MITIGATION AND INSURANCE - ACTIONS, POLICIES AND NEEDS

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Loss control, loss prevention or hazard mitigation, whatever the terminology, requires cultural assimilation over time, because we are dealing with extremely personal issues.

Insurance itself is a very personal business. The benefits of loss prevention are pursued because they can become personally cost effective to both the insurance seller and the insurance buyer. Reduced losses mean reduced premiums. That equation is basic, for mitigation has been and will continue to be a tool of insurance.

The insurance industry has participated in loss control efforts on behalf of the public interest for about a century. In 1893, the Columbian Exposition in the city of Chicago was experiencing repeated fires due to faulty electrical installations. A Boston electrical inspector was invited by the Chicago Board of Fire Underwriters to inspect the property. He recommended substantial changes, and from this effort was born the Underwriters Laboratories. This organization, begun and supported by the insurance companies, continues today, and has expanded its activity from testing

electrical equipment to a multitude of services aimed at safeguarding lives and preventing loss of property.

More recently, State Farm and other insurance companies founded the Insurance Institute for Highway Safety. Its objective was to bring about improved safety features and safer designs in automobiles that we Americans drive, such as air bags.

Today, Detroit's most famous industry broadly displays the wonders of these bags; yet, their record is one of ignoring safety as a central issue for many years. They battled the insurance industry on seat belt usage, over the shoulder belts, and passive restraints. They still refuse to build bumpers that truly bump.

Designing for safety from fire and motor vehicle accidents has been, and is, at the forefront of the insurance business. Better building design is becoming a hallmark for survival from hurricane force winds along our nation's coastlines. Our industry is supporting efforts to replace antiquated building codes, to enforce the new building codes more rigorously, and to build a stronger building in those places where high winds and high water can cause massive damage.

Flooding is the single major natural disaster that occurs on the face of this earth. It affects more people than any other type of catastrophe, and happens more frequently and in more places than hurricanes, tornadoes, earthquakes or volcanic action.

It is therefore important that we understand that insuring against the peril of flood requires controls, not just of the waters and their paths, but of future development and construction practices.

The private insurance sector has never provided insurance against flooding. Adverse selection prevented obtaining a geographical spread of risks. The flood peril itself is catastrophic in nature, and a price reflective of expected losses in limited, congested areas would be too expensive to make the coverage marketable.

State insurance laws also worked against insuring against the peril of flood. Prior to the 1950's, the insurance industry was a monoline business with each company writing a single type of insurance. Flood could only be insured as a single line of business, and this would accentuate the insurance company's vulnerability to catastrophic losses.

Interest in flood insurance always follows a major flood disaster. But, as the water subsides, so does the interest. In May, 1951, the states of Kansas and Missouri had thousands of square miles flooded, and President Truman proposed a $1.5 billion insurance program to be handled by the private insurance industry. The Federal Government would underwrite 90% of the value of the damaged property up to a maximum amount. Congress failed to take positive action on the President's flood proposal, and interest, like the flood waters, subsided.

Two years later, in August 1954, Hurricane Carol struck the New England coast. The following year heavy flooding again struck New England. Interest in providing flood insurance was again stimulated. An insurance trade association issued a study concerning uninsured wave wash damage statistics. Another trade association released a compilation of five separate reports entitled "Study of Flood and Flood Damage 1952-1955". The conclusions were predictable: insurance against flooding could not be underwritten successfully by the insurance industry.

However, the floods of those years aroused the interest of the Congress. In 1956 the Congress passed the Federal Flood Indemnity Act. Federal and state governments would subsidize 40% of the premium rate, private insurance companies would

sell and service the insurance and handle all claims, and a Federal Reinsurance Program would furnish the $100 million of financial protection from catastrophic flooding.

A federal agency was formed and staffed, and the program was ready to become operational in the Spring of 1957. Because the House Appropriations Committee decided not to appropriate any funds for the program, the agency was abolished and the program was scuttled by administrative order.

During the ensuing years, the National Association of Insurance Commissioners, whose members are the regulators of our business, expressed a desire to examine the subject. Hurricanes Donna and Carla in 1960 and 1961 struck the gulf coast, and heavy flooding was experienced in the Pacific Northwest, New Jersey and Delaware in 1962, rekindling interest in flood insurance. Several trade association committees developed separate and distinct recommendations and made reports to the National Association of Insurance Commissioners. However, these views were extremely divergent, and could not be brought together. Again, interest waned, but then came Hurricane Betsy in 1965.

This devastating hurricane led to the creation of the Southeast Hurricane Disaster Relief Act. This act directed the Secretary of the newly created Department of Housing and

Urban Development to prepare a report on providing programs of financial assistance to future flood victims. An essential characteristic of the report, which contemplated continued large scale participation by the Federal Government, were two objectives of equal importance:

(1) to help provide financial assistance for victims of flood disasters in order to rehabilitate their property through flood insurance; and,

(2) to help prevent unwise use of land where flood damages would mount steadily and rapidly through flood plain management.

A program that would keep both insurance and management of land in balance was proposed, congressional hearings followed, and the result was the National Flood Insurance Act of 1968, creating the National Flood Insurance Program.

In summary, during the 50's and most of the 60's, various attempts were made to develop a National Flood Insurance Program. At the same time, the Federal Government was using taxpayer revenues to fund financial assistance and disaster aid to victims of the floods. No unified effort was addressing reducing the potential of future flooding. The concept of an insurance program, whereby those at risk would

provide much of the funding for future payments, coupled with a mitigation program to prevent the unwise use of land, laid the cornerstone for a partnership which has worked for the past 23 years.

However, one part was missing. In 1969 Hurricane Camille struck the gulf coast, causing extremely heavy flood damage. Due to program restrictions, only residents of Metairie, Louisiana, were eligible for flood insurance. As a result, Congress amended the act to provide for emergency entrance by communities into the program, based on their promise to participate in the program and to provide evidence that future decisions relevant to location, design and construction of new structures within the area would take known flood hazards into account. Thus, another support was added to the concept of loss prevention or hazard mitigation.

Many more communities joined the program, but individual policy sales were slow. By June 30, 1972, fewer than 100,000 policies were in force across the country. One month later Hurricane Agnes permanently changed that. Moving through the Middle Atlantic states with extremely heavy rainfall, flooding occurred in hundreds of communities affecting hundreds of thousands of people. But flood insurance coverage was so sparse that this hurricane had little or no effect on the program.

Congress again responded, and amended the National Flood Insurance Act to bring mandatory flood insurance purchase requirements into the program. The Flood Disaster Protection Act became law December 31, 1973, and it created new incentives for communities to participate and new sanctions for not participating. It would be virtually impossible for communities with special hazard areas to remain out of the program now because flood insurance had to be purchased before any form of federal financial assistance for acquisition or construction purposes would be available. It denied both federal financial assistance for acquisition or construction purposes and federal related financing by private lending institutions. A floodprone community that did not join the program would not have federal disaster assistance loans or grants available for permanent repair or reconstruction after any catastrophe, even if flood had not caused the disaster.

The basis of structural engineering is a rigid, three sided figure: the triangle. Each leg is vital and necessary to the strength of the whole. The flood program was no different for, with this act, the Congress introduced the third leg to flood insurance and mitigation: the mandatory purchase. Communities must take action to mitigate against future flooding events, the federal government must provide insurance for the citizens of such communities, and insurance must be purchased.

Today, over 18,000 communities participate in the flood insurance program, and almost 2.5 million policies are in force. New policies are being added daily, as lenders continue to enforce the mandatory purchase requirements, although the Federal Government estimates that there are still more than 6 million structures without insurance.

Given the mandatory purchase requirements, the number of communities currently in the National Flood Insurance Program, and their enforcing flood plain management ordinances regulating proposed development in flood hazard areas, it would seem that the program has achieved its goals. But there is still a substantial number of risks which are not directly affected by floodplain management. These are the buildings that have been there for an extended period of time. Also, some communities have done much more in regulating construction of new buildings to the national standards than have other communities. Since the program provides identical flood insurance rates in all participating communities, there is no direct reward for this action.

A new approach is being taken to recognize the more productive communities. It is designed to encourage managed development in areas not mapped by the program, to foster additional protection of new buildings beyond the minimum described by the program, to provide more flood data information at a local

level, and to focus on ultimate damage reduction to existing buildings. This is the new Community Rating System, whose basis lies in insurance history.

Since before the turn of the century, fire insurance has been subjected to the measure of public fire protection. This is a classification given to each community reflective of its capability to respond to fires. It measures the quality of fire alarm communications, the water supply and distribution, and the staffing, equipment, and training against the insurance industry's minimum criteria. These functions are periodically reinspected for continuity and improvement. The better the community provides these functions, the lower are the fire insurance rates. Now this principle is going to be applied to the National Flood Insurance Program through an effort developed by a coalition of federal and state employees and the insurance industry.

The system is a product of three years of development, field testing, critiques, and reviews with communities, public interest organizations, and technical advisors. So far, the work has been reviewed by over 400 professional floodplain managers, 50 public interest organizations, and 41 communities.

While the Community Rating System will always be subject to change and improvement as more experience is gained, it rewards communities that are doing more than the minimum to prevent or reduce flood losses by rate credits to their citizenry who purchase flood insurance policies.

But reduction in individual flood insurance costs is only one of the rewards. Other rewards for the community include increased public safety, reduction of damages to property and public infrastructure, avoidance of economic disruption and losses, reduction of human suffering, and protection of the environment. Over the long term, it is obvious that the system is supportive of the fundamental desire to reduce the human and property costs of flooding to our society. Again, loss prevention, or motivation for mitigation, is being proved.

As an aside, a few years ago, the Federal Emergency Management Agency presented a Unified National Program for Floodplain Management. It recognized that wise use of the nation's flood plain must be consistent with an explicit concern for reduction of flood losses and threats to health, safety and welfare, and yet also recognize the need for preservation and restoration of natural and beneficial floodplain values. Promoting uses that minimize or eliminate exposure to flood

loss was preferred, rather than floodplain development or abandonment.

Three strategies were identified: to modify susceptibility to flood damage; to modify the impacts of flooding; and to modify the flood itself. A wide variety of tools, ranging from land acquisition, land use and development regulations, and flood proofing, to flood control works were used.

Floodplain management has become more widely accepted over a period of time since the advent of the National Flood Insurance Program. Almost all states have established floodplain management programs and are becoming more effective in achieving program goals. It appears that the role of the Federal Government is decreasing as state and local governments become more self reliant in dealing with the problems of flooding.

Three dimensions recognize the usefulness of a Federal Inter-Agency Post-Flood Hazard Mitigation Task Force in dealing with local programs:

(1) to encourage the preparation of pre-disaster plans for reducing future flood losses and encouraging wise use of floodplains;

(2) to provide assistance in the preparation and review of post-disaster plans;

(3) to assist agency efforts to develop and implement hazard mitigation team's recommendations.

Thus, flood mitigation efforts continue on a broad front, reflective of the overriding desire to provide for a reduction of future flooding incidents. But there is a penalty for success, for if a government program works well as constituted, it will also work well even if it is expanded beyond the natural boundaries of insurable risk. The Flood Program works well, and provides relief from property damage promptly and efficiently through insurance payments funded by the buyers of food insurance. General tax revenues are not used, except for those who did not purchase flood insurance, and they will have to repay the loans, or will receive only a small amount of financial relief. Thus, the program, with its self-funding sources well in place, serves as the hallmark of an insurance and mitigation partnership that works.

But one element must be constantly kept in mind: the National Flood Insurance Program literally belongs to the Federal Government. The Government establishes the rules, rates, coverage forms, and operational procedures. The insurance

industry provides the services to sell and service the policies, and to settle the claims resulting from them.

It therefore follows that the Federal Government can enact change to the program. This occurred in 1989 with the passage of the "Upton-Jones Bill" which dealt with eroding shorelines along oceans and lakes.

Because a growing number of people want to live near water, erosion is a growing social problem. Over the past two decades, there has been distinct and identifiable erosion of the Gulf and Atlantic coastlines, as well as the inland Great Lakes. By passing the Upton-Jones extension, the flood policy provided payment for demolition or relocation of any covered structure. The structure first had to be condemned, or to be certified as subject to imminent collapse or subsidence, as a result of erosion or undermining caused by the action of a body of water. While it seemed legislatively appropriate to include damage to structures under the National Flood Insurance Program, this action was in direct opposition to the principles of insurance.

An insurable risk must meet the following criteria:

1. The loss must be accidental and unexpected. Erosion occurs over an extended period of time, is

observable, and is not unexpected. There has been no accident; therefore, there is no accidental loss.

2. The loss must be definite in time and place. Erosion occurs over an extended period of time. Under the concept of the Upton-Jones extension, what the payment contemplates is not "loss", but a relocation action based upon contemplated damage, or a demolition action based on a gradual damaging effect.

3. There must be a large group of exposure units that are similar in nature, type and kind. This allows the insurance actuaries to measure loss probability. But, the erosion risk is not calculable as a reasonable statistical estimate of the chance of loss. There are not enough similar structures in existence for which there has been collected a body of previous experience. Further, there appears to be no reasonable relationship between the premiums needed to cover the cost of the erosion payments and those needed for the insurable loss of flooding.

4. Exposure should be widespread so that not all suffer loss from the same cause. Under the erosion scheme, there is not a spread of risk as the properties are all lined up along the various coastlines. An excessive catastrophic exposure exists as a single storm could cause (and has caused) a majority of potentially eligible risks in a small geographic area to make a claim under this type of provision.

5. The size of the loss must pose a financial risk to the insured. There is enough value in many of these risks to make insurance protection worthwhile from the standpoint of the property owner.

6. The cost of insurance should be affordable. Since the erosion treatment depends upon the rates and premiums developed under the National Flood Insurance Program, for flood losses, the costs are affordable. However, the use of rates and premiums for flood insurance are both inappropriate and inadequate for providing erosion coverage over the long term.

Erosion of our heavily developed coastlines is setting the stage for property losses that may dwarf the savings and loan

bailout according to Dr. William L. Wood, Associate Professor of Civil Engineering at Purdue University. He pointed out recently that management of coastal development through zoning is preferable in most cases to engineering solutions such as sea walls or beach nourishment. The most effective way to reduce erosion damage is to change the National Flood Insurance Program to encourage localities to use setback zonings to restrict development among America's endangered coasts.

He suggested establishing imminent, intermediate, and long term hazard zones reflecting erosion within 10 years, 30 years and 60 years, respectively. All new construction would be prohibited within the 10 and 30 year zones, and only easily moved single family dwellings would be built within the 60 year zone. Larger structures, such as hotels, would have to built outside the 60 year zone.

While relatively short setbacks on more stable coastlines would be appropriate, he noted that on many parts of the east coast the setbacks should be 300 feet or more. At the current time, the National Flood Insurance Program does not require erosion zone designation, and no land use management standards for erosion have been set.

It stands to reason that property owners would resist such setback requirements, especially if their lots are not very deep. The leverage that Dr. Wood is suggesting is ineligibility for flood insurance, which would make it difficult if not impossible to finance new construction or substantial improvements. The net result may be some devaluation of land through such regulations.

Courts have ruled that such zoning is legal and that using the National Flood Insurance Program for this purpose is appropriate. The National Flood Insurance Act implicitly assumes that federal policies will act to minimize flood damage, and that insurance through the program would shift the burden from the general taxpaying public to those directly at risk.

In the Great Lakes area, about 65% of the shore has been designated as having severe erosion, with hundreds of homes destroyed or threatened. To exacerbate this situation, the record high water levels in the Great Lakes reached in the last decade may further increase as the potential of global warming looms overhead.

But the Congress is proposing legislation to revise the National Flood Insurance Program to provide for separate mitigation insurance coverage. The Congressional findings

behind this legislation report that the vast majority of repetitively flooded structures were constructed before floodplain management standards were implemented and flood hazards were identified; that in the past 13 years approximately 18,500 structures covered by flood insurance have been damaged equal to or greater than half of their value; that erosion of shorelines along tidal waters in the Great Lakes has damaged or destroyed numerous structures and threatens many others in the future as a result of the anticipated rise in sea levels; and that relocating structures away from the shoreline has not worked under the 1989 National Flood Insurance Program changes because demolition was the preferred alternative, even though most costly.

It is proposed that a form of mitigation insurance be provided for a specific premium. Communities would have to adopt erosion management measures that prohibit construction in a 30 year erosion setback area, and limit construction within a 60 year erosion setback area. Further, federal instrumentalities responsible for regulating banks, savings and loans, and similar installations would direct such institutions not to make, extend, increase or renew any real estate loan unless the structure and any personal property is covered for the term of the loan by mitigation insurance.

Hurricane Hugo proved that the devastating effects of flooding relate closely to the issues of coastal development and hurricane exposures. Erosion response and setback laws also reflect the expanding coastal development along both inland and seacoast paths. As people continue to congregate closer to the water, the most vital single effort to reduce future losses that could have the most far-reaching response and optimum benefit is appropriate building codes.

Enactment and enforcement of strong building codes is an area that seemingly infringes upon the rights of the people, of the community, and of the developer. Recalling the length of time that the insurance industry fought for air bags, which are now a good business for auto manufacturers, it is high time that we make building code compliance good business from the people's, the community's, and the builder's standpoint.

To do this, we need what we in the insurance business call "proof sources". If the builder or developer alleges that it costs 25% more to build a home to code, we have to refute it logically and credibly. According to a 1989 study, using specifications prepared by the Southern Building Code Congress, and cost estimates both with and without code compliance furnished by the National Association of Home Builders Research Foundation, the additional cost to construct a home according to code should be between 2% and 4%.

These data were used effectively in late 1989 to blunt an effort to reduce Florida coastal standards because of alleged economic hardship. The added costs are financially manageable.

Simply enacting good codes, and enforcing them are only two legs of the solution triangle. The third leg is education. It is necessary that the public understand that homes built to code specifications are indeed a better buy and worth the few dollars more. It is necessary that the technical requirements of the codes are better understood. It is necessary that whether the home is or is not built to code is easily observed. And, it is necessary that action be taken with other organizations and interests in utilizing proper design, and in implementing and enforceing building codes and land use measures for the public good.

We also need to understand and balance the requirements and the costs of enforcing strong codes. The inspectors that a community uses must be qualified, and the number of inspections performed each week must be measured. Training and support must be given to inspectors on a continuous basis, and even certification of inspectors should be a consideration. Finally, oversight of the entire inspection process must be constant, and must be done professionally.

Loss control, loss prevention and hazard mitigation must be constantly practiced.

Yet, in some circles, the existence of insurance is a perceived barrier to effective loss control and hazard mitigation. The insurance industry today insures structures not built to code, and those built too close to the water. Therefore, the insurance industry does not want loss mitigation.

But this reasoning is somewhat simplistic, materially misdirected, and totally wrong. Our business is very competitive and is also subject to the political realities; we would be given legislative solutions and mandated participation if we were to avoid writing such business. We provide coverage on the beach front properties through associations or pools of insurers because we were so legislated.

We in the insurance industry cannot, by ourselves, effect improved building codes, hazard mitigation, and the like. Support for these efforts must come from a broad understanding, knowledge and acceptance by the American people of the substantial benefits to our societal infrastructure for the next generation.

We as an industry wish to lend our support to mitigation efforts as being in the public interest. It would be ideal to have a discount for compliance with an effective code. and it would be ideal to be able to identify without an engineering evaluation those buildings that would qualify for such treatment. It would be ideal to surcharge those risks which do not comply with the codes.

Opposing efforts against any of these items can be expected. The auto makers fought the Insurance Institute for Highway Safety at its beginning, and throughout its career. Any action that gives the impression of slowing down progress, however perceived, becomes an economic issue, especially in a community which looks to new construction for jobs, for tax income, and the like. Building code enactment and enforcement would be no different.

But it is no secret that the long term benefit, when viewed in the light of what is best for the community, the population, and the nation as a whole, is reduced damage from natural catastrophes and a lessened cost of insurance. This is not a pure insurance issue but one affecting the whole fabric of society. Mitigation is in everyone's best interest.

In the business of insurance we focus on controlling frequency and severity of manmade perils, but we surrender to natural

perils as unpredictable and uncontrollable "acts of god". Yet, we have made considerable progress in understanding the natural perils of earthquakes, floods, hurricanes, tornadoes and volcanic eruptions. We know a good deal about forces that create and are unleashed by these events. We understand how to estimate and track when and where some of these events will occur with some degree of accuracy. We know how to reduce property damage and human injuries by taking precautions before, during and after these violent outbursts of nature. We have made much progress and this progress offers great promise in saving lives and property in the future.

The insurance business fulfills promises based upon a written contract. But it is our actions which will determine our future. We must make a greater effort in understanding and dealing with these forces. We must provide for a nation substantially safer from natural disasters. And, we must dream a little, because a vision or two is not out of order if we want this to happen.

This vision embraces the practical use of our collective knowledge. In a recent speech before the National Committee on Property Insurance in Boston, Dr. Norman A. Baglini, President of the American Institute for Property and Liability Underwriters, posed these realistic needs:

1. Knowledge now closely held by experts must become public knowledge, so that the community at large recognizes the need for, and humanistic value of, loss reduction measures against all natural perils.

2. Architects, contractors, landowners, and community planners must recognize and rationally evaluate the loss reduction options available to them.

3. Those responsible for governing us must make technically sound and fiscally prudent policy choices - in effect, mandating loss reduction measures and expenditures for us against the natural perils we all, to one degree or another, must confront whatever part of the world we inhabit.

4. Those responsible for allocating the cost of natural disasters - of both pre-event loss control and post-event restoration - must be able to forecast these costs and build them into the cost of goods and services they sell (including the cost of insurance that pays after a loss and the proper premium credits for pre-loss precautions).

5. The insurance industry at all levels must learn and appreciate, through training, personal experiences, and realistic case studies, how natural disasters affect people's lives, and how technology, regulatory and political activity, sociology, economics, and a variety of other disciplines can contribute to the best overall response to both the pre-loss threat and the post-loss reality of natural catastrophes.

His concluding observation was that we must make loss control or mitigation of natural disasters a reality, and that it requires many of us to learn, to appreciate, to make part of our basic planning and decision making processes, a good bit of fairly technical insight about natural perils that only the experts now possess.

Perhaps this is the major reason why all of us are gathered here today, coming from all ends of the globe and expert in diverse fields of critical study and practical application. To use that knowledge, that skill, and those resources we individually posses for society's collective good, overcoming the barriers that exist, is the challenge we face. We must get on with it, now.