDE BASIS, IN 1981 DOLLARS, WILL BE \$22,000. THE SUBSIDY PORTION OF INSURANCE CLAIMS, IS OVER \$23,000 IN 1981 DOLLARS. THIS POTENTIAL FOR SAVINGS DOES NOT INCLUDE THOSE DAMAGES COVERED BY PREMIUMS AS WELL AS OTHER COSTS TO SOCIETY SUCH AS DEATH, REDUCED PRODUCTIVITY, BUSINESS INTERRUPTION, AND THE INFLATIONARY IMPACT OF UNNECESSARILY REBUILDING EXISTING HOUSING.

THIS YEAR, WITH A BUDGET OF \$5.4 MILLION AVAILABLE IN FISCAL YEAR 1981 FOR PROPERTY PURCHASE, AND A NEED WHICH FAR EXCEEDS FUNDS AVAILABLE, THE FEDERAL INSURANCE ADMINISTRATION WILL CONCENTRATE ON SELECTING PROJECTS WHICH BEST MEET THE SELECTION FACTORS IN OUR REGULATIONS. FOR FISCAL YEAR 1982, \$5.4 MILLION IS BEING REQUESTED TO CONTINUE THE 1362 PROGRAM.

OF INTEREST, TOO, IS THE STATUS OF THE FEDERAL INSURANCE ADMINISTRATION'S FLOOD INSURANCE STUDIES AND EFFORTS TO DELINEATE WAVE HEIGHTS AND ESTABLISH ACTUARIAL RATES FOR NEW CONSTRUCTION AND SUBSTANTIAL CONSTRUCTION IN COASTAL HIGH HAZARD AREAS.

RECENT YEARS HAVE BROUGHT SUCCESSIVE REDUCTIONS OF FUNDS DEVOTED TO NEW, DETAILED FLOOD STUDIES. WE, THEREFORE, FIND OURSELVES WITH A POOL OF ABOUT 8,000 - 10,000 COMMUNITIES WITH IDENTIFIED FLOOD HAZARDS FOR WHICH A DETAILED FLOOD INSURANCE STUDY HAS NOT BEEN CONDUCTED, AN INCREASINGLY DIMINISHED BUDGET FOR FLOOD STUDIES, AND AN OBVIOUS RESPONSIBILITY TO SELECT THOSE COMMUNITIES FOR FUTURE STUDY IN WHICH THERE IS A HIGH RISK OF FLOODING TO BOTH EXISTING AND NEW CONSTRUCTION.

ONE FLOOD RISK ZONE MOST APPROPRIATE FOR STUDY IS THE VELOCITY ZONE OR V ZONE ALSO REFERRED TO AS THE COASTAL HIGH HAZARD AREA, WHERE THE INSURANCE DEFICIT IS SIGNIFICANT. AMELIORATING THE DEFICIT IN THE

NEAR-TERM IS A PROBLEM COMPOSED OF AN AMALGAM OF, AS YET, SEPARATED LINKS. THE NECESSARY CONNECTIONS WHICH MUST BE FUSED FOR SUCCESSFUL HAZARD MITIGATION AND ACTUARIAL RATING ON THE COAST INCLUDE V-ZONE IDENTIFICATION (410 COMMUNITIES ARE IDENTIFIED ALONG THE ATLANTIC AND GULF COAST); THE ADDITION OF THE WAVE HEIGHTS TO COASTAL FLOOD INSURANCE RATE MAPS; AND THE ACTUARIAL RATING OF COASTAL NEW CONSTRUCTION BASED ON THE INCLUSION OF THE WAVE HEIGHT RISK FACTOR.

THE ENTIRE PROCESS IS UNDER VERY INTENSIVE STUDY AND IMPLEMENTATION AT THIS TIME. IN REGARD TO V-ZONE IDENTIFICATION, THE FEDERAL INSURANCE ADMINISTRATION HAS DEVELOPED A PLAN WHICH CALLS FOR REVISION OF THE CURRENTLY EFFECTIVE FLOOD INSURANCE RATE MAPS FOR REGULAR PROGRAM COMMUNITIES TO INCLUDE V-ZONES. DURING THE NORMAL CONSULTATION PROCEDURE COMMUNITIES WILL HAVE THE OPPORTUNITY TO REVIEW AND APPEAL THE DATA PRIOR TO PUBLICATION. FOLLOWING THIS PUBLICATION, THE FLOOD ELEVATIONS WITH WAVE HEIGHTS WILL BE REQUIRED FOR FLOOD PLAIN MANAGEMENT AND INSURANCE PURPOSES. FINALLY, THE FEDERAL EMERGENCY MANAGEMENT AGENCY IS CONSIDERING A POLICY TO DENY THE SALE OF FLOOD INSURANCE FOR NEW CONSTRUCTION ON UNDEVELOPED BARRIER ISLANDS.

IN CONCLUSION, I WOULD LIKE TO STATE THAT VARIOUS EFFORTS AND ACTIVITIES CURRENTLY UNDERWAY, THAT I HAVE JUST DESCRIBED, ARE ALLOWING THE NATIONAL FLOOD INSURANCE PROGRAM TO CARRY OUT ITS CONGRESSIONALLY ESTABLISHED GOALS OF PROVIDING INSURANCE AT SUBSIDIZED RATES - TO REIMBURSE PROPERTY OWNERS OF EXISTING BUILDINGS FOR THEIR LOSSES, AND CHARGING FULL ACTUARIAL RATES FOR NEW CONSTRUCTION, WHILE DISCOURAGING THE UNSAFE DEVELOPMENT IN THE NATION'S FLOOD PLAINS THROUGH THE EFFECTIVE ENFORCEMENT OF FLOOD PLAIN MANAGEMENT REGULATIONS BY STATE AND LOCAL GOVERNMENTS WITHIN THEIR FLOOD PRONE AREAS.

WITH THESE OBJECTIVES IN MIND, THE FEDERAL EMERGENCY MANAGEMENT AGENCY HAS A LONG RANGE GOAL, WHICH WAS ESTABLISHED IN THE 1966 STUDY, TO HAVE THE INSURANCE INDUSTRY UNDERWRITE THE RISK OF FLOODING AND THE STATES AND LOCAL COMMUNITIES TO ENFORCE FLOOD PLAIN MANAGEMENT.

I WOULD BE PLEASED TO ANSWER ANY QUESTIONS YOU MAY HAVE.

STATEMENT HIGHLIGHTED

Mr. KRIMM. In view of some of the things that have been said, I would like to highlight various parts of the statement.

The national flood insurance program has approximately 2 million policies in force protecting buildings and/or contents from loss by flood, including flood mudflow and flood-related erosion.

Individual eligibility of insurance is conditional upon the insured residing or doing business within one of the communities participating in the program, and as of April 30, 1981, there were 10,891 communities in the emergency program, which is the first phase, and over 6,000 communities in the regular program, which is the second phase of the program.

Insurance coverage nationwide is approximately \$100 billion.

Approximately 90 percent of the Nation's potential flood victims are located in communities in which flood insurance coverage under the program is available. This, in terms of overall coverage, translates in Pennsylvania alone, for example, to over \$2.7 billion in flood insurance coverage.

PROGRAM INITIATIVES

I would like to discuss some of the most salient program initiatives presently underway and some of the innovations planned for the months ahead.

On the flood insurance rating front, we are very acutely aware of the state of the economy and the need to make the national flood insurance program more fiscally secure and responsive.

FEMA has taken, and will take, the following actions: On January 1, 1981, the program increased rates countrywide by 32.5 percent, which included an actuarial rate increase of 48.9 percent. FEMA is proposing an additional increase of subsidized rates across the board for all type of buildings.

These present and proposed rate increases are the first in the history of the program and may be considered a definite harbinger for the fiscal future of the national flood insurance program, which will include an annual review of the rating structure, a new rating system in coastal high-hazard areas, an annual review of rates to recoup some of the deficits of recent years, an increase in subsidized rates for new construction in the emergency program to offset the long delay in conversion to the regular program, and an emphasis on putting the program more on a pay-as-you-go rather than on a deep-pocket subsidy basis.

Senator SPECTER. Do you think it is possible to establish the insurance rates due to an actuarial sound basis?

Mr. KRIMM. Not all of the rates will be actuarially sound as long as you have existing structures in certain flood plain areas.

The way the program is set up, you subsidize insurance for existing structures. We do have a goal of having the program on a self-sufficient basis by the year 2000.

Senator SPECTER. You mean actuarially sound?

Mr. KRIMM. Actuarially sound as far as new construction is concerned; yes. As long as you have structures that were built prior to the program coming into effect, the subsidy will continue. The in-

insurance industry might treat them as a loss leader to be offset by premium income from the actuarially rated policies.

In strengthening the program, there are several areas of the program on which we are focusing. One is enhanced claims cost austerity in terms of a renewed and aggressive pursuit of subrogation and salvage possibilities.

Second, we are focusing on streamlining loss adjustment methods, such as sharing adjusters with private wind insurers in coastal hurricane situations; third, in-progress claims audit by our inspector general; fourth, a tightening of all insurance policy coverage decisions; fifth, a planned uniform schedule for adjuster services; and sixth, a general tightening of the internal management of the claims operations which should result in solid reductions in losses and expenses.

In addition, FEMA has contacted representatives of the insurance industry to explore ways in which they can assist us in assuring that proper claims practices, rates, and insurance principles are followed.

FLOOD PLAIN MANAGEMENT MONITORING

In addition to the insurance side, better flood plain management monitoring activities at the local level to assure compliance with safe building practices will result in a reduction of flood losses.

Now I have to put a caveat there. We are very much hamstrung in our monitoring by the fact that we do not have adequate staff in the regional offices. But let me just review some of the flood plain management monitoring.

FEMA, first of all, has a monitoring system in place that measures community enforcement. Community assistance and program evaluation—CAPE—reports are conducted annually in 20 percent of regular program communities. Community-provided annual reports have, likewise, revealed overall compliance with flood plain management standards.

Senator SPECTER. Are you satisfied with the existing check by your agency on community standards?

Mr. KRIMM. No. As I mentioned earlier, 20 percent is the most we can do. We should do a more thorough job.

Senator SPECTER. What do you do on 20 percent?

Mr. KRIMM. Our regional staff goes into the community and, again, it will depend on the region—I will take as an example, Walter Pearson in Philadelphia, because he does the best job on CAPE's—they drive through the flood hazard area checking elevations on new construction to make sure the structures are being built so the lowest floor is above the 100-year flood. They look at where development is taking place in the flood plain, if there has been any variance, and what notices the communities put up regarding the flood.

A lot of communities in Pennsylvania have charts that show previous flood levels. I know in my hometown of Williamsport, they have markers that show the 1889 flood, the 1936 flood, the 1972 flood, and so forth. The regional staff looks for markers. Next, they visit the local building inspector's office and start reviewing building permits to see that there has been compliance, that the building inspector is actually checking permits for new construction in the flood plain and making

sure the structure is built properly, and that the elevation of the lowest floor is recorded. They also will check with banks to see if they are enforcing the insurance purchase requirements.

Senator SPECTER. Beyond the inspection, do you have a systematic method of having reports filed by the local communities in response to your specific questions.

Mr. KRIMM. The community files an annual report. If that report uncovers deficiencies, our regional office will write a letter to the community. The community will have to respond as to what measures they are taking to correct any deficiencies that have been found. Also, during the CAPE visit, the regional staff works with the community if they have any problems or difficulties in the administration of the flood program.

COMMUNITY SUSPENSION

Senator SPECTER. Somebody had testified earlier there were no communities suspended or no sanctions imposed out of your agency.

Mr. KRIMM. That is quite correct. We do have communities suspended for failure to adopt flood plain management measures when they go in the regular program, but until this month, we have not suspended a community for failure to enforce their flood plain management ordinances since about 1974 when we suspended a county in Florida.

When I became Acting Administrator, I felt very strongly that you have to set examples. We almost suspended Port Orange, Fla., but they submitted a plan that is acceptable.

I told our regional staff we are going to start suspending communities if they are not enforcing flood plain management measures.

STAFFING SHORTAGES

Senator SPECTER. What do you need in the way of increased regional staff—

Mr. KRIMM. Well—

Senator SPECTER. Excuse me, let me finish my question, to insure that there will be an adequate number of people to carry out the inspection program you outlined.

Mr. KRIMM. We have approximately 117 people right now in our 10 regional offices nationwide. This staff is used for things other than the flood insurance program. They are used for various civil defense programs and disaster work. So they are not always working full time on the flood program.

Senator SPECTER. What do you need?

Mr. KRIMM. We need about 220 people devoted entirely to the flood program.

Senator SPECTER. Have you proposed an increase in your budget to provide for that?

Mr. KRIMM. We did, but it was denied by the past administration.

Senator SPECTER. By the administration of President Carter?

Mr. KRIMM. Yes.

Senator SPECTER. Did you renew it for the administration of President Reagan?

Mr. KRIMM. What happened was that we were more or less obligated to support the budget that came up to the Hill.

Senator SPECTER. What do you mean, "more or less"?

Mr. KRIMM. Well, we were told.

Senator SPECTER. That is the most modulated statement I have heard from many, many witnesses who have been before the appropriation subcommittees.

Mr. KRIMM. Let me just continue here.

FEMA's regional offices do have a strong program of community assistance to help resolve enforcement problems that surface through these or other methods.

The monitoring indications are that most participating communities are enforcing their flood plain management regulations in compliance with the national flood insurance program standards. When communities do not enforce flood plain management ordinances, they will be suspended from the program.

STATE ASSISTANCE PROGRAM

Some special program initiatives also warrant attention. One is the flood hazard mitigation-oriented State assistance program, which provides States with the opportunity to strengthen their role in the national flood insurance program flood hazard mitigation activity. A long-range goal of the program is to have all States and territories with strong flood plain management laws and technical assistance capacity so this effort can be assumed by the State without Federal involvement.

I might mention the Commonwealth of Pennsylvania has one of the best flood plain management laws in the Nation. We do encourage other States to follow that law.

Senator SPECTER. Is there anything that could be done to stimulate other States to emulate Pennsylvania's approach?

Mr. KRIMM. We are doing this now, Senator, through the State assistance program. Last week I attended the national meeting of the Association of State Flood Plain Managers in which 29 States participated.

You might say that doesn't sound like very many, but it is an increase from the first meeting when only about seven or eight States attended.

Last year under the State assistance program, we had 48 States, plus three territories, represented at our meeting here in Washington.

COVERAGE IN PENNSYLVANIA

Senator SPECTER. Mr. Krimm, when you comment about Pennsylvania, given Pennsylvania's population and number of flood-prone communities, do you have an opinion as to why it is only \$2.7 billion of insurance coverage out of a national coverage of \$107 million coverage?

Mr. KRIMM. Yes. I think there tends to be, in Pennsylvania, and some of the other riverine States, a feeling that we have had our flood, and it may not happen here again. An interesting example is several years ago there were very heavy snows and ice in Pennsylvania and Governor

Shapp encouraged everybody to buy flood insurance. We didn't get a flood because there was an ideal melting pattern. In other words, you had warm days and cool nights.

In August came the Johnstown flood and the people there were very pleased they had the flood insurance coverage. But I think there is an attitude, too frequently, that this is not going to happen.

I can give you an example of my ex-father-in-law. When Harrisburg came into the flood insurance program in 1971, I told him to buy flood insurance because he lived on Front Street in Harrisburg. That is right on the Susquehanna River. He said, "I will buy it because you are in the program, but I will never be flooded again because in 1936 the water only came up to the first floor." Unfortunately, he procrastinated and didn't buy it. Nobody in Harrisburg bought it. You know what happened. The water was right up to the ceiling in his house on Front Street.

Senator SPECTER. What did you say to him?

Mr. KRIMM. As we shoveled out the mud, what can you say?

Senator SPECTER. Was Governor Shapp's home insured?

Mr. KRIMM. No; Bill Wilcox could give you a long story on that. They were originally insured under what is known as difference in conditions policy. An interesting sidelight is that Senator Harvey Taylor stated, when the Governor's mansion was being built, that it should not be built on the river bank. He said it was flood prone and that the Governor's mansion should be built up in the mountains.

Senator SPECTER. Senator Taylor recalls personally the last several floods. He is over 100 years old.

Mr. KRIMM. Since the beginning of recordkeeping in Harrisburg.

Senator SPECTER. How do you account for Pennsylvania's low proportion? The proclivities you have described would apply regularly, I think, to other citizens in other States.

Mr. KRIMM. I think in Pennsylvania one of the problems is that riverland or floodland is already developed. There are existing structures in the flood plain where people own their houses. There seems to be a lack of willingness to buy the insurance unless there is a flood threat. We see the fluctuation. When the river is high, people go out and buy the insurance, and when it is low, they don't renew it.

COASTAL COVERAGE

Senator SPECTER. Do you think people buy it more when they are on the coastal area?

Mr. KRIMM. In the Sun Belt, for example, where you have development going on and flood insurance is required as a condition of a mortgage, people do maintain their insurance. In coastal areas, even under the voluntary program, we found that more people bought the insurance because they have an annual threat of a hurricane which is like a roulette wheel spinning every season.

Senator SPECTER. Mr. Krimm, we have quite a number of questions which we will submit for the record. If you have some highlight, we are under a time situation, hit your highlights and there are a few questions I want to ask you.

FLOOD INSURANCE STUDIES

Mr. KRIMM. I might talk about our flood insurance study program. We find ourselves with a pool of 8,000 or 10,000 communities with identified flood hazards for which a detailed flood insurance study has not been conducted, an increasingly diminished budget for flood studies, and an obvious responsibility to select those communities for future study in which there is a high risk of flooding to both existing and new construction.

One flood-risk zone most appropriate for the study is the velocity zone which you heard discussed this morning, or also referred to as the V zone.

DEVELOPMENT OF COASTAL AREAS

Senator SPECTER. What do you think about the testimony on that subject? Do you think that should be excluded?

Mr. KRIMM. I think that has to be carefully thought out. If you exclude flood insurance in V zones, you may lose community participation in the program and lose any hope of flood plain management that prevents future losses. In the Carolinas, where development is taking place, as well as on the west coast of Florida, I have made a point of talking to a number of developers in those areas because I am concerned about the question, Is flood insurance encouraging development in coastal areas? Many of the developers have said to me that as long as people buy the buildings and as long as they pay the price, they will build without flood insurance, as long as they can get the money. For a lot of large developers that is not a problem. They say flood insurance gives them just a little bit of extra security, but then they complain about the flood insurance program because we require elevations which they say increase the cost of the construction and they say when you elevate the structure, you are subject to more wind damage. They say it is just ridiculous to have these elevations. In fact, if you go to Hilton Head, S.C., which is a vulnerable area, and ask them if hurricanes ever occur here, the salesman will say, "No, we are very fortunate, they come up the Georgia coast, veer out to sea, and then come into Hatteras, N.C., Yet they have had very serious hurricanes in Hilton Head.

I don't think flood insurance has encouraged development of coastal areas, but I don't think it has discouraged it either. That is a thing of great concern to me.

Senator SPECTER. But you don't think it has encouraged?

Mr. KRIMM. No, I don't.

I think the development would have taken place anyway. We mentioned Long Beach Island. When I was in college, I went down there in the summer during the 1950's, and it was pretty well developed at that time.

Senator SPECTER. You don't think there is any causal connection between the availability of insurance under the development of the island?

Mr. KRIMM. No.

Senator SPECTER. How about on the availability of mortgage loans?

Mr. KRIMM. I think if mortgage loans were available before the flood program came into being on Long Beach Island, they would be available now.

Senator SPECTER. What year did the flood program come into being?

Mr. KRIMM. It was passed by Congress in 1968 and started in 1969. When I came to the program in March 1970, there were only two communities in the flood program. Long Beach Island, as I recall, came into the program around 1971 or 1972.

DEVELOPMENT STUDIES

Senator SPECTER. It would be interesting, although not really conclusive like all the rest of the studies, to see the development in 1962 and 1971, when they came into the program. My estimation would be it has been gigantic since 1971 contrasted to the period 1962 to 1971.

Mr. KRIMM. In my opinion, it would have taken place. I will put it this way: I have recommended we do a study on the flood insurance program's effect on coastal development. Some people have made statements and some have done studies that show that the flood program has not really caused the development.

A comprehensive study on it talking to developers, lenders, residents, land speculators, and so forth, is really needed. It would not have to be a lengthy or costly study. I think this would give us conclusive evidence whether or not we need to be tightening up our flood plain management ordinances in coastal areas.

Senator SPECTER. What would your view be about having GAO do a study?

Mr. KRIMM. I would be delighted. I have always been impressed with their studies.

Senator SPECTER. Do you think that the policy of the legislation, if any there be, be carried out by the program, or is this program discouraging people from building in high-risk areas?

Mr. KRIMM. I can definitely say it is discouraging people from building in high risk riverine areas. In coastal areas, as I said earlier, I am not satisfied that it has been enough of a discouragement.

Senator SPECTER. Why do you feel it has in riverine areas?

Mr. KRIMM. I think you can see as you go around the country, a definite trend away from new construction in some of the riverine areas, or where they are building they are not building right at the river's edge.

In coastal areas, I see that they are still building a little too close to the beach.

Senator SPECTER. Do you think it makes sense to exclude coastal areas from coverage?

DENIAL OF INSURANCE ON BARRIER ISLANDS

Mr. KRIMM. One of my recommendations in preparing regulations is not to allow flood insurance for new construction on undeveloped barrier islands. We participated in the barrier islands task force. This is an area I feel very strongly about. We can do it regulatorially. We have the authority to do it.

Therefore, if it is approved by OMB, it will be done. But as I stated earlier, I think we have to look very closely about denying insurance in velocity zones.

Senator SPECTER. Is there anything else you would like to emphasize, Mr. Krimm?

Mr. KRIMM. No; I will address those questions.

Senator SPECTER. I want to thank you all very much for coming. This hearing has been held because of some unique expertise that I have on my staff.

Bill Wilcox has had experience in the Pennsylvania Department of Community Affairs, also in the FEMA Emergency Administration area and has had some unique exposure and experience here. I think with that background, it may be that we can study this issue and perhaps improve the administration of this program. So I thank you all very much for coming today.

SUBMITTED QUESTIONS

[The following questions were not asked at the hearing but were submitted to the Agency for response subsequent to the hearing:]

SUBMITTED QUESTIONS

Why is it necessary to increase the year end (un)-obligated balance of the National Flood Insurance Fund from \$448 million in 1981 to \$705 million in 1982?

Beginning with 1981, FIA requested an annual appropriation for the National Flood Insurance Fund to repay Treasury borrowings. This was intended to maintain an adequate balance in the Fund to cover heavy losses and to reduce FIA's outlays by reducing interest payments. If the appropriate request for FY 1982 is not approved, the interest expense will be increased by \$39 million from \$16 million to \$55 million.

Wouldn't it be adequate to maintain the unobligated Balance of the fund at about \$400 million, slightly less?

In a year of average losses, a balance of \$400 million would be sufficient to cover the Federal subsidy. If it were a catastrophic loss year, additional borrowing authority or a supplemental appropriation would be required.

I note that 10,892 communities, well over half, are still in the emergency program. Lacking FIRM (Flood Insurance Rate Maps) maps, what are the required compliances "with minimum flood plain management measures" as stated in your testimony?

The following are the minimum flood plain management standards to be applied in areas of special flood hazard for communities participating in the Emergency Phase of the National Flood Insurance Program:

1. Require permits for all proposed development in any area of special flood hazard. The term "development" is defined to mean "any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations."
2. Review permits for proposed development to assure that all other necessary permits have been received from those governmental agencies from which approval is required by Federal or State Law.
3. Require that new construction (including prefabricated buildings and mobile homes) be anchored to prevent flotation and lateral movement, and be constructed with flood resistant materials and methods.
4. Assure that subdivision proposals and proposals for other developments, including their utilities and drainage, are located and designed to be consistent with the need to minimize flood damage.
5. Require that all subdivision proposals and other proposed new developments greater than 50 lots or 5 acres, whichever is less, include base flood elevation data.

6. Require new water and sewer systems (including on-site systems) to be located and designed to avoid impairment.

7. Obtain and maintain records of elevations and flood-proofing levels for all new or substantially improved structures, and whether or not such structures contain a basement.

8. In riverine situations, notify adjacent communities and the State Coordinating Office prior to any alteration or relocation of a water course and submit copies of such notifications to FIA. Within the altered or relocated portions of any watercourse, assure that the flood carrying capacity is maintained.

9. In A zones, obtain, review, and reasonably utilize base flood elevation data from alternative sources, prior to its being provided by FIA through its Flood Insurance Study, as criteria for requiring that all new residential structures and substantial improvements to existing structures have their lowest floor (including basement) elevated to or above the base flood level, and that new nonresidential structures and substantial improvements to existing structures have the lowest floor (including basement) elevated or floodproofed to or above the base flood level.

As of May 15, 1981, there were 9,872 communities participating with an FIA map delineating areas of special flood hazard. Items 1-5 are required for the 872 communities which have not received an FIA map.

What, on an overall basis, is the proportion of taxpayer subsidy and premium payments to the flood insurance program?

	<u>1980</u>	<u>1981</u>	<u>1982</u>
	(\$ in Thousands)		
Total Cost	\$446,819	\$415,154	\$424,272
Premium Income	\$153,985	\$204,933	\$308,998
Ratio - Cost/Income	2.9/1	2.0/1	1.4/1

The ratio of total cost to total income averaged 2.3 to 1 from the inception of the program through 1980. In 1980, the ratio was nearly 3 to 1. In fiscal years 1981 and 1982, that ratio is expected to drop significantly, to 2 to 1 and 1.4 to 1, respectively. This large drop is a reflection of increases in rates and rating changes which took effect January 1, 1981, and other changes scheduled to occur September 30, 1981. No significant changes are projected in the costs of the program. This downward trend should continue until the program reaches a 1 to 1 ratio (projected to be the year 2000).

To what extent does Federal disaster assistance pay for flood insurance premiums?

The state-administered Individual and Family Grant program has provided \$25 to each eligible applicant whose home is located in a designated special flood hazard area, and who receives a grant to meet a disaster-related necessary expense or serious need for home repair and/or contents. This \$25 (now a minimum of \$50 under

the NFIP rate increase) is to cover the cost of the initial flood insurance premium to protect the home and/or contents, and is considered a disaster-related necessary expense.

There is some likelihood that this "initial" premium is received again by the NFIP in the event the insured receives subsequent IFG funds following a second or third flood. The last administration did not require that flood insurance be maintained as a condition for receipt of additional IFG funds after a second flood disaster. FIA now has a three-year policy available, and the Disaster Response and Recovery Office should be requiring that flood insurance be purchased as a condition of receiving IFG funds in the near future.

The following table shows the number of policies that have been purchased under the IFG program for the indicated fiscal years:

Fiscal Year	Number of Disasters Involving Flooding	Approximate Number of Grants for Flood Insurance	Federal Share of Cost*
1978	22	2,914	\$ 54,638
1979	35	87,486**	1,640,363
1980	13	10,814	202,763

*\$25 x Number of Grants x .75 = Federal Share of Cost

**Includes Approximately 65,000 Grants for Flood Insurance in Puerto Rico

What do you think of Mr. Larson's idea to increase premium rates by 20% after each loss has been paid?

Mr. Larson's proposal has merit in the case where actual flooding events would indicate that applying the theoretical flood frequency to the risk is inappropriate. For the proven repetitive flood damaged building, it would create desirable economic incentives to mitigate future losses. Our office will be studying how the concept underlying Mr. Larson's proposal could be implemented.

What standards or criteria do you use for establishing rates in the emergency and permanent programs?

The National Flood Insurance Act of 1968 separated the flood insurance rate-making process into two distinct categories, namely, estimated risk premium (actuarial) rates and chargeable premium rates which, under certain statutory conditions, could be "less than estimated risk premium" (subsidized) rates. At present, these two rate categories have been implemented as follows:

1. Subsidized Rates - These are countrywide rates by broad building type classifications which produce a premium income somewhat less than the expense and loss payments incurred on the flood insurance policies issued on that basis. The funds needed to

supplement the inadequate premium income are provided by the National Flood Insurance Fund. The subsidized rates are promulgated by the Administrator for use under the Emergency Program (added to the NFIP in 1970) and for the use in the Regular Program on construction or substantial improvement started on or before December 31, 1974 (this additional grandfathering added to NFIP in 1973) or the effective date of the initial Flood Insurance Rate Map (FIRM), whichever is later. The level of these rates has resulted in an average annual insurance premium of \$86 per policy paid by policyholders and an average premium subsidy of about \$125 per policy borrowed from the Treasury of the United States. These rates were established in conjunction with a feasibility study conducted in 1966. The rates were lowered in 1974 to provide an inducement for communities to join the program. The level of rates are consistent with the statutory objective of making flood insurance available where necessary at reasonable rates so as to encourage prospective insureds to purchase such insurance and with the purpose of the National Flood Insurance Program. To illustrate this process, we cite two examples. In 1980, it was decided that the insurance administrative expenses will be exclusively borne by the policyholders. Effective January 1, 1981, the insurance expense constant was included in the rating of each policy whereas heretofore it only applied to policies rated on an actuarial basis. In 1981, in response to the need to reduce the average per policy subsidy, the subsidized rates will be adjusted to the pre-1972 level (43% rate increase) thereby eliminating the major rate reduction granted in early 1974 when the limited mandatory purchase requirement was initiated. Rates will be reviewed on an annual basis for possible modifications.

Currently, new rate initiatives are under study to address the rating of new construction in coastal communities participating in the Emergency Program.

2. Actuarial Rates - These rates are promulgated by the Administrator for use under the Regular Program (the phase of the National Flood Insurance Program which a community may enter following the initial publication of the FIRM-detailed risk zone and elevation map). The actuarial rates are applied in the rating of post-FIRM construction and second layer limits of insurance on all construction (e.g., in the case of 1-4 family residential, amounts of insurance in excess of \$35,000).

The actuarial rates are based on consideration of the risk involved and accepted actuarial principles. The actuarial rate formula may be expressed as follows:

$$\text{Rate} = \frac{\text{Max} \sum \text{Min} (\text{PELV} \times \text{DELV}) \times \text{LADJ} \times \text{DED} \times \text{UINS}}{\text{EXLOSS}}$$

Rate =

EXLOSS

Where: Min = minimum elevation relative to grade floor at which flood damage occurs.

Max = maximum elevation relative to grade floor at which flood damage approaches a maximum.

The variable identified as PELV is the probability of a particular water surface relative to the 100-year base flood elevation. For example, in Zone A10, the probability of water rising to an elevation 1 foot less than the 100-year flood elevation is 1.6%, 1 foot above the 100-year flood elevation 0.6%, whereas the probability of water rising to base flood elevation is 1%. There are many risk zones and they are based on information gathered and calculations made by professional engineers and hydrologists. Various Federal agencies such as the Army Corps of Engineers and private engineering firms are performing detailed risk zone and elevation studies of all serious flood-prone areas. The PELV values are determined from these detailed studies.

The variable DELV is the ratio of the flood damage to actual cash value of the insurable property and is obtained from depth percent damage tables. These tables are subject to experience checks by the FIA from a review of actual flood insurance claim files.

The variable LADJ is the loss adjustment expense factor expressed as a function of losses (claim payments to policyholders). This provides funds for the payment of loss adjusters fees and claims examiners fees which are required to determine the appropriate insurance value of the flood damage and the amount due the policyholder under the terms and conditions of the flood insurance policy. The variable named DED is the deductible offset. This variable is required to reflect the insurance policy condition that the first \$200 of damage does not necessarily qualify for an indemnification payment.

The variable named UINS is the under-insurance factor and is included in the formula because flood insurance policyholders do not always insure to value. This requires that the impact of the DELV values in the formula be adjusted to account for the difference between property values and the amount of insurance purchased for each category of risk.

The variable EXLOSS is the expected loss ratio and serves to load the actuarial rates for insurance agents' commissions and other acquisition expenses incurred in the selling of flood insurance policies.

The formula described above follows in principle the "hydrologic method of estimating flooding damage risk" outlined in the 1966 HUD Report to the President entitled, "Insurance and Other Programs for Financial Assistance to Flood Victims" (see Report page 50). With the NFIP adoption of the 100-year (or 1% annual chance) flood standard, the flood risk zones were redefined and the reference point shifted from ground level to the base flood elevation. Specific elevation rates apply in zones A1-30 and V1-30 following the detailed risk zone and elevation study.

There are a few risk zones (Zones A, B, C, -D, AO, AH, and V) where costs to obtain the hydrologic and topographic information needed to develop flood magnitude-frequency relationships would be extremely high in relation to the flood plain management benefits. Average rates based on actuarial and engineering judgments were promulgated for these zones.

It is important to note that the 1966 HUD Report described the "hydrologic method" of ratemaking as a method which "uses available data on the occurrence of floods and damage but is considerably more sophisticated than merely averaging losses over a period of time." This method of ratemaking when coupled with special financial arrangements to protect the insurance fund against the risk of severe underwriting losses (the chance still remains that another severe hurricane like Betsy or Camille could wipe out the insurance fund) eventually led to the legal statute of actuarial rates under the National Flood Insurance Act of 1968. This marriage of ratemaking and financial arrangements was a necessary outcome because the actuarial formula is the only valid estimate of flood damage over a very long period of time. The annual provision for flood insurance losses and loss adjustment expenses cannot be predicted with any degree of certainty. In fact, the estimated amount of losses in any future one year period is so uncertain that it can only be provided for by having available large loss reserves and replenishing those reserves by accumulating funds during good years to offset the drain on the reserves during bad years. However, since the chargeable rates for so many policyholders are less than the actuarial rates by statute (all construction before December 31, 1974, or the effective date of the initial Flood Insurance Rate Map, whichever is later) there is no ability to accumulate loss reserves during good years. Therefore, the current statutory method of providing borrowing authority to finance the long term loss and loss adjustment provision of the flood insurance program makes a good deal of sense.

Section 1306(a)(3) of your legislation appears to provide you authority to reject "any risks which may be advisable." How do you interpret and use this authority? What risks have you rejected?

Part B of the 1968 Act, under which the Program is presently being administered, authorizes the Director, at Section 1306(a), after consultation with appropriate representatives of the insurance authorities of the several States, to issue regulations concerning the eligibility of properties for flood insurance and, among other things, the "rejection of any risks which may be advisable."

Prior to January 1, 1978, when the National Flood Insurance Program (NFIP) was operated under Part A of the 1968 Act in cooperation with an association, or pool, of insurers responsible for the servicing of the Program, the Administrator consulted with "appropriate representatives of the pool," with the State regulators and with a statutory advisory committee in determining the risks where rejection would be advisable. The uninsurability of these risks was documented for the record in the exclusions provisions of the Standard Flood Insurance Policy and in the agent's manual of rules and rates. For example, the following risks were declared as not eligible for coverage:

1. Mobile homes not on foundations.
2. Underground buildings or structures.
3. Open buildings not fully enclosed and roofed.
4. Buildings not affixed to a permanent site.
5. Buildings declared by a State or local authority to be in violation of local flood plain management laws.
6. Open buildings located on or partially over water.
7. Land values, growing crops, livestock, walks, fences, driveways and the like.
8. Contents not contained within a fully enclosed building.

In the administration of the NFIP, FEMA issued final regulations on September 9, 1980, implementing Executive Order 11988 which authorized the rejection of any risks:

1. where the building is one with respect to which the FEMA Regional Director has taken the "no action" option (44 CFR 9.9(e)(6));
2. where the Regional Director has been precluded from providing assistance for a new or substantially improved structure in a floodway (44 CFR 9.11(e)(4));
3. involving new construction in a coastal high hazard area (V-Zone) with respect to which the wave heights have not been designated (44 CFR 9.11(e)(3)(ii)); and
4. in respect to which, as to any structures in a V-Zone, the building has not been individually rated based on the structures' capacity to withstand damage from the 100-year flood (44 CFR 9.11(e)(2)(i)).

There have been no instances as yet in which any risk has been declined under the first two categories above. As to the third and fourth and another requirement, dealing with anchoring of structures in V-Zones, FEMA is still assessing public comment and has, therefore, deferred action until its V-Zone rating system has been established. Work is proceeding diligently on these matters.

More recently, FEMA published a proposed rule on November 25, 1980, which would have provided for the rejection of the following additional risks:

1. Mobile homes located in special flood hazard areas that are not anchored to resist flotation, collapse, or lateral movement by providing ties to ground anchors and meeting other specific requirements.
2. Contents which may become a pollutant to a community during flooding (unless such contents are at or above the base flood elevation, or above ground level where there is no established elevation.)
3. All obstructions, in V-Zones, below a building's lowest floor, including solid walls, open wood constructed lattice "breakaway walls", insect screening or other "breakaway walls," any personal property or other contents located below such building's lowest floor.

The portions of the proposed rule pertaining to those categories of risks, which would have been rejected under the proposed rule-making, have been deferred for administrative review of the policy decision. FEMA is actively considering these matters at this time along with the following additional categories of risk for which rejection might be advisable:

1. All new construction in the undeveloped areas of barrier islands.
2. All new construction in any V-Zone community having a Regular Program Flood Insurance Rate Map which includes FEMA-designated wave heights unless the new structure is actuarially rated.

Do you provide coverage for second homes in the V-Zone?

There is no distinction under the National Flood Insurance Program regarding the ownership or use of residential structures. Therefore, whether the home is used as a primary residence or a secondary residence does not affect eligibility. So long as the home is located in a community which has a flood plain management program at least equal to that prescribed by the FEMA regulations and is participating in the National Flood Insurance Program, coverage is available against the risk of flood loss. It should be kept in mind that in addition to flood insurance, there are various Federal disaster relief programs providing both direct and indirect assistance and thus the Federal Government is potentially liable under such programs as those involving disaster loans. In addition, losses can be claimed as casualty losses under the Internal Revenue Code.

So long as the Federal Government is exposed to liability for flood losses through so many different Federal laws, the Federal Government benefits by the operation of a program such as the National Flood Insurance Program which enables the Government to recover a portion of its liabilities through the collection of insurance premiums under an insurance mechanism which enables the Government to cover flood losses to buildings and contents at appropriate rates reflective of the risk. The Government also benefits from the flood plain management made possible through the National Flood Insurance Program by reducing future losses through safer construction practices and alternative uses of the community's flood hazard area. Thus, the National Flood Insurance Program enables the Government to offset the amounts which would otherwise be payable through other Federal programs.

When a structure is acquired under the Section 1362,
do you pay pre-flood or post-flood value?

The total value paid for a damaged structure under Section 1362 is equal to pre-flood market value less the insurance claim paid, assuming repairs have not been made.

QUESTIONS SUBMITTED FOR THE RECORD BY SENATOR SPECTER

Over a 50 year period in America, what do you think would be the worst case scenario in a single year in terms of demand on the \$100 billion Federal exposure in the Flood Insurance Fund?

Estimates of worst case scenarios are not an exact science. For example, in 1979, the NFIP incurred over \$200 million in losses as a result of two major storms--producing, along with other flooding during the year, an operating deficit of \$419 million. Mathematical simulations* underlying the legislative decision to establish the NFIP's reserve requirement indicated that the chance of exceeding that type of financial impact is less than one in five. Using this same simulation process, a worst case scenario can be developed for any probability desired. For example, an event which has less than 1 in 1,000 chances of occurring would result in Federal borrowing of \$2 billion. The attached table sets forth a comparison of the actual results with the probability model. In another approach, using the worst case computation from a simulation model with 2,000 years of simulated flood damage, the Federal borrowing would be \$3.7 billion.

We have also attached a comparison of the storms Agnes in 1972 and Eloise in 1975. It should be noted that these severe storms resulted in ratios of losses to amounts of insurance of .0048 and .0078 for all states. In other words, insured flood losses for these storms were less than 1% of the amount of insurance in force. Even using total adverse selection by relating flood losses to the hardest hit state, the ratios are .0892 (based on only 146 claims) and .0431. It would appear that the greater spread of risk on a national basis resulting in estimates of 2% to 4% of the amount of insurance as a probable maximum Federal subsidy are reasonable.

It must be remembered in evaluating the NFIP insurance subsidy that the insurance indemnification dramatically reduces at least two other large Federal subsidies; namely, deductions from income tax payments and Federal disaster relief subsidies. If, for example, NFIP borrowing of \$2 billion were needed for loss payments, it would increase income tax revenues by about \$500 million, plus it would reduce some of the Federal costs of disaster relief subsidies which would be granted. Further, the mitigation potential of the NFIP offers the only coordinated effort to require basic flood plain management at the local level. To quantify the leverage that hazard mitigation provides under a worst case scenario, recent research** supported by the National Science Foundation developed simulated results for Hurricane Camille (characterized by NOAA as the storm with record damage for a single hurricane) if it were to occur in the year 2000. The findings from the analysis show that building losses without mitigation would be \$2.39 billion whereas with mitigation damage to buildings would be \$1.515 billion, a savings of 37%. Also, with mitigation, the total left homeless would be reduced 61%, mortality would be reduced 59% and the total economic loss would be reduced by \$2.5 billion, a saving of 58%.

*HUD Report - Insurance and Other Programs for Financial Assistance to Flood Victims, September 1966

**Grant Numbers ERS-75-09998-A01, and AEN-74-23992, "Natural Hazards - A Public Policy Assessment" by J.H. Wiggins Company, December 1978

National Flood Insurance Program

<u>(1)</u> <u>Year</u>	<u>(2)</u> <u>Amount of</u> <u>Insurance</u> <u>In Force</u>	<u>(3)</u> <u>Ratio of</u> <u>Flood Loss</u> <u>to Amount</u> <u>of Insurance</u>	<u>(4)</u> <u>Probability of</u> <u>Obtaining a Ratio</u> <u>in Column (3) Greater</u> <u>than the Actual Shown</u>
1972	\$1.7 billion	.0054	47%
1973	4.0	.0119	8%
1974	7.5	.0033	> 50%
1975	12.6	.0076	24%
1976	19.6	.0018	> 50%
1977	30.0	.0032	> 50%
1978	43.0	.0033	> 50%
1979	61.6	.0082	20%
1980	86.4	.0027	> 50%
		<u>Estimated</u> <u>Worst Case</u>	
XXXX	\$100.0	.0219	0.1%

*Based upon table contained in "Actuarial Aspects of Flood and Earthquake Insurance" by Mortimer Kaplan, FCA

NATIONAL FLOOD INSURANCE PROGRAM

Comparison of the Actual Insurance Indemnification for Flood Damage Under the National Flood Insurance Program in Which the Insurance Purchase Requirement was Optional with the Insurance Indemnification Under the National Flood Insurance Program as Amended by the Limited Insurance Purchase Requirement Contained in the Flood Disaster Protection Act of 1973

Agnes (1972) vs Eloise (1975)

State	Flood Damage (a)		No. of Flood Ins. Policies in Force		Amount of Insurance Protection in Force		No. of Flood Ins. Claims Filed		Insurance Indemnification for Flood Damage		
	Agnes	Eloise	Agnes	Eloise	Agnes	Eloise	Agnes	Eloise	Agnes	Eloise	
Pennsylvania	\$410,060,000	\$112,800,000	683	40,180	\$ 8,654,000	\$ 869,576,000	146	8,000	\$ 772,260	\$37,500,000	
Virginia	69,650,000	6,000,000	667	9,224	13,616,000	302,217,000	209	450	1,601,354	4,200,000	
New York	41,385,000	27,420,000	2,046	25,121	43,657,000	704,264,000	7	1,650	35,000	2,438,000	
Maryland	15,000,000	8,000,000	693	5,610	14,395,000	176,780,000	99	600	733,933	2,900,000	
Florida	11,207,000	20,000,000	21,208	128,051	356,756,000	3,871,549,000	1,019	500	1,778,659	2,000,000	
New Jersey	8,112,000	1,500,000	9,259	41,069	193,065,000	1,206,133,000	107	375	90,511	562,000	
Connecticut	3,000,000	2,000,000	115	4,875	1,997,000	135,383,000	8	150	40,000	1,200,000	
District of Columbia	1,000,000	400,000	District of Columbia entered Flood Program on October 31, 1975, no insurance in force during Agnes and Eloise								
All States	569,741,000	228,780,000	61,228	258,744	1,064,140,000	7,433,230,000	1,614	12,375	5,146,717	58,000,000	

(a) Flood damage to structures and contents

Source: National Flood Insurers Association Insurance Experience and the American Insurance Association Property Claim Services

CORRESPONDENCE

Senator SPECTER. Dr. Gilbert White has been mentioned several times in this hearing. We have just received a letter from him which will be made a part of the record.

LETTER FROM GILBERT WHITE

MAY 5, 1981.

Hon. ARLEN SPECTER,
Room 342, Russell Office Building,
U.S. Senate, Washington, D.C.
(Attention of William Wilcox).

DEAR SENATOR SPECTER: I regret that I am unable to accept the invitation to testify before the Subcommittee on HUD and Independent Agencies concerning the fiscal year 1982 request of the Federal Insurance Administration. The following brief observations may be of some help as your subcommittee reviews the needs for flood insurance.

On the question of the extent to which the flood insurance program is meeting its objective of discouraging development of floodplains, five points are worthy of attention:

1. It is essential to distinguish between coastal areas with the hazard of hurricane storm surge and interior areas with the hazard of river overflow. The two situations are fundamentally different. The flood insurance program was aimed primarily at riverine situations, but the more rapid growth in population has taken place along the coastal margins. Those areas have required special consideration, and the efforts of the Flood Insurance Administration in recent years to specify minimum provision for wave heights have sought to curb encouragement of uneconomic invasion of the coast at Federal expense.

2. It is also apparent that the more rapidly communities are converted from the emergency program to the regular program the greater the likelihood that uneconomic occupation of hazardous areas will be curbed by actuarial rates.

3. Underlying any searching analysis of the changes in vulnerability of property to floods is the adequacy of data on premiums sold, claims indemnified, and land use in the floodplains. Until the last few months it has been difficult to estimate precisely what have been the effects. FIA should be encouraged to make the results of its improved statistical base available for appraisal.

4. A significant amount of new encroachment in hazardous areas apparently is encouraged by the public works activities of other Federal agencies. Just how much, no one knows. It would be helpful to find out how fully the several agencies are carrying out their responsibilities under Executive Order 11988.

5. As I indicated in testimony last year before a Senate committee, flood insurance is a basic component of a package of activities intended to promote wise use of floodplains. Its success inevitably is linked to the energy and effectiveness of the whole array of measures which would reduce in the long run the obligation of the Federal Government to come to the financial assistance of flood sufferers.

On the question of the appropriate levels of premiums for both subsidized and actuarial rates, there is no persuasive evidence that the levels now are unduly high. On the contrary, the scattered bits of evidence suggest that substantial increases would be in order. Here, as in the preceding question, the initiatives taken in recent years by FIA to build a data base on which more searching appraisals could be grounded are to be encouraged. For example, it is important to have more detailed information on claims and on the extent to which they are reducing Federal expenditures for relief and rehabilitation in the same areas.

In the event there are questions raised during the hearing for which our center might help in providing answers, I hope you will feel free to call on us.

Sincerely,

GILBERT F. WHITE.

CONCLUSION OF HEARING

Senator SPECTER. That concludes the hearing. The subcommittee will recess and reconvene at the call of the Chair.

[Whereupon, at 11:35 a.m. Wednesday, May 6, the hearing was concluded and the subcommittee was recessed to reconvene at the call of the Chair.]

