HANDBOOK FOR ARIZONA COMMUNITIES

ON FLOODPLAIN MANAGEMENT AND THE NATIONAL FLOOD INSURANCE PROGRAM

STATE OF ARIZONA

DEPARTMENT OF WATER RESOURCES

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HANDBOOK FOR ARIZONA COMMUNITIES

ON FLOODPLAIN MANAGEMENT AND

THE NATIONAL FLOOD INSURANCE PROGRAM

This 278-page handbook was developed by the Arizona Department of Water Resources for use by Arizona Communities. It may also be of interest to lenders, insurance agents, land developers, and others interested in or impacted by floodplain management and the National Flood Insurance Program. The handbook is designed to be updated and changed as necessary, and a mailing list has been created so that each copy will receive the updates.

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FLOOD CONTROL DISTRICT of Maricopa County

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State of Arizona

DEPARTMENT OF WATER RESOURCES

99 E. Virginia Avenue, Phoenix, Arizona 85004

BRUCE BABBITT, Governor
WESLEY E. STEINER, Director

September 28, 1984

DEAR FLOODPLAIN MANAGERS:

The recent changes in the Arizona Revised Statutes pertaining to floodplain management have necessitated revisions to the Handbook for Arizona Communities on Floodplain Management and The National Flood Insurance Program. We have also included updated FEMA policy regarding letters of map revision and map amendment vs. restudies; a brief summary of the National Flood Insurance Program; a glossary of terms used in the handbook; and an up-dated printing of the National Flood Insurance Program.

We hope these changes improve the usefulness of the handbook to you. If you have any suggestions which you feel would further enhance the handbook, we would appreciate receiving them.

Sincerely,

Wesley E. Steiner
Director

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A Letter to the People of Arizona:

In terms of both monetary loss and loss of life, floods are the most costly natural hazards affecting the people of Arizona. Throughout this state's history, there have been devastating floods which have not been effectively controlled by structural flood control measures.

In recent years, efforts to reduce the cost and trauma of flooding have taken a new and different approach: keep development away from the flood. Arizona started this change in direction with the adoption of a floodplain management statute in 1973, and has gained momentum as more and more communities have entered the Regular Phase of the National Flood Insurance Program. With Arizona's towns, cities and counties regulating new floodplain development, with the state assisting in the relocation of whole communities out of the floodplain, and with continuing construction of projects to protect existing development, we are moving to a time when the residents of Arizona are safe from the threats of floods.

This handbook is a tool to be used by Arizona communities to manage the development of their flood-prone areas, and to help them explain the basis for this program to their residents. I encourage the officials of every town, city and county in Arizona to work toward this worthwhile and reachable goal of flood-safe communities.

Sincerely,

Bruce Babbitt
Governor

BB:kqb

HANDBOOK FOR

ARIZONA COMMUNITIES

on

Floodplain Management

and

the National Flood Insurance Program

by

Leslie A. Bond

Art Work by

Len Maczuga

Arizona Department of Water Resources

Prepared for use by Arizona communities participating in the National Flood Insurance Program. Additional copies may be obtained by sending a check or money order for $6.00 to:

Arizona Department of Water Resources
Planning and Flood Control Division
99 East Virginia Avenue
Phoenix, Arizona 85004

10/82

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This handbook is a compendium of the author's thoughts on floodplain management and the National Flood Insurance Program, parts of a variety of public documents, and a copyrighted paper by Robert D. Sokolove which is printed with his permission. Specific acknowledgements follow for material not created by author:

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Chapter 31. Prepared from material from the Arizona Division of Emergency Services
Appendix F. Robert D. Sokolove.

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GLOSSARY

This appendix defines those terms frequently encountered in floodplain management.

Approximate Study--Prepared by approximating mathematical analysis for one or more of the following steps; topographic mapping, hydrologic calculations, and hydraulic calculations; arriving at floodplain delineations without precise water surface profiles. (see "Detailed Study").

Areal--Pertaining to the land area covered as measured in square miles or other units of area.

Backwater area--The low lying lands adjacent to a stream that become flooded during periods of high water.

Backwater Effect--The rise in water surface elevation caused by an obstruction such as a building, fill material, or bridge that limits the area through which water must flow.

Basin--The total land area from which surface run-off is transported away by a drainage system. Also known as a "drainage basin" or "watershed".

Bed--The bottom of a channel.

Bed slope--The inclination of the channel bottom.

Benchmark--A U.S. Coast and Geodetic Survey (National Geodetic Survey) elevation mark established on some stationary object and used as a vertical reference point in other surveys.

Channel--A natural or man-made waterway that continuously or periodically passes water. The bed of a stream or river.

Channelization--Improvement of flow characteristics or water carrying capacity of an artificial or natural channel by excavation, bank stabilization, clearing, or other means.

Channel Capacity--The maximum flow which can pass through a channel without overflowing the banks.

Contour Interval--The difference in elevation between adjacent contour lines on a topographic map, usually 1 foot, 2 feet, 5 feet, or some multiple of 10 feet.

Constriction--A place or feature that makes the channel and/or floodplain smaller or narrower, thereby reducing its ability to pass flow.

Geodetic Survey) position mark established on some stationary object and used as a horizontal reference point in other surveys.

Critical Depth--That depth of flow for a given discharge of water, where the specific energy (energy per unit weight of water) is at a minimum.

Cross Section--A plot or graph of ground elevation across a stream valley or portion of it, along a line perpendicular to the stream or direction of flow.

Cubic Feet Per Second(CFS)--A unit of measurement that describes the amount of flow passing a given point in a stream channel at a given point in time. One cubic foot per second is equivalent to approximately 7.5 gallons per second.

Current--The flow of water through a stream channel.

Dam--A barrier constructed across a waterway to control the flow or raise the level of water.

Dam Failure Flood Zone--The area downstream of a dam that would be subject to flooding by the waters stored behind the dam if the dam were to fail.

Datum--An assumed, given, measured, or otherwise determined point, line, or surface used as a reference in surveying or mapping.

Detailed Study--Prepared using mathematical analysis for the following steps, topographic mapping, hydrologic calculations, and hydraulic calculations, to arrive at precise water surface profiles and floodplain delineations. (see "Approximate Study").

Detention--The slowing, dampening or attenuating of flows by temporarily holding (generally less than 72 hours) the water on a surface area, in a storage basin, or within the storm or combined sewer itself. All detained water will be returned to the stream after the storm has passed at rates which will not adversely affect downstream occupants and water users.

Discharge--The volume of water passing through a channel during a given time, usually measured in cubic feet per second.

Duration--The time that elapses between when water first flows over a streams banks until floods are again confined to the stream's banks.

Ephemeral Stream (or Stream Reach)--A stream (or stream reach) that flows only in direct response to precipitation; measurable discharge generally occurs less than 10 percent of the time. It receives no long-continued supply from melting

snow or other surface sources. Because an ephemeral stream channel is at all times above the water table, it also receives no water from springs or sustained ground-water seepage.

Erosion-- As used in this handbook the removal of soil particles from a bank slope primarily due to water action.

Field Survey--The process of measuring dimensional relationships such as horizontal distances elevations, directions, and angles on the earth's surface for locating property boundaries, construction layout, and mapmaking.

Fill material--Soil that is placed at a specified location to bring the ground surface up to a desired elevation.

Flood or Floodwaters--Means a temporary rise in water level, including groundwater, or overflow of water onto lands not normally covered by water.

Flood Crest--The elevation or maximum height reached or expected to be reached by the waters of a given flood at a given location.

Flood Frequency--A measure of the likelihood of the occurrence of a flood expressed by the period of years during which one would expect such a flood to occur once; the frequency is calculated through a probability distribution analysis.

Flood Fringe--The part of the floodplain located outside of the floodway but still subject to flooding.

Flood Hazard Boundary Maps--Maps prepared by the Federal Insurance Administration or the Federal Emergency Management Agency showing areas of potential flood hazard as determined through approximate methods.

Flood Insurance Emergency Phase--The phase of the National Flood Insurance Program when limited amounts of flood insurance are available. Communities use Flood Hazard Boundary Maps to identify flood hazard areas and they also adopt general flood resolutions or measures. Subsidized rates are charged regardless of flood risks since technical flood information has yet to be determined.

Flood Insurance Rate Maps--Maps prepared by the Federal Insurance Administration or the Federal Emergency Management Agency showing areas that have a 1% chance of being flooded in any given year (100-year floodplain) as determined through detailed methods and showing Flood Insurance Rate Zones for determining insurance rates for the National Flood Insurance Program.

Flood Insurance Regular Phase--That phase of the National Flood Insurance Program when communities approve their Flood Insurance Study(FIS) and adopt a legally enforceable floodplain ordinance that meet FEMA criteria. Acutarial insurance rates are used which reflect the degree of risk. Higher limits of coverage both for structures and their contents are available under the regular program.

Flood of Record--The greatest flood recorded for a location.

Floodplain--The low lands adjoining the channel of a river, creek, stream or other water course, lake, or body of standing water which may be or has been covered by a floodwater.

Floodplain Delineation--The process of showing in graphic form on a map or photo mosaic, areas which may be or have been inundated by a specific or predicted flood.

Floodplain Information Study--A study prepared using detailed methods to determine water surface profiles and floodplain delineations including delineation of the 100-year floodplain.

Floodway--The channel of a stream and the portions of the adjoining floodplain required to pass the discharge of the 100-year flood with an insignificant increase in flood levels. As used in the National Flood Insurance Program, and the Arizona Revised Statutes floodways must be large enough to pass the 100-year discharge without causing the flood elevation to increase more than one-foot.

Freeboard--A factor of safety usually expressed in feet above a design flood level for flood protection or control works.

Gauge--An instrument for measuring precisely the flow of water past a given point on a stream.

Gauged--Measured by one or more stream gauges which provide data about historic volumes of water through a particular stream reach.

Horizontal Datum--An assumed set of lines in the two horizontal dimensions used as a reference in surveying or mapping and expressed as longitudinal and latitudinal coordinates.

Hydraulic Analysis--The study of determining water levels for particular flood events.

Hydrologic Analysis--The study of determining rainfall run-off (flood waters) for a specific watershed.

Intermittent Stream (or Stream Reach)--A stream (or stream reach)

which had surface discharge generally between 10 and 80 percent of the time. Because an intermittent stream channel is at or near the water-table surface, discharge can be the result of a discontinous supply from springs or ground water seepage, a discontinous supply from surface sources, including runoff or rainfall and seasonal snowmelt, or both. If a channel has a sustained period of no streamflow interrupted by a seasonal period of continous streamflow, at least 1 month in length, the stream or streams is intermittent.

Levee--An artificial barrier constructed to prevent a river or stream from overflowing.

Log-Pearson III Technique--A statistical distribution technique which is used in analyzing observed peak flows in order to calculate projected peak flows for various flood frequencies considered in a floodplain study.

Magnitude--The largest measured volume of flow during a particular flood.

Mean Sea Level--The average height of the sea for all stages of the tide over a 19-year period.

Monument--A known station, defining horizontal and/or vertical position, established by any entity other than the U.S. Coast and Geodetic Survey (National Geodetic Survey).

Monumentation--A network of surveying monuments, tied to one another, providing precise information on elevations and positions at places between the monuments.

National Datum--The vertical and horizontal data that have been defined by the National Geodetic Survey; Mean Sea Level (MSL) for vertical control and state plane coordinates within each state for horizontal control.

National Geodetic Survey (NGS)--The federal agency within the U.S. Department of Commerce which is responsible for establishing standards for vertical and horizontal data and for establishing surveying criteria. (Formerly the U.S. Coast and Geodetic Survey).

Nonstructural Measures--Designed to address floodplain problems by minimizing or avoiding conflicts between development and occupation of land and its propensity to be flooded; pursuing a policy of preventing such problems before development occurs.

Numbered A Zone--A zone on a Flood Insurance Rate Map that delineates in a detailed fashion the 100-year floodplain with precise engineering information showing detailed water surface elevation and floodplain boundary information.

Perennial Stream or (Stream Reach)--A stream (or stream reach) which has measurable surface discharge more than 80 percent of the time. Discharge is at times in part or in total the result of springflow or ground-water seepage because the streambed is lower than surrounding ground-water levels.

Probability Distribution Analysis--A mathematical analysis to determine the likelihood of occurrence of various volumes of streamflow expressed as a ratio of the number of times given volumes of streamflow can be expected to occur in a certain time period over the number of years in that time period.

Probable Maximum Flood (PMF)--Theoretically the greatest flood physically possible in a drainage basin.

Profile View--A two-dimensional representation of a stream channel and floodplain which cuts vertically through the center of the channel in the direction of flow. (also **Side View**).

Rain Gauge--A gauge for measuring the intensity and the amount of rainfall.

Rating Curve--An algebraic curve showing the relationship between the volume of water flowing past a given point on a stream and the depth of flow at that point.

Reach--A section of a stream's length.

Regression Curve--An algebraic curve which correlates a dependent variable with one or more independent variables allowing the prediction of values of the dependent variable based on the observed correlation between past values of the dependent and independent variables.

Retention--The prevention of runoff from entering a stream, storm sewer system, or combined sewer system by storing it in some type of storage basin.

Riprap--An assemblage of broken stones erected in water or adjacent to water, as on a stream bank, to protect the ground in or near the floodplain from erosion.

Rise--An increase in water surface elevations due to increased flow, obstructions to flow, or some combination of those factors.

Riverine--Located on or near the banks of a river.

Roughness Coefficient--A measure of the degree of resistance to water flow offered by a stream channel and the adjacent floodplain, which is a function of vegetation, rocks, channel material, and other such stream characteristics.

Runoff--That portion of rainfall or snowmelt that is not absorbed by the soil.

Scour--The erosive action of flowing water in streams that removes and carries away material from the bed and banks.

Sediment--Soil particles that have been transported away from their natural location by wind or water action.

Sediment deposition--The accumulation of soil particles on the channel bed and banks.

Sediment load--The soil particles transported through a channel by streamflow.

Staff Gauge--A vertical board or rod graduated in hundredths of a foot to measure stream depths; a rating curve is used to convert the depths to flows in cubic feet per second.

Stationing--An arbitrary system for locating a position along a baseline, (reference line) usually a stream centerline, by starting from one end of the baseline and numbering at regular intervals.

Step-Backwater Method--A mathematical methodology for calculating a water surface profile over a given stream reach by starting at the downstream end of the reach and, through incremental steps, balancing energy losses at upstream points to arrive at water surface elevations at those points until the entire stream reach has been analyzed.

Streamflow--The movement of water through a channel.

Structural Measures--Designed to address floodplain problems by constructing facilities which reduce or eliminate flooding of a given area thereby protecting facilities that would otherwise be subject to greater flooding and more frequent flooding.

Subcritical Flow--That type of flow, given discharge of water, where the depth is greater than critical depth and velocities are low.

Supercritical Flow--that type of flow, for a given discharge of water, where the depth is less than critical depth and velocities are high.

Surface runoff--That portion of rainfall that moves over the ground toward a lower elevation and does not infiltrate the soil.

Synthetic Rainfall - Runoff Method--A mathematical method to calculate runoff on a particular stream reach based on

rainfall amounts, durations, and distributions and on average water losses, ground slopes, and other hydraulic parameters.

Topographic Mapping--Mapping which graphically represents the exact physical configuration of a place or region, including elevations, water bodies, and man made features.

Un-Numbered A Zones--A zone on a Flood Insurance Rate Map that delineates in an approximate fashion the 100-year floodplain without precise engineering information showing detailed water surface elevation and floodplain boundary information.

Velocity (of water in a stream)--The distance that water can travel in a given direction during an interval of time.

Vertical Datum--An assumed elevation used as a reference in surveying or mapping and expressed in feet above Mean Sea Level.

Water Surface Elevation--The heights, usually in relation to Mean Sea Level, reached by flows of various frequencies and magnitudes at pertinent points in the floodplain.

Watershed--An area confined by drainage divides usually having only one streamflow outlet.

PART I

BACKGROUND

1. INTRODUCTION TO PART I

PURPOSE OF THIS HANDBOOK

Rising annual average flood losses are a National problem to be addressed by all levels of government, a wide variety of professionals in the construction and development industries, floodplain property owners, and the general taxpayer who ultimately pays for most of the results of improper use of flood-prone land.

Eighty-four communities in Arizona have been identified as having flood-prone areas. This handbook has been prepared to assist the elected officials, local government officials, and all other affected Arizonans to understand the concepts of floodplain management and the roles and interactions of the various levels of government and others involved in floodplain management and the National Flood Insurance Program.

ORGANIZATION OF THIS HANDBOOK

This handbook is divided into four major parts: a general explanation of the concept of floodplain management and the progress of Arizona communities; techniques and administrative processes for floodplain management at the local level; the role of the Federal government and others, and their impact on local government; and other things a community can do to protect its residents from flood disaster.

The handbook is published in a looseleaf form so that it can be revised, updated and corrected as the National, State and local programs evolve, and as users of the handbook identify topics which should be added. Any questions or comments on the handbook or any aspect of floodplain management should be addressed to:

State Coordinator for the NFIP
Planning and Flood Control Division
Arizona Department of Water Resources
99 East Virginia Avenue
Phoenix, Arizona 85004

2. FLOODS, FLOODPLAINS, AND THE NATIONAL FLOOD INSURANCE PROGRAM

Since our earliest history of Arizona and the Southwest, floods have been documented as events of great importance to man's activities. In prehistoric times, Arizona residents recognized the benefits and hazards associated with the lands along rivers. Notable Indian ruins throughout the State are located outside the areas of flood hazard: The cliff dwellings in Canyon de Chelly; Tuzigoot above the Verde River near Cottonwood; Pueblo Grande in Phoenix; and other less noted ruins are located above the flood threat while being near enough to the source of water to benefit from it.

More recent residents of Arizona have generally settled near the State's watercourses. Sixty-eight of the 76 incorporated cities and towns in Arizona have been identified as having significant flood hazard areas. Important unincorporated areas in all 15 counties are also subject to devastating floods. Five major storms between 1970 and 1980 have caused $206 million in damages in Arizona, along with the trauma and heartache of thousands of flood victims. These figures do not include numerous small floods which cause hundreds of thousands of dollars in damage almost every year.

The continuing increase in flood damages are the direct result of our encroachment into areas which have flooded in the past and will flood again in the future. In most of the flood events since 1970, the actual flood was not the largest flood known to have occurred even in the last century: The 1980 flood on the Salt River in the Phoenix area was only two-thirds as large as one which occurred in 1891; several floods at least twice as large as the 1978 and 1980 floods occurred on the Agua Fria River between 1900 and 1920; the 1980 flood on the Verde River was about the same as a flood in 1938. Even where recent floods were larger than previously known floods, these previous floods had given notice that wide areas are subject to flooding.

There are basically three ways to reduce flood losses to an acceptable level: reduce the amount of floodwater in a stream; contain the floodwater in a channel so it does not cover as wide an area; or locate the uses which are most subject to damage away from the flood danger. The first two approaches are <u>structural</u> measures. Historically, structural measures have been constructed with public money to reduce flood damage to existing structures. In many cases, these solutions will continue to be used in the future.

However, for future development, a <u>nonstructural</u> approach makes a lot more sense to the taxpayer. Whatever the apparent value of undeveloped property, if it is developed in such a way as to be subject to flooding, a very real hidden cost will be paid by all taxpayers when the property is flooded. After every

flood, we see the flow of tax money for disaster relief, repairs and/or relocation of uses which were damaged and usually a demand by the flood victims for a structural solution (at public expense) to protect them from future damage.

The nonstructural approach, called floodplain management, requires property owners to recognize a real limitation on the usefulness of their property, and forces them to pay for that limitation so that taxpayers do not have to. The usefulness of any piece of land has many limitations -- some are very obvious while others are less apparent. Steep land is not suitable for irrigated crops, land located far from transportation facilities is not suitable for heavy industry, and land which is subject to flooding is not suitable for many types of development.

In an attempt to provide relief for existing flood prone developments and establish a uniform nationwide standard for floodplain management, the United States Congress adopted the National Flood Insurance Act of 1968. This Act, as it has been subsequently amended, makes flood insurance available to all residents of communities which agree to manage their floodplains according to this National standard. Communities which do not agree to control floodplain development are penalized by becoming ineligible for flood disaster relief, and their residents lose their eligibility for flood insurance, disaster relief and Federally insured mortgage money secured by floodplain property.

The standards which were chosen for floodplain management are: 1) all new development must be protected from a flood which can be expected to occur on the average of once every 100 years, and; 2) future development can not cause the flood elevation to increase by more than one foot. In general, the application of these standards to a particular stream results in an area along one or both sides which is useable if new development is elevated or floodproofed, and an area right along the stream which is unsuitable for any uses which would obstruct the flow of floodwater. These standards are discussed in detail in Part II of this handbook.

As of the end of 1981, about 1.8 million flood insurance policies were in effect nationwide, providing almost $100 billion of insurance at an annual premium rate of $210 million. In 1981, this flood insurance paid over 24,000 claims for losses totaling $136 million. Since the program began, Arizonans have paid $11.3 million in premiums and have been paid $7.2 million for claims.

In summary, then, the Federal government has decided that floodplain management is the primary long-term method to be used to reduce future flood losses. It places responsibility for floodplain management at the local level and provides assistance to the communities to help them to perform this responsibility to Federal specifications. In exchange for this, the Federal government has established and continues to subsidize a program to provide flood insurance to existing flood-prone development.

3. THE EMERGENCY AND REGULAR PROGRAMS OF THE NATIONAL FLOOD INSURANCE PROGRAM

The 1969 amendments to the National Flood Insurance Act of 1968 allow a community to participate and residents of that community to purchase flood insurance before the community's floodplains are mapped. A community cannot manage floodplains to a particular standard, such as the 100-year flood, until a study is done to determine the location and extent of the floodplains. In recognition of this fact, the Congress established an Emergency Program. A community which resolves to assist the Federal Government in studying its floodplains is admitted to this Emergency Program. In the Emergency Program, the community really has no requirements from the Federal Government, although they have been required to manage floodplain development under State law (A.R.S. 45-2342) since 1973. In the Emergency Program, a community's residents are able to purchase a limited amount of flood insurance at a subsidized rate regardless of their individual susceptibility to flooding. The limits on coverage are $35,000 per residential structure and $10,000 on residential contents. A summary of Emergency Program limits and premuims is shown in table 3-1.

TABLE 3-1. AMOUNT OF INSURANCE AVAILABLE (EMERGENCY PROGRAM)

Residential		Non Residential	
Building			
Single Family	$ 35,000	Building	$100,000
Other Residential	$100,000		
Contents (per unit)	$ 10,000	Contents (per unit)	$100,000

ANNUAL RATES (Per $100 of Insurance)

Residential		Non-Residential	
Building	.45	Building	.55
Contents	.55	Contents	1.10

EXPENSE CONSTANT $20.00

An expense constant of $20.00 per policy (either one or three year) is charged to defray the Federal government's policy writing and other expenses. The insured can save $40.00 in expense constants by applying for a three year policy term.

After the Federal Government has provided a flood insurance study for a community, that community has six months to adopt a floodplain management ordinance in compliance with National Flood Insurance Program criteria. When such an ordinance is adopted, the community moves into the Regular Program. All development which exists at the time the community enters the Regular Program remains eligible for the subsidized flood insurance rates up to the Emergency Program limits, and additional coverage is available at a somewhat lower rate. If the flood insurance study shows that a piece of property is not subject to damage during a 100-year flood, the owner of that property may receive a refund for his last year's premium, or if he chooses to maintain flood insurance, the rates will be adjusted to reflect his lower damage potential and the owner will be refunded the difference.

In the Regular Program, insurance rates for areas outside the 100-year flood-prone areas and for new developments in the flood-prone areas are actuarial. For example, in the areas with least flood risk, annual insurance rates for a single-family residence are as low as $0.06 per $100 coverage for the structure and as low as $0.11 per $100 coverage for contents, compared with $0.40 and $0.50 under the Emergency Program. On the other hand, for new development built in the floodplain and below the 100-year flood elevation, the annual rates are as high as $25.00 per $100 coverage. In the Regular Program, all Federally insured loans, including FHA and VA loans, must be secured by flood insurance. Table 3-2 shows the amount of insurance available and the range of premiums.

TABLE 3-2. AMOUNT OF INSURANCE AVAILABLE (REGULAR PROGRAM)

	Basic Insurance Limits	Additional Insurance Limits	Total Insurance Available
BUILDING COVERAGE			
Single Family Dwelling	$ 35,000	$150,000	$185,000
2-4 Family Dwelling	$ 35,000	$215,000	$250,000
Other Residential	$100,000	$150,000	$250,000
Non-Residential	$100,000	$100,000	$200,000
Small Business	$100,000	$150,000	$250,000
CONTENTS COVERAGE (per unit)			
Residential	$ 10,000	$ 50,000	$ 60,000
Non-Residential	$100,000	$100,000	$200,000
Small Business	$100,000	$200,000	$300,000

ANNUAL RATES (Per $100 of Insurance)
Single Family Residence-No Basement

Building	.06 to 25.00
Contents	.11 to 25.00

Deductible Options

As of April 1, 1984, newly authorized options are available to flood insurance policyholders. Policyholders may now choose to retain the standard deductible and current premium schedule, or to select one of the optional larger deductibles with a reduced premium level. The standard deductible is $500 for both building and contents policies.

Basically, the new deductible is structured like any other variable deductible on other lines of business. An example of the rates appear below:

1 to 4 Family Units
BUILDING AND CONTENTS POLICIES

Building/Contents	Discount
$ 500/$ 500	Standard
$ 1000/$1000	10%
$ 2000/$1000	15%
$ 3000/$1000	20%
$ 4000/$2000	30%
$ 5000/$2000	35%

Policyholders should be made aware that in certain situations the selection of an optional deductible may not be acceptable under the terms of their mortgage. Prior approval of the lender is advised before committing to a substantially increased deductible.

For more information on the National Flood Insurance Optional Deductible, policyholders should be advised to contact their flood insurance agent.

Figure 3-1 summarizes the sequence of events which have led to floodplain management in Arizona communities. Figure 3-2 shows the status of Arizona Communities since 1970. About four times each year, the FEMA Region IX office issues an updated status report for communities in Arizona. This status report is distributed to insurance agents so that they can be sure that the maps they have for each community are current. A recent version of this status report is shown as Figure 3-3.

FIGURE 3-1. SUMMARY OF FLOOD INSURANCE/FLOODPLAIN MANAGEMENT FOR ARIZONA COMMUNITIES

1968 Congress passed the National Flood Insurance Act to make flood insurance available to residents of communities which agreed to manage floodplains.

1973 Congress passed the Flood Disaster Protection Act which made communities not participating in the National Flood Insurance Program ineligible for Federal disaster relief; and made Federally insured lenders require borrowers to purchase flood insurance for loans secured by floodplain property.

1973 The Arizona Legislature passed House Bill 2010 (A.R.S.] 45-2346) which named the governing body of each city, town and county the Floodplain Board for their jurisdiction, and required them to adopt floodplain regulations and delineate floodplains.

1977 President signed Executive Order 11988 requiring all Federal agencies to practice floodplain management in the expenditure of Federal funds.

1977 Governor signed Executive Order 77-6 requiring all State agencies to practice floodplain management in the expenditure of State funds.

1975-1980 83 Arizona communities were identified as having flood hazard areas. Flood Hazard Boundary Maps (FHBM) were issued and were used by some lenders to require flood insurance.

1975-1981 Federal Insurance Administration (FIA) held meetings with community staffs and officials to determine areas to be studied by engineers.

1975-1982 Flood Insurance Studies were undertaken by contract engineers to delineate floodplains and establish flood elevations and areas of actuarial flood insurance rates. The result of the study is the Flood Insurance Study, the Flood Boundary and Floodway Map (FBFM) and the Flood Insurance Rate Map (FIRM).

1984 - State floodplain management statutes (A.R.S. 45-2341-2723) amended directing each county to organize flood control district and govern its area of jurisdiction except those incorporated cities or towns which elected to assume their own floodplain management powers and duties. The director of water resorces was directed to develop and adopt criteria for establishing the 100-year floodplain in areas not mapped by FEMA (see C, Extract of The Arizona Revised Statutues Pertaining to Floodplain Management).

FIGURE 3-2

STATUS OF ARIZONA COMMUNITIES IN THE NATIONAL FLOOD INSURANCE PROGRAM AS OF DECEMBER 31 EACH YEAR

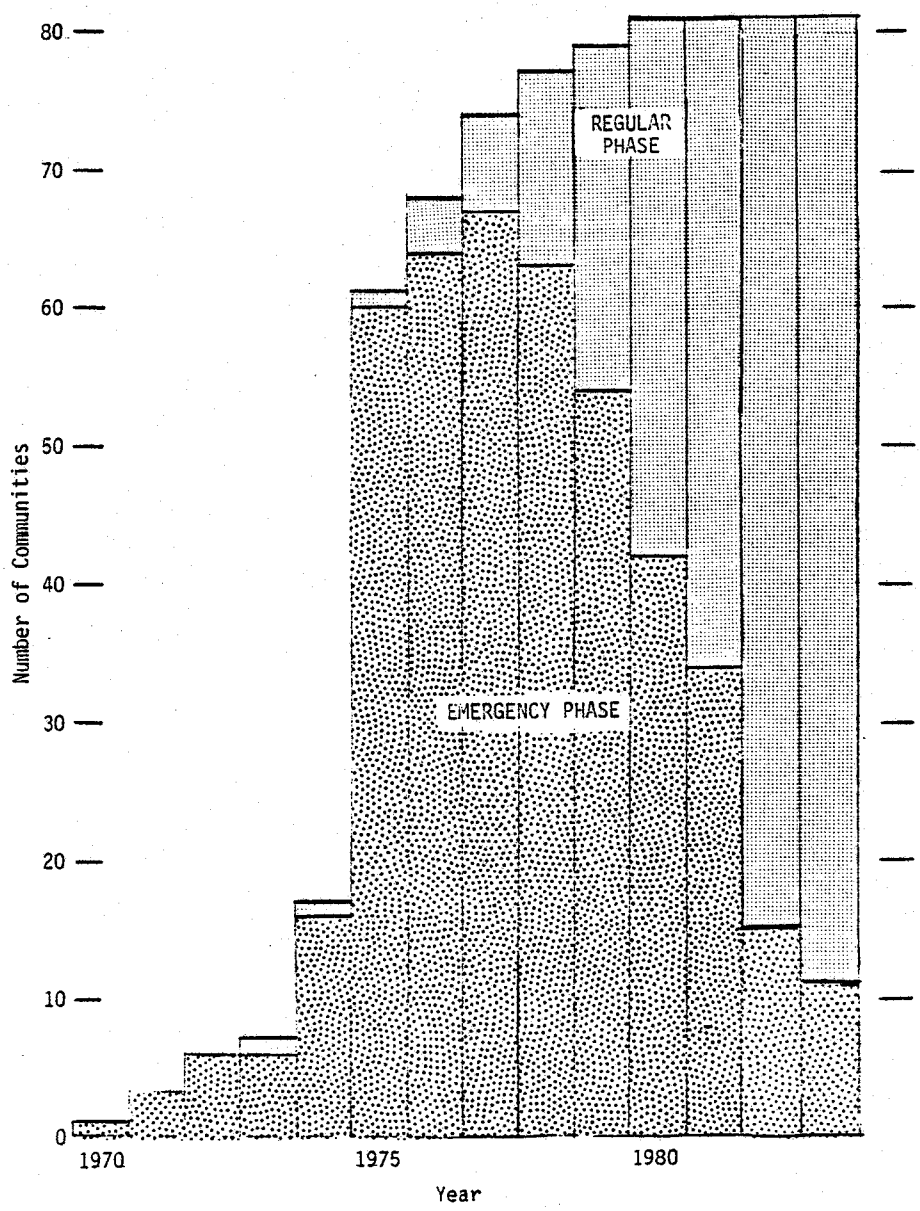


FIGURE 3-2. STATUS OF ARIZONA COMMUNITIES IN THE NATIONAL FLOOD INSURANCE PROGRAM -- AS OF DECEMBER 31 EACH YEAR

FIGURE 3-3

SAMPLE OF "REGION IX FLOOD PRONE LIST"

Federal Emergency Management Agency

Region IX Building 105
Presidio of San Francisco, California 94129

October 1, 1984

REGION IX FLOOD PRONE LIST

ARIZONA

TYPE	COMM #	COMMUNITY NAME & COUNTY	CURRENT MAP	ENTRY TO REG. PROG.
R	040120B	APACHE JUNCTION (PINAL)	09-30-82	09-30-82
R	040001B	APACHE COUNTY	07-05-82	07-05-82
R	040038C	AVONDALE (MARICOPA)	08-03-82	06-15-79
R	040013A	BENSON (COCHISE)	Map Resc	06-25-82
R	040014B	BISBEE (COCHISE)	01-03-79	01-03-79
R	040039A	BUCKEYE (MARICOPA)	02-15-80	02-15-80
R	040080B	CASA GRANDE (PINAL)	04-19-83	08-01-77
R	040040	CHANDLER (MARICOPA)	07-16-80	07-16-80
R	040094B	CHINO VALLEY (YAVAPAI)	09-01-81	09-01-81
R	040095A	CLARKDALE (YAVAPAI)	12-01-82	12-01-82
R	040035B	CLIFTON (GREENLEE)	03-01-84	03-01-84
R	040012B	COCHISE COUNTY	12-04-84	12-04-84
R	040019B	COCONINO COUNTY	11-16-83	11-16-83
	040123	COLO. RIVER INDIAN TRIBES		
R	040082A	COOLIDGE (PINAL)	Map Resc	06-10-80
R	040096B	COTTONWOOD (YAVAPAI)	09-16-81	12-20-83
R	040015B	DOUGLAS (COCHISE)	09-29-78	09-29-78
R	040036B	DUNCAN (GREENLEE)	08-02-82	08-02-82
R	040103A	EAGER (APACHE)	01-06-82	01-06-82
R	040041B	EL MIRAGE (MARICOPA)	12-01-78	12-01-78
R	040083A	ELOY (PINAL)	Map Resc	08-05-80
R	040020A	FLAGSTAFF (COCONINO)	01-19-83	01-19-83
R	040084B	FLORENCE (PINAL)	08-17-81	08-17-81
R	040021B	FREDONIA (COCONINO)	05-17-82	05-17-82
R	040043B	GILA BEND (MARICOPA)	12-04-79	12-04-79
	040028A	GILA COUNTY	04-08-77	
R	040044C	GILBERT (MARICOPA)	09-30-83	01-16-80
R	040045C	GLENDALE (MARICOPA)	08-22-81	04-16-79
R	040029B	GLOBE (GILA)	05-01-80	05-01-80
R	040046C	GOODYEAR (MARICOPA)	10-18-83	07-16-79
R	040032A	GRAHAM COUNTY	12-04-84	12-04-84
	040104A	GREENLEE COUNTY	10-25-77	
R	040104A	HAYDEN (GILA)(40104)A	09-14-79	09-14-79
R	040067A	HOLBROOK (NAVAJO)	09-30-83	09-30-83
R	040016D	HUACHUCA (COCHISE)	02-24-79	02-14-76
R	040085B	KEARNEY (PINAL)	08-17-82	08-17-82
R	040060C	KINGMAN (MOHAVE)	12-22-81	08-15-77
R	040116B	LAKE HAVASU (MOHAVE)	Map Resc	09-01-81
	040122A	LA PAZ COUNTY	09-18-84	09-18-84
	040086C	MAMMOTH (PINAL)	09-15-81	09-15-81
	040118B	MARANA (PIMA)	08-01-84	08-01-84
	040037A	MARICOPA COUNTY	07-02-79	07-02-79

ARIZONA

TYPE	COMM	#COMMUNITY NAME & COUNTY	CURRENT MAP	ENTRY TO REG. PROG
R	040048B	MESA (MARICOPA)	05-15-80	05-15-80
R	040030B	MIAMI (GILA)	05-01-80	05-01-80
R	040058C	MOHAVE COUNTY	03-01-83	03-15-82
R	040066B	NAVAJO COUNTY	06-01-82	06-01-82
R	040091B	NOGALES (SANTA CRUZ)	04-15-81	04-15-81
R	040109C	ORO VALLEY (PIMA)	02-01-83	12-04-79
R	040049B	PARADISE VALLEY (MARICOPA)	05-01-80	05-01-80
R	040100C	PARKER (LA PAZ)	Map Resc	12-17-76
R	040092A	PATAGONIA (SANTA CRUZ)	03-18-80	03-18-80
R	040170A	PAYSON (GILA)	03-18-80	03-18-80
R	040050C	PEORIA (MARICOPA)	01-16-81	11-17-78
R	040051C	PHOENIX (MARICOPA)	06-01-84	12-[illegible]-79
R	040073B	PIMA COUNTY(PIMA)	02-15-83	02[illegible]83
R	040033B	PIMA (GRAHAM)	02-15-84	02-15-84
R	040077C	PINAL COUNTY	08-15-83	08-15-83
R	040098B	PRESCOTT (YAVAPAI)	03-29-83	02-02-77
R	040121B	PRESCOTT VALLEY (YAVAPAI)	08-16-82	08-16-82
	040124	SAFFORD(GRAHAM COUNTY)		
R	040090A	SANTA CRUZ COUNTY	08-01-80	08-01-80
R	045012A	SCOTTSDALE (MARICOPA)	01-09-76	09-21-73
R	040069B	SHOW LOW (NAVAJO)	02-03-82	02-03-82
R	040017C	SIERRA VISTA (COCHISE)	09-28-84	09-28-84
R	040070C	SNOWFLAKE (NAVAJO)	03-01-82	03-01-82
R	040075B	SOUTH TUCSON (PIMA)	Map Resc	01-31-79
R	040011C	SPRINGERVILLE (APACHE)	02-01-83	06-25-76
R	040010B	ST. JOHNS (APACHE)	Map Resc	03-30-81
R	040119B	SUPERIOR (PINAL)	11-04-81	08-11-82
R	040053C	SURPRISE (MARICOPA)	03-01-83	12-15-78
R	040071B	TAYLOR (NAVAJO)	02-03-82	02-03-82
R	040054C	TEMPE (MARICOPA)	12-14-82	08-15-80
R	040117A	THATCHER (GRAHAM)	12-15-83	12-15-83
R	040055B	TOLLESON (MARICOPA)	01-16-80	01-16-80
R	040106A	TOMBSTONE (COCHISE)	02-16-83	02-16-83
R	040076B	TUCSON (PINAL)	08-02-82	08-02-82
R	040056C	WICKENBURG (MARICOPA)	03-29-83	01-05-78
R	040018C	WILLCOX (COCHISE)	12-28-82	07-17-78
R	040027B	WILLIAMS (COCONINO)	12-15-83	12-15-83
R	040031B	WINKLEMAN (GILA)	09-14-79	09-14-79
R	040072B	WINSLOW (NAVAJO)	09-16-81	09-16-81
	040093A	YAVAPAI COUNTY	07-25-78	
R	040057C	YOUNGTOWN (MARICOPA)	11-15-78	11-15-78
R	040102B	YUMA (YUMA)	07-05-83	07-05-83
R	040099B	YUMA COUNTY	12-15-83	12-15-83

Map Resc.	No Map, Zone C Designation
R	Community Participating in Regular Phase in NFIP
*	Community Not Participating in NFIP
	All Other Communities Participating in Emergency Phase of NFIP
Underline	Identifies Revision

4. COMMUNITY PROGRESS IN FLOODPLAIN MANAGEMENT

The overall intent of the National Flood Insurance Program (NFIP) is to reduce the public and private costs of disastrous floods through subsidized insurance for existing development and management of future development. Floodplain management is left to the local government entities responsible for land use planning and the issuance of building permits. The communities are coerced into floodplain management by the threat of withheld disaster relief and Federally insured mortgage money. Without this coercion, some communities would continue to allow flood-prone development, and Federal and State tax money would continue to be spent for disaster relief.

All communities in the Nation are required to implement the same type of floodplain management regulations and regulate to the same standards as they enter the "regular" phase of the National Flood Insurance Program. This occurs on the effective date of the Flood Insurance Rate Map.

The general sequence of events is as follows:

1. Community is identified by Federal Insurance Administration (FIA) as having flood-prone areas.

2. Community is notified and invited to join the National Flood Insurance Program. No regulation is required by FIA, although it has been required by State law since 1973. The community enters the "emergency" phase of the NFIP, and insurance is available to the residents.

3. Whether or not the community is admitted to the NFIP, a Flood Hazard Boundary Map is produced. If the community joins the program, disaster relief and Federally insured loans are available.

4. FIA and a study contractor meet with community officials and staff to determine areas to be studied. FIA contracts for the study which takes at least one year.

5. FIA and the study contractor meet with community staff and officials to show them the results of the study.

6. The study is sent to a technical review contractor for review and preparation for publication. This process may take several months to several years. For example, a recent change in policy related to analysis of levees has held some Arizona studies which were submitted for review two or three years ago. The completion dates of these studies is now unknown.

7. Community is sent a "Preliminary" FIS and informed that they have 90 days to submit appeals to the technical information.

rejected), a "Proof" FIS is sent to the community. At this time, the community is informed that they must adopt a floodplain regulation by the effective date of the FIRM, which is six months after this notification or be suspended from the Program.

9. On the FIRM effective date, the community has either: adopted a regulation and enters the "regular" phase of the program (insurance limits are raised, residents who live outside the 100-year floodplain or in structures elevated above the 100-year flood elevation are eligible for reduced rates, and new structures are heavily penalized if they are not constructed in compliance with the regulations); or the community is suspended.

10. At any time, the community or anyone with the proper technical information may cause the maps to be revised. For single pieces of property, a "Letter of Map Amendment" may be issued instead of an actual map revision.

Figure 4-1 shows the progress of an Arizona community through this process.

FIGURE 4-1. COMMUNITY PROGRESS IN FLOODPLAIN MANAGEMENT

Sample Community: Bisbee

Date	Progress
1973	1. Identification of flood-prone areas.
1973	2. a. Notification by FIA
	b. Application for admission to NFIP.
N/A	c. Suspension from NFIP.
8/30/74	3. FHBM produced.
5/2/75	4. Time and cost meeting for FIS.
7/26/76	5. a. Intermediate meeting to show study results.
12/7/76	b. Final meeting including community's comments.
12/7/76	6. Study reviewed by review contractor.
8/9/77	7. 90-day appeals period starts.
7/3/78	8. a. 180-day period for adoption of regulation starts.
8/9/78	b. Community adopts regulation.
1/3/79	9. FIRM effective date.
N/A	10. Map revisions.

5. THE ROLE OF THE STATE COORDINATOR

In 1979, Governor Babbitt designated the Arizona Water Commission as the State Coordinating Agency for the National Flood Insurance Program (NFIP). That responsibility shifted to the Arizona Department of Water Resources (ADWR) in 1981 when the Commission became a part of the Department. State law does not spell out any specific duties for the coordinating agency, although the Water Commission/ADWR has had certain responsibilities for floodplain management in the State since 1973.

The National Flood Insurance Act (NFIA), however, lists 18 activities which the State should undertake to further the objectives of floodplain management. Due to budgetary restrictions, the ADWR has not been as active in the execution of these activities as we would like, but we feel that there has been a lot of progress. These activities are discussed below.

1. **Encourage and assist communities in qualifying for participation in the NFIP.** Since it became the State coordinating agency, the ADWR has met with every community which has identified flood hazard areas. In these meetings, the ADWR has encourged and assisted the communities. Only four communities have been suspended from the NFIP and three of those have been reinstated.

2. **Enact legislation to enable communities to manage floodplains.** This was done in 1973 in ARS § 45-2341 through § 45-2345, and modified in 1984.

3. **Designate a State agency to be responsible for coordinating floodplain management among Federal, State and local agencies.** The State Land Department was so designated in 1973, the Arizona Water Commission in 1979, and the ADWR in 1981.

4. **Assist in floodplain delinations.** Although this has never been funded by the Legislature, the ADWR has worked to make sure that FEMA study contractors get all current information on modifications of floodplains, and has provided them with topographic mapping and other information which it developed for other tasks.

5. **Establish minimum floodplain management standards consistent with those in the NFIA.** A.R.S. § 45-2341 through § 45-2343 did this in 1973. Modifications made in 1984 updated those sections.

6. **Guide and assist communities in the development of floodplain management plans and regulations.** This is part of the on-going effort described above in number 1.

7. **Recommend priorities for new Flood Insurance Studies to be performed by FEMA contractors.** FEMA has had so little money for new studies since 1979 that this has been unnecessary. The ADWR will perform this task as needed.

8. **Communicate floodplain area information to local governments and the general public.** See number 1 above. Also, the ADWR answers numerous questions from the public, and when requested by communities, sends representatives to public meetings throughout the State.

9. **Participate in flood-warning and preparedness programs.** The ADWR is working to develop a flood-warning system throughout the State, and it works with the Arizona Division of Emergency Services to develop and improve community emergency preparedness plans.

10. **Assist communities in dissemination of floodplain information.** This has been done when specifically requested by a community, as well as in the ADWR office.

11. **Advise public and private agencies on the unnecessary aggravation of floodplain problems.** This is done through the A-94 Clearinghouse process and as requested.

12. **Require that proposed floodplain uses conform to State environmental and pollution control standards.** This is done through the Clearinghouse process. State agencies are required to practice floodplain management by Executive Order 77-6.

13. **Provide communities with information on the NFIP, with emphasis on the coordination of Federal and State requirements for floodplain management.** The ADWR has developed a model ordinance which meets both Federal and State requirements, has held workshops, and visits communities to accomplish this.

14. **Assure coordination and consistency of floodplain management and planning with comprehensive planning.** This has never been requested by a community. The ADWR has initiated discussions among some Maricopa County communities to achieve consistency.

15. **Amend State recording acts so that certain information on floodplain property may be recorded in the chain of title.** This was not needed in Arizona.

16. **Not applicable in Arizona since it deals with Coastal Zone Management.**

17. **Provide notification to FEMA if a participating community violates the NFIP's requirements.** Both the ADWR and FEMA rely upon the annual report submitted to FEMA by the communities to find violations.

18. **Assure coordination efforts when disputes arise between communities.** The ADWR has responded to specific requests from communities.

The ADWR will continue to perform these functions as limited by its budget. Because of staff limitations, these functions will continue to be done generally in response to specific requests from communities and individuals.

6. QUESTIONS AND ANSWERS ABOUT FLOOD INSURANCE

Who can purchase flood insurance? Any person (renter or property owner) can purchase flood insurance provided the community in which the property is located is participating in the NFIP. This is true regardless of whether or not the property insured is in an identified/mapped floodplain. In Arizona, all communities are participating.

What types of property can be insured against flood loss? A building and its contents may be insured. Almost every type of walled and roofed building that is principally above ground can be insured. In most cases, this includes mobile homes, but not travel trailers or converted buses. Gas and liquid storage tanks, wharves, piers, bulkheads, crops, shrubbery, land, livestock, roads, machinery or equipment in the open and motor vehicles are among the types of property which are not insurable.

How is a flood insurance policy purchased? Any insurance agent or broker licensed to sell property insurance in Arizona can write a flood insurance policy through the NFIP or through an insurance company participating in the "Write-Your-Own" program. An agent or broker can secure application forms from the NFIP and send the completed forms and premium payment to the NFIP. The policy is processed and adjusted for claims payment (if necessary) by an independent servicing company.

There is an optional arrangement between private sector insurance companies and the NFIP called "Write-Your-Own" which allows commercial firms to write flood insurance under their own names. Policies are applied for, precessed and adjusted for loss through those firms participating in the program. The Federal Insurance Administration (FIA) hopes this arrangement will substantially increase the number of flood insurance policies.

The "Write-Your-Own" program is subsidized by NFIP so if a company pays out more in claims than they take in in premiums and investment income, the NFIP will reimburse the difference. Any profit under the terms of this arrangement will be returned to the U.S. Treasury.

How much flood insurance is available? The amount of coverage available and the cost of insurance vary depending upon whether a community is in the "emergency" or "regular" phase of the NFIP.

When should flood insurance be purchased? The decision to buy flood insurance is often a personal decision. It is safe to say that the cost of the insurance should be offset by the potential benefits derived. Individuals should fully understand the type of coverage which is being provided, the cost and under what specific circumstances the flood insurance policy will reimburse for loss. Individuals should be encouraged to discuss these matters with a qualified, licensed insurance agent or

contact the NFIP by using the toll-free number of 1-800-638-6620.

What is a loss in progress? It is important to realize that a flood insurance policy will not pay for damages where there is a loss in progress prior to the inception of the policy. A "loss in progress" is a situation in which actual flood damages have occurred to the insured items prior to the inception date of the flood insurance policy. A flood insurance policy becomes effective following a five-day waiting period from the date the policy application forms and premium are sent to the NFIP.

What constitutes a flood? While in most instances there is little doubt that a flood has occurred, there are increasingly more cases where this determination is not clear-cut. The definition of flood is then critical in determining under what conditions a claim for damages would be paid. The NFIP defines "flood" as:

1. "A general and temporary condition of partial or complete inundation of normally dry land areas from:

   a. The overflow of inland or tidal waters:

   b. The unusual and rapid accumulation or runoff of surface waters from any source;

   c. Mudslides (i.e., mudflows) which are proximately caused by flood, as defined above and are akin to a river of liquid and flowing mud on the surface of normally dry land area, as when earth is carried by a current of water and deposited along the path of the current.

2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding the cyclical levels which result in flood, as defined above.

3. Sewer (drain) backup, which is covered only if it is caused by flood, as defined above."

FLOOD INSURANCE POLICY COVERAGE AND PREMIUM CHANGES

On October 1, 1983, changes in the NFIP became effective which resulted in increased policy (premium) costs and coverage reductions.

The FIA has also introduced flood insurance policy coverage reductions for both new and existing construction which are intended to reduce the overall cost of the flood insurance program. Most noticeable of these changes is the new and renewal policies no longer provide coverage for:

1. Finishing materials on walls floors, ceiling or other similar construction or improvement to a basement area (although coverage would remain for structural failure of a basement wall, floor, etc.);

2. Enclosures and building components located below (at a lower elevation or level) the lowest elevated floor of an elevated building (except for the required utility connections and the footing, foundation, posts, pilings, piers or other foundation walls and anchorage system as required for the support of the elevated building):

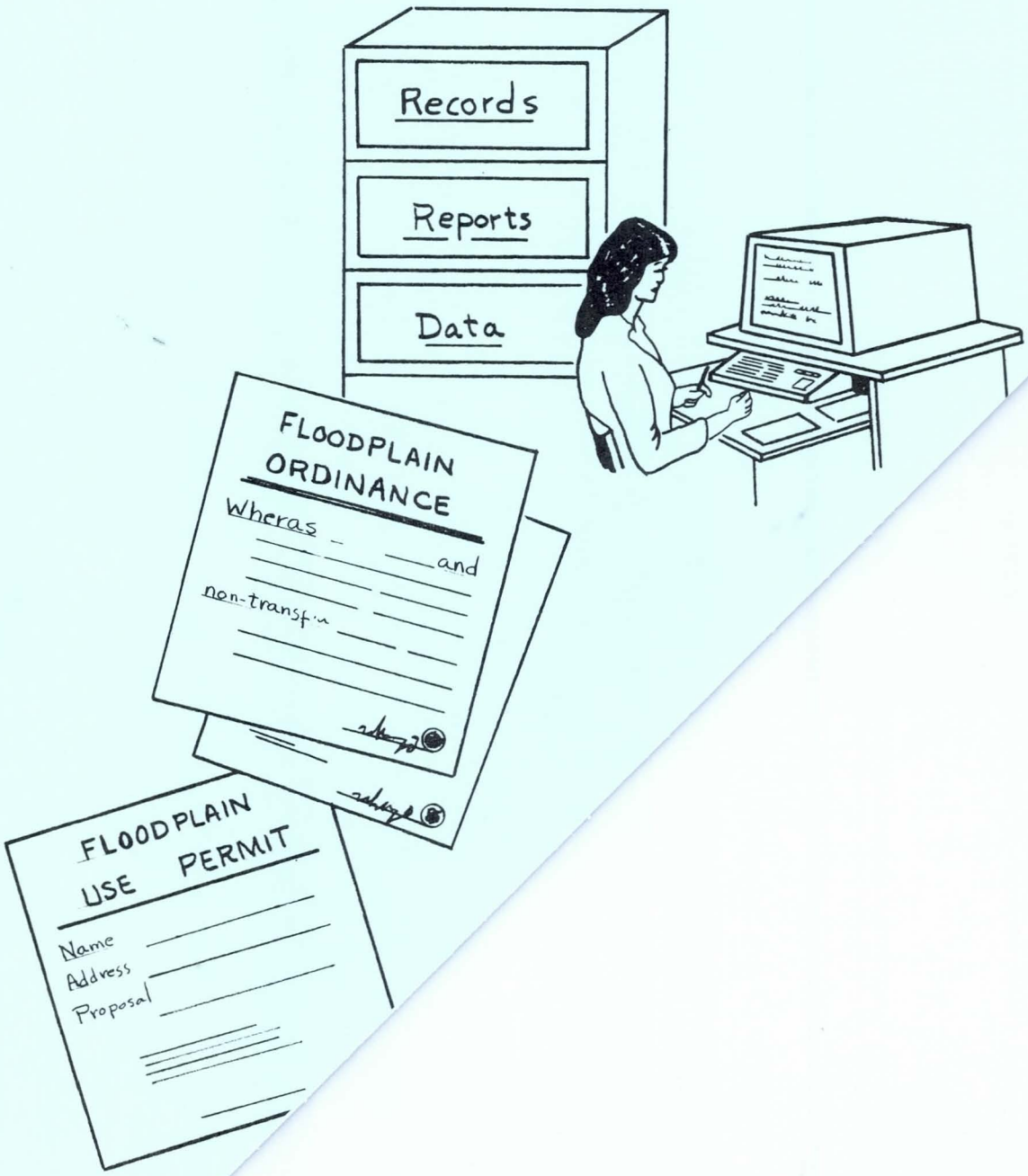
3. Contents, building machinery and equipment located in a basement area or below the lowest elevated floor of an elevated building (except for stairways and staircases attached to the building and not separated from an elevated building by elevated walkways); except coverage is still provided for sump pumps, well-water tanks, oil tanks, furnaces, hot water heaters, clothes washers and dryers, flood freezers, air conditioners, heat pumps and electric junction and circuit breaker boxes (located as mentioned above).

These premium increases and coverage reductions may result in the flood insurance program not being as attractive to those structures marginally flood prone. As stated earlier, only limited structural and contents coverage is now available for basement areas. For those subject to significant structural damage, or contents damage, flood insurance coverage through the National Flood Insurance Program remains a viable option to reimburse flood-related losses.

7. RESERVED FOR FUTURE TOPIC

PART II

FLOODPLAIN MANAGEMENT BY THE COMMUNITY



8. INTRODUCTION TO PART II

Floodplain management was seen as a community responsibility by the Congress and the Arizona Legislature when they adopted their various laws and rules because the responsibilities for building permits, land-use planning and the zoning of land uses are generally at the community level. Because many communities do not have the technical and financial capability to map floodplains, the Congress agreed to do that job. For some small communities, floodplain management may be the most technical and most complex administrative task they face.In 1984, the Arizona Legislature revised the floodplain management unless a city or town resolved to keep their program. This resulted in 41 city and town floodplain management programs becoming a county responsibility. This part of the handbook is intended to provide some insights into how communities of all sizes can succeed in this task.

Chapters 8 through 15 are all interrelated, since the administration of the program, the responsibilities of staff, variance procedures and legal considerations all depend upon the nature of the ordinance that is adopted. These chapters are all keyed to the specific "model" ordinance in Chapter 9 but comments are included to indicate other ways for a community to manage its floodplains.

Chapters 12 and 14 show how to use the materials available to the community and suggest record-keeping procedures which will ultimately resolve questions of liability and fairness to all community residents.

9. AN IN-DEPTH LOOK AT A "MODEL" REGULATION

A number of model regulations have been developed to assist communities in formulating a regulation which will allow the community to manage its floodplains according to its own aims and capability. Regulations in effect in Arizona vary widely in development standards and administrative detail. The model regulation examined herein was developed by the Arizona Department of Water Resources, patterned largely after a model developed by the Region IX staff of the Federal Emergency Management Agency (FEMA).

The model is intended to meet the minimum requirements of the Arizona Revised Statutes (ARS) and the National Flood Insurance Act of 1968 as amended (NFIA). References will also be made to other regulations in effect in Arizona communities.

This model reflects the 1984 statutory changes. It has alternate sections where the wording is different for counties and for cities and towns.

MODEL ORDINANCE

FLOOD DAMAGE PREVENTION ORDINANCE

SECTION 1.0

STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND METHODS

1.1 STATUTORY AUTHORIZATION

The Legislature of the State of Arizona has in A.R.S. § 45-2341 through 45-2349 delegated the responsibility to each county flood control district units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the the Flood Control District, (Board of Directors) of _____, County, Arizona, does ordain as follows:

1.1 STATUTORY AUTHORIZATION

The Legislature of the State of Arizona has in A.R.S. § 45-2350 enabled the (City Or Town) to adopt regulations in conformance with ARS § 45-2349 designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the (City Council, Town Council) of _____, Arizona, does ordain as follows:

1.2 FINDINGS OF FACT

(1) The flood hazard areas of _____ are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services,

COMMENTS

Other titles include "Floodplain Regulation for the Unincorporated Area of _____ County," "The Floodplain Management Ordinance," and a section in the City Code entitled "Floodplains."

1.1 Although there is no legal requirement to state it in the ordinance, cities, towns and counties must be authorized by the State in order to adopt an ordinance.

The first "1.1" is to be used by counties; the second "1.1" is to be used by cities and towns. Delete the one which does not apply.

1.2 In order to prove a need for an ordinance, a community should state findings of fact.

extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(2) These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

1.3 STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

(1) To protect human life and health;

(2) To minimize expenditure of public money for costly flood control projects;

(3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) To minimize prolonged business interruptions;

(5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets

COMMENTS

1.3 Stating the purpose of the ordinance is good for several reasons: the community staff and officials can refer back to the stated purpose when faced with a difficult decision; it is a concise summary which the public can understand; and a court of law can refer to it if a dispute goes beyond the appeal process within the community. Other purposes stated in Arizona community ordinances include, "To meet State and Federal requirements, thereby allowing _____ residents to purchase flood insurance, receive disaster relief should the need arise and obtain residential and start commercial real estate loans," "To protect and preserve groundwater recharge," "To recognize that southwestern watercourses are unstable and that their physical characteristics may change," "To enhance property values of abutting floodplain lands," and "To enhance wildlife and recreation values where appropriate by preserving riparian vegetation in 'green belts' along watercourses and floodplains."

and bridges located in areas of special flood hazard;

(6) To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;

(7) To insure that potential buyers are notified that property is in an area of special flood hazard;

(8) To insure that those who occupy the areas of special flood hazard assume responsibility for their actions; and

(9) To maintain eligibility for State disaster relief.

1.4 METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this ordinance includes methods and provisions for:

(1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

(2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Controlling the alteration of natural flood

COMMENTS

1.4 This section is optional, although it may also serve to inform the public of the specific types of controls to be imposed by the ordinance.

plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

(4) Controlling filling, grading, dredging, and other development which may increase flood damage; and,

(5) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

COMMENTS

MODEL ORDINANCE

SECTION 2.0

DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

"Appeal" means a request for a review of the Floodplain Administrator's interpretation of any provision of this ordinance or a request for a variance.

"Area of shallow flooding" means a designated AO or VO Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident.

"Area of special flood hazard" means the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. This area is designated as Zone A, AO, AH, and A1-30 on the FIRM and other areas determined by the criteria adopted by the Director of Water Resources.

"Base flood" means the flood having a one percent chance of being equalled or exceeded in any given year.

"Breakaway walls" mean any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic or any other suitable building material which are not part of the structural support of

COMMENTS

2.0 The definitions in the model are an attempt to combine the language of the NFIA and that of the ARS, which do not always coincide. Because Arizona communities are creatures of the State, the ARS definitions prevail, and those definitions are used thereafter in the model ordinance.

"Appeal" is part of a specific administrative procedure specified in Section 6.0 of the model ordinance.

"Area of shallow flooding" and "area of special flood hazard" are defined in the NFIA, and since most communities will regulate according to FEMA maps, they are used throughout the model ordinance. Other ordinances include "Regulatory Floodplain - the portion of the natural floodplain which would be flooded by (the 100 year flood)."

"Base flood" is from the NFIA. The ARS defines "one Hundred-Year Flood" as "a flood that has a one per cent chance of occurring, based upon the criteria established by the Arizona Dept of Water Resources."

"Breakaway walls" are defined in the NFIA and have limited applicability in Arizona. They would be used where a structure is entirely supported by piers or columns and where water is expected to flow under the structure during a flood. They might be used as mobile home skirts or where structures are elevated on piers.

the building and which are so designed as to breakaway, during the base flood, without damage to the structural integrity of the building on which they are used or any structures to which they might be carried by flood waters.

"Development" means 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 located within the area of special flood hazard.

"Existing mobile home park or mobile home subdivision" means a parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale for which the construction of facilities for servicing the lot on which the mobile home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of this ordinance.

"Expansion to an existing mobile home park or mobile home subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the mobile homes are to be affixed (including the installation of utilities, either final site grading or pouring of concrete pads, or the construction of streets).

"Flood" or **"flooding"** means a general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of flood waters and/or

COMMENTS

"Development" is an important definition because development is primarily what is controlled by the model ordinance. Other ordinances have regulated "obstruction or diversion of flood waters" and have a definition for "obstruction" which includes vegetation. This allows the community to order a property owner to remove vegetation which obstructs flow. Since such vegetation may not be the result of the property owner's efforts, this is a stronger control of floodplain lands. Of course, many communities order the removal of weeds if they are hazardous to health or aesthetics or if they are a fire hazard.

"Existing mobile home park or mobile home subdivision" is defined in the NFIA. The ARS and the NFIA allow uses which exist at the time of adoption of an ordinance to continue. However, the NFIA considers the placement of a new mobile home to be a new use, even if a mobile home was on the lot as an existing use.

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

"Flood Boundary Floodway Map" means the official map on which the Federal Insurance Administration has delineated both the areas of flood hazard and the floodway.

"Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

"Flood Insurance Study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the FIRM, the Flood Boundary Floodway Map, and the water surface elevation of the base flood.

"Floodplain Administrator" means the _____ of _____ who is hereby authorized by the Floodplain Board to administer the provisions of this ordinance.

"Floodplain Board" means the Board of Directors of the Flood Control District of _____ County at such times as they are engaged in the enforcement of this ordinance.

"Floodplain Board" means the (City, Town) Council of _____ at such times as they are engaged in the enforcement of this ordinance.

COMMENTS

"Floodplain Administrator" is an individual (or a position, such as the City Engineer, Building Official or Planning Director) who is given specific authorities and responsibilities within the ordinance. The Floodplain Board should be sure that the person named as Floodplain Administrator is capable of interpreting the ordinance and has access to the necessary technical competence.

"Floodplain Board" is defined in the ARS. One community has defined a "Floodplain Commission" consisting of three appointees from each Supervisorial District to act as an advisory body to the Floodplain Board. This body may lead to more rational floodplain management by removing political pressure from the Board, but it may slow the process.

"The first definition of "Floodplain Board" is for use in County ordinances; the second is for use by cities and towns. Delete the definition which does not apply."

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot. The floodway for some watercourses is delineated on the Flood Boundary Floodway Map and is as defined by the Director of Water Resources for other watercourses.

"Habitable floor" means any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a "habitable floor."

Mobile home" means a structure that is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers. The term includes, but is not limited to, the definition of "mobile home" as set forth in regulations governing the Mobile Home Safety and Construction Standards Program (24 C.F.R. 3282.7(a)).

"New construction" means structures for which the "start of construction" commenced on or after the effective date of this ordinance.

"New mobile home park or mobile home subdivision" means a parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale for which the construction of facilities or servicing the lot (including

COMMENTS

"Floodway" is defined in the NFIA. The ARS have no specific criteria of this type, but the Department of Water Resources considers this standard to be appropriate for Arizona floodplains. Some communities allow no rise in flood elevation. If any part of a floodplain is to be developed, the remainder of the floodplain must be improved so that no rise results. Some communities define a "Floodway Fringe" as the area of the floodplain outside the Floodway. Then instead of having development standards for the floodplain except for the floodway, they have two different standards -- one for the floodway and one for the floodway fringe.

"Habitable floor" is defined in the NFIA. The ARS requires control over "dwelling units," but the NFIA definition is more concise and easier to deal with, so it is used in the model.

"Mobile home" specifically excludes recreational vehicles and travel trailers because the NFIA did not anticipate that they would be a primary residence as they are in many Arizona communities. See comments under Section 5.0.

at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed on or after the effective date of this ordinance.

"Person" means any individual or his agent, firm partnership, association, corporation, or agent of the aforementioned groups or the State or any agency or political subdivision thereof.

"Regulatory Flood Elevation" means an elevation one foot above the base flood elevation.

"Start of construction" means the first placement or permanent construction of a structure (other than a mobile home) on a site, such as the pouring of slabs or footings or any work beyond the stage of excavation. Permanent construction does not include land preparation, such as clearing, grading, and filling, nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not as part of the main structure. For a structure (other than a mobile home) without a basement or poured footings, the "start of construction" includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation. For mobile homes not within a mobile home park or mobile home subdivision, "start of construction" means the affixing of

COMMENTS

"Person" is defined in the ARS.

the mobile home to its permanent site. For mobile homes within mobile home parks or mobile home subdivisions, "start of construction" is the date on which the construction of facilities for servicing the site on which the mobile home is to be affixed (including, at a minimum, the construction of streets, either final site grading or the pouring of concrete pads, and installation of utilities) is completed.

"Structure" means a walled and roofed building or mobile home that is principally above ground.

"Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market values of the structure either:

(1) before the improvement or repair is started, or

(2) if the structure has been damaged and is being restored, before the damage occured. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of a wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

(1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which

COMMENTS

are solely necessary to assure safe living conditions, or

(2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

Variance means a grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

COMMENTS

"Variance" is defined in both the NFIA and the ARS. A variance must be considered by the Floodplain Board for any requested development which the Floodplain Administrator is not authorized in the ordinance to permit.

Other regulations include a definition of "Base Flood Elevation," "One Hundred-Year Flood Elevation" or "Regulatory Flood Elevation" as the water surface elevation which has a one percent chance of being equalled or exceeded in any year, and make that elevation the basis for all determinations.

MODEL ORDINANCE

SECTION 3.0

GENERAL PROVISIONS

3.1 **LANDS TO WHICH THIS ORDINANCE APPLIES**

This ordinance shall apply to all areas of special flood hazards within the boundaries of _____ County except those incorporated cities and towns which have adopted a resolution as specified in ARS § 45-2350.

3.2 **BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD**

The areas of special flood hazard identified by the Federal Insurance Administration in Flood Insurance Studies for all areas as specified by Subsection 3.1 above with accompanying Flood Insurance Rate Maps are hereby adopted by reference and declared to be a part of this ordinance. These Flood Insurance Studies are on file at _____. The Flood Insurance Study is the minimum area of applicability of this ordinance and may be supplemented by studies for other areas which allow implementation of this ordinance and which are recommended to the Floodplain Board by the Floodplain Administrator.

3.1 **LANDS TO WHICH THIS ORDINANCE APPLIES**

This ordinance shall apply to all areas of special flood hazards within the jurisdiction of

_____.

COMMENTS

3.1 and 3.2 The area or jurisdiction is, as a minimum, the areas shown on the FIRM. Some communities receive additional floodplain delineations from land developers and other sources and use these even if they are not on the FIRM. Some communities define a floodplain of a certain width and flood depth for all washes which have a certain minimum watershed area.

"The first versions of subsections 3.1 and 3.2 apply to counties; the second applies to cities and towns. Delete the subsections which do not apply."

3.2 **BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD**

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the _____," dated _____, 19__, with an accompanying Flood Insurance Rate Map is hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file at _____. The Flood Insurance Study is the minimum area of applicability of this ordinance and may be supplemented by studies for other areas which allow implementation of this ordinance and which are recommended to the Floodplain Board by the Floodplain Administrator.

3.3 **COMPLIANCE**

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations.

3.4 **ABROGATION AND GREATER RESTRICTIONS**

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

COMMENTS

3.3 Compliance is required by the ARS.

3.5 INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be:

(1) Considered as minimum requirements;

(2) Liberally construed in favor of the governing body; and,

(3) Deemed neither to limit nor repeal any other powers granted under state statutes.

3.6 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of _____, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

COMMENTS

3.6 The one hundred-year flood was selected for floodplain management purposes because it more or less matches the life expectancy of many types of floodplain uses. A lower standard (like a 25-year flood) would allow more flood damages, while a high standard (like a 500-year flood) would increase development costs and remove more land from intense use. However, for any standard, a larger flood will eventually occur. Some streams in Arizona have had a flood larger than a 100-year flood since 1970. This section is designed to eliminate community liablity when one of those extreme floods occurs.

3.7 STATUTORY EXEMPTIONS

1. In accordance with ARS Section 45-2349, nothing in this ordinance shall:

   A. Affect existing uses of property or the right to continuation of the use under conditions which existed on the effective date of this ordinance.

   B. Affect repair or alteration of property for the purposes for which such property was used on the effective date of this ordinance; providing such repair or alteration does not exceed 50 percent of the value of the property prior to the repair or alteration; and provided the repair or alteration does not decrease the carrying capacity of the watercourse.

   C. Affect or apply to facilities constructed or installed pursuant to a certificate of environmental compatability issued under the authority of Title 40, chapter 2, article 6.2.

2. In accordance with ARS Section 45-2353, written authorization shall not be required, nor shall the Floodplain Board prohibit:

   A. The construction of bridges, culverts, dikes and other structures necessary to the construction of public highways, roads and streets intersecting a watercourse.

COMMENTS

3.7 Statutory exemptions in Arizona do not conflict with the NFIA except for 3.7.2. Since a community cannot override the ARS, these exemptions must be allowed. ARS § 45-2342 F.1 allows completion of subdivisions which were 75% complete in 1973. If a community has subdivisions which meet this criterion, they need to add the appropriate wording to 3.7.1.

B. The construction of storage dams for watering livestock or wildlife, structures on banks of a creek, stream, river, wash, arroyo, or other watercourse to prevent erosion of or damage to adjoining land, or dams for the conservation of flood waters as permitted by Title 45, Chapter 3.

C. Construction of tailing dams and waste disposal areas for use in connection with mining and metallurgical operations. This paragraph does not exempt those sand and gravel operations which will divert, retard or obstruct the flow of waters in any watercourse.

D. Any flood control district, or other political subdivision, from exercising powers granted to it under ARS Title 45, Chapter 10.

3. Before any construction authorized by Subsection 2 of this Section may begin, the responsible person must submit plans for the construction to the Board for review and comment.

4. These exemptions do not preclude any person from liability if that person's actions increase flood hazards to any other person or property.

COMMENTS

3.8 **DECLARATION OF PUBLIC NUISANCE**

Every new structure, building, fill, excavation or development located or maintained within any area of special flood hazard after August 8, 1973 in violation of this ordinance is a public nuisance per se.

3.9 **ABATEMENT OF VIOLATIONS**

Within 30 days of discovery of a violation of this ordinance, the Floodplain Administrator shall submit a report to the Floodplain Board which shall include all information available to the Floodplain Administrator which is pertinent to said violation. Within 30 days of receipt of this report, the Floodplain Board shall either:

(1) Take any necessary action to effect the abatement of such violation; or

(2) Issue a variance to this ordinance in accordance with the provisions of Section 6.0 herein; or

(3) Order the owner of the property upon which the violation exists to provide whatever additional information may be required for their determinaton. Such information must be provided to the Floodplain Administrator within 30 days of such order, and he shall submit an amended report to the Floodplain Board within 20 days. At their next regularly scheduled

COMMENTS

3.8 From ARS § 45-2344.

3.9 This is an example of an administrative procedure being spelled out in an ordinance. It clearly defines the responsibilities of the Floodplain Administrator, the Floodplain Board and the property owner, and gives a schedule for the ultimate correction of the problem.

public meeting, the Floodplain Board shall either order the abatement of said violation or they shall grant a variance in accordance with the provisions of Section 6.0 herein.

3.10 **UNLAWFUL ACTS**

1. It is unlawful for any person to divert, retard or obstruct the flow of waters in any watercourse whenever it creates a hazard to life or property without securing the written authorization of the Floodplain Board.
2. Any person violating the provisions of this section shall be guilty of a class 2 misdemeanor.

3.11 **SEVERABILITY**

This ordinance and the various parts thereof are hereby declared to be severable. Should any section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

COMMENTS

3.10 FROM ARS § 45-2345.

SECTION 4.0

ADMINISTRATION

4.1 ESTABLISHMENT OF DEVELOPMENT PERMIT

A Development Permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 3.2. Application for a Development Permit shall be made on forms furnished by the Floodplain Administrator and may include, but not be limited to; plans in duplicate drawn to scale showing the nature, location, dimensions, and elevation of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

(1) Proposed elevation in relation to mean sea level, of the lowest habitable floor (including basement) of all strucutres; in Zone AO, elevation of existing grade and proposed elevation of lowest habitable floor of all structures.

(2) Proposed elevation in relation to mean sea level to which any structure will be floodproofed;

(3) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet

COMMENTS

4.0 This section is the most variable throughout Arizona communities. Some have many pages and explicitly spell out the procedure (as in 3.9 above), while others simply say, "The Floodplain Administrator shall administer this ordinance." It is probably better to spell out at least the duties and responsibilities of the Floodplain Administrator.

4.1 This section may be deleted if other permit procedures cover all uses of the floodplain. For instance, minimum floor elevations for residential construction may simply be a stipulation on the building permit. The Floodplain Board needs to specify whether the Floodplain Administrator or the applicant is to provide data needed for various uses. The model is not specific on this point, and the Board may wish to be. One community establishes arbitrary and large floodplains on unstudied washes which are to be used "...until the area is considered for development and then to be revised to meet the requirements of this Ordinance, such determinations being based on a study of the drainage areas, the probable runoff after development, and other topographic and hydrologic data prepared for the developer by a registered engineer and approved by the County Engineer."

the floodproofing criteria in Section 5.1-3(3); and,

(4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

4.2 **DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR**

Duties of the Floodplain Administrator shall include, but not be limited to:

4.2-1 Permit Review

(1) Review all development permits to determine that the permit requirements of this ordinance have been satisfied.

(2) Review all permits to determine that the site is reasonably safe from flooding.

(3) Review all development permits to determine if the proposed development adversely affects the flood carrying capacity of the floodway. For purposes of this ordinance, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point.

4.2-2 Use of Other Base Flood Data

When base flood elevation data has not been provided in accordance with Section 3.2., **BASIS FOR**

COMMENTS

4.2 This section may be deleted if the community routinely checks completed jobs and inspects for proper elevations and other stipulated items. However, the community's inspector should certify to the Floodplain Administrator that all stipulations were complied with.

ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation data available from a Federal, State or other source, in order to administer Section 5.0. Any such information shall be submitted to the Floodplain Board for adoption.

4.2-3 Information to be Obtained and Maintained

Obtain and maintain for public inspection and make available as needed for Flood Insurance Policies:

(1) the certified elevation required in Section 5.1-3(1);

(2) the certification required in Section 5.1-3(2);

(3) the floodproofing certification required in Section 5.1-3(3); and

(4) the certified elevation required in Section 5.4-2.

4.2-4 Alteration of Watercourses

(1) Notify adjacent communities and the Arizona Department of Water Resources prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration; and

(2) Require that the flood carrying capacity of the altered or relocated portion of said watercourse is maintained.

4.2-5 Interpretation of FIRM Boundaries

Make interpretations where needed, as to the exact

COMMENTS

4.2-4 Required by ARS § 45-2342 and NFIA.

location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 6.0.

4.2-6 Take actions on violations of this ordinance as required in Section 3.9 herein.

4.2-7 Advise any city or town which has assumed jurisdiction over its floodplains in accordance with ARS § 45-2350 in writing and provide a copy of any development plan of any application for a floodplains use permit or variance to develop land in a floodplain or floodway within one mile of the corporate limits of such city or town. The District shall also advise such city or town in writing and provide a copy of any development plan of any major development proposed within a floodplain or floodway which could affect floodplains, floodways or watercourses within such city's or town's area of jurisdiction. Written notice and a copy of the plan of development shall be sent to such city or town no later than three working days after having been revised by the District.

COMMENTS

4.2-7: "The first subsection 4.2-7 applies to counties; the second subsection 4.2-7 applies to cities and towns. Delete the subsection which does not apply."

4.2-7 Advise the Flood Control Disrict of _____ County and any adjunct jurisdiction having responsibility for floodplain management in writing and provide a copy of development plan of all applications for floodplain use permits or vaiances to develop land in a floodplain or floodway within one mile of the corporate limits of the (City, Town) of _____. Also, advise the Flood Control District of _____ County in writing and provide a copy of any development plan of any major development proposed within a floodplain or floodway which could affect floodplains, floodways or watercourses within the District's area of jurisdiction. Written notice and a copy of the plan of development shall be sent to the District no later than three working days after having been received by the District.

COMMENTS

4.2-7: "The first subsection 4.2-7 applies to counties; the second subsection 4.2-7 applies to cities and towns. Delete the subsection which does not apply."

SECTION 5.0

PROVISIONS FOR FLOOD HAZARD REDUCTION

5.1 STANDARDS OF CONSTRUCTION

In all areas of special flood hazards the following standards are required:

5.1-1 Anchoring

(1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

(2) All mobile homes shall meet the anchoring standards of Section 5.5-1.

5.1-2 Construction Materials and Methods

(1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

5.1-3 Elevation and Floodproofing

(1) New construction and substantial improvement of any structure shall have the lowest habitable floor, including basement, elevated to or above the regulatory flood elevation. Nonresidential structures may meet the standards in Section 5.1-3(3). Upon the completion of the structure the elevation of the lowest habitable floor

COMMENTS

5.0 This section is the real "meat" of floodplain management. It is pointed out again that the model ordinance meets the minimum State and Federal requirements. Many Arizona communities exceed some of these minimums.

5.1-1 Debris moving with floodwater may unduly damage other structures in the floodplain or cause obstruction of a bridge which would increase the flooded area.

5.1-3 Many comunities require construction or floodproofing to be at least one foot above the base flood elevation. This is recommended because the base flood elevation can be raised by future construction, and the flood elevations may be wrong. Also, structures one foot above the base flood elevation may be insured with a lower premium. For example, a $50,000 policy would cost $69.50 per year for a residence at the base flood elevation, while the same policy would cost $45.00 if the floor was one foot higher. Insurance for $10,000 in contents would lower from $29 per year to $10.

including basement shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator.

(2) New construction and substantial improvement of any structure in Zone AO shall have the lowest floor, including basement, elevated at least one foot above the depth number specified on the FIRM. If there is no depth number on the FIRM, the lowest floor, including basement, shall be elevated one foot above the crown of the nearest street. Nonresidential structures may meet the standards in Section 5.1-3(3). Upon completion of the structure a registered professional engineer shall certify to the Floodplain Administrator that the elevation of the structure meets this standard.

(3) Nonresidential construction shall either be elevated in conformance with Section 5.1-3(1) or (2) or together with attendant utility and sanitary facilities:

(a) be floodproofed so that below the regulatory flood level the structure is watertight with walls substantially impermeable to the passage of water;

(b) have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(c) be certified by a registered professional

COMMENTS

5.1-3(1) through 5.1-3(3)	Note the requirement for certification.

engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the Floodplain Administrator.

(4) Mobile homes shall meet the above standards and also the standards in Section 5.5.

5.2 **STANDARDS FOR STORAGE OF MATERIALS AND EQUIPMENT**

5.2-1 The storage or processing of materials that are in time of flooding bouyant, flammable, explosive, or could be injurious to human, animal or plant life is prohibited.

5.2-2 Storage of other material or equipment may be allowed if not subject to major damage by floods and if firmly anchored to prevent flotation or if readily removable from the area within the time available after flood warning.

5.3 **STANDARDS FOR UTILITIES**

5.3-1 All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.

5.3-2 On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

5.3-3 Waste disposal systems shall not be installed wholly or partially in a floodway.

COMMENTS

5.3 Several Arizona communities prohibit individual septic systems in floodplains.

5.4 **STANDARDS FOR SUBDIVISIONS**

5.4-1 All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood.

5.4-2 All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base flood, the final pad elevation shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator.

5.4-3 All subdivision proposals shall be consistent with the need to minimize flood damage. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

5.5 **STANDARDS FOR MOBILE HOMES AND MOBILE HOME PARKS AND SUBDIVISIONS**

All mobile homes and additions to mobile homes shall be anchored to resist flotation, collapse, or lateral movement by one of the following methods:

(1) by providing an anchoring system designed to withstand horizontal forces of 25 pounds per square foot and uplift forces or 15 pounds per square foot;

(2) by providing over-the-top and frame ties to ground anchors. Specifically:

(a) over-the-top ties be provided at each of the four corners of the mobile home, with

COMMENTS

5.4 Some communities require all-weather emergency vehicle access to all new subdivision lots. The criteria for all-weather access is no more than one foot of water during a 100-year flood. If water is to flow through a subdivision (around the pads), deed restrictions may be needed to ensure that other obstructions such a masonry walls do not interfere with such flow.

5.5 Note that even in existing mobile home parks or subdivisions, newly placed mobile homes must be elevated to or above the base flood elevation.

two additional ties per side at intermediate locations, except that mobile homes less than 50 feet long require only one additional tie per side;

(b) frame ties be provided at each corner of the home with five additional ties per side at intermediate points, except that mobile homes less than 50 feet long require only four additional ties per side; and,

(c) all components of the anchoring system be capable of carrying a force of 4,800 pounds.

5.5-2 Mobile Home Parks and Mobile Home Subdivisions

The following standards are required for all new and replacement mobile homes:

(1) Adequate surface drainage and access for a hauler shall be provided.

(2) All mobile homes shall be placed on pads or lots elevated on compacted fill or on pilings so that the bottom of the structural frame or the lowest point of any attached appliances, whichever is lower, is at or above the regulatory flood elevation. If elevated on pilings:

(a) the lots shall be large enough to permit steps;

COMMENTS

(b) the pilings shall be placed in stable soil no more than ten feet apart, and

(c) reinforcement shall be provided for pilings more than six feet above the ground level.

5.5-3 No mobile home shall be placed in a floodway, except in an existing mobile home park or existing mobile home subdivision.

5.6 **FLOODWAYS**

Located within areas of special flood hazard established in Section 3.2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

5.6-1 Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

5.6-2 Prohibit the placement of any mobile homes except in an existing mobile home park or subdivision.

5.6-3 If Sections 5.6-1 and 5.6-2 are satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 5, **PROVISIONS FOR FLOOD HAZARD REDUCTION.**

COMMENTS

5.6 Some communities specify allowed uses in floodways. Such uses include parking lots, many types of recreations use, drive-in theaters, if properly engineered and constructed, and temporary uses such as carnivals.

A community may wish to specifically address recreational vehicles and travel trailers in Section 5.0. One community allows travel trailer parks in floodplains with the stipulation that all units will be mobile at all times, units will not be stored in the parks, and that the park owner is responsible for immediately evacuating the park if the community orders evacuation.

SECTION 6.0

VARIANCE PROCEDURE

6.1 APPEAL BOARD

6.1-1 The Floodplain Board of _____ shall hear and decide appeals and requests for variances from the requirements of this ordinance.

6.1-2 The Floodplain Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this ordinance.

6.1-3 Those aggrieved by the decision of the Floodplain Board, or any taxpayer, may appeal such decision to the Superior Court of _____ County.

6.1-4 In passing upon such applications, the Floodplain Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:

(1) the danger that materials may be swept onto other lands to the injury of others;

(2) the danger of life and property due to flooding or erosion damage;

(3) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(4) the importance of the services provided by the proposed facility to the community;

(5) the necessity to the facility of a waterfront

COMMENTS

6.0 The Floodplain Board decides appeals to decisions of the Floodplain Administrator and may consider variances to the provisions of the ordinance. Since the Board adopts the ordinance, they are the only entity which can vary from its requirements.

6.1-3 Appeals to the courts are provided for in the NFIA.

location, where applicable;

(6) the availability of alternative locations for the proposed use which are not subject to flooding or erosion damge;

(7) the compatability of the proposed use with existing and anticipated development;

(8) the relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

(9) the safety of access to the property in time of flood for ordinary and emergency vehicles;

(10) the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and,

(11) the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water system, and streets and bridges.

6.1-5 Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (1-11) in Section 6.1-4 have been fully considered. As the lot size increases beyond one-half acre, the technical justifiction required for issuing the variance increases.

COMMENTS

6.1-6 Upon consideration of the factors of Section 6.1-4 and the purposes of this ordinance, the Floodplain Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

6.1-7 The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

6.2 **CONDITIONS FOR VARIANCES**

6.2-1 Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.

6.2-2 Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

6.2-3 Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

6.2-4 Variances shall only be issued upon:

(1) a showing of good and sufficient cause;

(2) a determination that failure to grant the variance would result in exceptional hardship to the applicant; and

COMMENTS

(3) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of, the public, or confict with existing local laws or ordinances.

6.2-5 Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the regulatory flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. Such notice will also state that the land upon which the variance is granted shall be ineligible for exchange of State land pursuant to the flood relocation and land exchange program provided for by ARS title 26, chapter 2, article 2. A copy of the notice shall be recorded by the Floodplain Board in the office of the _____ County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.

COMMENTS

6.2-5 Required by the NFIA and ARS § 45-2342J.

10. DEVELOPMENT OF AN ADMINISTRATIVE PROCEDURE

All Government agencies have procedures for their various activities, whether or not these procedures are written on paper. Administrative processes which occur infrequently are most likely to cause problems, because the staff may have to "invent the wheel" each time they arise. In many Arizona communities, floodplain management is not a frequent process, but it is very important that it be done correctly each time. A mistake in this area will be a continuing problem for generations.

The most common administrative mistake in floodplain management occurs at the very beginning of the community's interaction with the property owner -- a proposed activity is not identified as flood-prone. Even if this mistake is corrected before final disposition of the proposal, the property owner will probably feel that he has been the victim of bureaucratic red tape.

This error can be corrected by making sure that the staff member who has the initial contact with property owners is aware of the flood insurance maps and the special handling required for property in identified floodplains.

One way to accomplish this is to draft the floodplain boundaries onto the maps normally used by staff. These may be assessor's maps, zoning district maps, or any other maps used to initially locate the property. Early identification of flood-prone property is essential in the administration of zoning changes, subdivision approval and building permit issuance, as well as grading and drainage if that is controlled by the community.

When a proposed activity is identified as being flood-prone, staff must next determine the impact of floodplain management on that activity. Depending upon the nature of the proposal, this will range from no impact to prohibition of the activity.

Generally, staff will first determine if the activity is in the floodway or the floodway fringe. Activity in the floodway must be restricted to prevent a reduction in the carrying capacity of the floodway. This would generally prohibit new structures. In the floodway fringe, staff may be able to proceed with normal processing if the applicant agrees with stipulations on floor elevations, erosion protection, or other requirements of floodplain management.

The following flow charts are examples of procedures which may be used for different proposed activities.

Figure 10-1 shows a procedure for a requested building permit. Note that the first step is to determine if the request is in a floodplain. If so, the location within the floodplain must be determined. If the activity is in the floodway, staff <u>must not</u> issue a permit. They should inform the applicant that a

FIGURE 10-1. SAMPLE PROCEDURE FOR A BUILDING PERMIT REQUEST.

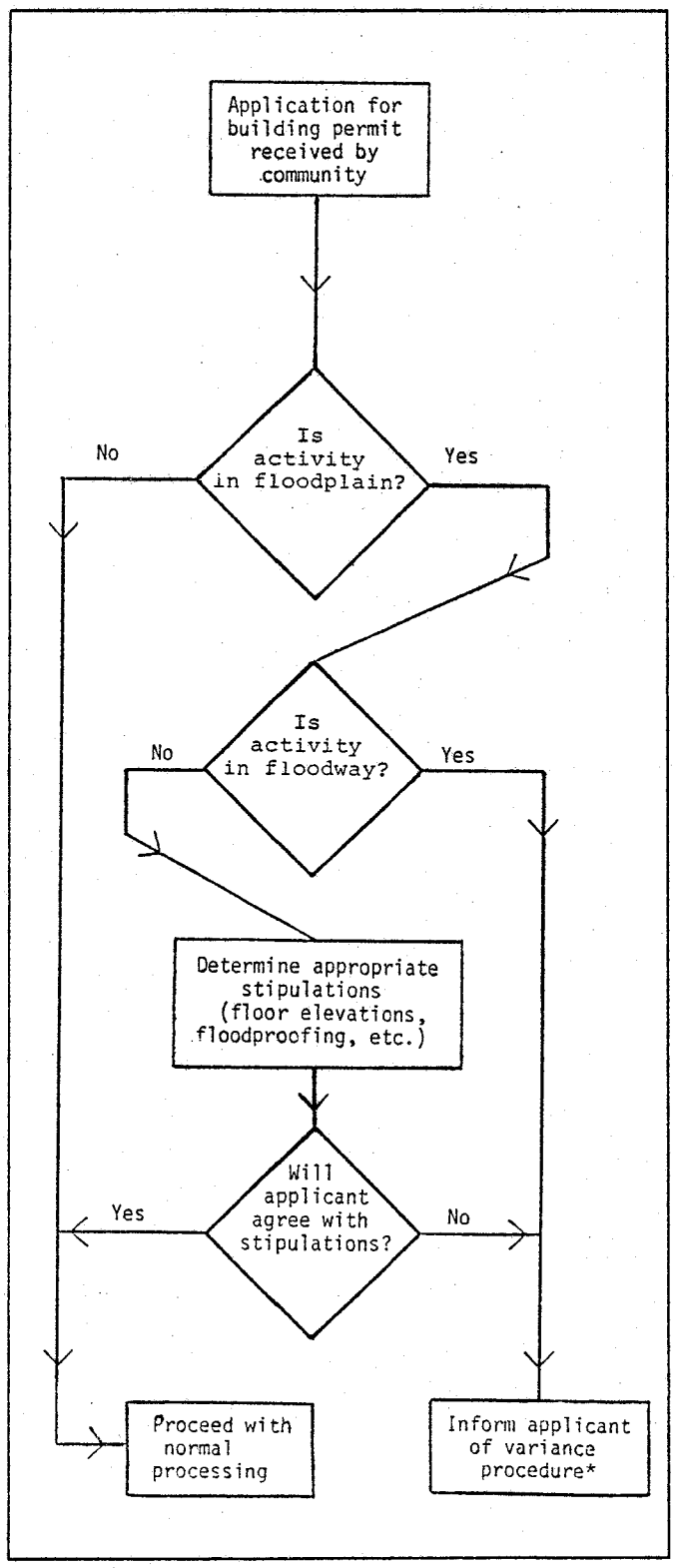
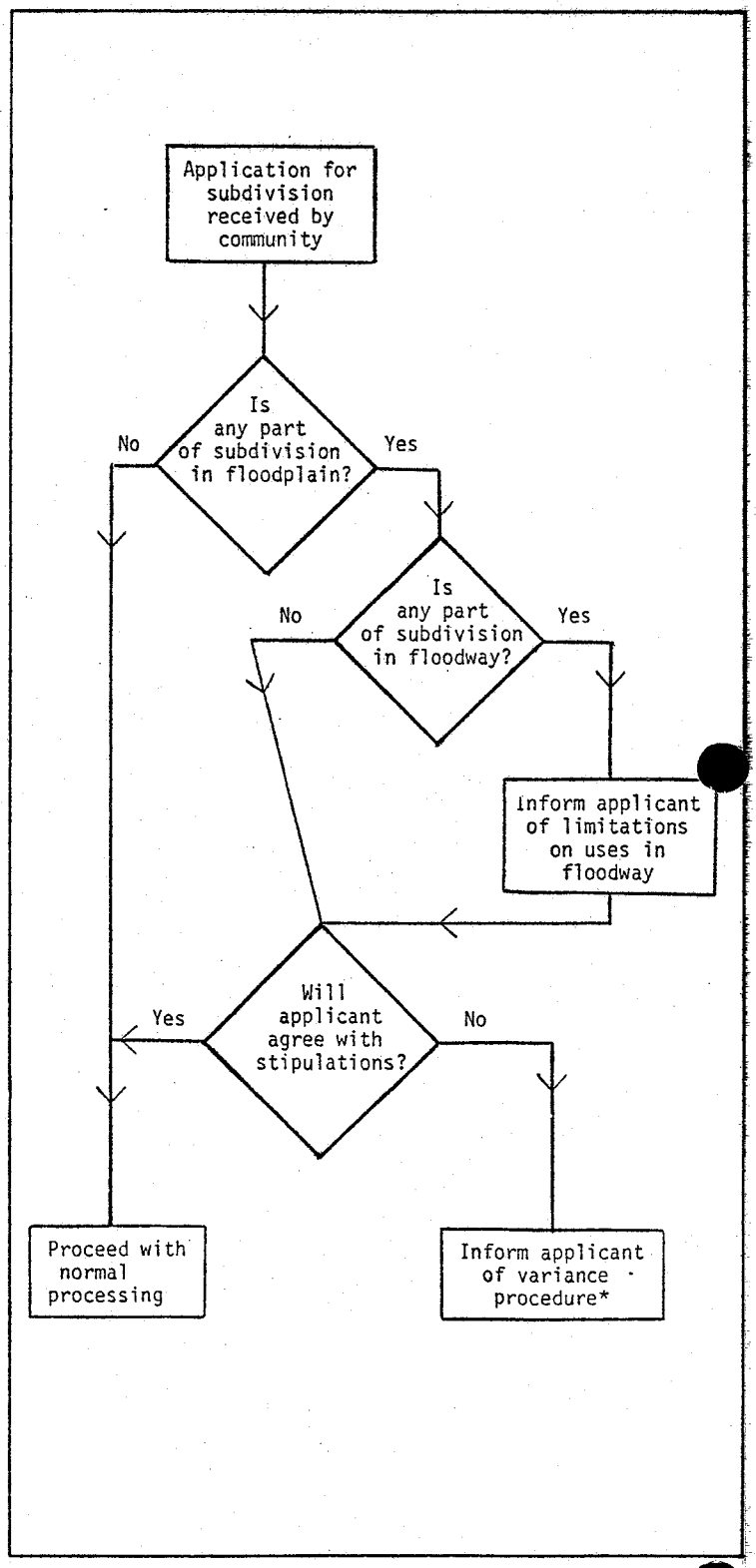


FIGURE 10-2. SAMPLE PROCEDURE FOR A SUBDIVISION REQUEST.



variance must be obtained from the Floodplain Board. If the request is not in the floodway, staff should determine what conditions must be met by the applicant in order to comply with the community's floodplain regulation or ordinance. If the applicant agrees with these conditions, the request returns to normal processing channels. If not, the applicant must appeal staff's requirements to the Floodplain Board.

Figures 10-2 and 10-3 show similar procedures for subdivision requests and reported floodplain violations.

Figure 10-4 shows an administrative procedure for appeals and variance requests. Staff should assist the applicant in his/her preparation, and they must schedule a hearing before the Floodplain Board. They must also prepare recommendations and present all pertinent data to the Board. If the Board approves the appeal or variance, they may include stipulations which staff must follow up on. Any appeals or variances which do not meet the Federal requirements for floodplain management must be included in the community's annual report to FEMA.

A formalized procedure will help staff to ensure that the floodplain regulation is not violated by the community, and if it is approved by the Floodplain Board, staff will have fewer conflicts with applicants.

Figures 10-5 and 10-6 are administrative procedures used by the City of Flagstaff. Notice that it uses basically the same steps, but staff elements (the Development Review Board and the Floodplain Administrator) are included. Each community should tailor their procedure to their staff capabilities.

The City of Phoenix Administrative Procedures are included on pages 10-6 through 10-10. This is an example of procedures that work in a busy growing metropolitan area. Other communities may wish to adopt all or part of these procedures to fit their needs.

FIGURE 10-3. SAMPLE PROCEDURE FOR A FLOODPLAIN VIOLATION

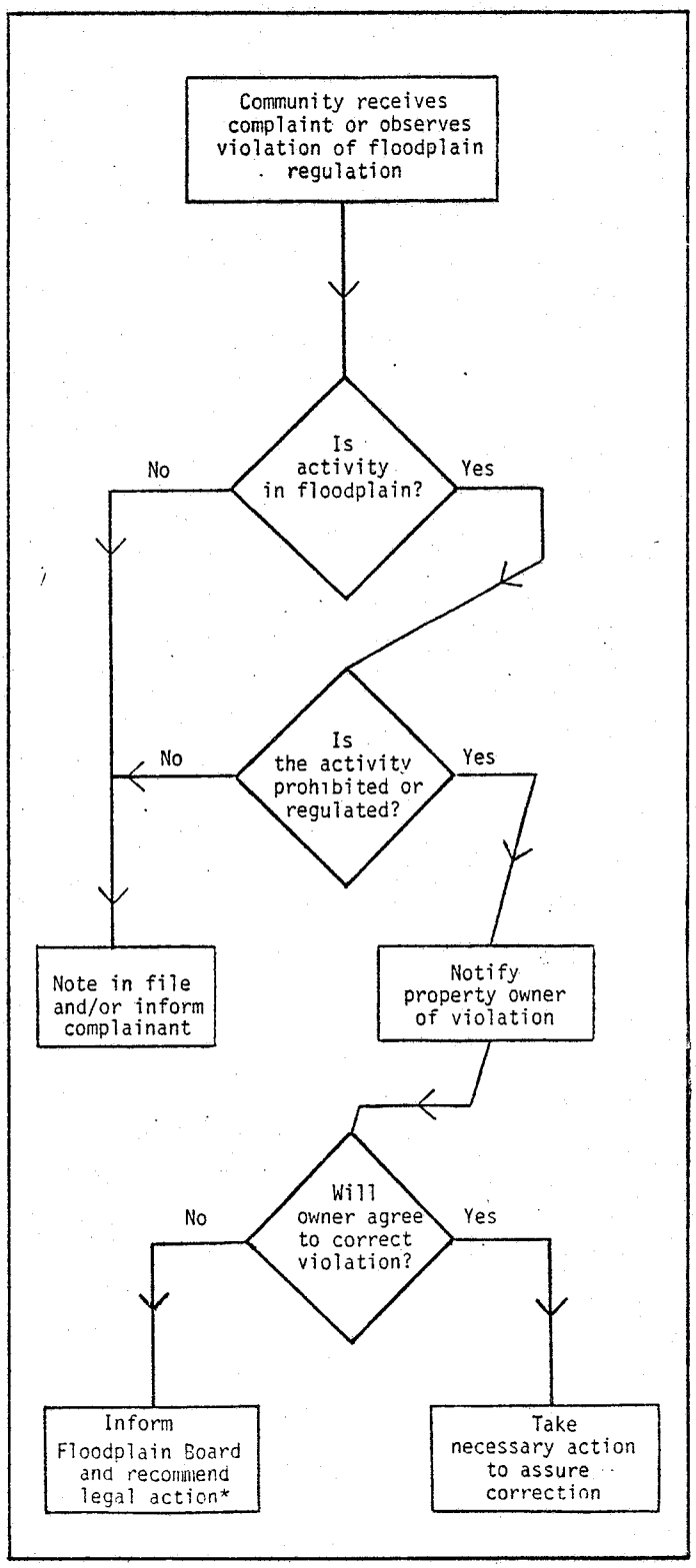


FIGURE 10-4. SAMPLE PROCEDURE FOR APPEALS AND VARIANCES

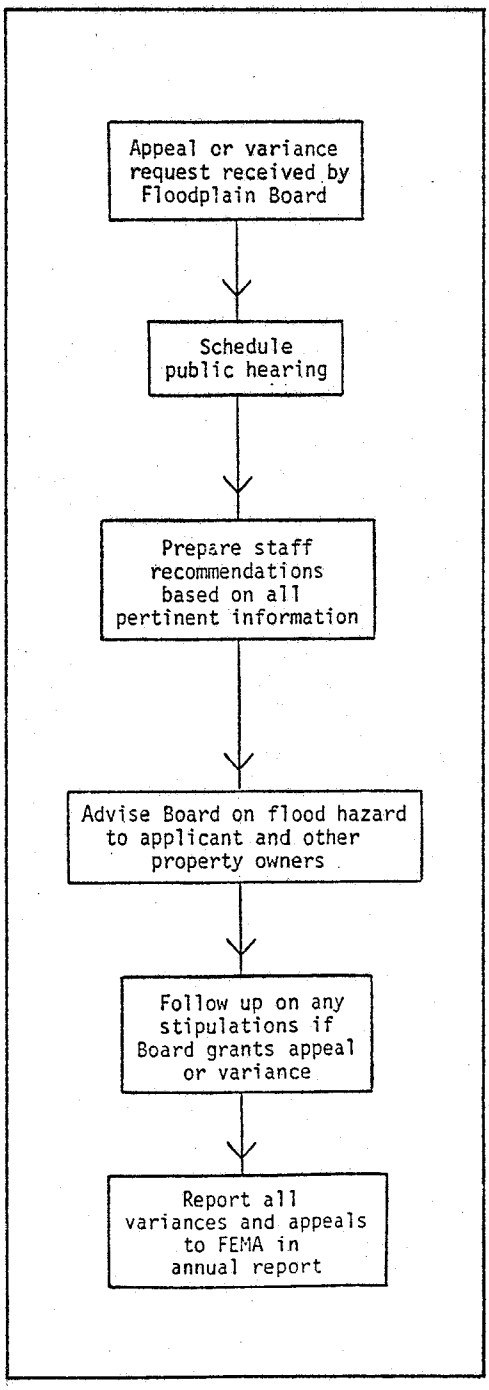


FIGURE 10-5. ADMINISTRATIVE PROCEDURE FOR THE CITY OF FLAGSTAFF.

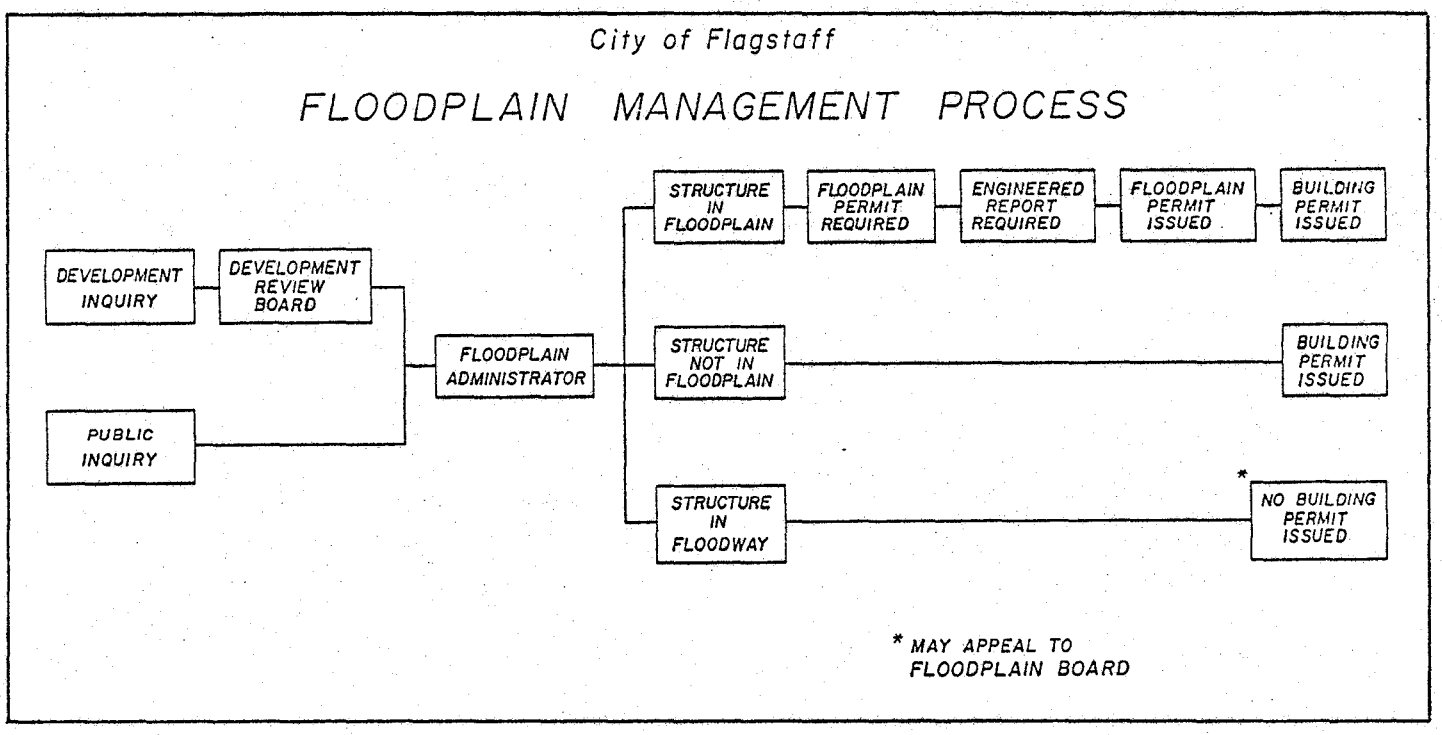
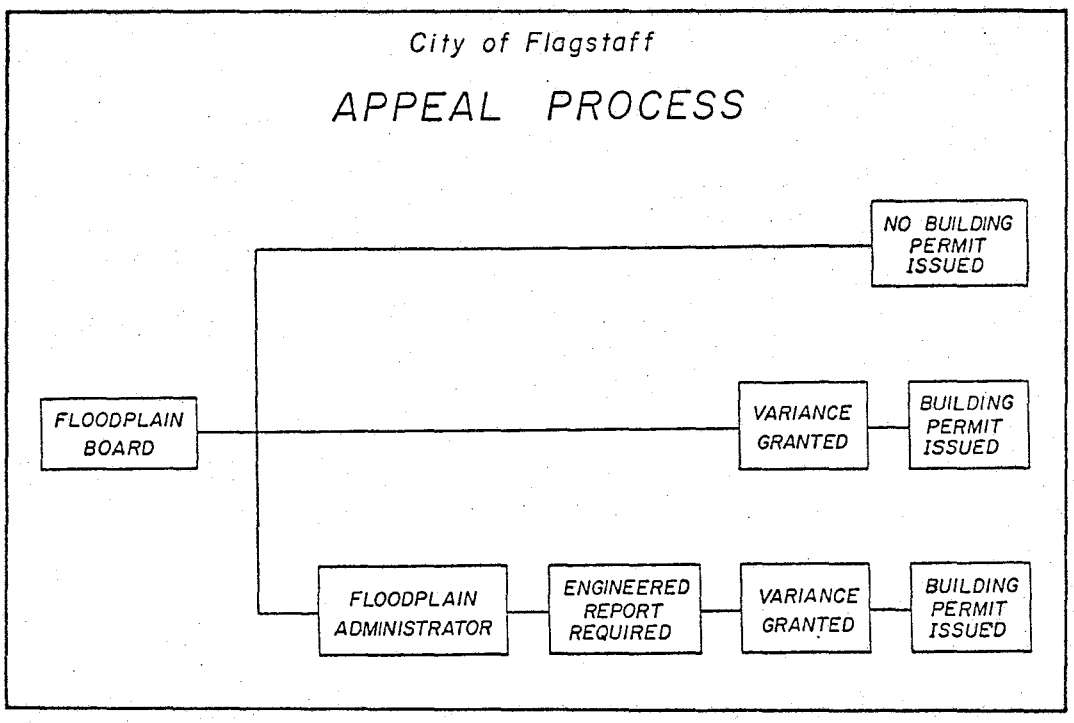


FIGURE 10-6. ADMINISTRATIVE PROCEDURE FOR APPEALS FOR THE CITY OF FLAGSTAFF.



CITY OF PHOENIX
ENGINEERING DEPARTMENT

ADMINSTRATIVE
PROCEDURE NO. 15
May 12, 1982

SUBJECT: FLOODPLAIN MANAGEMENT

(1) PURPOSE

The purpose of this Administrative Procedure is to establish criteria and procedures for floodplain management.

(2) AUTHORITY AND REFERENCES

City Code, Chapter 32B - Floodplain Ordinance, adopted by City Council January 22, 1980, pursuant to authority contained in Arizona Revised Statute 45-2341 et. seq.

This ordinance has been reviewed by the Federal Emergency Management Agency (FEMA) and declared to satisfy the requirements of the National Flood Insurance Program as set forth in Subchapter B of Chapter X of Title 24 of the Code of Federal Regulations.

The Floodplain Ordinance adopted Flood Insurance Rate Maps (FIRM) and a Flood Insurance Study produced by FEMA, dated December 4, 1979. The official record copies of these documents are maintained by the City Clerk. Additional copies can also be found in Central Files and in the Floodplain Management Section files.

New criteria and policies are distributed from time to time by FEMA and should be followed whenever possible. To date we have received policies on the:

- Use of levees
- Revisions to floodways
- Applications for letters of map amendment

These policies are subject to revision and interpretation and are, therefore, kept in the Floodplain Management Section files for use on appropriate projects.

(3) PROCEDURES

Review of Development Plans

All plans reviewed should be documented by completing Form 122-291D (New 2/82). One copy is to be retained in the Floodplain Management Section files and the other is to be returned with the plans.

All new structures located in designated floodplains must be protected from the 100-year flood as follows:

(a) Residential units must have the finished floor elevated to or above the expected 100-year water surface.

(b) Commercial and industrial buildings may be either elevated or flood proofed to the required elevation. If the owner/developer elects to flood proof, a statement by the engineer/architect attesting to this fact will be required by law.

Development proposed in floodplains containing a floodway must be elevated/flood proofed to an elevation at least one foot above the calculated 100-year water surface. (This requirement is necessary to provide for future development in the fringe areas and the resultant increase in water surface.)

Those floodplains which have been designated as unnumbered A zones by FEMA do not have any specific water surface elevations associated with them. Therefore, the best information available must be used. On the upstream side of the canal banks, the minimum floor elevation/flood proofing elevations should be set at one foot above the high canal bank. In other unnumbered A zones, it may be possible to utilize previous studies by other entities or organizations.

AO zones require that floor/flood proofing elevations be set at least as high as the associated zone depth. For example, an AO2 zone requires that the floors be elevated at least two feet above the average elevation of the existing ground. This is usually interpreted to mean two feet above the curb or crown of the street.

As a general rule, all new structures should be discouraged in the floodways. These areas are reserved for flood waters. Uses other than open space will tend to decrease the hydraulic capacity of the floodways. The Ordinance does not prohibit construction in floodways if the structures can be built without adversely affecting the water surface. Proof of this will be required in the form of an engineering evaluation and design. In addition to the stability of the structure, such things as general and local scour depths, debris accumulation and access during flood events must be considered.

The Ordinance permits reasonable repairs and alterations to existing structures. The test of reasonable repair or alteration is whether the value of the proposed work is greater or less than 50 percent of the market value of the original structure. Proof of the values must be submitted by the engineer/developer. The City will accept a private appraisal, County Assessor's valuation or simply prorate the floor areas if that is the wish of the owner.

On-site waste disposal systems are not permitted in

floodplain areas. In some instances, constructing a line to the nearest sanitary sewer can be very expensive. Staff should check with the Water and Sewers Department in such cases to determine the location of the nearest line and to determine whether a possibility exists for cost sharing.

Prior to approval of any new development in the right-of-way for the Arizona Canal Diversion Channel (ACDC), the Flood Control District of Maricopa County should be contacted to determine whether they wish to purchase the property prior to further development. The contact for this inquiry should be the ACDC Project Engineer (currently John Rodriquez) at 262-1501.

(4) REVIEW TIME

The usual turn around time for review of development plans is one week or less. Extremely large or complicated proposals may take slightly longer. In no event should the review take longer than two weeks. The burden of proof in all matters rests with the applicant and any additional information needed to complete the review should be requested from the design engineer.

(5) FEES

The fee to review development proposals in floodplain areas is $35 per sheet. An additional fee of $20 per sheet will be charged for the third and each subsequent review.

These fees are due prior to signature of the plans by the Floodplain Management Engineer.

Fees will be waived if the plans have a DCO number or the engineer can submit proof of having paid standard DCO fees.

Form 120-225D (Rev. 8-76) from the building Safety Department requires a $10 fee for completion. In the event that the site in question is shown on the official FIRM to be in the floodplain and yet new and better data shows the site to be outside of the floodplain, the form is to be filled out to that effect and no fee is charged.

(6) APPROVALS

All proposed development plans in designated floodplains must be signed by the Floodplain Management Engineer prior to the issuance of a Grading and Drainage or a Building Permit. In the absence of the Floodplain Management Engineer, the supervisor of the Plans Review Section is authorized to sign the plans.

(7) VARIANCES

The Ordinance has specific criteria that must be satisfied prior to granting a variance. All of the criteria must be satisfied prior to granting the variance.

(8) APPEALS

Appeals to decisions of the City Engineer must be made in writing to the Floodplain Management Engineer. Reasons for appeal and variance from the Ordinance should be given. The Floodplain Engineer will prepare a background packet for the members of the Floodplain Board and schedule a time and place for the appeal. The appeal will be scheduled within two weeks of receipt of appeal request, and the applicant will be invited to attend.

The Floodplain Management Engineer will notify the applicant of the City Engineer's decision in writing within one week of the hearing. Usually the applicant is informed verbally at the appeal of the Board's decision and cautioned that the Board acts in an advisory capacity. The City Engineer may use, reject or modify the recommendation of the Board.

(9) INQUIRIES

The City is not involved in the sale of flood insurance in any manner. Inquiries about insurance rates, coverage limits, etc. should be referred to the persons's insurance agent or the National Flood Insurance Program (NFIP) at 1-800-638-6620.

Insurance agencies and lending institutions inquiring about flood hazard zones should be told that the information will not be given out over the telephone but that if they wish to come to the office we will be glad to assist them in using our maps to make the determination. They should also be strongly encouraged to order their own copies of the FIRM from the NFIP at the number given above. There is no charge for these maps and all companies doing substantial business in Phoenix should have a copy. An exception to this rule should be made for out-of-state companies who have only occasional need for this information.

Specific information concerning finished floor or flood proofing elevations will not be given out over the telephone because of the possibility of errors and confusion. Ask that the person come to the office with a plate or sketch of the property involved. Staff should document on Form 122-291D (New 2/82) any information given.

The City does not provide certified finished floor elevation surveys. This information must be obtained by the property owner from a registered engineer or surveyor.

(10) CERTIFICATION

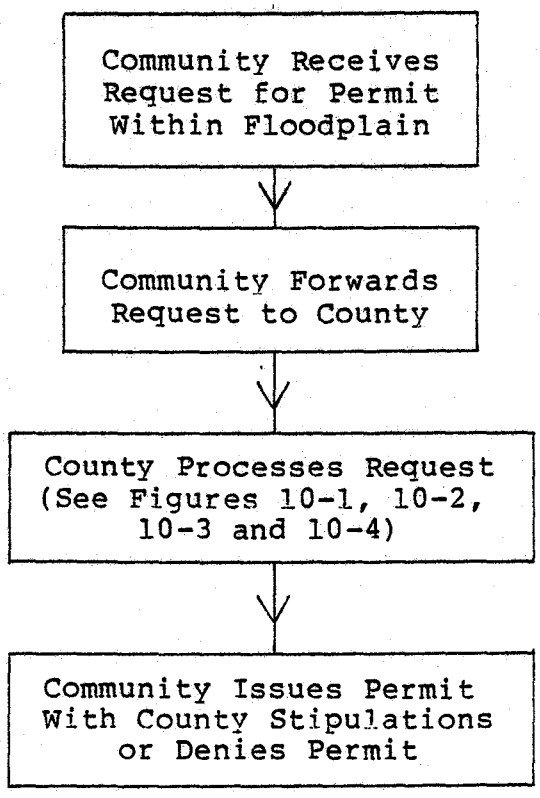
The City requires that all floodplain development provide either a certified finished floor elevation or a certificate of flood proofing to us. This data is kept on file for the use of insurance agents and property owners in computing actuarial insurance rates.

J. E. ATTERBERY
City Engineer

Where a city or town is under the floodplain management program of the county flood control district, an abbreviated administrative procedure is required (See figure 10-7). The community must still determine if a required use is within a floodplain, they must refer it to the flood control district for floodplain review. Their permit must then reflect the requirements of the flood control district. Each community which is under county jurisdiction should work with the county to ensure that the review and certification processes are adequate to provide good floodplain management.

Figure 10 - 7

PROCEDURE FOR CITY OR TOWN UNDER COUNTY JURISDICTION



11. SEPARATION OF RESPONSIBILITY BETWEEN ELECTED OFFICIALS AND STAFF

It is important that within each community, both the elected officials and the members of the community's administrative staff clearly understand their roles and responsibilities. It may be necessary to spell these out in the ordinance or in other documents. Just as the State must enable the community to adopt an ordinance, the elected officials must authorize and direct their staff to perform certain tasks.

The Arizona Revised Statutes §45-2341.2 define the "Board" as "the board of directors of a flood control district," except that under §45-2350.A. it means "the governing body of an incorporated city or town within its jurisdiction if the incorporated city or town declares by public resolution that it intends to assume the powers and duties", of floodplain management. In §45-2349, the Board is directed to delineate floodplains and adopt regulations which require specific minimum development standards within the community's floodplains. The Board may adopt a variance procedure.

Nowhere within ARS 45-2349 is reference made to the use of staff by the Floodplain Board, but it is common practice for an elected body to use staff to administer its rulings. In the case of floodplain management, there are many uses within a floodplain which may be permitted provided they are properly elevated, engineered or constructed. The model ordinance discussed in Chapter 9 of this handbook expects that the Floodplain Board will name a staff member as the Floodplain Administrator and will empower that person to make certain decisions. However, ARS § 45-2353 states that, "No person shall construct any structure which will divert, retard or obstruct the flow of waters in any watercourse without securing written authorization from the **Floodplain Board** in which the watercourse is located."

The floodplain delineations which are done according to specifications of the Federal Emergency Management Agency (FEMA) delineate the 100-year floodplain, and within that floodplain, a floodway. FEMA allows encroachment into the floodplain from both sides until the encroachments cause a one-foot rise in the 100-year flood elevation. These limits on encroachment determine the floodway. The model ordinance expects the Board to empower the Floodplain Administrator to review all applications for floodplain uses and allow those uses outside the floodway which are elevated or otherwise protected from the 100-year flood, and those uses within the floodway which do not divert, retard or obstruct the flow of water in the floodway.

Any proposed use which does not include protection of the use from the 100-year flood, or which may obstruct, divert or retard the flow of waters in the floodway <u>must</u> receive written

authorization from the Floodplain Board. When the Board has made a rule, it cannot empower its staff to violate that rule, and the Floodplain Administrator must be careful not to do so. Under Arizona's open meeting law, all variances to the floodplain ordinance will be done at a public meeting, which is appropriate since adjacent property owners may be adversely affected by a variance.

Since the Floodplain Administrator has been empowered to make certain determinations which the Legislature required the Board to make, the model ordinance allows for appeals of those decisions to the Board. If an applicant feels that the Floodplain Administrator has made an error in determining the flood elevation on his property, he is given an opportunity to ask the Board for a determination. In this case, the Administrator would present the information he used to make his determination, the applicant presents his information, and the Board decides which it will accept.

In adopting its floodplain ordinance, the Floodplain Board should decide whether the "burden of proof" for variances and appeals is on the community or the applicant. In order to avoid frivolous appeals, the Board may require the applicant to provide all technical information by ordinance, and then instruct the Floodplain Administrator to provide all possible assistance to the applicant. In most communities which have had an ordinance for a period of time, this approach seems to be most satisfactory -- the community does not have an overwhelming burden, and the applicants are generally satisfied that the bureaucracy which they pay for with taxes is working for them.

12. SUMMARY OF COMMUNITY ACTIONS IN THE GRANTING OF A VARIANCE

Based on the foregoing discussions and two examples provided by Maricopa County, we will now summarize a community's actions in granting a variance to its floodplain regulation. We assume that the community is in the Regular Program (the FIRM is effective) and the community has adopted the model ordinance*. All documents which will be part of the community's permanent file on the case will be numbered in sequence.

An owner of 2 1/2 acres of undeveloped property requests a permit for a single mobile home. No zoning change is required. The Building Official checks the location of the request and discovers that, according to the FIRM, the parcel is located in the floodplain of New River. He informs the applicant that he cannot issue a building permit without further processing. The applicant leaves and the Building Official sends:

(1) the building permit application

to the Floodplain Administrator with

(2) a memo

requesting a review of the application for compliance with the community's floodplain regulation. The Floodplain Administrator uses the legal description, a subdivision plat map or the assessor's map to accurately locate the parcel on the FIRM. He confirms that the parcel is in the floodplain. He then locates the parcel on the FBFM and discovers that it is in the floodway. The floodplain regulation requires that all permits for structures in the floodway be denied unless the Floodplain Board grants a variance. He gives the case to a staff member for technical analysis.

The staff member knows that a flood control dam is planned for New River upstream from this parcel. When constructed, that dam will reduce the floodplain and floodway. He also knows that in this area, New River has no distinct channel and that there are numerous relatively high areas within the delineated floodway. He checks the topographic map obtained from the FIS study contractor and determines that the proposed location of the mobile home on the parcel is relatively high. He writes:

(3) a memorandum to the Floodplain Administrator

which explains the situation as he sees it. Although he makes no recommendation, his memo has a positive tone.

The Floodplain Administrator evaluates the information and decides that a variance granted under these conditions would not be contrary to the intent of the community's regulation and would be acceptable to FEMA. He calls the applicant to tell him what is happening and,

(4) requests a hearing

before the Floodplain Board and writes

(5) a memo

explaining the situation in more detail than the agenda request form might warrant. The Floodplain Board votes to approve the variance and

(6) a certified copy of the Board action

is returned to the Floodplain Administrator. He sends a copy of the Board action to the Building Official with

(7) a memo

summarizing any conditions which should be placed on the permit. The Building Official issues the permit and attaches to it

(8) a registered letter

stating what actions, if any, the applicant must take. The file on this variance will be complete when the Building Official receives from the applicant

(9) a copy of a required recorded statement

that the property is in the floodplain and

(10) a certification of finished flood elevation

by a registered land surveyor or engineer.

This variance will be noted in the annual report to FEMA, and the entire file can be made available to them if they question the propriety of the variance.

Several of these documents are shown on pages 12-3 to 12-9. These are actual examples from Maricopa County files.

REGULATORY FLOODPLAIN

USE PERMITS & VARIANCES

FLOODPLAIN ADMINISTRATOR

MARICOPA COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT
Third Floor, County Administration Building
111 South 3rd Avenue, Phoenix, AZ 85003
Phone: (602) 262-3201

Procedure for making application to the Floodplain Administrator for USE PERMITS and VARIANCES in accordance with Sections 4.2 and 6.2 of the Amended Floodplain Regulations for Unincorporated Maricopa County.

1) Application will be submitted to the Planning and Development Department: Third Floor, County Administration Building, Phoenix, Arizona.

2) Information required:

   a) Completed application form.

   b) Two (2) copies of a plot plan of the property indicating the following:

      (1) North point and scale.

      (2) Property lines with dimensions.

      (3) Location of existing and proposed structures or uses.

      (4) Existing and proposed topography (including finished contours).

   c) Additional information which may be required (where applicable).

      (1) Excavation and stockpiles, including depth and/or height.

      (2) Phasing and method of operation.

   d) Any other supporting information that would assist in making an evaluation of the application.

   e) Applicant's statement of hardship involved or grounds for Variance if not shown on the application.

3) When it has been determined that the application and supporting material is in proper form a case number will be assigned and a hearing date set.

4) All pertinent data will be reviewed by this Department and the Flood Control District which serves as technical staff to the Floodplain Administrator.

   If you have any questions please call the Floodplain Representative at (602) 262-3201.

APPLICATION TO FLOODPLAIN ADMINISTRATOR

Maricopa County, Arizona

District No. _____ Application No. _____ Date _____

Applicant _____

Address _____ City _____

Zip Code _____ Phone _____ Zoning District _____

Regulatory Floodplain _____ Flood Control Map _____

LEGAL DESCRIPTION

The above petitioner hereby applies for (USE PERMIT) (VARIANCE), Strike out word not applicable, as indicated below in accordance with Sections 4.2 and 6.2 of the Amended Floodplain Regulations for Unincorporated Maricopa County.

REQUEST

APPLICANT'S STATEMENT (Hardship Involved) Grounds for Variance: ____

_____

_____

_____

_____

_____

_____

_____

Applicant's Signature _____

Date Referred to Flood Control District _____

Date Response received _____

ACTION

Date of Hearing: _____ Approved: _____ Denied: _____

Stipulations or
further action:

FLOODPLAIN ADMINISTRATION

SAMPLE ONLY A F F I D A V I T SAMPLE ONLY

(NON-CONFORMING USE)

This is to attest and confirm to the best of my knowledge and belief that the following conditions listed below are the true and accurate concerning the parcel/ lot (property) located at the following street address:

, Arizona.

Also known as Maricopa County Assessor parcel: Map____, Page ____, Parcel____, and owned by:

1. The following use was established on the subject property prior to July 14, 1975:

2. This use included the following accessory uses, structures, equipment, activities (scaled plot plan and floor plan(s) attached):

3. The use and accessory uses have been continuous since July 14, 1975 with no discontinuance of use for any period of time exceeding twelve (12) consecutive months.

4. I understand that in the event a non-conforming use of land, buildings, structure or activity is discontinued for a period of twelve (12) consecutive months, the exempted status of the land is null and void and the use shall not be resumed unless it is in conformity with the regulations of the Amended Floodplain Regulation for the Unincorporated area of Maricopa County.

NAME_____

MAILING ADDRESS_____

STREET ADDRESS_____

TELEPHONE NUMBER_____

SIGNATURE_____

Subscribed and Sworn to before me on _____at_____, Arizona.

NOTARY PUBLIC_____

My Commission Expires on _____

SAMPLE FORM

AFFIDAVIT

Flood Damage Statement

I, _____, do hereby attest, swear, and say: that I am the owner of the Parcel, legal description _____ also known as (Address) _____; that I have read and understand the Notification of Variance; that I have been advised that the described property is subject to a Regulatory Flood Elevation of ____ feet which has a one percent (1%) chance of being equalled or exceeded in any year; I understand that the risks may be reduced, but not necessarly eliminated, by elevating all structures at least one (1) foot above the Flood Elevation.

OWNER: _____

ADDRESS: _____

_____

_____

Subscribed and sworn to before me this _____day of _____, 19____

My Commission expires _____

Notary Public _____

OFFICE OF THE COUNTY MANAGER

MARICOPA COUNTY BOARD OF SUPERVISORS
604 County Administration Bldg. 111 S. 3rd Ave., Phoenix, Arizona 85003

602-262-3571

TO: Board of Supervisors

FROM: Bob Bartel, Floodplain Administrator

SUBJECT: VARIANCE REQUEST BY [redacted]

DATE: July 17, 1979

Mr. [redacted] is requesting a variance from Section 7.13 which specifies that a residence may be allowed in the floodway fringe district provided that the first habitable floor is at least one foot above the flood elevation. According to the Flood Control District there are mitigating circumstances throughout a large area of the floodplain south of the Salt River. The Maricopa County Floodplain Regulation Section 3.23 defines the regulatory flood elevation as the encroached elevation. In this area, if the entire floodway fringe district is developed, no flooding will occur.

The County's Floodplain Regulation requiring the one foot above the flood elevation exceeds the Federal Insurance Administration Standards. Consequently, the Board may permit Mr. [redacted] to build 1.1 feet above grade without conflicting with the Federal Insurance Administration.

Because Sections 7.13 and 3.23 are explicit, I feel that a variance must be granted by the Board in order for Mr. [redacted] to build below the 2.9 feet. His request is for a reduction to 1.9 feet.

Under the requirements of Section 4.41 d, I hereby certify that:

a. The granting of a variance to allow construction at an elevation of at least 1.9 feet above grade will not result in an undue increase in flood heights, additional threats to public safety, extraordinary public expense, create nuisances, or cause fraud, and;

b. The granting of such a variance is the minumum necessary to afford relief.

TOM FREESTONE District 1 | GEORGE L. CAMPBELL District 2 | FRED KOORY, JR. District 3 | HAWLEY ATKINSON District 4 | ED PASTOR District 5

I also recommend the following for compliance with Section 4.42:

a. that the applicant be notified in writing that (1) the issuance of this variance will result in increased premium rates for flood insurance. These rates would increase from $.07/$100 to $.16/$100 for the structure and from $.18/$100 to $.38/$100 on the contents (2) construction at a lower level than that required by the Regulation will increase risks to life and property, even though that construction is at or above the 100-year flood elevation.

b. that the applicant cause to be recorded a statement that the structure is to be constructed at or above the 100-year flood elevation and is therefore not subject to flooding from a flood which has a one percent chance of being equalled or exceeded in any year. This document should state that the minimum elevation of the lowest habitable floor is 992.50 feet, the same as the Regulatory Flood Elevation. Proof of such recordation should be made a condition of issuance of a building permit.

Respectfully submitted,

Bob Bartel
Floodplain Administrator

August 2, 1979

Mr. [redacted]
[redacted]
Phoenix, AZ 85020

Dear Mr. Middleton:

The Maricopa County Floodplain Board approved your request for a Floodplain Variance to construct a residence at [redacted] W. Baseline Road, Laveen, Arizona. This approval is subject to the following stipulations:

A. (1) That issuance of this variance will result in increased premium rates for flood insurance. These rates would increase from $.07/$100 to $.16/$100 for the structure and from $.18/$100 to $.38/$100 on the contents; (2) construction at a lower level than that required by the Regulation will increase risks to life and property, even though that construction is at or above the 100-year flood elevation.

B. That the applicant cause to be recorded a statement that the structure is to be constructed at or above the 100-year flood elevation and is therefore not subject to flooding from a flood which has a one percent chance of being equalled or exceeded in any year. This document should state that the minimum elevation of the lowest habitable floor is 992.50 feet, the same as the Regulatory Flood Elevation. Proof of such recordation should be made a condition of issuance of a building permit.

Formal approval was dated July 30, 1979, and this letter should be presented to the Building Safety Department when you apply for the necessary building permits.

Sincerely,

Bob Bartel
Floodplain Administrator

cc: Raymond Johnson, Director
Building Safety Department

13. LEGAL CONSIDERATION: HEARINGS, CERTIFICATIONS AND RECORDATIONS

The National Flood Insurance Act of 1968, as revised (NFIA) and the Arizona Revised Statutes (ARS) require certain activities in conjunction with floodplain management. Civil attorneys experienced in municipal government have suggested other activities to protect communities from liability and to ensure the viability of floodplain regulations. This discussion will differentiate between legal requirements and suggestions for a Floodplain Board's legal counsel to consider.

The NFIA requires a community to adopt a floodplain management regulation as a condition of eligibility in the National Flood Insurance Program (NFIP). A community is not required to join the NFIP, but nonparticipation precludes: community property owners from purchasing flood insurance; Federally insured lenders from making loans secured by floodplain property; and makes certain Federal disaster relief funds unavailable to the community and its residents.

ARS 45-2342C requires governing bodies of towns, cities and counties in Arizona to adopt and enforce floodplain regulations. These regulations may be adopted only after a public hearing which has been legally advertised for at least 30 days. A notice of the hearing and a copy of the proposed regulation is to be sent to the Arizona Department of Water Resources, as is a copy of the adopted regulation within five days after the adoption. If a floodplain regulation is adopted in order to make the community eligible for the NFIP, it must be submitted to the FEMA Region IX office.

Since a floodplain regulation is effective only over identified flood hazard areas, it is reasonable to question whether a change, addition or deletion of a floodplain is a de facto change in the regulation. Some communities assume that it is, and they legally advertise and hold a public hearing before adoption of any changes in floodplain boundaries. Federal and State laws are not specific about this question.

ARS 45-2342C requires management of the 100-year floodplains by the Floodplain Board. The NFIA has explicit criteria for floodplain management (§ 1910.3) and a variance procedure with specific requirements. If a Floodplain Board grants a variance, it must: (1) Notify the applicant that flood insurance premiums will increase and that construction below the 100-year flood elevation increases the risk to life and property (§ 1910.6 (a)(5)); and (2) Maintain a record of all variance actions and report them in their annual report to FEMA (§ 1910.6(a)(6)). If a variance permit or waiver is granted contrary to the adopted floodplain regulation, ARS 45-2342J requires the Floodplain Board to notify the applicant that the land upon which the variance is granted is ineligible for exchange of State land pursuant to the flood relocation and land exchange program. A copy of that

notice must be recorded by the Floodplain Board so that it appears in the chain of title.

Although many floodplain boards accept, or even demand, "hold-harmless" agreements from successful variance applicants, attorneys have said repeatedly that a governing body cannot assign its duty to provide for the health, safety and welfare of its residents. At best, such an agreement would bind only the owners and his heirs and assigns. It would not bind adjacent property owners or visitors.

Although a public hearing for a variance request is not required by the NFIA or the ARS, decisions by a Floodplain Board must be made at open meetings, which are usually the regularly scheduled meetings of the governing body of the community. Because the granting of a variance may adversely affect an adjacent property owner, the community may choose to have hearings on variance requests.

The NFIA requires a community to obtain certification from a registered professional engineer or architect that where flood-proofing is used, the methods used are adequate.

No certificiation is required for other floodplain activities. However, a floodplain regulation which meets the NFIA criteria places a responsibility on the community to ensure that the criteria are met by each development in the floodplain. For this reason, many communities require a building permit applicant to provide certification that the criteria are met. Certification may be required for floor elevation, erosion control facilities, structural soundness of piers, fill compaction, floodproofing of utilities, or any other aspect of a project which is deemed essential by the community.

Figures 13-1 through 13-4 are examples of elevation certification forms -- one from FEMA, one from the State of Arkansas and two from the State of North Dakota. A community Building Official or Floodplain Administrator can develop a form to meet the community's needs.

FIGURE 13-1. SAMPLE ELEVATION AND FLOODPROOFING CERTIFICATE FROM FEMA

OMB 076-R-0029

FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM

POST CONSTRUCTION ELEVATION CERTIFICATE FLOODPROOFING CERTIFICATE

	BUILDING OWNER	COMMUNITY NUMBER

INSTRUCTIONS: The registered professional engineer, architect, surveyor or community permit official completes Section I below. Section II may be completed by any of the professionals listed at the beginning of Section II, or by a similarily qualified local permit official or by a local permit official relying on official permit records. Print or type the information on this form. This form is to be used for new (POST-FIRM) construction and for substantial improvements to existing structures in Zones A1-A30, AO, AH, A99 and V1-V30 and existing (PRE-FIRM) buildings to be rated under POST-FIRM rules and rates.

SECTION I

PROPERTY LOCATION (lot and block numbers and address if available)

FIA MAP PANEL ON WHICH PROPERTY IS LOCATED	FIA MAP ZONE IN WHICH PROPERTY IS LOCATED
FIA MAP EFFECTIVE DATE	BASE FLOOD ELEVATION AT THE BUILDING SITE

START OF CONSTRUCTION DATE	Name and Title	PHONE (with Area Code)

ADDRESS

(Signature) (Date)

SECTION II

INSTRUCTIONS

Complete only the Elevation Certification unless the building has been floodproofed at least to the base flood elevation. If floodproofing is used, complete only the Floodproofing Certification. The Elevation Certification may be completed by a registered professional engineer, architect, or surveyor. The Floodproofing Certification may only be completed by a registered professional engineer or architect.

ELEVATION CERTIFICATION

ZONES A, A1-30, A-99, AH: I certify that the building at the property location described above has the lowest floor (including basement) at an elevation of_____feet, NGVD (mean sea level) and the average grade at the building site is at an elevation of_____feet, NGVD.

ZONES V, V1-V30: I certify that the building at the property location described above has the bottom of the lowest floor beam at an elevation of_____feet, NGVD (mean sea level), and the average grade at the building site is at an elevation of_____feet, NGVD.

ZONE AO: I certify that the building at the property location described above has the lowest floor (including basement) elevated_____feet above the highest adjacent grade. This meets ☐, does not meet ☐ the community's requirement for new construction.

FLOODPROOFING CERTIFICATION

I certify to the best of my knowledge, information, and belief, that the structure is designed so that the structure is watertight to an elevation of_____feet NGVD (mean sea level), with walls substantially impermeable to the passage of water and structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy that would be caused by the flood depths, pressures, velocities, impact and uplift forces associated with the base flood.

In the event of flooding, will this degree of floodproofing be achieved with human intervention?*_____

Will the structure be occupied as a residence?_____

If the answer to both questions is Yes, the floodproofing cannot be credited for rating purposes and the elevation certification must be completed instead.

*Floodproofed with human intervention means that water will enter the structure when floods up to the base flood level occur, unless measures are taken prior to the flood to prevent entry of water (e.g. bolting metal shields over doors and windows).

CERTIFIER'S NAME	If certified by Engineer, Architect or Surveyor AFFIX SEAL OR WRITE PROFESSIONAL LICENSE NO BELOW
TITLE	
ADDRESS	
(Signature) (Date)	

The insurance agent attaches the second copy of the completed form to the flood insurance policy application for new (POST-FIRM) construction or substantial improvements. Be sure that the second copy is certified.

FIGURE 13-2. SAMPLE DEVELOPMENT PERMIT FROM THE STATE OF ARKANSAS

SAMPLE
DEVELOPMENT PERMIT IN A
FLOOD HAZARD AREA

Application No.: _____ Date: _____

1. Location or Address of Development:

_____

_____

2. Type of Development:

Mobile Home_____ Residential Structure_____

Non-Residential Structure_____

Non-Structural Activity_____ Describe_____

_____

_____

3. Conditional Pre-Construction Permit

Permit is: Approved_____ Disapproved_____

Signature of Permit Official:_____

Date: _____

4. Final Post-Construction Permit

Elevation of the First Floor, Basement Floor or Flood-proofed Level is _____ ft. above mean sea level (msl).

The Above Elevation is Certified by:

_____

(Signature an Title of Surveyor, Engineer, or Architect)

Permit is: Approved_____ Disapproved_____

Signature of Permit Official:_____

Date: _____

FIGURE 13-3. PRECONSTRUCTION FLOODPROOFING FORM FROM THE STATE OF NORTH DAKOTA

PRECONSTRUCTION FLOODPROOFING CERTIFICATION FORM

(Instructions on reverse side)

Community _____

SECTION I
(To Be Completed By Permit Applicant)

Permit Applicant _____ Phone No. _____

Description of Structure/Floodproofing Method

Property Address

Structure Use
Residential
Nonresidential

SECTION II
(To Be Completed By Local Administrator)

FIA Map Zone in Which Property is Located _____

Base Flood Elevation at Proposed Site _____

Elevation to Which Structure Must be Floodproofed _____

Local Administrator _____ Phone No. _____

_____ _____
Signature Date

SECTION III
FLOODPROOFING CERTIFICATION
(To Be Completed by a Registered Professional Engineer or Architect)

I certify to the best of my knowledge, information, and belief, that the structure described above is designed so that the structure will be watertight to an elevation of _____ feet NGVD (mean sea level), with walls substantially impermeable to the passage of water and structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy that would be caused by the flood depths, pressures, velocities, impact and uplift forces associated with the base flood.

My certification assumes that the actual construction of the building will be in strict compliance with the plans presented to me.

NAME	AFFIX SEAL OR WRITE PROFESSIONAL LICENSE NO. BELOW:
TITLE	
ADDRESS	
(Signature) (Date)	

FIGURE 13-4. POSTCONSTRUCTION CERTIFICATION FORM FROM THE STATE OF NORTH DAKOTA

POSTCONSTRUCTION ELEVATION/FLOODPROOFING CERTIFICATION FORM

(Instructions on reverse side)

SECTION I
(To be completed by Local Administrator)

Community _____ Permit Applicant _____

Structure Address

_____

_____

_____

Base Flood Elevation
at Structure Site _____
Required Lowest Floor Elevation _____

Local Administrator _____

_____ Signature _____ Date

SECTION II

The floodproofing section of this form must be completed by either a registered professional engineer or architect. The elevation section may be completed by a licensed land surveyor, or by a registered professional engineer or architect.

ELEVATION CERTIFICATION

I certify that the structure at the property described above has the lowest floor at an elevation of _____NGVD (mean seal level).

FLOODPROOFING CERTIFICATION

I certify that the structure, together with the proposed utility and sanitary facilities, at the location described above, are designed so that the structure is watertight to an elevation of _____NGVD (mean seal level), with walls substantially impermeable to the passage of water and structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

In the event of flooding, will this degree of floodproofing be achieved with human intervention? _____
Will the structure be occupied as a residence? _____

CERTIFIER'S NAME	AFFIX SEAL OR WRITE PROFESSIONAL LICENSE NO. BELOW:
TITLE	
ADDRESS	
(Signature) (Date)	

SUBSTANTIAL IMPROVEMENT

Substantial improvement means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

1) before the improvement or repair is started, or

2) if the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

This term does not, however, include either:

1) any project for improvement of a structure to comply with existing state or local health sanitary or safety code specifications which are solely necessary to assure safe living conditions, or

2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

Substantial improvement of a mobile home park means any expansion, repair, reconstruction or improvement of the streets, utilities, and pads that equals or exceeds 50% of the value of the streets, utilities and pads before the expansion, repair, reconstruction or improvement commenced.

The NFIP regulations require the first habitable floor of all new construction and substantial improvements to be elevated above the 100-year flood elevation (non-residential buildings may be floodproofed) and construction must be adequately anchored and constructed of materials and methods that minimize flood damage.

When a building or mobile home park or facility is substantially damaged, it must be reconstructed to the standards of existing NFIP, other federal, county or local regulation.

RATIONALE

The development standards of the NFIP (and the State Floodplain Management Act) are intended to protect new construction from flood damage. The regulations interpret "new construction" to include substantial improvements to existing structures. The reason for this interpretation is that any improvement which significantly increases the value of a structure should be protected from the effects of flooding. By using the "50 percent of market value" as a cutoff level, the

sound floodplain management and the needs of owners of existing structures.

ADMINISTRATION

In administering the substantial improvement regulations of the NFIP, the local floodplain ordinance administrator has several items to consider: 1) how to determine market value; 2) additions vs. renovations; and 3) exceptions.

1. DETERMINING MARKET VALUE

The "substantial improvement" definition is straighforward--it is 50 percent of the market value of a structure. That means if a permit applicant's home could sell for $40,000, and he requests a permit to build an addition that will cost $30,000, then the "substantial improvement" definition is met and the floodplain ordinance regulations apply. What is not quite as straightforward is determining if the house could sell for $40,000; or in other words, determining the market value.

The easiest option a local administrator has to determine market value is to work closely with the community's tax assessor. Property taxes for residential and commercial structures are, by state law, assessed based on a percentage of their "true and full" value. "True and full" value is the same as market value. Generally, both the market value and the assessed value of a structure appear on a property tax statement. This information is public. An administrator can determine market value by simply calling his community's assessor, providing a legal description, and asking for the value.

In some instances, the permit applicant may protest the market value assigned his structure--stating it is either too high or too low. The applicant can be given the option of having his structure independently appraised. The cost of the professional appraisal would be assumed by the permit applicant.

2. ADDITIONS VS. RENOVATIONS

Substantial improvements to structures can be in the form of an addition, a renovation, or both. How the NFIP development standards are applied to these situations can vary.

ADDITIONS

When reviewing a permit for a substantial improvement which involves an addition to a structure, the question that arises is: "Do the regulations in the floodplain ordinance apply to the entire structure, or just the addition?" The Federal Emergency Management Agency (FEMA) has set no hard and fast rule to answer this question. The decision on how to apply the regulations rests with the local floodplain ordinance administrator.

In most cases, it is likely the administrator will interpret the regulation so that it applies to the addition only. For example, a person adding rooms to his home would be required to elevate the floors of those rooms to or above the base (or 100-year) flood level. The entire structure would not have to be elevated. No basement, however, would be allowed beneath the new rooms.

The disadvantage of using this less strict interpretation of the substantial improvement regulation comes in the form of flood insurance premium rates. When a substantial improvement is made to a structure, it is considered--for flood insurance purposes--to be "POST-FIRM" construction. In other words, the rates for flood insurance are actuarial ones, based on risk to flooding. Risk to flooding is determined by comparison of the elevation of the lowest floor of the structure to the elevation of the base (or 100-year) flood. The greater the negative difference in these elevations (i.e., the further the basement floor is below the base flood elevation) the higher the flood insurance premium rates.

In practical terms, this means the person making a substantial improvement to a preexisting structure (built before the effective date of a community's Flood Insurance Rate Map--(FIRM) will pay actuarial flood insurance rates for the first layer of coverage ($35,000) rather than the subsidized rate that is available if the improvement is not made. Local administrators should provide written notice of this possibility of increased insurance rates to the permit applicant.

RENOVATIONS

When a substantial improvement is a renovation, rather than an addition, the NFIP regulations must be applied to the entire structure. For example, when the substantial improvement involves work such as rewiring, new plumbing, siding, painting, or other similar activities--but does not include a change in exterior dimensions--the structure itself must be elevated so the lowest floor is at or above the base flood level.

While the cost of elevating an existing structure (and filling in a basement) may be very expensive, it is necessary for the local administration to require it to be done. In that way, the administrator will ensure the objective of his community's floodplain management ordinance is met: prohibition of continued unwise development in flood prone areas.

3. EXCEPTIONS

Two types of improvements are excluded from the substantial improvement definition. The first is for improvement required so a structure is in compliance with health or safety codes. This exception is intended to prevent the type of blight that results from unchecked deterioration.

Improvements to historical structures are excluded so that their historical significance will not be diminished. To determine whether or not a structure meets the "historical" definition (i.e., is listed on the National or State Inventory of Historic Places) a local administrator can contact the:

Arizona Historic Preservation Society
Arizona State Parks Department
1688 West Adams
Phoenix, Arizona 85007
or call (602) 255-4174.

LOOPHOLES

The obvious loophole in the "substantial improvement" regulation is typified by the person who requests a permit for an improvement that costs less than 50 percent of market value (say, for example, 30 percent), this month, and next month (or next year) requests another permit to do additional work. While each individual permit for improvement represents less than a substantial improvement, the cumulative effect of a series of improvements over a period of time certainly is a substantial improvement. How does a local administrator handle that?

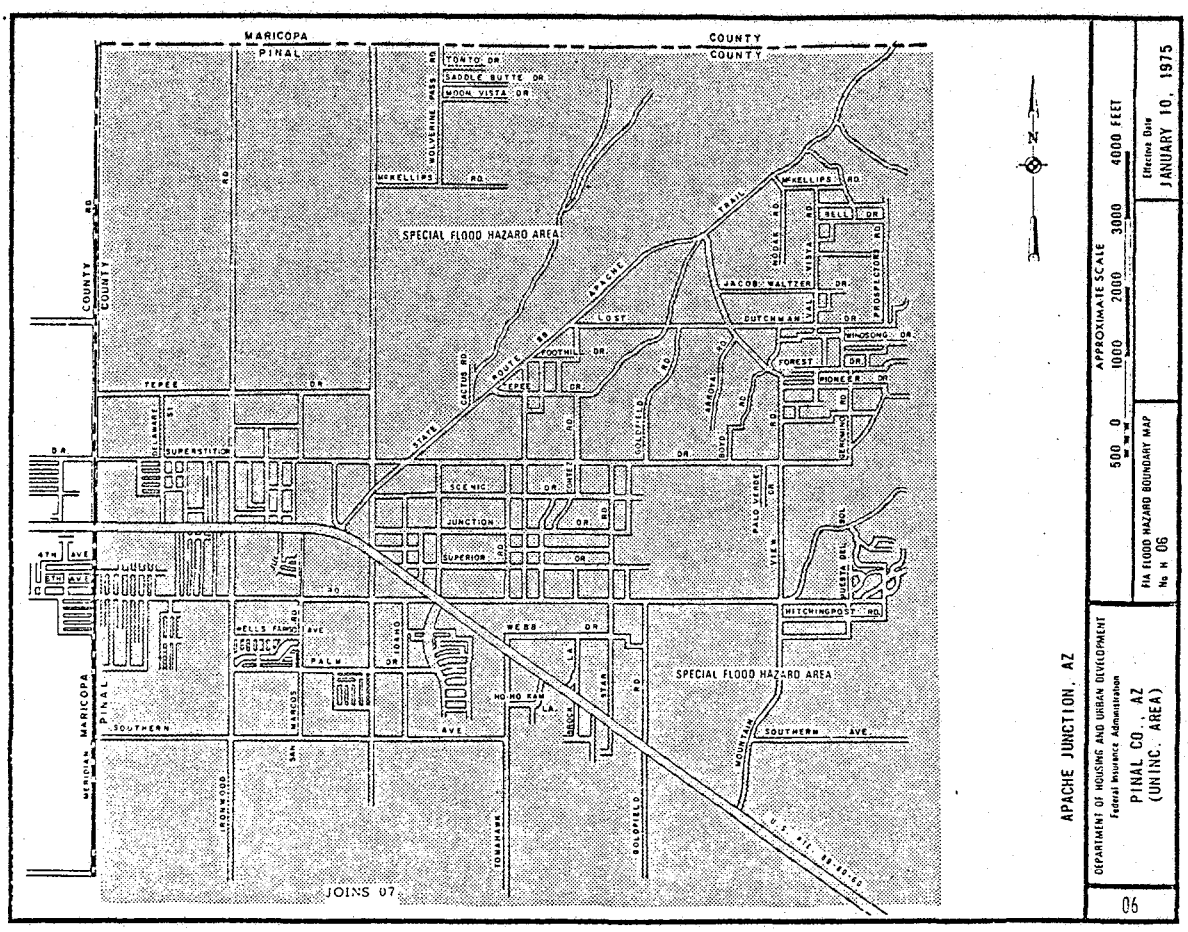
Again, no hard and fast rule has been set by FEMA and the decision for interpretation remains with the local administrator. It is recommended, however, that a community take a conservative and consistent approach to this regulation. The method to do this would be for the local administrator to keep track of the number of permits granted per structure and the cumulative cost of the improvements. When the total equals or exceeds 50 percent of the market value of the structure (when the first improvement began) no more permits should be issued unless the entire structure is brought into compliance with the NFIP regulations. A local administrator using this method should be sure the permit applicant is fully aware of the "substantial improvement" regulations at the time the first permit is requested.

14. USING FLOOD INSURANCE MAPS FOR FLOODPLAIN MANAGEMENT

Many communities in the National Flood Insurance Program have difficulty interpreting the information supplied by the Federal Emergency Management Agency (FEMA) and using it to make floodplain management decisions. This discussion will use portions of an Arizona community (the City of Apache Junction) to explain the maps and other information available to the community.

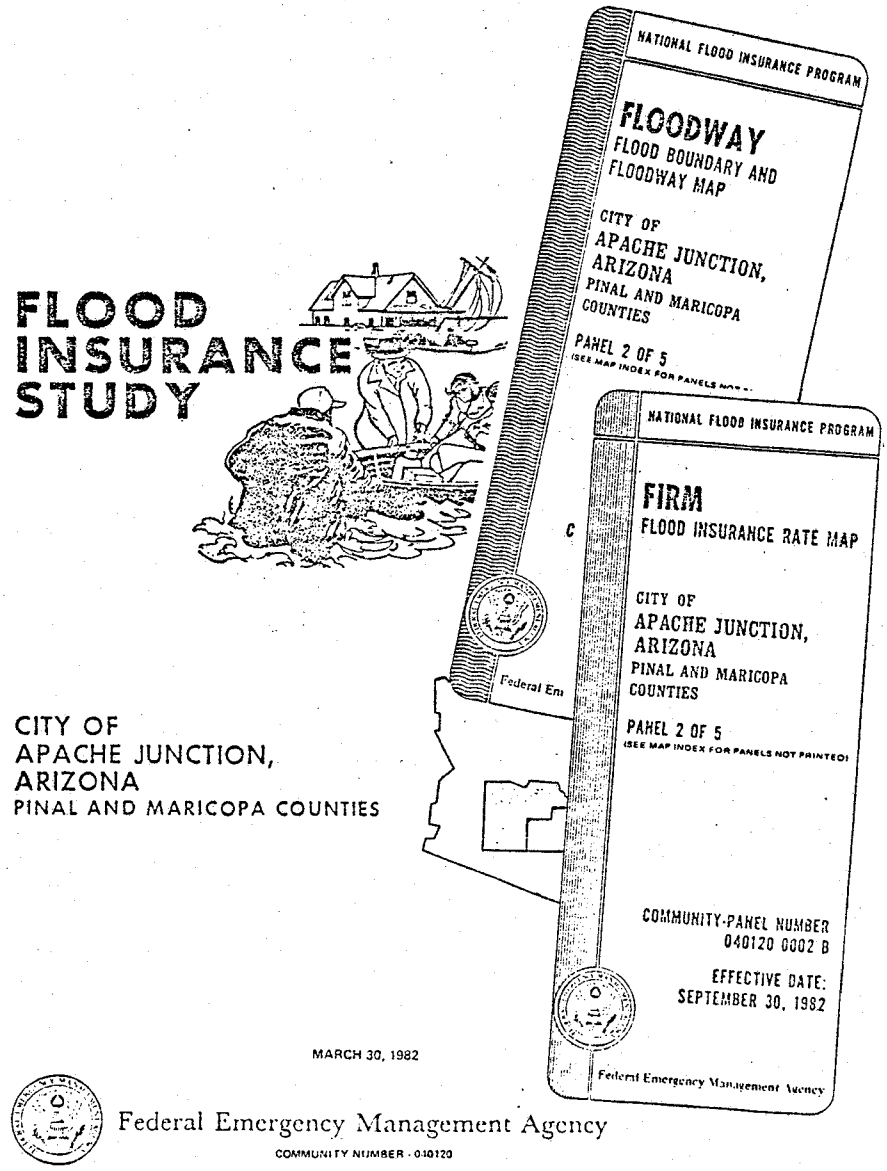
In most communities, three maps are produced by FEMA. The FLOOD HAZARD BOUNDARY MAP (FHBM) is produced with little or no study. An example (Map 14-1) for a portion of Apache Junction is included. Apache Junction was not incorporated when this FHBM was produced, so this area was included in the Pinal County map. The FHBM is not used by the community for floodplain management, although some lenders require loans in "Special Flood Hazard Areas" to be secured by flood insurance.

MAP 14-1. EXAMPLE OF A "FLOOD HAZARD BOUNDARY MAP" (FHBM)



After a community is identified as having flood-prone areas, and generally after the FHBM is printed, FEMA contracts with a Federal agency or a consulting engineer to perform a FLOOD INSURANCE STUDY (FIS). FEMA and its contractor meet with community officials to determine the areas to be studied. Areas which are developed or which the community expects to develop soon are studied in detail and other areas are studied "by approximate methods." In both types of studies, the contractor should spend time in the community to become familiar with the terrain.

FIGURE 14-1. THE FLOOD INSURANCE STUDY AND MAPS.



When the contractor completes his study, he and FEMA meet with community officials again to show them the results. At that time, the community is given a copy of the work maps. The community is not required by FEMA to use these maps for floodplain management, but they may be used to comply with State requirements.

All study material is then given to a Technical Review Contractor. The Technical Review Contractor is an engineering firm paid by FEMA to see that proper engineering practices were followed in the production of the study. It also drafts the maps into a standard form used nationwide.

The Technical Review Contractor uses the study material to produce preliminary versions of the FIS, the FLOOD BOUNDARY AND FLOODWAY MAP (FBFM) and the FLOOD INSURANCE RATE MAP (FIRM). These are the products which are ultimately used by the community for floodplain management, and by lenders and insurance agents for flood insurance purposes. (See Figure 14-1).

The FIS is a paperback volume from 1/8 inch to several inches thick. It explains in some detail how the study was performed, and it contains flood elevations and flood profiles for streams which were studied in detail. We will refer to portions of the FIS later.

The FIRM is used primarily by lenders to determine if flood insurance is required to secure a loan and by insurance agents to determine insurance rates. Map 14-2 shows a portion of Weekes Wash in Apache Junction.

The darkest area on the FIRM shows the 100-year floodplain, the only area where floodplain management is required, and where flood insurance may be required by a lender. Notice three things at this time: (1) there are wavy lines with numbers across the dark area; (2) there are notations of reference marks ("RM14"); and (3) there are zone designations ("ZONE A2").

Now let's go through an example of how a lender and an insurance agent would use this map. A house on the northwest corner of the intersection of East Teepee Street and North Bowman Road is being sold (location "A"), and the buyer goes to a federally insured lender to borrow mortgage money. The lender sees that the property is in the floodplain and tells the buyer that he must purchase flood insurance for the amount of the loan, as well as fire insurance.

The buyer goes to his insurance agency. The insurance agent looks at the FIRM and determines that the flood elevation is about 1827 feet above mean sea level. The wavy lines with numbers indicate the flood elevation. In this case, the insurance agent might precisely locate the house on the map between the 1827 line and the 1823 line and determine that the flood elevation is 1826.5 feet.

MAP 4-2. EXAMPLE OF A FLOOD INSURANCE RATE MAP (FIRM).

ELEVATION REFERENCE MARKS

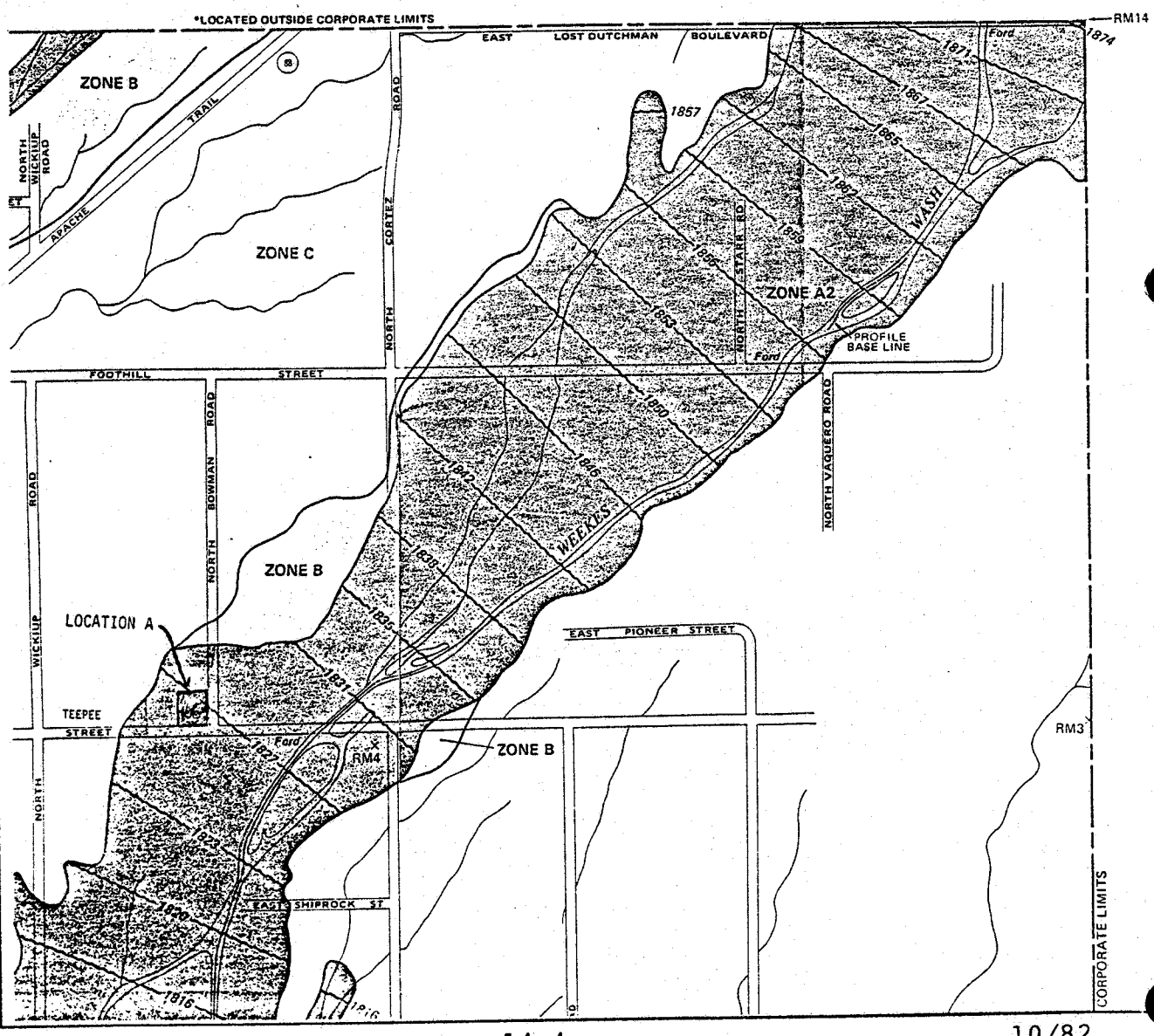
REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM2	1833.84	Government Land Office brass cap 0.9 foot above ground, located 2100 feet west of North Apache Trail (State Highway 88)along north corporate limit line east of North Bulldog Mine Road.
RM3	1851.95	Government Land Office brass cap 1.5 feet above ground at approximate centerline of East Tepee Street extended and North Goldfield Road extended.
RM4	1829.43	Top of 5/8 inch rebar 1.0 foot southwest of 4-inch by 4-inch post at southwest corner of East Tepee Street and North Cortez Road. Established by Cella Barr Associates.
RM5	1796.81	Brass cap on 1 inch bar at southwest corner of North Tomahawk Road and East Superstition Boulevard. Established by Cella Barr Associates.
RM6	1810.14	Top north flange bolt on fire hydrant at southwest corner of North Cortez Road and East Superstition Boulevard. Established by Cella Barr Associates.
RM7	1788.91	Government Land Office brass cap at intersection of East Junction Street extended and South Goldfield Road.
RM8	1766.22	Top north flange bolt on fire hydrant at southeast corner of East Junction Street and North Royal Palm Road. Established by Cella Barr Associates.
RM14	1873.27	Top of 1.25 inch axle at the corner of East Lost Dutchman Boulevard and North Goldfield Road extended. Northeast corner of Section 15. Established by Cella Barr Associates.
RM15*	1894.03	U.S. Coast and Geodetic Survey bronze disk stamped "Y 21 1933" located approximately 2550 feet north of the north Apache Junction Corporate limits line along North Apache Trail (State Highway 88).

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE

400 0 400 FEET



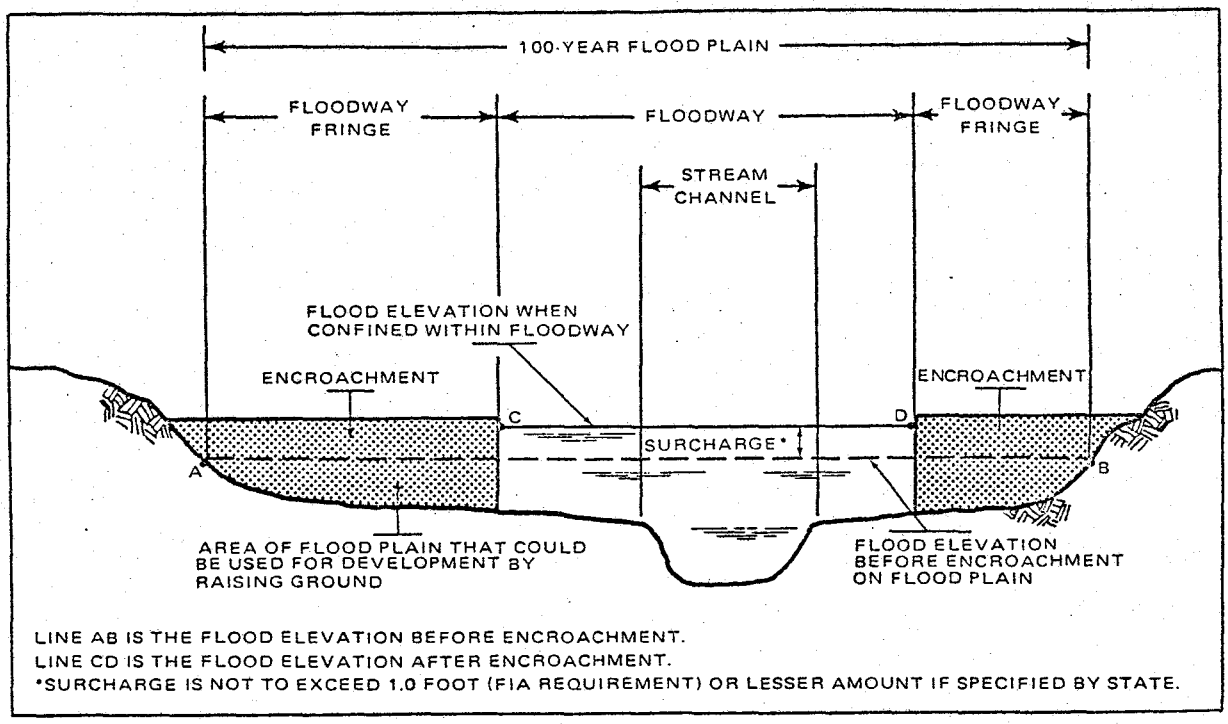
If the house was built before the "effective date" of the FIRM (which is shown on each page of the FIRM), he may charge a subsidized rate for insurance, no matter what the actual flood risk is to that house. If the house was built after the FIRM effective date, the City of Apache Junction should have required the builder to provide a certification of flood elevation. Unless a variance was granted, that certified elevation would be at least 1826.5 feet. The agent would then use the appropriate insurance rate for Zone A2 to determine the premium rate.

If no certification is available, the buyer may choose to pay a surveyor to determine his floor elevation. The elevation and a description of reference marks used in the study are shown either in the FIS or on the FIRM. In this case, RM4 is shown to be at elevation 1829.43, so the surveyor would determine the flood elevation of the house relative to that.

The City of Apache Junction has no specific duty in this process except to provide the certification of flood elevation if it has one on file.

Notice on the FIRM (Map 14-2) that there are areas designated as "ZONE B" and "ZONE C." Communities have no floodplain management responsibilities in these areas. Zone B is the 500-year floodplain, which will be explained later, and Zone C is an area determined to be relatively free from flood problems.

FIGURE 14-2. FLOODWAY SCHEMATIC.



The FBFM and the FIS are used primarily by the community for floodplain management. Map 14-3 shows the same portion of Weekes Wash in the City of Apache Junction which we have already looked at. In addition to the 100-year and 500-year floodplains, the FBFM shows a white area within the 100-year floodplain which is called the "FLOODWAY." In the FIS, there is a drawing, usually "Figure 2" (see Figure 14-2) which shows a typical cross-section of a floodplain. You see that the dashed line from A to B is the elevation of the 100-year floodplain. If obstructions are placed in the floodplain, the flood elevation will rise in order to get around the obstruction. Floodplain management allows encroachment on either side of the center of a wash or stream up to the point where the flood elevation rises one foot. The area remaining is the floodway. Any encroachment in the floodway would cause an unacceptable rise in the flood elevation.

Also on the FBFM, instead of the wavy flood elevation lines, there are cross-sections which were actually used in the computer program which determined the flood elevations. The FIS will have a flood profile with letter designations which agree with those on the FBFM (see Figure 14-3). This profile can be used to accurately determine a flood elevation between cross-sections.

Let's see how the City would use these tools. A developer proposes a subdivision in the area bounded by North Starr Road, East Foothill Street, North Cortez Road and East Lost Dutchman Boulevard (location "B" on Map 14-3). The City's planning director sees that a portion of this area is in the 100-year floodplain. He informs the developer that the subdivision plat must clearly show the floodplain boundary. Also, a portion of the area is in the floodway and no obstruction is allowed in that area. It must remain undeveloped or be left for open space uses, such as a park, a parking lot, or a golf course. If the developer is going to build the houses in the subdivision, he must provide to the City certification that each floor in the floodplain is above the flood elevation. If he is going to sell vacant lots, the subdivision plat must clearly state which lots are in the floodplain and give the minimum floor elevation for each lot. Later, the City will require certification of the floor elevation from the builder whenever they issue a building permit for one of those lots.

Now suppose the owner of the lot on the northeast corner of the intersection of North Starr Road and East Foothill Street requests a building permit for a residence (location "C" on Map 14-3). The Building Official sees that the lot is entirely within the floodway and denies the permit. He advises the applicant that his decision can be appealed to the City Council and assists the applicant in the preparation of an appeal and request for a variance from the City's floodplain ordinance which prohibits obstruction of a floodway.

MAP 14-3. EXAMPLE OF A FLOOD BOUNDARY AND FLOODWAY MAP (FBFM).

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM2	1833.84	Government Land Office brass cap 0.9 foot above ground, located 2100 feet west of North Apache Trail (State Highway 88)along north corporate limit line east of North Bulldog Mine Road.
RM3	1851.95	Government Land Office brass cap 1.5 feet above ground at approximate centerline of East Tapee Street extended and North Goldfield Road extended.
RM4	1829.43	Top of 5/8 inch rebar 1.0 foot southwest of 4-inch by 4-inch post at southwest corner of East Tapee Street and North Cortez Road. Established by Cella Barr Associates.
RM5	1796.81	Brass cap on 1 inch bar at southwest corner of North Tomahawk Road and East Superstition Boulevard. Established by Cella Barr Associates.
RM6	1810.14	Top north flange bolt on fire hydrant at southwest corner of North Cortez Road and East Superstition Boulevard. Established by Cella Barr Associates.
RM7	1788.91	Government Land Office brass cap at intersection of East Junction Street extended and South Goldfield Road.
RM8	1766.22	Top north flange bolt on fire hydrant at southeast corner of East Junction Street and North Royal Palm Road. Established by Cella Barr Associates.
RM14	1873.27	Top of 1.25 inch axle at the corner of East Lost Dutchman Boulevard and North Goldfield Road extended. Northeast corner of Section 15. Established by Cella Barr Associates.
RM15*	1894.03	U.S. Coast and Geodetic Survey bronze disk stamped "Y 21 1933" located approximately 2550 feet north of the north Apache Junction Corporate limits line along North Apache Trail (State Highway 88).

APPROXIMATE SCALE

400 0 400 FEET

KEY TO MAP

500-Year Flood Boundary

100-Year Flood Boundary

FLOODWAY FRINGE

FLOODWAY

100-Year Flood Boundary

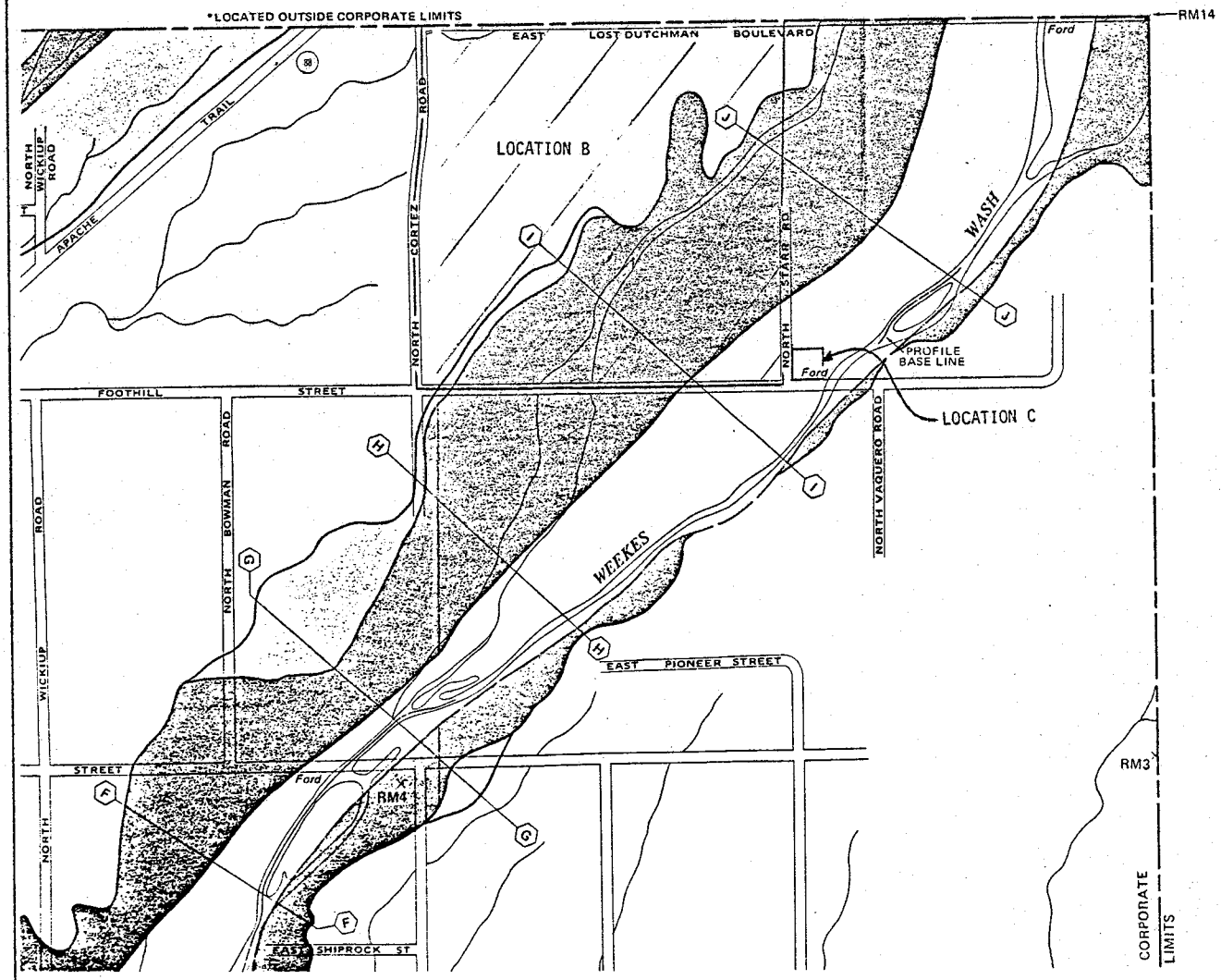
500-Year Flood Boundary

Approximate 100-Year Flood Boundary

Cross Section Line

Elevation Reference Mark

River Mile

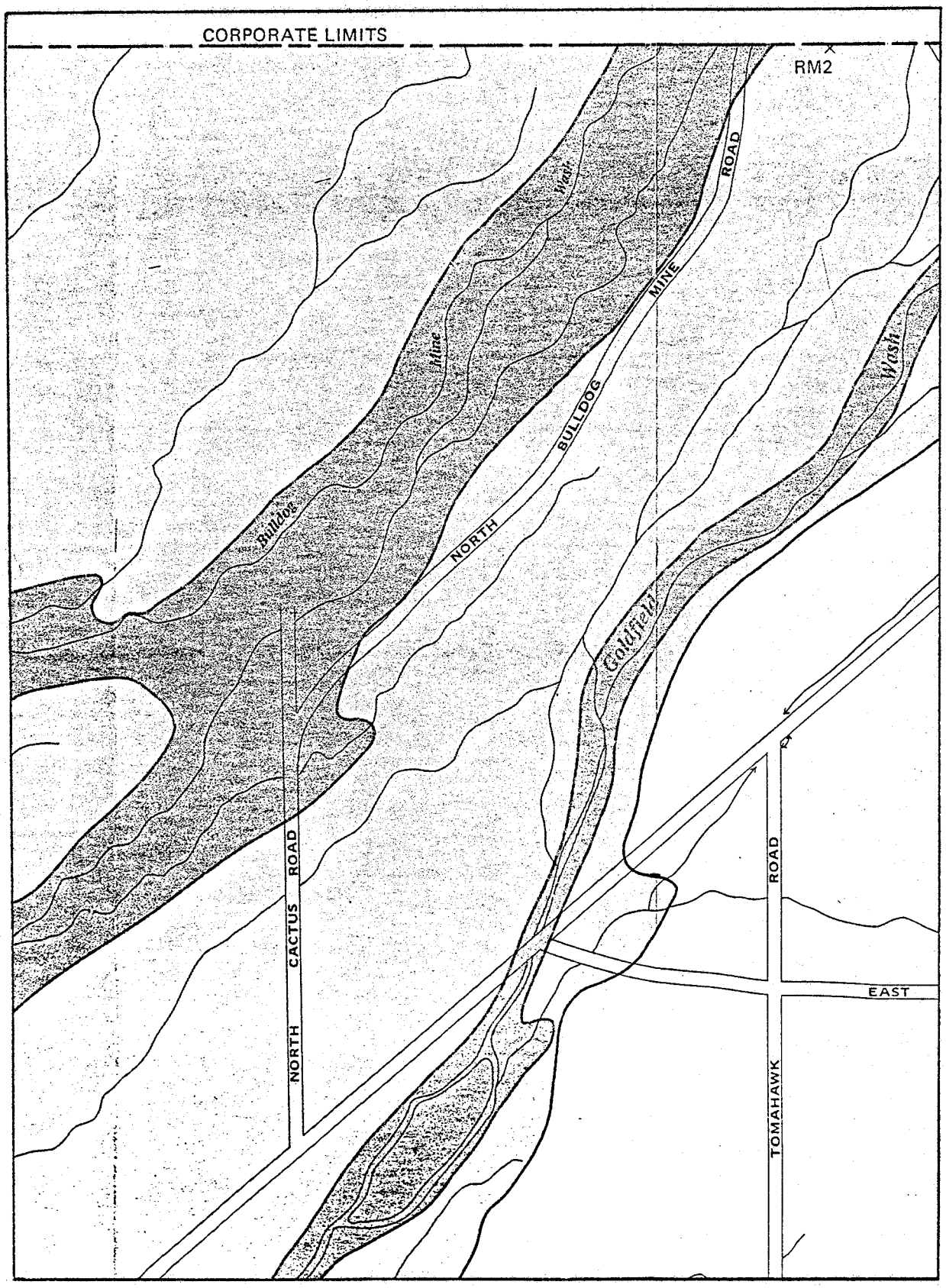


The designated Floodplain Administrator for the City presents the facts to the Council, the Council hears from the applicant, and votes on the variance. In this case, the Floodplain Administrator has looked at the profile in the FIS (Figure 14-3) and determined that the property is subject to about 3 1/2 feet of flooding. A table of flood velocities in the FIS (see Figure 14-4) shows that because this property is between cross-sections I and J, floodway velocities will be between 6.5 and 7 feet per second. For these reasons, he recommends that the Council deny the request. Even if the house were built on piers to be above the flood elevation and to minimize obstruction to flow, he considers it to be an unacceptable hazard. A strong man cannot stand in waist-deep water if the velocity is above 5 feet per second.

However, if the Council votes to grant the variance, the Floodplain Administrator recommends that they require the structure to be elevated above the flood elevation on piers which are engineered to withstand the anticipated velocities.

Map 14-4 shows areas in Apache Junction which were studied by approximate methods. On the FIRM, these areas are shown as unnumbered "A" zones. Because no detailed information is available for these areas, rational floodplain management is difficult. All a community can do is either to prohibit or allow all requests. They may require notification to all applicants that they are in a flood-prone area, and they may require recordation of such notification.

MAP 14-4. EXAMPLE OF UNNUMBERED "A" ZONES.



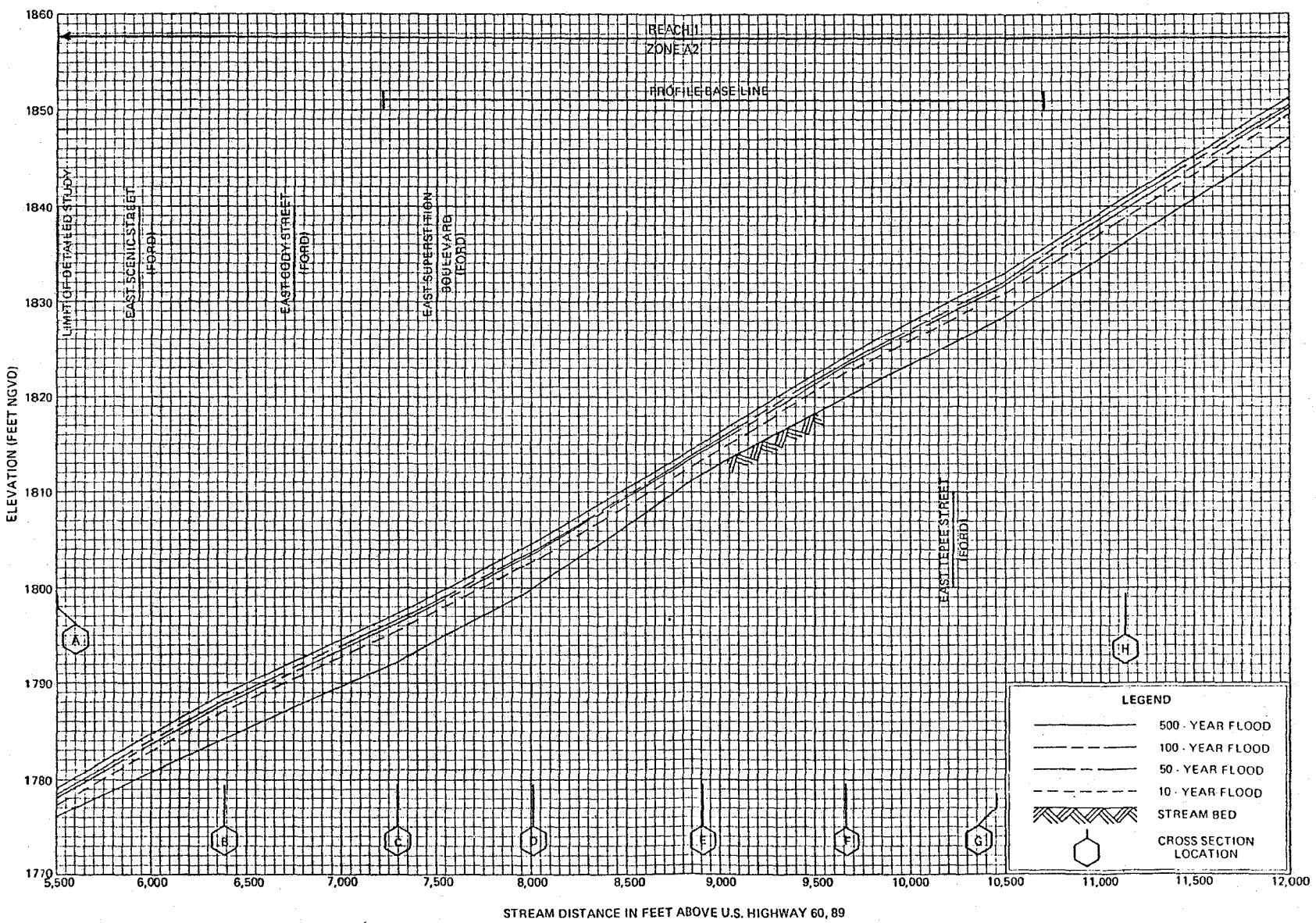


FIGURE 14-3. EXAMPLE OF A FLOOD PROFILE FROM A FLOOD INSURANCE STUDY.

FIGURE 14-4. EXAMPLE OF A FLOODWAY DATA TABLE FROM A FLOOD INSURANCE STUDY.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY	INCREASE
Weekes Wash								
A	5,500	439	807	8.5	1,778.3	1,778.3	1,779.0	0.7
B	6,380	220	818	8.4	1,788.1	1,788.1	1,789.1	1.0
C	7,290	297	867	7.9	1,796.5	1,796.5	1,797.4	0.9
D	8,010	725	1,352	5.1	1,803.9	1,803.9	1,804.2	0.3
E	8,910	793	1,139	6.0	1,814.5	1,814.5	1,815.3	0.8
F	9,660	267	807	8.5	1,823.5	1,823.5	1,824.4	0.9
G	10,460	199	767	8.9	1,831.7	1,831.7	1,832.6	0.9
H	11,140	320	854	8.0	1,840.2	1,840.2	1,840.3	0.1
I	12,090	449	962	7.1	1,851.3	1,851.3	1,852.3	1.0
J	12,990	385	1,046	6.5	1,860.3	1,860.3	1,861.2	0.9
K[2]	13,990	503	1,017	6.7	1,872.8	1,872.8	1,873.8	1.0

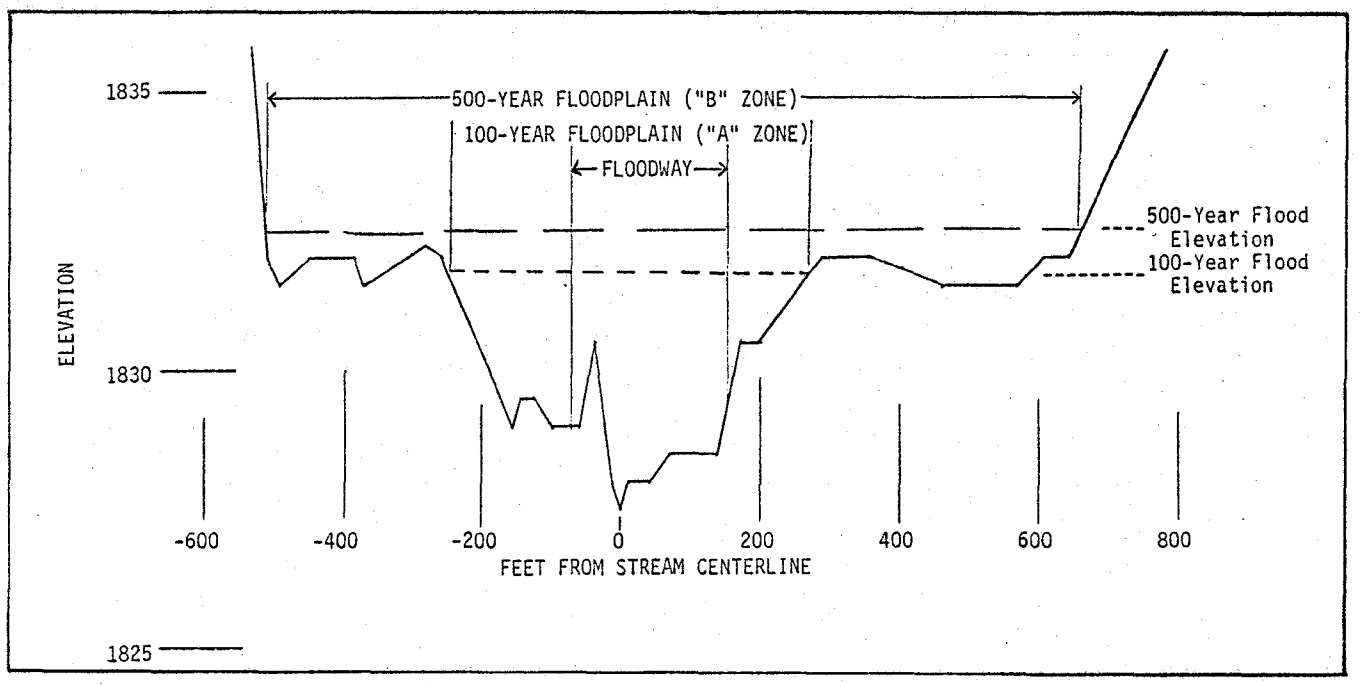
[1]Feet Above U.S. Highway 60/89 [2]Cross Section Lies Entirely Outside Corporate Limits

In addition to the FIS, the FBFM and the FIRM, a community can obtain from the study contractor any materials developed for the FIS. Of particular interest are the topographic maps generally used for areas of detailed study. Map 14-5 is the topographic map for the area of Weekes Wash in Apache Junction examined earlier. Looking again at the request for the building permit in the floodway north of East Foothill Drive (location "C"), it can be determined that the ground elevation is about 1853, while the flood elevation is about 1855. The condition at this particular location is not as dangerous as it appeared from the FIS and the FBFM.

Figure 14-5 shows a cross-section from the Weekes Wash study. This cross-section shows the actual data used by the computer to calculate flood elevations. Stream cross-sections in Arizona are usually not as smooth and well-defined as the "typical" section shown in Figure 14-2. The computer input data for the FIS may also be obtained from the study contractor if the community can use it. However, the data will be computer data, not a graphic display (see Figure 14-6).

In Figure 14-5, the area shown as B-zone on Map 14-2 at elevation 1831 (cross-section "G" on Map 14-4 is shown. The 500-year flood elevation causes flooding of areas outside the 100-year floodplain, so the B-zone is the area NOT flooded by a 100-year flood but flooded by a 500-year flood.

FIGURE 14-5. CROSS-SECTION "G", WEEKES WASH, CITY OF APACHE JUNCTION.



MAP 14-5. EXAMPLE OF A TOPOGRAPHIC MAP FOR A FLOOD INSURANCE STUDY.

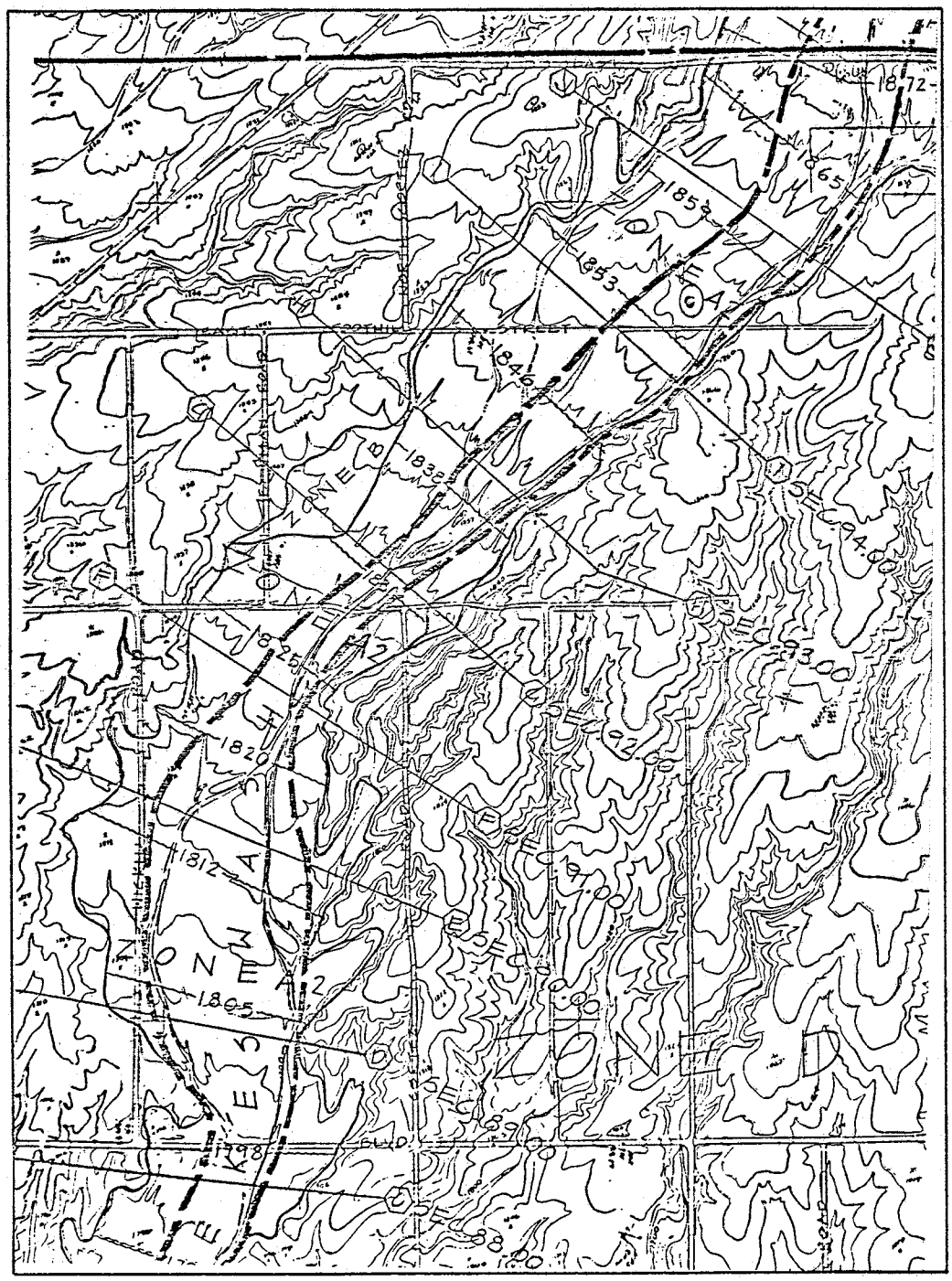


FIGURE 14-6. EXAMPLE OF COMPUTER INPUT DATA.

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03/12/82      15.4060                                                                                                PAGE    6

GR   2866.000   1500.000   2866.000   1720.000   2868.000   1750.000   2870.000   1765.000   2868.000   1780.000
GR   2866.000   1790.000   2866.000   1825.000   2866.600   2040.000   2868.000   2230.000   2870.000   2360.000
GR   2870.000   2465.000   2872.000   2600.000   2874.000   2644.000   2876.000   2775.000   2878.000   2780.000
GR   2880.000   2793.000   2880.000   2852.000   2882.000   2860.000   2884.000   2880.000   2886.000   2895.000
GR   2888.000   2920.000   2890.000   2955.000   2900.000   3002.000   2910.000   3045.000   2920.000   3090.000
GR   2922.000   3125.000   2924.000   3250.000   2924.900   3395.000      0.         0.         0.         0.

X1      4.000     56.000    245.000   1495.000    600.000    330.000    275.000      0.         0.         0.
CI    508.000   2859.850    330.000      1.000      1.000    550.000    550.000    550.000    550.000    550.000
X3     10.000      0.         0.         0.         0.       793.000   2871.000      0.         0.         0.
GR   2990.000      0.      2980.000     15.000   2970.000     30.000   2960.000     55.000   2950.000     61.000
GR   2940.000     66.000   2930.000     81.000   2920.000     93.000   2910.000    102.000   2900.000    130.000
GR   2890.000    150.000   2890.000    165.000   2900.000    200.000   2890.000    230.000   2880.000    245.000
GR   2870.000    250.000   2868.000    258.000   2866.000    265.000   2864.000    330.000   2862.000    343.000
GR   2862.000    395.000   2864.000    440.000   2866.000    500.000   2866.000    560.000   2864.000    850.000
GR   2864.000    940.000   2866.000    965.000   2868.000    980.000   2868.000   1495.000   2868.000   1710.000
GR   2870.000   1730.000   2870.000   1790.000   2868.000   1792.000   2868.000   2215.000   2870.000   2370.000
GR   2872.000   2495.000   2874.000   2775.000   2876.000   2835.000   2878.000   2880.000   2880.000   2890.000
GR   2882.000   2905.000   2880.000   2970.000   2890.000   3010.000   2900.000   3060.000   2910.000   3090.000
GR   2920.000   3115.000   2922.000   3130.000   2924.000   3151.000   2926.000   3378.000   2928.000   3402.000
GR   2930.000   3425.000   2932.000   3435.000   2934.000   3445.000   2936.000   3455.000   2938.000   3475.000
GR   2940.000   3505.000      0.         0.         0.         0.         0.         0.         0.         0.

X1      3.100     69.000    246.000   1400.000    200.000    130.000    225.000      0.         0.         0.
CI    515.000   2861.200    215.000      1.000      1.000    550.000    550.000    550.000    550.000    550.000
X3     10.000      0.         0.         0.         0.       800.000   2872.000      0.         0.         0.
GR   2990.000      0.      2980.000     25.000   2970.000     46.000   2960.000     65.000   2950.000     82.000
GR   2940.000     91.000   2930.000    102.000   2920.000    127.000   2918.000    141.000   2916.000    152.000
GR   2918.000    160.000   2918.000    188.000   2920.000    212.000   2910.000    229.000   2900.000    238.000
GR   2890.000    243.000   2880.000    246.000   2870.000    260.000   2868.000    271.000   2866.000    284.000
GR   2866.000    312.000   2868.000    348.000   2870.000    377.000   2870.000    406.000   2868.000    415.000
GR   2866.000    423.000   2864.600    463.000   2866.000    528.000   2867.000    650.000   2866.000    824.000
GR   2866.000    972.000   2868.000    988.000   2870.000   1002.000   2870.000   1231.000   2872.000   1380.000
GR   2874.000   1400.000   2874.000   1422.000   2872.000   1450.000   2872.000   1524.000   2874.000   1531.000
GR   2876.000   1540.000   2874.000   1551.000   2872.000   1596.000   2870.000   1948.000   2868.900   1976.000
GR   2868.000   2027.000   2868.000   2155.000   2870.000   2365.000   2872.000   2465.000   2872.000   2555.000
GR   2874.000   2720.000   2874.000   2805.000   2876.000   2876.000   2878.000   3015.000   2880.000   3120.000
GR   2882.000   3145.000   2884.000   3160.000   2886.000   3178.000   2888.000   3194.000   2890.000   3190.000
GR   2900.000   3225.000   2910.000   3270.000   2920.000   3308.000   2922.000   3320.000   2924.000   3331.000
GR   2926.000   3379.000   2928.000   3390.000   2930.000   3406.000   2940.000   3455.000      0.         0.

X1      3.000     70.000    253.000   1225.000    205.000    120.000    220.000      0.         0.         0.
CI    595.000   2862.550    220.000      1.000      1.000    550.000    550.000    550.000    550.000    550.000
X3     10.000      0.         0.         0.         0.       880.000   2874.000      0.         0.         0.
GR   2990.000      0.      2980.000     25.000   2970.000     55.000   2960.000     97.000   2950.000    143.000
GR   2940.000    190.000   2930.000    225.000   2920.000    241.000   2910.000    244.000   2900.000    247.000
GR   2890.000    250.000   2880.000    253.000   2870.000    256.000   2868.000    271.000   2866.800    305.000
GR   2868.000    330.000   2870.000    343.000   2872.000    400.000   2870.000    490.000   2868.000    501.000
GR   2866.200    550.000   2868.000    700.000   2868.300    747.000   2868.000    835.000   2866.000    910.000
GR   2868.000    955.000   2870.000    970.000   2872.000   1130.000   2874.000   1150.000   2874.000   1225.000
GR   2876.000   1295.000   2877.400   1335.000   2876.000   1420.000   2874.000   1515.000   2874.000   1630.000
```

15. MOBILE HOMES IN A FLOODPLAIN

In the National Flood Insurance Act § 59.1, "mobile home" is defined as, "A structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers. The term includes, but is not limited to, the definition of 'mobile home' as set forth in regulations governing the Mobile Home Safety and Construction Standards Program (24 CFR 3282.7(a))." The Arizona Revised Statutes § 32.1172.18 and 24 CFR 3282.7(a) define "mobile home" as, "A structure transportable in one or more sections, including the plumbing, heating, air conditioning and electrical systems contained in such structure, which when erected on a site is all of the following:

a. Eight body feet or more in width.

b. Thirty-two body feet or more in length.

c. Built on a permanent chassis.

d. Designed to be used as a single family dwelling with or without a permanent foundation when connected to the required utilities."

All of this seems to say that FEMA excludes travel trailers and recreational vehicles from their minimum requirements for floodplain management, while the Arizona Revised Statutes require management of all dwelling units. Thus, communities and their attorneys should decide how they want to treat travel trailers.

In the National Flood Insurance Program, there are specific requirements for mobile homes which are placed in floodplains. In § 60.3(a)(3) it is specified that if no floodplain maps have been produced by FEMA, but if the proposed site is flood-prone, "...all new construction and substantial improvements (including the placement of prefabricated buildings and mobile homes) shall...be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure...."

In § 60.3(b), when FEMA has identified unnumbered "A" Zones in a community, the community must comply with § 60.3(a) <u>and</u> "Require that all mobile homes to be placed within Zone A...shall be anchored to resist flotation, collapse or lateral movement by providing over-the-top and frame ties to ground anchors..." as specified in Section 5.5 of the Model Ordinance.

In § 60.3(c), when FEMA has established flood elevations and numbered "A" Zones, the community must comply with the above <u>and</u> "Require that within Zones A1-30 on the community's FIRM for new

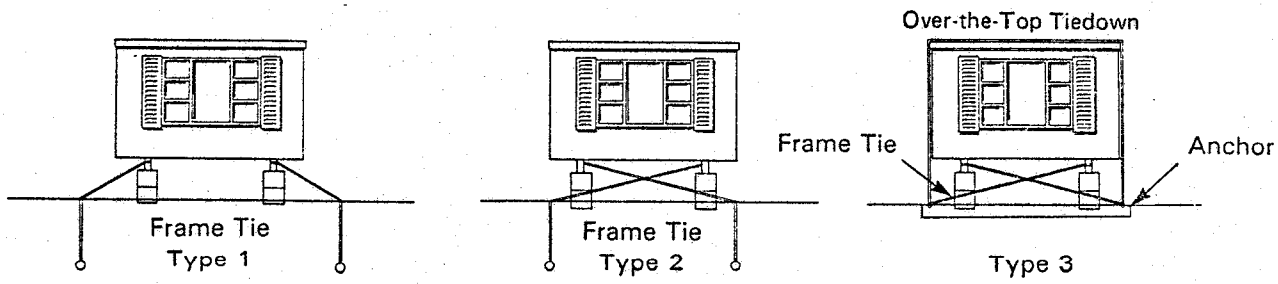
mobile home parks and mobile home subdivisions, for expansions to existing mobile home parks and mobile home subdivisions, and for existing mobile home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds 50% of the value...before the repair, reconstruction or improvement has commenced, that (i) stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be at or above the base flood level, (ii) adequate surface drainage and access for a hauler are provided, and (iii) in the instance of elevation on pilings, lots are large enough to permit steps, piling foundations are placed in stable soil no more than ten feet apart, and reinforcement is provided for piers more than six feet above ground level."

ARS §45-2349 was amended effective August 3, 1984, to provide that if a mobile home is to be replaced, even in an existing mobile home park, the replacement must be elevated "...so that the bottom of the structural frame or the lowest point of any attached appliances whichever is lower, is at or above the regulatory flood elevation." This applies to <u>any</u> replacement mobile home, damaged or not. This section also requires anchoring of mobile homes.

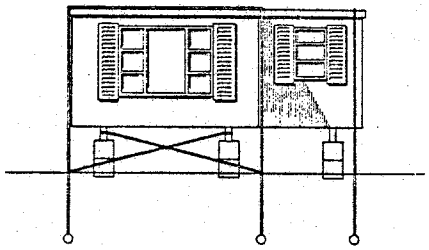
In § 60.3(d), when a floodway has been designated, all of the above applies, <u>and</u> the community shall "...prohibit the placement of any mobile homes, except in an existing mobile home park or mobile home subdivision, within the adopted regulatory floodway."

Figure 15-1 is from the National Flood Insurance Program insurance agents' handbook and shows the types of anchoring an agent is to look for before writing an insurance policy.

FIGURE 15-1. MOBILE HOME TIEDOWNS REQUIRED FOR FLOOD INSURANCE.

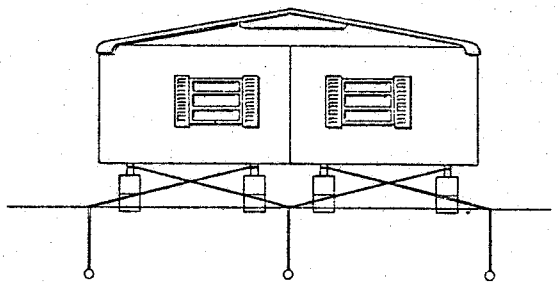


These sketches illustrate various methods for connecting frame ties to the mobile home frame. Type 2 system can resist greater horizontal forces than Type 1. Type 3 system involves placement of mobile home on concrete slab. Anchors embedded in concrete slab are connected to ties.



Type 4

Additions or canopies also need to be secured with over-the-top tiedowns.



Type 5

Doublewides do not require over-the-top tiedowns, but are subject to the same frame tie requirements.

NOTE: Over-the-top tiedowns are not required if the mobile home design provides the equivalent structural strength to resist flotation, collapse or lateral movement when anchored in accordance with manufacturer's specifications.

16. THE PROPERTY OWNER AND FLOODPLAIN MANAGEMENT

Often, the most difficult part of floodplain management for local officials is explaining it to the affected property owners. Property owners are usually surprised to find that their property is in a floodplain, and that they will have different development standards than most other people in the community. If they are not angry when they first arrive at City Hall, they frequently are within a few minutes. This chapter will attempt to explain to property owners the reasons for floodplain management and the options they have.

"What Is a 100-Year Floodplain, Anyway?"

Along any wash, stream or river, there are areas where floods will exceed the capacity of the main channel and overflow on relatively flat land. That land was in fact deposited there by previous floods. Depending on the size of a given flood, a larger or smaller area will be flooded. The area subject to flooding is called the floodplain.

Engineers and hydrologists work together to determine the magnitude of floods for different streams, and to determine the areas which will be inundated by a flood of a particular magnitude. A hydrologist looks at the history of flooding on the stream and other similar streams, as well as the size and slope to the area which contributes water to the stream. Using these facts he can determine the size of a flood which will be equalled or exceeded in 5 years, or 100 years, or 500 years. For critical structures, such as dams, he determines the "Maximum Probable Flood," not to design the dam to contain it, but to allow the dam designer to make certain that the dam will not fail.

With the size of a flood determined by the hydrologist, the engineer looks at the stream and its floodplain to determine the area which will be flooded. He looks at the shape of the land, the slope of the streambed, vegetation, and other factors which will affect the speed of water flowing in the stream and floodplain. Using this information, he can determine the depth of flooding and the area which will be flooded. If he uses the flood which the hydrologist says will be equalled or exceeded on the average of every 100 years, the area flooded is the 100-year floodplain.

"Why Is Floodplain Development Regulated?"

The use of land is governed by many factors. Some of these are features of the land itself: the slope, the soil, the natural vegetation, the climate, and the availability of water and other resources. All have a major impact on the potential use of the land. Other restrictions are put on the land by society to ensure the orderly development of land and to protect

society and other property owners in other ways. The availability of public utilities, access to public right of way, and land use zoning are societal factors which affect the use of land.

Because of continually increasing flood damages over the years, the U.S. Congress (in 1968) and the Arizona Legislature (in 1973) determined standards for future use of floodplain land and required the regulation of such land by the local communities in Arizona. The sole purpose of this regulation is to protect future development from unnecessary flood damages, and to protect taxpayers from the increasing costs of flood disaster.

"Why Wasn't I Told That My Property Is In A Floodplain?"

There are no Federal or State requirements for floodplain property owners to be notified that their property is in a floodplain. Most of the mapped floodplains in Arizona were studied by the Federal Insurance Administration, which was under the Department of Housing and Urban Development until 1981, when it became part of the newly created Federal Insurance Administration, which was under the Department of Housing and Urban Development until 1981, when it became part of the newly created Federal Emergency Management Agency (FEMA). The mapping of a floodplain did not create the flood problem; it just made it a matter of public record. In every community where FEMA's maps are in effect for flood insurance purposes, numerous legal notices were published, and most local newspapers ran articles on the maps.

"What Does It All Mean To My Use of My Property?"

The impact of floodplain management on the use of property varies from "none at all" to "very severe," depending upon the nature of the flood problem and the existing and planned use of the property.

1. Existing uses

Under the Federal and Arizona regulations, any use of a property which was occurring at the time a floodplain was mapped may continue. Such use is limited in several ways, however. If the use is discontinued for six months, it is no longer an "existing condition," and it must thereafter conform to the floodplain management standards. If a property owner wishes to improve or expand his use by more than 50% of its current value, the improvement must meet the standards. Finally, if a use is 50% or more destroyed by flood, the repairs must meet the standards.

In exchange for regulation of new floodplain development by your community, FEMA makes flood insurance available to existing uses. Insurance for up to $185,000 is available for Arizona residences, and contents may be insured for up to $60,000. If

a home or business is in a floodplain or has a history of flooding, the owner is encouraged to discuss flood insurance with his insurance agent.

The purchase of flood insurance is not required by either Federal or State regulations unless Federally insured financing is applied for. Mortgage lenders are required to secure any loans on floodplain structures with flood insurance, just as they require fire and liability insurance to protect their loans.

2. Future Uses

New uses of floodplain land are regulated in such a way as to protect both the new user and adjacent property owners. The stream channel and some adjacent areas must be reserved to carry floodwater. This area is called the "floodway," and is generally the area subject to the most frequent and the deepest floods. Use of the floodway is restricted to uses which will not impede the flow of water. This restriction generally limits future uses to such open space features as farming, ranching, recreational uses, and, in some cases, parking lots.

Outside the floodway, virtually any use can be allowed if it can be built to be safe from flooding. For residences, there is a requirement that the lowest habitable floor be at or above the elevation of the 100-year flood. Non-residential structures must be either elevated or floodproofed to the 100-year flood level. Hazardous and flammable materials may not be stored in the floodplain. Mobile and manufactured housing, in addition to being elevated, must be anchored to resist lateral movement and floatation.

As with existing uses, new structures in floodplains must be insured against flood damages if they are to be financed with Federally insured loans.

17. THE ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

In October, 1982, a number of floodplain administrators from Arizona communities formed the Arizona Floodplain Management Association (AFMA). The purpose of the AFMA is to promote improved floodplain management throughout the State. The AFMA allows each Arizona community one voting membership, and any individual may become an associate member. By September 1, 1983, 41 of the 83 NFIP communities in Arizona had voting memberships and 39 associate memberships had been granted.

The AFMA pursues its goals through general membership meetings, workshops for members, and lobbying efforts at both the State and Federal levels. A study session in June, 1983 on revisions to Arizona's floodplain management statutes provided valuable input to the Legislature.

Workshops on topics of interest to floodplain administrators have been held in conjunction with quarterly meetings of the general membership. Topics for the first three AFMA workshops have been the regulation of sand and gravel operations, methods for analyzing alluvial fan flooding and channels with high sediment loads, and administrative procedures and forms.

With a voting membership which includes 50% of Arizona's NFIP communities, AFMA has been and will continue to be an important force in the future of floodplain management in Arizona. This effectiveness was recognized by the Association of State Floodplain managers in 1984 through their presentation of the "Award for Excellence in Floodplain Management" award to AFMA. This competitive award is the highest given by the national association.

For membership information, contact the Membership Committee member for your area:

Cochise, Santa Cruz, Graham and Greenlee Counties:
Susan Harbin, Hydrologist
City Engineer's Office
City of Tucson
250 W. Alameda
Tucson, AZ 85726
(602) 791-4914

Pinal, Gila, Maricopa, Yuma and La Paz Counties:
R. Larry Morse, Engineer
Gila County Courthouse
1400 East Ash Street
Globe, AZ 85501
(602) 425-3231, Ext. 219

Apache, Navajo, Coconino, Yavapai and Mohave Counties;
Jesse Broadbent, Engineer
Apache County Courthouse
P. O. Box 428
St. Johns, AZ 85936
(602) 337-4364

PART III

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

FLOODWAY

NATIONAL FLOOD INSURANCE PROGRAM

SHALLOW FLOODING

LETTER OF MAP AMENDMENT

EMERGENCY PHASE

REGULAR PHASE

MAPS

90-DAY APPEALS PERIOD

FEDERAL INSURED LENDERS

AREAS OF SPECIAL FLOOD HAZARD

APPEALS

COMPLIANCE

18. INTRODUCTION TO PART III

Since floodplain management in most Arizona communities has been the direct result of the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA), it is important to understand how a community interacts with FEMA and the effects of FEMA'S actions and decisions on the community and its residents.

19. FEDERAL SANCTIONS AGAINST NON-PARTICIPATING COMMUNITIES

When communities did not respond to a voluntary program which required them to manage their floodplains in exchange for eligibility for flood insurance, the Federal Government enacted laws which penalize communities for non-participation (or rewarded them for participation) in the National Flood Insurance Program (NFIP). These penalties are in two general areas: disaster recovery and Federal expenditures on floodplain property.

A community which is not participating in the NFIP has either failed to adopt an ordinance which meets the minimum Federal requirements for floodplain management or, it has failed to properly administer or enforce such an ordinance. In either case, the Federal Government has no indication that new developments will be protected from flooding. Under those circumstances, the Federal Emergency Management Agency (FEMA) withholds certain benefits for which the community would otherwise be eligible.

Federal sanctions are felt by both the community government and the residents. In the event of a Federally declared flood disaster, neither the community nor its residents are eligible for any disaster recovery grants or loans. These funds are normally given to a community to pay for damage to transportation facilities such as culverts, roads, bridges and airports; public buildings; and public utilities such as water and sewer lines, water treatment plants, sewage treatment plants and land fills. Individuals are not eligible for grants or loans for residences or businesses which are damaged by a disastrous flood.

The community is impacted by the loss of all Federal grants and loans for improvements to any property in the floodplains, including road improvements, development grants, housing rehabilitation, and the leasing of space to Federal agencies. Flood insurance is not available to residents and businesses in the community, so they must suffer any flood damages themselves. Also, Federally insured mortgage loans, including FHA, VA and Farm Home loans, may not be made on floodplain property. That means that a property owner who wishes to refinance his mortgage, or to sell, will find funds much harder to obtain.

These penalties are designed to force floodplain management (or at least reduce the public cost resulting from a lack of floodplain management) in all communities where it is needed. The elected officials of a community are obligated to see to the health, safety and welfare of the residents of their community. If they do not see wise development of flood prone property as a part of that obligation, they and their constituents must live with the financial responsibility for that decision.

Since it is difficult and expensive to discover mistakes in floodplain management until a flood occurs, a community may go along for years allowing flood prone development without being

"caught." A community may tell FEMA that they are enforcing a floodplain ordinance, while they are in fact allowing development of their floodplains with no regard for the ordinance. Residents of this new development will be required to purchase flood insurance by Federally insured lenders, but that is not a total solution because when a flood occurs, the damages will occur.

Appendix E is a paper by Robert D. Sokolove, a former attorney for FEMA. In this paper, Mr. Sokolove describes in some detail the concept of subrogation, which FEMA is using to reduce the cost of poor floodplain management to the Federal taxpayer. Subrogation is a legal concept which allows an insuror to sue a third party if that third party caused damage to an insured party. In the case of poor floodplain management, FEMA is the insuror, the homeowner is the insured, and the community, the insurance agent, and the development engineer may be the third parties who "caused" the insurance claim.

Community officials are urged to read Appendix F carefully. In the first subrogation cases brought forward by FEMA, the actual damages are $93 million in two Louisiana parishes (counties) with a total population of 518,700. FEMA alleges that 45 defendants, including the State of Louisiana, the two parishes, developers, insurance companies, and engineers allowed development in floodplains which did not comply with the FEMA criteria, and that $93 million in flood insurance claims should be repaid by them to FEMA.

20. MAP REVISIONS

What the Letter of Map Amendment (See Chapter 21) is for an individual property owner, the Map Revision is to a community or a subdivision developer. When a portion of a floodplain has been changed due to revised hydrology (for instance, construction of a flood control dam), channelization or subdivision design, a map revision is required to remove areas from the "A" zone on the Flood Insurance Rate Map. This eliminates the requirement for flood insurance for Federally insured mortgage loans and simplifies the community's development review process.

The following policy and criteria are self-explanatory.

Federal Emergency Management Agency

Washington, D.C. 20472

JUL 27 1984

RECEIVED

AUG 08 1984

WATER RESOURCES

MEMORANDUM FOR: REGIONAL DIRECTORS

FROM: Jeffrey S. Bragg, Administrator
Federal Insurance Administration

SUBJECT: Policy on Map Revisions Versus Restudies

Attached for your use is the final policy statement for determining when map revisions will be accomplished by the Technical Evaluation Contractors and when they will be accomplished through the restudy process by study contractors. This policy is not to imply that all map revision actions which are deferred for restudy will be given a high restudy priority. One of FIA's FY 85 objectives is to establish a restudy decision-making process which will address the issues of restudy need and priority, including cost-benefit considerations.

Also included in this transmittal are Conditions and Criteria for Map Revisions under Part 65 of the National Flood Insurance Program regulations which describe the procedures and requirements for correcting or updating Flood Insurance Rate Maps and Flood Boundary and Floodway Maps.

The comments provided in response to John Gibson's April 27, 1984, memorandum have been incorporated as appropriate. Some of the more general concerns will be addressed in future policy statements and memoranda. In particular, exceptions to this policy should be coordinated with Headquarters.

If you have any questions, please contact Brian Mrazik at 287-0230.

Attachments

POLICY ON MAP REVISIONS VERSUS RESTUDIES

This document sets forth FEMA policy for determining when map revisions will be accomplished by the Technical Evaluation Contractors (TECs) and when map revisions will be deferred for accomplishment through the restudy process by study contractors.

Definitions

Map Revisions: Map Revisions are performed by TECs either by physically revising map panels or through the Letter of Map Revision (LOMR) process. Data necessary for the revision may be provided by the appellant, at no cost to FEMA, or generated by the TEC, at FEMA's expense.

Letter of Map Revision (LOMR): A revision put into effect by letter rather than a physical map revision as an expedient to the revision process; LOMRs involving Base Flood Elevation (BFE) changes are always succeeded by a physical map revision.

Restudy: Any detailed examination of a community's flood hazard undertaken by a study contractor subsequent to the effective date of a community's first Flood Insurance Rate Map (FIRM).

Background

As more and more communities enter the Regular Phase of the National Flood Insurance Program (NFIP) and as the age of original Flood Insurance Study (FIS) data increases, the need for updating effective FISs will require increasingly more resources. At present, FISs are updated by two distinct processes: the map revisions process, defined under Part 65 of the program regulations, and restudies. Revisions are generally smaller scale, often involving only a portion of a flooding source, and are carried out by TECs using some or all information supplied by the appellant/community. Restudies, on the other hand, generally involve several flooding sources and are performed by study contractors for FEMA. Revisions thus tend to be reactive and limited in scope and are carried out comparatively quickly. Restudies are much more comprehensive, but require much greater time and cost to accomplish. The following tabulation summarizes restudy efforts over time:

Year	Number Initiated	Year	Number Initiated
1969-74	58	1980	96
1975	14	1981	20
1976	60	1982	29
1977	114	1983	73
1978	188	1984	(91 planned)
1979	42		

The average restudy performed over the last 8 years, usually undertaken for the larger, more complex communities, cost about $100,000 to initiate, compared to the present average initial study cost of about $52,000.

FIRM revisions have shown a marked increase in recent years, as summarized in the following tabulation:

Year	Effective LOMRs and Physical Map Revisions
1979	54
1980	178
1981	371
1982	400 (estimated)
1983	393
1984	220 (intended)

Revision costs vary with their size and complexity and the amount of data analysis performed or supplied by the appellant versus that performed by the TEC. The reduction in planned revisions for 1984 reflects a desire to revise maps only for those cases where all data is supplied by the appellant and to set aside, for restudies, those cases where significant hydrologic and hydraulic analysis or surveying effort are required.

Current Process: Requests for revisions are generated by communities, usually as a result of development which changes hydrologic or hydraulic conditions, although FEMA may initiate a revision through the discovery of information that would supersede the effective FIS. Examples of the former situation include:

- Channel modifications
- Fill in the floodway fringe
- Levees and berms
- Dams
- New bridges and culverts

The following are examples of the latter situation:

- Original FIS analysis found to be in error by more than 0.5 foot.
- Updated information shows change in Base Flood Elevation (BFE) greater than 0.5 foot.
- Significant flood boundary changes due to better topographic data.
- Development pressures in areas of the community not previously studied.

Minor changes not falling into the above categories are put off for incorporation into a future map revision. One such example is the common occurrence of a community annexing an area with Special Flood Hazard Area that is shown in the former community's FIS. In such cases, the community is usually informed that in lieu of a map revision, they should refer to the

other FIS. Other common examples are planimetric changes to a community's base map that have no impact on the flooding shown in the effective FIS.

Having the requestor or appellant supply complete and accurate information for a revision is most cost-efficient for FEMA. However, it may ultimately involve a lengthier time period to process the request and greater cost to the appellant. This must be balanced against a public perception of where the appellant's responsibility ends and where FEMA's begins and, thus, the perception of unresponsiveness on the part of FEMA. For example, when the original FIS analyses are obviously in error and/or there is a clear need for revision, but community resources are insufficient, FEMA may opt to gather or generate any missing information.

Regulatory Guidance: The fact that a community's FIS may become outdated due to physical changes affecting flooding conditions or hydrologic data which has become available since the study was performed is addressed in Part 65.3 of the NFIP regulations. The regulations emphasize the responsibility of the community to inform FEMA of new information as it becomes available or, in the case of flood control projects, before they are completed.

According to Part 65.3, the following information should, as a minimum, be submitted:

A. New information indicating FIRMs do not accurately reflect flood risks as they currently exist.

- o A topographic map of greater detail than maps available at the time the study was performed, or showing topographic changes that have occurred since that time.
- o Hydrologic data that has become available since the original analysis was performed. This could consist of:
  - Photographs or historical flood records
  - Information or a study developed by a Federal or state agency, a County Water Control District, and a County, City, or private registered professional engineer. This information must be of sufficient detail so that the computations may be evaluated by FEMA.

B. Information about flood control projects, such as stream channelizations, new dams, reservoirs, canals, private levees, or flood protection systems.

- o This information shall be submitted at least six months prior to the expected completion of the project.
- o The information must include a complete plan of the project with cross sections and dimensions and a detailed map of the area indicating BFE changes caused by construction of the project.

Part 65 of the regulations is very general in stating what action is then required of FEMA; the community must be informed only of whether the BFEs are in need of modification. The regulations do not dictate how to effect any needed changes.

Policy Statement

It is the intent of FEMA to maximize the use of data and analyses collected or developed by appellants, communities, state, or other public and private sources to effect map revisions necessary to keep flood hazard and risk information current and accurate. Where data and analyses are not available, the restudy program will be used, with priority given to those restudies which are cost-shared between FEMA and affected public or private entities. In this light, decisions regarding the maintenance of maps and studies will be made with the recognition that when economically justified, communities will undergo the restudy process. The restudy process will be implemented upon recognition that new development pressures are occurring within previously unstudied flood plains or that the flood plains of a community have changed significantly from the existing study and that the new risk information which represents these changes is not available. The timing of the initiation of a restudy will be established based on our current procedures for developing priority of studies including any cost-sharing considerations.

The alternative to restudy is to process a map revision. A revision request may come about through two different situations:

1. A physical change has made the original FIS analyses obsolete.

2. New information has become available that warrants modification of the original FIS results.

Physical Changes: In this case, which is usually the result of development, FEMA will perform a map revision only if a complete reanalysis is submitted. This reanalysis must include:

- Written description of new hydrologic/hydraulic methodologies, if applicable.

- Revised water-surface profiles of the 10-, 50-, 100-, and 500-year floods, including a zone determination.

- Two floodway models, reflecting pre- and post-development conditions. The post-development analysis should be based on the pre-development model, changing only the survey data to reflect new encroachments such as structures or fill.

- Delineation of new 100- and 500-year flood boundaries and 100-year floodway on suitable topographic mapping.

For situations where the request is the result of a structural measure, such as a levee or channelization, as-built plans of the project must be submitted and all other relevant design, operation, and maintenance requirements must be met.

The attached Conditions and Criteria for Part 65 Revisions addresses this data submittal requirement in more detail. In these situations, the TECs will be responsible for reviewing the technical accuracy of the submitted information and for effecting the map change. The TECs will not be permitted to develop basic data or generate new analyses. For the situation where a Federal action is responsible for the altered conditions and all required information is not available from the responsible agency, the TECs may be authorized, on a case-by-case basis, to revise the hydrologic and/or hydraulic analyses if the existing analyses and the basic input data reflecting the new condition are available.

New Information: In the second case, where new information has become available that could modify the results of the original FIS, the distinction must be made between information that only modifies the study and information that shows the original study to have been in error. If the original study is shown to be in error, the TECs may be authorized, on a case-by-case basis, to revise the hydrologic and/or hydraulic modeling provided that the existing analyses and required input data for the revision are available. If the new information would only modify the original study, the burden will be on the appellant to provide complete analyses and mapping so that the TEC is only responsible for reviewing the information and effecting the change. Under no circumstance will TECs be authorized to gather or generate original survey, topographic, or other basic information.

The above position explicitly defines when TECs can undertake map revisions. Where they cannot, the request will be deferred for incorporation in a future restudy. Regional offices will be informed of all revision requests which have been deferred for a restudy, and the Risk Studies Division will maintain an active list of all such deferrals. Following is an outline summary of the situations that will result in revisions and those that must be deferred for restudy.

Summary of Position

A. Request result of non-Federal action affecting flood plain hydrology, hydraulics, or topography.

   1. Appellant/community must supply revised data and analyses as described in "Conditions and Criteria for Map Revisions."

   2. TEC reviews and effects map revision or LOMR, as warranted.

   3. If information is not available/submitted, request will be deferred for incorporation in restudy.

B. Request result of Federal action or omission affecting flood plain hydrology, hydraulics, or topography.

1. Required data and analyses exist; TEC effects map revision or LOMR.

2. Required analyses do not exist; basic input data for revision and modeling available; TEC authorized to generate additional analyses on case-by-case basis.

3. If neither B1 or B2 applies, request deferred for restudy.

C. New information available since original analyses performed.

1. Modifies original information.

a. If required data and analyses submitted by appellant as described in "Conditions and Criteria for Map Revisions," TEC effects map revision or LOMR as warranted.

b. If required data and analyses not submitted, request will be deferred for restudy.

2. Shows original analyses to be incorrect.

a. Basic input data and modeling available; TEC authorized to generate new analyses on case-by-case basis and effect map revision or LOMR.

b. Basic input data and/or modeling not available; request deferred for future restudy.

D. TECs not authorized to gather, develop or generate basic input data for any situation.

CONDITIONS AND CRITERIA FOR MAP REVISIONS

A. Introduction

This document describes the conditions and criteria for revising a Flood Insurance Study (FIS) under Part 65 of the National Flood Insurance Program (NFIP) regulations. The Federal Emergency Management Agency (FEMA) recognizes that FISs may require revision due to new information becoming available or through physical changes in flood plains. This document defines the situations that fall under Part 65 of the NFIP regulations and describes the procedures for correcting or updating Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs).

B. Definitions

A Letter of Map Amendment (LOMA) issued under Part 70 of the NFIP regulations indicates whether or not a structure(s) or proposed structure(s) is located in a Special Flood Hazard Area (SFHA) as shown on a FIRM or Flood Hazard Boundary Map (FHBM). A LOMA removes a property from the SFHA and thereby makes inapplicable the Federal requirement for the purchase of flood insurance. For more information regarding LOMAs, refer to "Conditions and Criteria for Letters of Map Amendment."

A Conditional Letter of Map Revision, or belief letter, issued under Part 65 of the NFIP regulations is FEMA's comment on the effectiveness or impacts of a proposed flood control project or flood plain modification. It is based on FEMA's review of the proposed project and states that were the proposed project built as designed, it would be cause for a map revision.

A Letter of Map Revision (LOMR) can be issued under Part 65 of the NFIP regulations as an expeditious means of revising a FIRM or FBFM. The LOMR gives a detailed description of the Base Flood Elevation (BFE) and graphic changes that will be made to the SFHA currently delineated on the effective FIRM and/or FBFM. LOMRs involving BFE changes are always succeeded by a physical map revision.

A physical map revision under Part 65 of the NFIP regulations involves changing and republishing the existing FIRM and/or FBFM to reflect any updated condition. Valid LOMAs and LOMRs are incorporated into map revisions.

C. Reasons for Revision

FEMA will revise an effective FIS to reflect new information which shows the original FIS to be incorrect and to reflect physical changes which invalidates the original FIS analyses or presentation of data. Updated or corrected topographic mapping, hydrologic data, or hydraulic data

constitute new information which may warrant a revision. Flood protection projects and any form of topographic alterations (cut and fill) constitute physical changes which may also warrant a map revision.

D. General Revision Policy

Within the statutory criteria established for appeals, revision requests will be evaluated based on the possession of knowledge or information indicating that the effective elevations are scientifically or technically incorrect. In certain situations where new information shows mathematical or measurement errors in the original FIS, FEMA will accept the responsibility for revising the FIS provided the requestor submits the basic data necessary to correct the problem. Where revision requests are based on the application of alternative methods, appellants are required to demonstrate that the new analyses result in more correct estimates of base flood elevations, thus demonstrating that FEMA's estimates are incorrect. In these situations, where a revision request is being made based on improved data, methods, or applications, the community (or requestor through the community) must accept responsibility for providing all data and analyses necessary to update the FIS.

If a physical change resulting from development warrants a revision to the existing analyses, FEMA will not undertake this new technical analysis. The requestor, through the community, must accept responsibility for providing all data and analysis necessary for updating the FIS.

E. Community Map Revision Requests

The map revision process cannot be initiated without the community's endorsement since it is the community that adopts the effective FIS. Therefore, any individuals requesting a change to the FIS, must do so through the community. The community, in turn, may support the request and forward the information to FEMA for evaluation. FEMA will review the request to ascertain that the following conditions are met before evaluating the revision request.

Condition Number 1

The community must endorse the revision request and demonstrate preparedness to accept responsibility for the operation and/or maintenance of any structural measures (e.g. channel improvements or levees) involved. The request submittal should include the following:

1.1 A statement that the community endorses the revision request.

1.2 If the basis for the revision request is a channel modification, the completion of a dam, levee, or any other structural measure. evidence is required to demonstrate the design is adequate and that maintenance and operation provisions, where applicable, have been made. The submittal must indicate what entity has operation and maintenance responsibility and how they will be accomplished. If maintenance is to be accomplished by an agent other than the community, a legal

provision (ordinance) for community monitoring and backup maintenance is required.

1.3 The submittal must indicate that, where necessary, state approval of the revision has been obtained.

Condition Number 2

If the revision request is based on information showing a mathematical or measurement error in the original analysis, the submittal must include the following:

2.1 Documentation that identifies the specific source of the error.

2.2 A written description of the new information and how it differs from the existing FIS information.

2.3 Basic data supporting the revision request to enable FEMA to revise the FIS. In most cases, this data must be certified by a registered professional engineer or licensed land surveyor. Updated topographic maps, revised community boundary maps including annexation ordinances, and channel, dam, or bridge structure plans which illustrate the correct dimensions are examples of the basic data required.

Condition Number 3

If the revision request is based on improved application of hydrologic, hydraulic, or other methods, or use of better data in applying such methods, the requestor must submit the following:

3.1 Documentation that identifies the error in the application or in the inferior data in the original analysis and supports why the application is incorrect or the data is inferior.

3.2 Engineering analyses applying the same basic methods utilized by FEMA but with the changes itemized.

3.3 Alternative engineering analyses utilizing the methods or assumptions determined to be correct.

3.4 Background technical information which supports the requestor's changes as being more correct.

3.5 Certification by a registered professional engineer or licensed land surveyor of the correctness of any alternate data utilized or measurements made.

3.6 Documentation of all locations where the requestor's base flood elevations are different from FEMA's.

All engineering analyses performed must substantiate that the revised hydrologic or hydraulic analyses meet FEMA requirements as well as any state or community requirements.

F. General Technical Guidance

Flood plain revisions should be based on the hydraulic model used to develop the flood profile and flood boundaries currently in effect. The community should request, through the FEMA Regional Office, a copy of the input data used in the computer model for its effective FIS. Where the input data representing the original hydraulic model is unavailable, or where a technically superior model can be used, an approximation should be developed. A new model should be established using the original cross-section topographic information, where possible, and the discharges contained in the FIS which established the original BFEs. The model must use the same effective flow areas as established in the original analysis and must be calibrated to reproduce the original base flood elevations within 0.1 foot. Any differences between the new analysis and the original profile must be justified on an engineering basis.

After the model has been checked and matches the original base flood elevations, the model can be modified for new flood plain runs. The analysis will be accomplished as specified for the following conditions:

Discharge Decreases. Hydraulic analyses may be revised when a base flood discharge decreases as a result of structural improvements, such as the construction of a flood control dam or other significant retention facilities. Hydraulic analyses should not be revised based on a computed discharge reduction which results from changed methodology or longer stream gage records, unless the change is statistically significant. The statistical significance criteria are discussed in Section 2-6 "Hydrologic Analyses" of FEMA's Guidelines and Specifications for Study Contractors (dated September 1982). If it is evident that the change is statistically significant, the original hydraulic model should be rerun, changing only the discharges. In cases where the statistical significance test does not apply, a determination by a state or Federal agency that the change is significant may be accepted as a basis for a map revision.

Discharge Increases. If watershed conditions have resulted in a significant (defined as above) increase in discharge, the original hydraulic model must be run with the increased discharges.

Channel Modification. The original hydraulic model will be modified to include the channel modification, and any other encroachment occurring subsequent to the original flood plain delineation.

In all situations, the revised hydraulic analysis should be modified to include current conditions as well as any encroachment to the flood plain that may have occurred since the original model was developed. The revised hydraulic analysis should also include a zone determination, and if only a portion of the existing hydraulic analysis is revised, the upstream and downstream portions of the revised analysis should coincide

with the effective FIS profiles, i.e., hydraulic calculations should be continued for a great enough distance upstream and downstream of the revised area until water-surface elevations coincide with those in the effective FIS.

The submittal must include the technical data that enables FEMA to determine whether the flood plain revision meets FEMA's requirements. The submittal must include the following:

- A copy of the printout for the original hydraulic computer model representing the 100-year flood profile run for conditions existing at the time the currently effective hydraulic analysis was developed. The printout must include full input and output listings.

- A copy of the printout from the hydraulic computer model representing the new 10-, 50-, 100-, and 500-year profiles. The model should be the same as that used in the preceding item, but modified to include any channel modification, fill or other encroachment that may have occurred in the flood plain since the original flood plain was delineated.

- Delineation of the 100- and 500-year flood boundaries and the location and alignment of cross sections and flow line used in the hydraulic model. This information should be shown on a map of suitable scale and topographic definition to provide reasonable accuracy.

- A copy of the currently effective flood profiles showing the existing and the revised flood elevations.

- Certification from a registered professional engineer that the physical parameters used in the proposed flood boundary delineation represent actual conditions and that the standards contained in these "Conditions and Criteria" are met.

When a map is revised as a result of a new hydraulic analysis, the effect of the revised hydraulics on the floodway must also be considered. If a revised floodway analysis is necessary, the community should refer to the "Conditions and Criteria for Floodway Revisions" for additional information that will be required.

G. FEMA Response to Map Revision Request

FEMA will evaluate a request from the community for a revision and respond by one of the following means:

(1) A preliminary copy of the revised FIS will be sent to the community for their review. If the revision involves BFE changes or the establishment of new BFEs, FEMA will initiate a 90-day Appeals Period. Upon review and resolution of any comments and/or appeals received, FEMA will issue a new effective FIS which will be sent to all previous recipients of the maps.

(2) Send a Letter of Map Revision (LOMR) to the community stating that the review of the submitted material has resulted in an official map revision but that a physical map revision is not warranted at this time. The LOMR will give a detailed description of the BFE and graphic changes that have been made to the SFHA currently delineated on the effective FIS. The material, including a copy of the maps showing the revised information, will be filed for incorporation at a later time into a physical map revision. The approved map revision copies will be dated. Since it is possible that FEMA has responded to a map revision request in this manner, all FIS users are encouraged to contact the community before proceeding with plans for development within the flood plain areas. LOMRs that result in an increase in BFE will also be preceded by a 90-day appeals period. An appeals period for a LOMR which only decreases BFEs will be provided subsequent to the issuance of the LOMR.

(3) Send a letter to the community with a copy to any other requestor stating that the submitted material is not adequate to make an evaluation and offer them the option of submitting additional information.

(4) Send a letter to the community with a copy to any other requestor stating that the submitted material appears to justify a map revision, but because not enough information was submitted the community will be placed on a list for restudy consideration, as funds permit, unless the community can submit additional information.

(5) Send a letter to the community with a copy to any other requestor stating that the submitted material does not substantiate their request for a map revision and that the file will be closed unless the community can submit additional information to substantiate their request.

H. Submittal of Material

Submit material to the FEMA Regional Office. The Regional Office will review material for completeness, concur with the proposed changes, approve any maintenance ordinances, and forward the necessary material to FEMA Headquarters.

FEMA Headquarters will review the hydrologic/hydraulic backup material, engineering design, and any plans of operation and maintenance (where appropriate), request additional information as necessary, then respond to the community by means of the appropriate action defined under Section F above.

To obtain further information on the conditions and criteria for map revisions, communities are encouraged to contact the appropriate FEMA Regional Office or FEMA Headquarters in Washington, D.C., at (202) 287-0230, prior to requesting a map revision.

21. Letters of Map Amendment

Many communities in the regular phase of the National Flood Insurance Program are aware of areas which are designated as "A" zones which are not subject to flooding during a 100-year flood. These areas may have resulted from lack of topographic detail in the work maps, upstream changes (Such as flood control structures), or changes within the study reach (such as channel scour from flooding or authorized filling within a floodway fringe area). Although these maps may need to be revised by FEMA, the fact is that they do not have adequate funds to do this in a timely manner.

For this reason, they will issue a letter of map amendment (LOMA) for an individual parcel when they are satisfied that the existing or proposed use will meet FEMA's floodplain management criteria. As usual, the burden of proof is on the applicant. The following FEMA policy statement explains what is needed for their consideration of a LOMA.

A community may assist its residents by helping them to understand the requirements and by assisting them in gathering the necessary materials. For example, if a flood control structure has changed the floodplain, the community can make that information available to its residents. Conditions and criteria required for FEMA to issue a LOMA are shown on the following pages.

Federal Emergency Management Agency
Washington, D.C. 20472

CONDITIONS AMD CRITERIA FOR LETTERS OF MAP AMENDMENT (LOMAs)

This sets forth the policy of the Federal Emergency Management Agency (FEMA) concerning requests to FEMA for a determination as to whether or not a structure(s) or proposed structure(s) is located in a Special Flood Hazard Area (SFHA) shown on a Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map (FHBM). In order for FEMA to issue a Letter of Map Amendment (LOMA) under Part 70 of the National Flood Insurance Program (NFIP) regulations, a property owner should submit documentation to satisfy the criteria set forth below. Compliance with the criteria will result in the issuance of a LOMA which will remove the property from the SFHA, thus removing the Federal mandatory flood insurance purchase requirement from the structure.

1-1 Definitions:

The terms used in this memorandum have the same meaning as those defined in Part 59.1 of the NFIP regulations at 44 CFR 59 et seq. SFHAs comprise all lands subject to inundation by the flood having a one-percent chance of being equaled or exceeded in any given year - hereafter called the base flood. This flood's elevation is called the base flood elevation (BFE) and is measured in feet above a given datum - e.g., the National Geodetic Vertical Datum (NGVD), mean low tide, or mean low water.

1-2 Requirement to Submit Technical Data:

All requests for LOMAs must be supported by sufficient technical or scientific data to demonstrate that the property is not subject to inundation by the base flood. This consists of proving that both the lowest floor elevation (including basement) and the lowest grade adjacent to the structure are at or above the base flood elevation. The following documentation should be submitted to aid FEMA in processing each LOMA request.

1. A copy of the recorded deed or recorded plat, indicating both the legal description of the property and the official recordation information (deed or plat book volume and page number) and bearing the seal of the Recorder of Deeds. If the property is not recorded on a plat map, actual copies of the deed, tax map, or other suitable maps are required to aid FEMA in accurately locating the property.

2. A topographical map, certified by a registered professional engineer or licensed land surveyor, indicating structure locations, ground elevations, and the elevations of both the lowest finished grade adjacent to the structure and the lowest floor (including basement). In cases of no basement it should be so stated.

   In cases of new construction, a clear distinction must be made between existing and proposed elevations, and after completion all finished grades and elevations must be certified as-built.

   Additionally, data to substantiate the base flood elevation (100-year elevation) should be provided from an authoritative source such as the U.S. Army Corps of Engineers, U.S. Geological Survey, Soil Conservation Service, or other Federal Agency, state and local water resource or planning departments, a FEMA Flood Insurance Study, or technical data prepared by a registered engineer.

3. A signed copy of the statement asserting the accuracy of the information submitted (form entitled Request for Letter of Map Amendment).

4. In certain instances, additional data may be required for FEMA to make a determination. This may consist of but not be limited to certifications by registered engineers or land surveyors as to the type of structure and whether it is elevated on posts, piers, pilings, on barrier sand dunes, hydraulic calculations on the flooding condition, and development plans indicating dates and extent of fill placement.

1-3 Criteria for Removing Flood Plain Designation and Waiving Flood Insurance Purchase Requirement

As previously stated, individuals furnishing technical data which indicates that both the lowest floor (including basement) and lowest adjacent grade elevations of a structure are at or above the base flood elevation can have the structure removed from the flood plain on the map and have the federal flood insurance purchase requirement waived. There is one exception to this rule. Structures located on natural (non-fill) high ground can be removed from the SFHA if it can be proven that only the lowest adjacent grade elevation is above the BFE and that when the area was originally mapped the area should not have been included in the SFHA. Under this scenario the lowest floor elevation is not considered. Structures that have been elevated out of the flood plain by the placement of fill must have both lowest floor (including basement) and lowest adjacent grade elevations at or above the BFE to be removed if the fill was placed after the date of the effective FHBM or FIRM.

Special Considerations:

(1) Floodways

The Federal requirement for flood insurance will not be waived if a structure is located within an officially designated or anticipated regulatory floodway. The floodway is the channel of a river or other watercourse that must be reserved to efficiently carry the floodwaters. Appeals of floodway designations should be directed to community officials since the floodway is designated and adopted by the community.

(2) Elevated Structures

Buildings which have the lowest floor elevated on posts, piers or pilings above the base flood level in the SFHA will not be removed from the Special Flood Hazard Area, and therefore, from the flood insurance purchase requirement if any portion of the structure (i.e., posts or piers) is still in the Special Flood Hazard Area.

(3) Coastal High Hazard Areas

Letters of Map Amendment (LOMA) will not be issued under the Part 70 procedure of the NFIP Regulations for property located in a designated or anticipated coastal high hazard area subject to wave action (V-Zone).

Individuals who believe that their property has been incorrectly designated in a coastal high hazard area, (which would also include any property that was elevated by the placement of compacted fill before the effective date of the current FHBM or FIRM) and is not subject to wave effects, can request a zone change under the Part 66 procedure of the NFIP regulations. Technical data supporting their contentions should be submitted through the community for consideration by FEMA. Once the zone has been changed, a LOMA request will be considered.

It should be noted that new construction in a coastal high hazard area (V-Zone) is not eligible for flood insurance unless:

(a) Wave heights have been developed for the site; and

(b) The structure is rated for insurance purposes based upon a system which reflects its capacity to withstand the height and force of waves during the 100-year flood.

(4) Sheet Flow Areas

In areas of sheet flow flooding where the flooding depth ranges from one foot to three feet, LOMA's can only be issued if it can be demonstrated that the structure has been elevated with the lowest adjacent grade and lowest floor (including basement) above the sheet flow level.

(5) Levees

LOMA's will only be issued for structures protected by levee systems if it can be demonstrated that the levee meets FEMA criteria for providing adequate protection against a 100-year flood. The FEMA levee policy generally follows the guidelines established by the U.S. Army Corps of Engineers in their manual entitled "Design and Construction of Levees" dated March 31, 1978 (EM 1110-2-1913).

1-4 Conditional Letters of Map Amendment

The Federal requirement for flood insurance does not apply to unimproved land, since flood insurance is available only for structures and their contents. However, if construction is proposed on land within a Special Flood Hazard Area, a Conditional Letter of Map Amendment can be issued provided that the proposed structural information meets the same criteria set forth herein for a LOMA. After construction is completed, certified as-built information must be submitted to FEMA for the purpose of obtaining a LOMA. The information required for a Conditional LOMA is basically the same as that for a LOMA.

Property owners and developers should note that a Conditional LOMA merely provides a comment on the proposed plan and does not amend the map or waive the insurance purchase requirement. It also does not relieve Federal agencies of the need to comply with Executive Order 11988 on Floodplain Management in carrying out their responsibilities for providing Federally undertaken, financed or assisted construction and improvements or in their regulating and licensing activities.

1-5 FEMA Evaluation and Response

Upon receipt and evaluation of the required data by FEMA, the individual making the inquiry will be notified of our findings. Should a review of the evidence indicate a change in FEMA maps is needed, a LOMA will be issued with copies going to the FEMA Servicing Agent, the State Coordinating Agency, and the community. The time required for FEMA to review requests for LOMA's will generally depend upon the quality and completeness

of the data submitted. Requests are usually evaluated within four to eight weeks of the receipt of all technical data required to review the case.

1-6 Refund of Insurance Premium After Issuance of LOMA

Property owners are required to purchase flood insurance as a condition of direct Federal or federally-related financial assistance on a structure located in a designated SFHA on a FEMA FHBM or FIRM. Persons seeking a LOMA should check with the lending institution that imposed the flood insurance requirement originally to assure that if they are granted the LOMA from FEMA, the lending institution will honor it. Even though FEMA may issue a LOMA removing the property from the SFHA and waiving the Federal requirement for the purchase of flood insurance, it is the lending institution's prerogative to require flood insurance if they deem such action appropriate. If, however, the lending institution accepts the LOMA and agrees to waive the flood insurance purchase requirement, the property owner is eligible for a full refund of the premium paid for the current policy year provided that no claim is pending or has been paid on the policy in question during the same policy year. For processing of the refund, the property owner need only provide the LOMA and evidence of the waiver of the flood insurance requirement from the lending institution to the agent or broker who sold the policy.

1-7 Appropriate Address

Letters of request and information supporting requests for a LOMA should be sent directly to:

Federal Emergency Management Agency
State and Local Programs and Support
Natural Hazards Division
Engineering Branch
Washington, D.C. 20472

More specific information relating to LOMA's may be obtained by telephoning FEMA's Washington Office at (202) 287-0230.

February, 1982

Federal Emergency Management Agency

Washington, D.C. 20472

REQUEST FOR LETTER OF MAP AMENDMENT

The following information is submitted in support of my request that a determination be made as to whether or not a certain land area or structure is within a Special Flood Hazard Area. The property is shown on the Federal Emergency Management Agency Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM) identified as: _____, _____.
(Community Name) (Community Number)

(Please check appropriate boxes)

☐ (1) A copy of the recorded deed or recorded plat indicating both the legal description of the property and the official recordation information (deed or plat book volume and page number) and bear ing the seal of the Recorder of Deeds.

☐ (2) Topographic information, including contours and elevations of both the lowest finished grade adjacent to the structure and the lowest floor (including basement).

☐ (3) Planimetric information indicating the location of structures on the property.

☐ (4) Certification by a registered professional engineer or licensed land surveyor indicating the type of structure, whether it is elevated on posts, piers, or walls, and whether it is built on a barrier sand dune.

☐ (5) Other (please list)

The above statements and all documents submitted in support of this appeal are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

_____ _____
(Date) (Signature of Applicant)

22. FEMA Levee Policy

Many communities (and the State Coordinator for the NFIP) have been concerned about FEMA's levee policy. The following information explains the policy and certain exceptions to the policy. The purpose of the policy, as with all other FEMA criteria, is to ensure that new development is safe from a 100-year flood and to require flood insurance for existing development which is protected by levees. Where those levees do not meet the FEMA criteria, the properties behind them are considered to be unprotected.

Federal Emergency Management Agency

Washington, D.C. 20472

SEP 3 1981

MEMORANDU FOR: ENGINEERING STAFF
OFFICE OF FLOOD PLAIN MANAGEMENT

FROM: Gregg Chappell, Director
Engineering Division
Office of Flood Plain Management
State and Local Programs and Support

SUBJECT: Levees

The attached represents our current policy as it relates to levees or other simular structures not covered by the Interim Levee Policy issued on Febuary 10, 1981. This change is designed primarily to explain that the interim policy does not apply in such situations. It further explains what procedures should be used in evaluating these structures.

Please assure that both your staff and contractors which you are managing are made aware of this policy.

ATTACHMENT

cc: L. Smith
G. Johnson
J. Seyffert
R. MacKay

FEDERAL EMERGENCY MANAGEMENT AGENCY

Washington D.C. 20472

10 FEB 1981

MEMORANDUM TO: FIA Staff

FROM: Richard W. Krimm
Acting Administrator
Federal Insurance Administration

SUBJECT: Interim Levee Policy

Background

The Federal Insurance Administration is proposing to initiate a comprehensive levee policy study with the National Academy of Sciences during fiscal year 1981. This study will take approximately one year to complete and will provide authoritative recommendations for the treatment of levees under the National Flood Insurance Program in the following areas:

1. Minimum design standards, including level of protection, freeboard requirements, and others.

2. The nature and extent of inspection and evaluation of levees to be conducted by or for FIA as part of a risk study.

3. Requirements FIA should place on communities who receive credit for protection afforded by levees.

4. Consideration of levee protection under the insurance aspects of the Program.

5. Portraying risks associated with flooding in leveed areas on study and map products.

In the interim, I believe it is essential to establish a responsible, candid and uniform policy for dealing with levees in the day-to-day operation of the NFIP. Therefore, the following criteria and procedures are to be followed until further notice.

Ownership

FIA will not consider privately owned, operated or maintained levee systems unless local ordinance or state statute mandates operation and maintenance. Levees for which the community, state, or Federal government has responsibility for operation and maintenance will be considered by FIA provided that the criteria discussed below are met.

Design Requirements

The Federal Insurance Administration has the responsibility under Public Law 90-488 to identify the special flood hazard areas of the United States. The Special Flood Hazard Area has been defined as that area subject to a one percent or greater annual chance of flooding. In order for FIA to remove the special flood hazard designation from an area "protected" by levees, we must be assured that the area involved does not fall within this definition.

The degree of protection afforded by a levee system is uncertain because of both the uncertainty involved in establishing the one percent chance flood elevations and the uncertainty involved in the structural stability of the levee itself. Common engineering practice in the construction of flood protection works, such as dams and levees is the inclusion of a freeboard allowance above the computed water surface levels, to allow for all of the uncertainties in analysis, design and construction which cannot be fully or readily considered in an analytical fashion. In the case of the National Flood Insurance Program, freeboard allowances must be a major factor in establishing a levee's probability of providing protection against the true one percent annual chance flood. FIA must be reasonably certain of this level of protection before the flood plain management, insurance purchase, and lender notification requirements under the Program can be removed from the leveed area.

FIA will require a minimum levee freeboard of three feet, with an additional foot within 100 feet either side of structures within the levee or where ever the flow is constricted, such as at bridges. An additional half-foot above this minimum is also required at the upstream end, tapering to the minimum at the downstream end of the levee. This standard has been generally utilized by the Corps for levees protecting populated areas, and is based on long term experience with the success and failure of levee systems.

The above criteria will be utilized to evaluate levee systems in all ongoing and future analyses of flood hazards conducted by FIA. This includes initial identifications, studies, restudies, map revisions, LOMA's, etc. At the present time, no effort should be undertaken to revise maps for the sole purpose of implementing this policy. However, this policy shall be applied for all maps issued by FIA from the date of this memo and for which the six-month compliance

period has not yet started. Where this freeboard criteria has not been met, the onus for demonstrating that protection from the one percent chance flood does exist, with a lesser freeboard, will be on the levee owner. As discussed above, this will be a difficult analytical task which must address all the uncertainties involved in establishing flood discharges, and the structural stability of the levee system itself. A report documenting such analyses must be submitted to, and approved by, FIA before such a levee will be credited.

Inspection and Evaluation

Prior to any levee system receiving credit on any future map issued by FIA, the contractor responsible for the production or revision of that map will be required to determine that the minimum design requirements itemized above have been met. In addition, a field inspection or suitable alternative, will be required to verify that the levee appears structurally sound and adequately maintained. A certification from a Federal or state agency, or a registered professional engineer that the levee meets the minimum design criteria above and that it appears, upon visual inspection, to be structually sound and adequately maintained may be utilized in lieu of a site specific inspection by the contractor. Levees with obvious structural defects or obvious lack of maintenance will not be credited by FIA.

Human Intervention and Operation of Closures

In general, FIA will not recognize human intervention (e.g. capping of levees by sandbagging, earth-fill, flashboards, etc.) for the purpose of increasing a levee's design level of protection during an imminent flood situation. The levee must be designed and maintained to provide adequate 100-year protection without human supplementation. Human intervention will only be accepted for the operation of closure structures (e.g. gates, stop logs, etc.) in a levee system designed to provide at least 100-year flood protection, including adequate freeboard as described above. FIA will recognize levees with closures only under the following conditions:

1. The levee system was designed with the closure to be an integral part of the system during operation. Sandbagging of openings would not be sufficient.

2. The levee system was designed to require human operation of closures or human backup is provided for automatic systems.

3. Sufficient flood warning time exists for the operation of all closure structures, including necessary sealing, before flood waters reach the base of the closure.

4. Operation and maintenance of closure structures are responsibilities mandated by local ordinance.

5. A formal operation plan addressing closure operation and including specific assignments of responsibility is available and capable of being implemented.

6. Periodic operation of the closure structure (at least once annually) is performed for testing and training purposes.

7. Sufficient documentation, indicating that each of the above requirements have been met, has been provided to, and accepted by, FIA.

Mapping of Leveed Areas

Levees meeting the design, closure, and inspection requirements listed above will be credited with providing protection from the one percent chance flood on FHBMs and FIRMs. However, the protected area will be identified with a note on the maps stating

"This area protected from the 100-year flood by levee, dike or other structure subject to failure or overtopping during larger floods".

All such areas will be shown as Zone B on the FIRM and as an area subject to the 500-year flood on the FBFM, to highlight the residual risk of flooding. Floodways will be delineated at the inside toe of mainline and tributary levees which are credited on a map. This will assure that no development will occur on the outside of the levee, which may jeopardize the levee's integrity, or effectiveness.

As part of all future study, restudy or map revision effort, where credit will be given to levees providing 100-year protection, the adequacy of interior drainage systems will be evaluated. Areas subject to flooding from inadequate interior drainage behind levees will be mapped using standard procedures. Often, shallow flooding zones, or even numbered A-Zones may be applicable in these instances.

For the area contained within a levee (i.e. the protected area) providing less than 100-year protection, the base flood elevation to be shown is that computed as if the levee did not exist. For the area outside of such a levee, the elevations to be shown are those obtained from the profile which would exist at the time levee overtopping begins, or from the profile computed as if the levee did not exist, whichever is higher.

This procedure recognizes the increase in flood elevation in the unprotected area which is caused by the levee itself. This procedure may result in flood elevations being shown as several feet higher on one side of the levee than the other. Both profiles should be shown in the study report and labeled as "before levee overtopping" and "after levee overtopping" respectively. Separate Floodway Data Tables should be prepared for each side of the levee and adequately labeled. The Flood Insurance Rate Map should show a gutter line, running along the levee centerline, separating the areas of different base flood elevations and zones. Flood Hazard Factors and Zones should be computed independently for each area using the standard procedure.

5

Proposed and New Levees

Requests to FIA for guidance on levee construction should be addressed by referencing the minimum requirements discussed above and the Corps of Engineers' manual on the "Design and Construction of Levees" EM 1110-2-1913 for basic principles to be applied. FIA approval of design plans and as-built certifications will be handled on a case by case basis. All future requests for map revisions or letters of map amendment, on the basis of newly constructed levees, will require FIA's review of as-built specifications according to the minimum standards outlined above, and the principles outlined in the Corps' manual. Levees proposed for construction in an identified floodway must also be approved through the exception process outlined in Part 60.6 of the Program regulations.

Contractors performing study, review and map revision functions shall be notified of this policy as soon as possible.

Federal Emergency Management Agency

Washington D.C. 20472

AUG 17 1981

MEMORANDUM TO: Staff, Office of Flood Plain Management

FROM: Acting Director
Office of Flood Plain Management
State and Local Programs and Support

SUBJECT: Exceptions to Levee Freeboard Requirements

Background

The interim levee policy issued on February 10, 1981, provides for exceptions to the minimum freeboard standard provided that the levee owner can demonstrate, to FEMA's satisfaction, that adequate protection is provided against the one percent chance (100-year) flood. A report documenting an assessment of the uncertainties involved in establishing the 100-year flood profile as well as the structural stability of the levee was required in order for FEMA to make an adequate technical evaluation.

This memo provides further guidance on the nature of the required report and essential elements which must be addressed. It is not intended to set forth the specific criteria with which these elements will be evaluated. This evaluation must be made on a case by case basis after a thorough review of the exception request report by FEMA's engineering staff or consultants familiar with the design of levee systems. The elements outlined below pertain to the evaluation of freeboard exception requests only, additional factors may require consideration in the comprehensive evaluation of other aspects of a levee system.

Elements Required

The purpose of a freeboard allowance is to provide for those factors that cannot be rationally accounted for in design flood profile computations. When exceptions to the freeboard standard are sought, the levee owner must demonstrate that those factors which have not been directly considered in the 100-year profile computations are of insignificant consequence and do not appreciably increase the probability that the levee will overtop or fail during the true 100-year event. The elements which must be addressed in an exception request are discussed below.

1. Uncertainty in the design flood profiles

Ideally, a levee system which is credited with providing 100-year flood protection would have no chance of overtopping or failure during the true 100-year flood, or a smaller event. This can never be the case because of the uncertainties associated with estimating the 100-year flood and the uncertainties in the structural stability of the levee itself. The freeboard allowance is an important factor in increasing the probability that protection from the true 100-year flood does exist, as an earth levee built only to the estimated 100-year flood profile has less than a 50 percent chance of providing true 100-year flood protection.

a. Hydrologic uncertainty. An exception request from the standard freeboard requirement must evaluate the variance in the estimated 100-year discharge which could result in an underestimation of the magnitude of the true 100-year flood. In general, ungaged streams, or streams with a short period of gage record have flood estimates with greater variance. Thus, there is less certainty that the estimated 100-year discharge will fall within reasonable limits of the true value. The exception request should include a computation of the 100-year discharge with the expected probability adjustment. The approximate confidence limit at which levee overtopping begins should also be identified in the report. Where confidence limits or the expected probability adjustment cannot be computed directly from statistical analysis of gaged records, they should be estimated by some reasonable method which is documented in the report.

b. Hydraulic uncertainty. Uncertainty in flood discharges can be translated into corresponding uncertainty in flood profiles using standard hydraulic techniques. Stream reaches with a high degree of hydraulic sensitivity (i.e. relatively great changes in stage result from a relatively small change in discharge) would have a greater tendency for levee overtopping than a less sensitive stream. The freeboard exception request should include a profile developed using the 100-year flood discharge with the expected probability adjustment. It should also include a profile run at the discharge where levee overtopping just begins, and an assessment of the approximate confidence limit corresponding to that discharge. Where a high degree of uncertainty exists in the 100-year discharge and the stream reach is hydraulically sensitive to changes in discharge, reduction in the freeboard requirement would not be warranted.

Other factors which must be assessed in the evaluation of the hydraulic uncertainty are the potential and magnitude of debris or sediment accumulation or ice jamming during the 100-year discharge event. Sources of debris, sediment and ice in upstream areas should be considered as well as any historical evidence of ice or debris blockage or sediment deposition. The behavior of such materials within the leveed reach, and particularly at bends or constrictions, should be addressed. Where such problems are common, the expected level of flood protection from a levee system designed considering only free-flow events can be greatly reduced. A reduction in the standard freeboard requirement would not be warranted in this situation.

2. Uncertainty in Levee Structural Stability

a. Seepage Levees work primarily on the principle of providing a mass of material large enough to prevent shear failure by the hydrostatic and hydrodynamic forces acting on the levee embankment and foundation. Because of the construction costs involved, levees rarely contain the impervious cores or drainage layers common to earth dams. Since levee embankments are actually flooded for relatively short periods of time, such expenditures are usually not warranted. Thus, levee mass is substituted for other design features which would control seepage. This is necessary because, once the levee embankment becomes completely saturated during a period of high water, seepage emerges on the landside slope and failure probability through loss of slope stability and internal erosion increases greatly.

For given levee top widths and side slopes, the mass of a levee section is determined by the levee height. Thus, the freeboard above the 100-year flood level is a good indication of the relative mass of the levee section and the length of the seepage path before saturation occurs. Whenever freeboard lower than the standard is being proposed, this usually implies a levee of lower mass. In this situation, other factors which influence the rate and degree of levee embankment and foundation saturation must be addressed.

The analyses supporting the request for exception from the standard freeboard requirement should demonstrate that saturation through the levee foundation and embankment will not occur during the 100-year flood, or that the levee is designed for stability against loading conditions for case IV as defined in the Corps of Engineers manual on the "Design and Construction of Levees" (EM 1110-2-1913, Chapter 6 Section II). The following factors should be addressed in these analyses.

1. Depth of flooding
2. Duration of flooding
3. Embankment geometry and length of Seepage path at critical locations
4. Embankment and foundation materials
5. Embankment compaction
6. Other design factors affecting seepage (e.g. drainage layers)
7. Other design factors affecting embankment and foundation stability (e.g. berms).

Where seepage control is critical and stability problems are likely, an exception to the standard freeboard requirement would not be warranted.

b. Surface Erosion As with seepage control, most levees rely primarily on greater mass to compensate for loss of levee material through erosion caused by flow velocity and wave wash. Requests for exception from the standard freeboard

requirements should demonstrate that no appreciable erosion of the levee embankment can be expected during the 100-year flood, as a result of either stream currents or waves, or that anticipated erosion would not result in failure of the levee embankment or foundation directly or indirectly through reduction of the seepage path and subsequent instability.

The following factors should be addressed in these analyses:

1. Expected flow velocities, especially in constricted areas
2. Expected wind and wave action
3. Slope protection techniques
4. Duration of flooding at various stages and velocities
5. Embankment and foundation material
6. Levee alignment, bends and transitions
7. Levee side slopes

Where erosion potential is significant, an exception to the standard freeboard requirement will not be made.

C. Settlement Levees constructed with minimal or no compaction, or where embankment or foundation materials are undrained or composed of materials of high compressibility, will often experience a significant amount of post construction settlement. This settlement can result in losses of freeboard as large as 15 percent of the total levee height. An exception request from the standard freeboard requirement must evaluate the potential and magnitude of future losses of freeboard as a result of levee settlement and assess the following factors:

1. Embankment loads
2. Compressibility of embankment soils
3. Compressibility of foundation soils
4. Age of levee system
5. Construction compaction methods

For new or recently enlarged levee systems where minimal or no compaction was utilized in construction or where foundation soils are undrained or of high compressibility, a detailed settlement analysis must be made using procedures such as those described in the Corps of Engineers manual on "Soil Mechanics Design -- Settlement Analysis" (EM 1110-2-1904). For established levee systems (more than 10 years old), the exception request should address the above 5 factors, the amount of settlement which has occurred since construction and the amount and rate of expected future settlement. Where additional loss of freeboard due to expected future settlement could contribute significantly to the probability of levee overtopping or structural failure during the 100-year flood, an exception to the standard freeboard requirement will not be granted.

Procedure

Upon a determination that a levee system does not meet the minimum freeboard requirements as established in the February 10, 1981 policy memo, the levee owner may appeal FEMA's determination to designate the leveed area as flood prone. The sole basis for the appeal shall be the demonstration that adequate protection from the 100-year flood exists. This demonstration will be accomplished through a technical report submitted by the levee owner which addresses each of the above elements. The report must be certified by a registered professional engineer to be correct and accurate to the best of his or her knowledge. The same registered professional shall also certify that the levee system is adequately designed and maintained to protect against the 100-year flood.

Upon receipt of this report and certification, FEMA will review the report either in-house, through another Federal agency, or through a consultant familiar with the design and construction of levee systems. During this review, the levee owner may be required to provide additional data and certifications necessary to complete the review.

Upon completion of the review, FEMA will revise the appropriate community map or inform the levee owner why the levee system was found to be deficient. Maps will not be revised while either the levee system or FEMA's review is incomplete. The exception request, technical back-up report and certifications will be retained by FEMA as documentation for the exception.

Federal Emergency Management Agency

Washington D.C. 20472

31 AUG 1981

MEMORANDUM FOR: DIRECTOR, ENGINEERING DIVISION
OFFICE OF FLOOD PLAIN MANAGEMENT
STATE AND LOCAL PROGRAMS AND SUPPORT

FROM: Acting Director
Office of Flood Plain Management
State and Local Programs and Support

SUBJECT: Local Flood Protection Structures not Covered by the Interim Levee Policy

The Interim Levee Policy issued on February 10, 1981, is applicable only to riverine levees constructed of earthen materials. It is not applicable to coastal flooding situations or to structures constructed partially or wholly of concrete, or similar impervious materials. This is because the interim levee policy incorporates certain assumptions regarding the nature of flooding and modes of failure of typical earthen riverine levees.

In the case of non-riverine flooding, or of other structures, such as concrete dikes, seawalls, floodwalls, or levees with steel or concrete sections, the following procedures are to be followed:

Federal Structures

Flooding within the area protected by federally constructed structures shall be as established by the agency responsible for their design and construction, provided that the structure has been adequately maintained. Where 100-year flood analyses have not been made by the agency, the analysis procedures recommended by that agency shall be utilized by FEMA contractors conducting the evaluation.

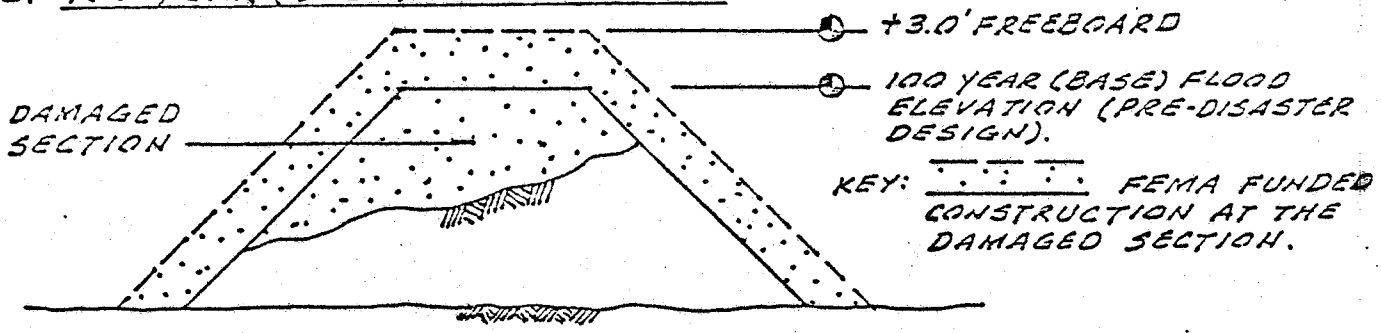
Non-Federal Structures

For non-Federal structures, the "burden of proof" will be on the owner to demonstrate the degree of flood protection afforded by the structure. A technical report providing such demonstration will be reviewed and approved by FEMA staff, FEMA contractors or another Federal agency.

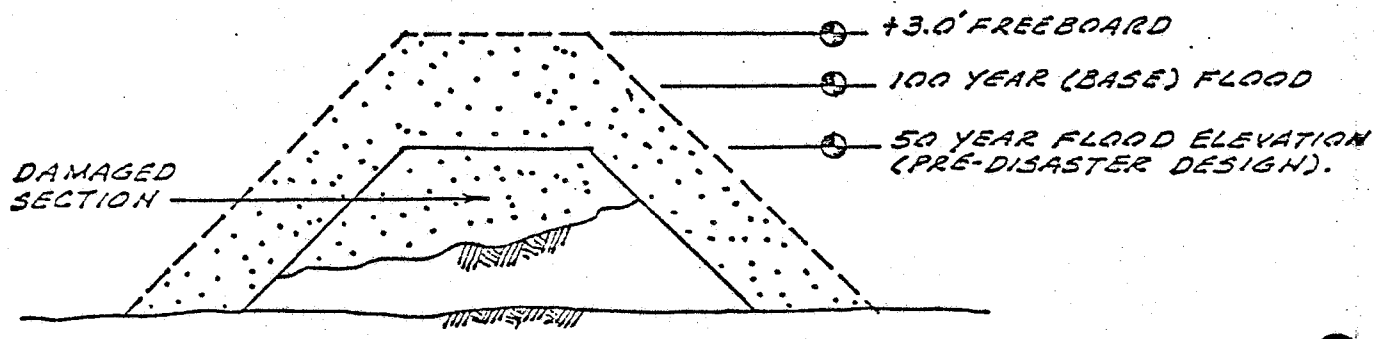
For non-Federal structures, a review will be made by FEMA staff, FEMA contractors, or another Federal agency. However, the burden of proof will remain with the owner of the structure to demonstrate to FEMA's satisfaction the degree of flood protection which is afforded by the structure.

3. EXAMPLES OF PERMANENT RESTORATION

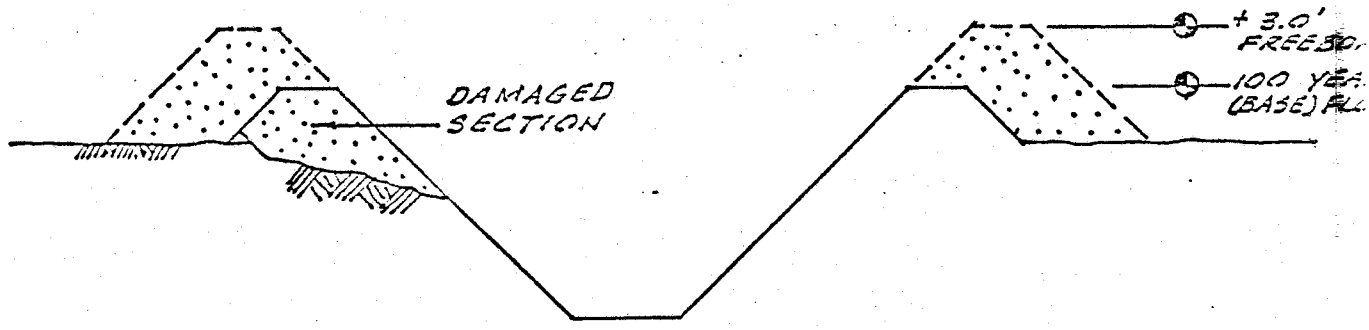
a. 100 YEAR (BASE) FLOOD LEVEE



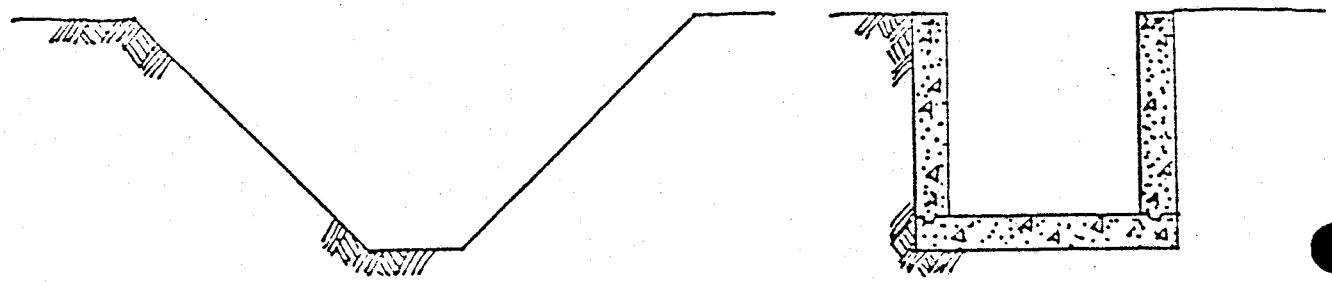
b. 50 YEAR FLOOD LEVEE



c. LEVEE DRAINAGE DITCH



d. DRAINAGE DITCH

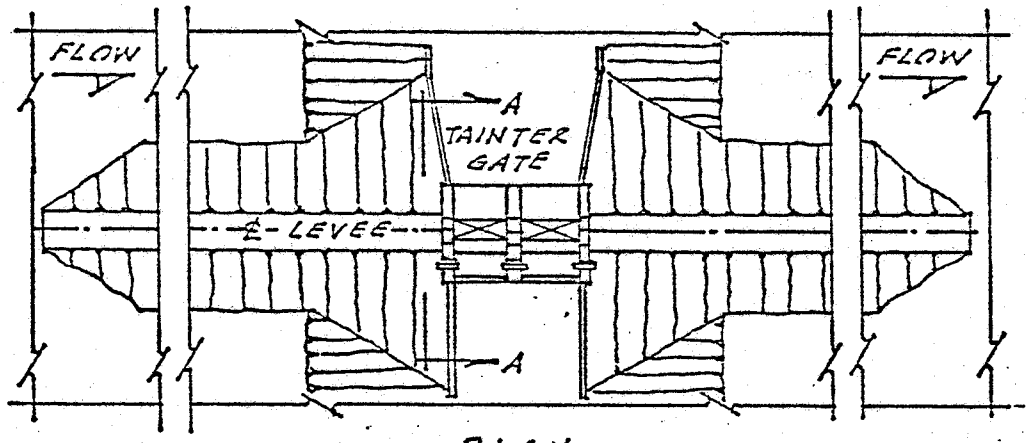


LEVEE HEIGHT STANDARD DOES NOT APPLY IN EITHER CASE.

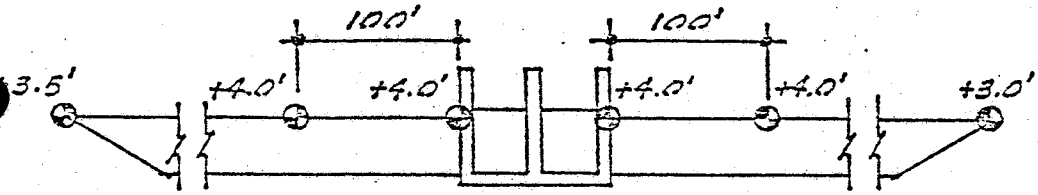
DSE 11-10-8

FEMA INTERIM LEVEE POLICY
DR&R-2, APPENDIX N, FEBRUARY 10, 1981

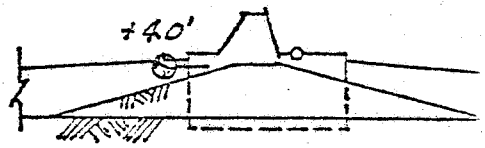
1. LEVEE HEIGHT STANDARD



PLAN



ELEVATION



SECTION A-A

ELEVATIONS INDICATED ARE FREEBOARD ABOVE THE BASE FLOOD ELEVATION (100-YEAR FLOOD ELEV.).

2. PERMANENT RESTORATION POLICY

FEMA WILL FUND PERMANENT RESTORATION WORK TO THE ABOVE STANDARD FOR A DAMAGED SECTION OF A LEVEE, PROVIDED THE APPLICANT AT HIS OWN EXPENSE WILL BRING THE LEVEE UP TO THE SAME STANDARD ON EACH SIDE OF THE DAMAGED SECTION FOR THE ENTIRE LENGTH OF THE LEVEE. WHICH PROVIDES PROTECTION.

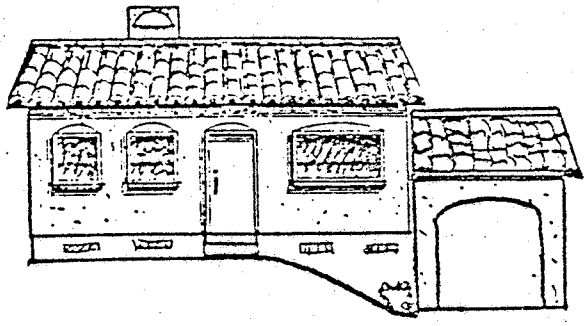
23. EXAMPLES OF INSURANCE RATES AND PREMIUMS

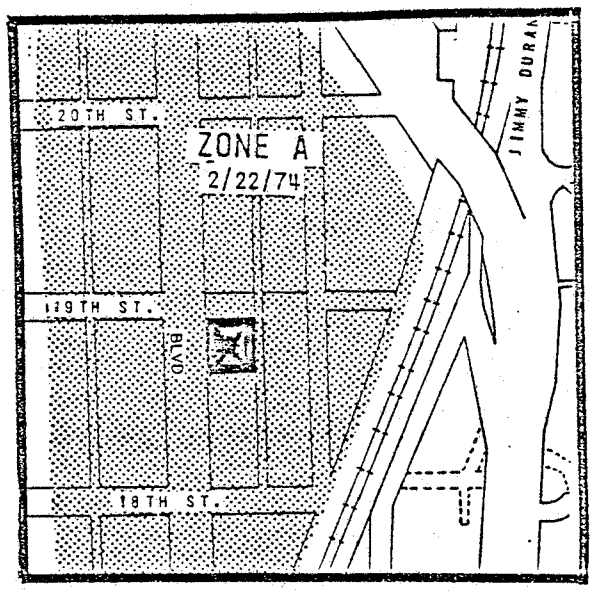
The following examples of flood insurance rates and premiums were provided by the Region IX office of the Federal Emergency Management Agency. They are useful for comparing insurance rates for the same structure and contents if it were built at different times, in different flood insurance rate zones, and at different flood elevations.

EXAMPLE #1 - EMERGENCY PROGRAM

The property owner has a residential structure that has a replacement cost of $100,000. The appraisal of contents with the structure has been estimated to be $20,000. However, the community is participating in the emergency phase of the Flood Insurance Program because the Flood Insurance Rate study has yet to be completed.

Therefore, the limit of coverage will be $35,000 for the structure and $10,000 for contents.



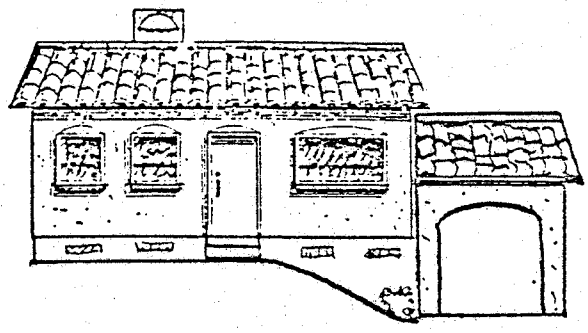


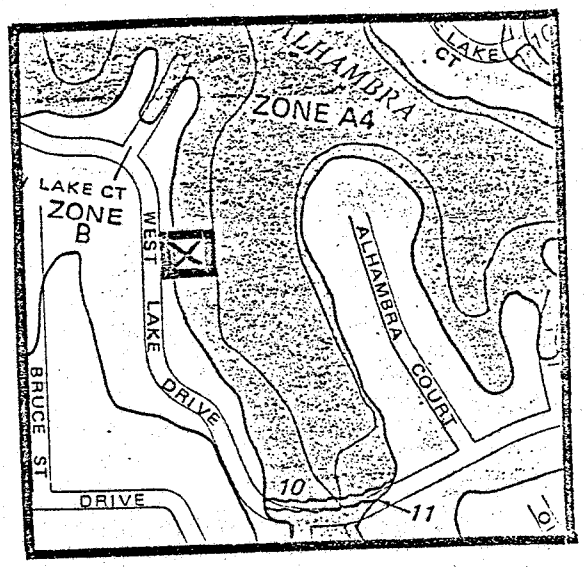
PREMIUM COMPUTATIONS:

	Coverage		Rate				Premium	
STRUCTURE:	$35,000	x	.45	÷	100	=	$158.00	
CONTENTS :	10,000	x	.55	÷	100	=	55.00	
BASIC COVERAGE								$213.00
Expense Constant								20.00
TOTAL ANNUAL PREMIUM								$223.00

EXAMPLE #2 - PRE-FIRM (A4 ZONE)

The property owner has a residential structure that has a replacement cost of $100,000. The appraisal of contents within the structure has been estimated to be $20,000. The house was built before the community entered the Regular Program. (PRE-FIRM) The elevation of the lowest floor has never been established. The owner desires to insure the structure for $100,000 and the contents for $20,000.





AMOUNT OF INSURANCE REQUESTED BY PROPERTY OWNER:

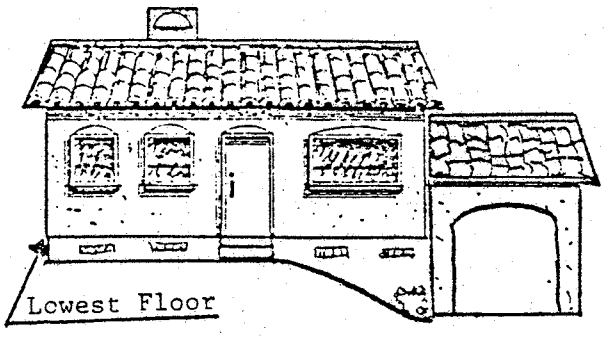
STRUCTURE:	100,000	=	35,000 Basic Coverage +	65,000 Additional Coverage
CONTENTS :	20,000	=	10,000 Basic Coverage +	10,000 Additional Coverage
TOTAL :	120,000			

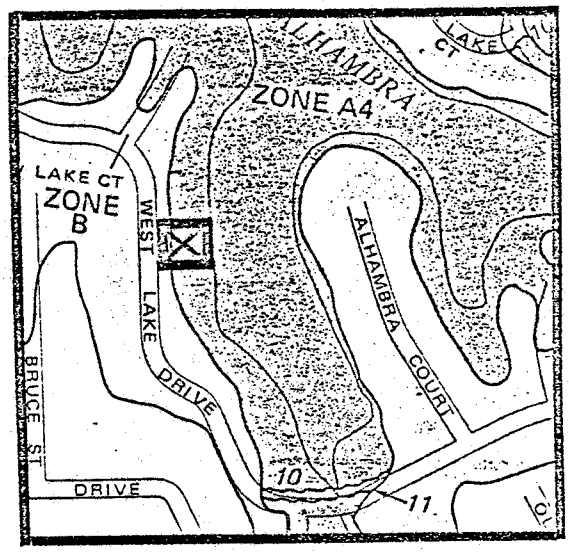
PREMIUM COMPUTATIONS

	Coverage		Rate				Premium	
STRUCTURE:	35,000	x	.45	÷	100	=	$158.00	
CONTENTS :	10,000	x	.55	÷	100	=	55.00	
BASIC COVERAGE								$213.00
STRUCTURE:	65,000	x	.17	÷	100	=	$110.00	
CONTENTS :	10,000	x	.28	÷	100	=	28.00	
ADDITIONAL COVERAGE								$138.00
Subtotal: Basic + Additional Coverage								351.00
Expense Constant								20.00
TOTAL ANNUAL PREMIUM								$371.00

EXAMPLE #3 - POST-FIRM (A4 ZONE)

The property owner has a residential structure that has replacement cost of $100,000. The appraisal of contents within the structure is estimated to be $20,000. The house was built after the community entered the Regular Program and was built at the specified Base Flood Elevation, after the Effective Date of the FIRM (POST-FIRM) The owner desires to insure the structure for $100,000 and the contents for $20,000.





AMOUNT OF INSURANCE REQUESTED BY PROPERTY OWNER:

STRUCTURE:	100,000	=	35,000 Basic Coverage + 65,000 Additional Coverage
CONTENTS :	20,000	=	10,000 Basic Coverage + 10,000 Additional Coverage
TOTAL :	120,000		

PREMIUM COMPUTATIONS

	Coverage		Rate				Premium
STRUCTURE:	35,000	x	.25	÷	100	=	$ 88.00
CONTENTS :	10,000	x	.55	÷	100	=	55.00

BASIC COVERAGE $143.00

STRUCTURE:	65,000	x	.06	÷	100	=	$39.00
CONTENTS :	10,000	x	.11	÷	100	=	11.00

ADDITIONAL COVERAGE 50.00

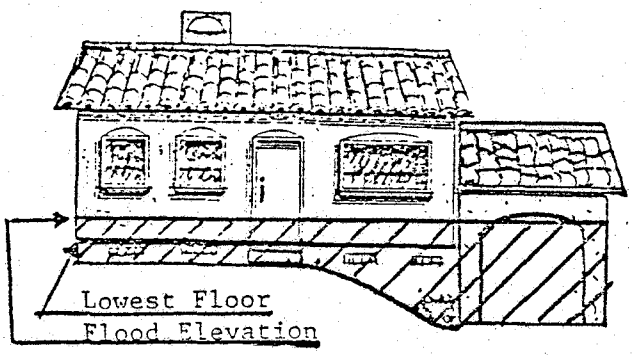
Subtotal: Basic + Additional Coverage $193.00

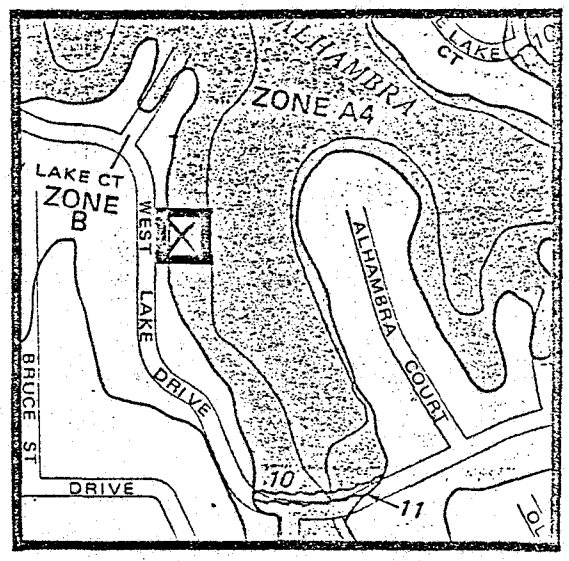
Expense Constant 20.00

TOTAL ANNUAL PREMIUM $213.00

EXAMPLE #4 - POST-FIRM (A4 ZONE)

The property owner has a residential structure that has replacement cost of $100,000. The appraisal of contents within the structure is estimated to be $20,000. The house was built after the community entered the Regular Program and was built one foot below (-1) the specified Base Flood Elevation, after the Effective Date of the FIRM, (POST-FIRM). In this example the community would have had to issue a variance to allow this new construction after entry to the Regular Program. The owner desires to insure the structure for $100,000 and the contents for $20,000.





AMOUNT OF INSURANCE REQUESTED BY PROPERTY OWNER:

STRUCTURE:	100,000	=	35,000 Basic Coverage + 65,000 Additional Coverage
CONTENTS :	20,000	=	10,000 Basic Coverage + 10,000 Additional Coverage
TOTAL :	120,000		

PREMIUM COMPUTATIONS

	Coverage		Rate				Premium
STRUCTURE:	35,000	x	.50	÷	100	=	$228.00
CONTENTS :	10,000	x	1.25	÷	100	=	123.00

BASIC COVERAGE $351.00

STRUCTURE:	65,000	x	.50	÷	100	=	$325.00
CONTENTS :	10,000	x	1.00	÷	100	=	100.00

ADDITIONAL COVERAGE $425.00

Subtotal: Basic + Additional Coverage $776.00

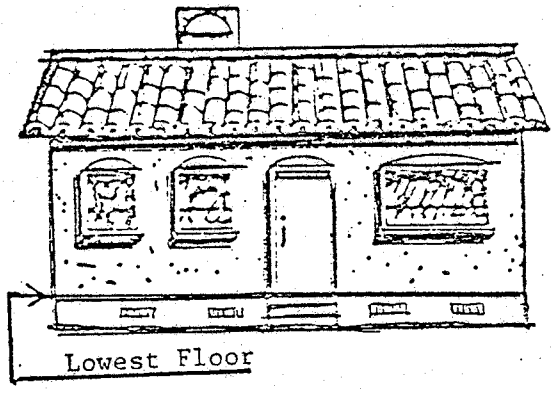
Expense Constant 20.00

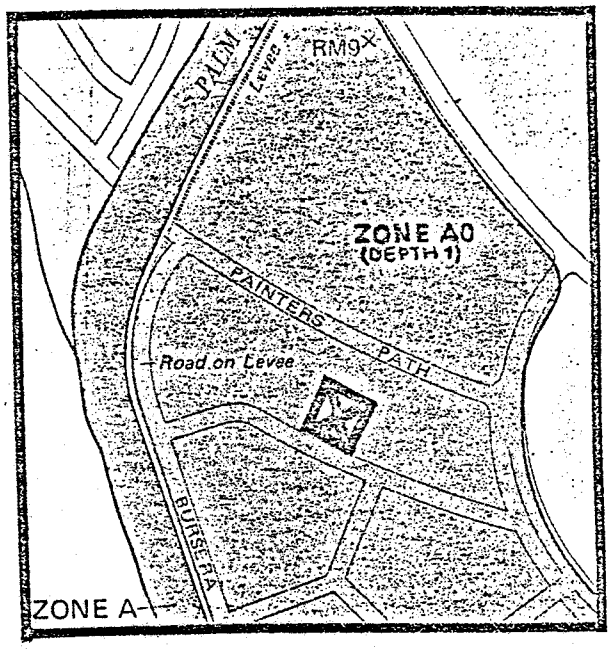
TOTAL ANNUAL PREMIUM $796.00

EXAMPLE #5 - POST-FIRM (AO ZONE)

The property owner has a residential structure that has replacement cost of $100,000. The appraisal of contents within the structure is estimated to be $20,000. The house was built after the community entered the Regular Program and was built at the proper depth number is this shallow flooding area, after the Effective Date of the FIRM (POST-FIRM). The owner desires to insure the structure for $100,000 and the contents for $20,000.

(This house is eligible for AOB rates)





AMOUNT OF INSURANCE REQUESTED BY PROPERTY OWNER:

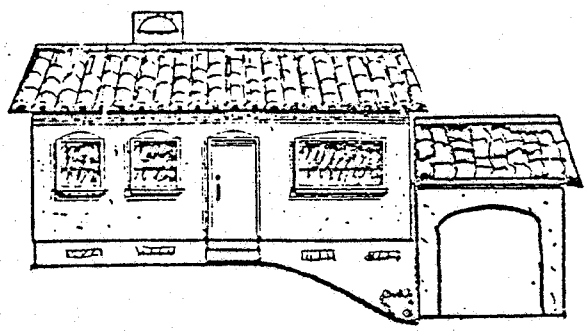
STRUCTURE:	100,000	=	35,000 Basic Coverage + 65,000 Additional Coverage
CONTENTS :	20,000	=	10,000 Basic Coverage + 10,000 Additional Coverage
TOTAL :	120,000		

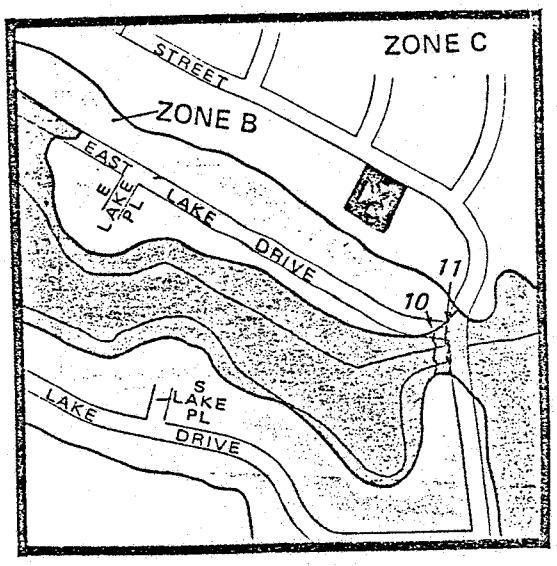
PREMIUM COMPUTATIONS

	Coverage		Rate				Premium	
STRUCTURE:	35,000	x	.15	÷	100	=	$ 53.00	
CONTENTS :	10,000	x	.15	÷	100	=	15.00	
BASIC COVERAGE								$ 68.00
STRUCTURE:	65,000	x	.06	÷	100	=	$ 39.00	
CONTENTS :	10,000	x	.11	÷	100	=	11.00	
ADDITIONAL COVERAGE								$ 50.00
Subtotal: Basic + Additional Coverage								$ 118.00
Expense Constant								20.00
TOTAL ANNUAL PREMIUM								$ 138.00

EXAMPLE #6 - POST-FIRM (B OR C ZONE)

The property owner has a residential structure that has replacement cost of $100,000. The appraisal of contents within the structure is estimated to be $20,000. The house was built after the community entered the Regular Program after the Effective Date of the FIRM, (POST-FIRM), in an area when the flood damage potential is a minimal. The owner desires to insure the structure for $100,000 & the contents for $20,000.





AMOUNT OF INSURANCE REQUESTED BY PROPERTY OWNER:

STRUCTURE:	100,000	=	35,000 Basic Coverage + 65,000 Additional Coverage
CONTENTS :	20,000	=	10,000 Basic Coverage + 10,000 Additional Coverage
TOTAL :	120,000		

PREMIUM COMPUTATIONS

	Coverage		Rate				Premium	
STRUCTURE:	35,000	x	.25	÷	100	=	$ 88.00	
CONTENTS :	10,000	x	.40	÷	100	=	40.00	
BASIC COVERAGE								$ 128.00
STRUCTURE:	65,000	x	.06	÷	100	=	$ 39.00	
CONTENTS :	10,000	x	.11	÷	100	=	11.00	
ADDITIONAL COVERAGE								$ 50.00
Subtotal: Basic + Additional Coverage								$ 178.00
Expense Constant								20.00
TOTAL ANNUAL PREMIUM								$ 198.00

24. LENDER'S RESPONSIBILITIES IN THE NFIP

Lenders play a vital role in reducing the financial burden that flood damages can cause to property. They must advise prospective property owners of flood hazards and, when necessary, require that flood insurance be purchased. Lenders assume this role under the auspices of the Flood Disaster Protection Act of 1973. That Act mandates the purchase of flood insurance under certain conditions, and regulations have been developed for lenders to ensure the requirements of the 1973 Act are implemented.

LOAN REVIEW

In reviewing loan applications it is the lender's responsibility to determine whether or not the property in question is located in a Special Flood Hazard Area (SFHA). The lender makes this determination by consulting a community's Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM). These maps, issued by the Federal Emergency Management Agency (FEMA), indicate SFHAs and A-Zones. Lenders can order maps from the National Flood Insurance Program at: P. O. Box 34604, Bethesda, Maryland 20817, or they may call toll free 1-800-638-6620.

When a property is determined to be located in a Special Flood Hazard Area, the lender must provide <u>written</u> notice of that fact to the borrower, regardless of whether or not the community is participating in the National Flood Insurance Program (NFIP). Such notice must be provided to the customer at least 10 days prior to closing of the loan.

The lender also holds the responsibility for providing written notice to the borrower of the availability of disaster assistance. For a structure in a non-participating community, for example, federal disaster assistance relief would <u>not</u> be available to the borrower in the event damage was caused by flooding in a Presidentially declared disaster. In a participating community, however, the disaster relief <u>would</u> be available.

FLOOD INSURANCE

In those communities participating in the NFIP, lenders granting loans, mortgages, and other financial assistance to buy, build, or improve properties located in Special Flood Hazard Areas must require flood insurance be purchased by the Borrower. This applies to all structures including mobile homes, and any walled and roofed buildings (other than a gas or liquid storage tank) that are principally above ground and affixed to a permanent site. The flood insurance purchase requirement is also applicable in instances when loans are made for other than real estate purposes, but for which flood prone property is used as collateral.

Flood insurance is required for any mortgage, loan, grant, or other funding that is in any way federally connected. Included is direct financing from a federal agency such as the Federal Housing Administration, Veterans Administration, or the Small Business Administration. Flood insurance is also required for conventional mortgages from a bank or a savings and loan that is regulated or insured by federal entities such as the Federal Deposit Insurance Corporation (FDIC), The Federal Savings and Loan Insurance Corporation (FSLIC) or the National Credit Union Administration (NCUA).

When a particular community is not participating in the NFIP or is sanctioned from the program, lenders are prohibited from providing financial assistance in the form of federally insured loans (FHA, VA, SBA) for the construction or acquisition of buildings or mobile homes.

Conventional mortgages or home improvement loans for buildings and mobile homes are not restricted in a non-participating community, although lenders, while assessing their capital and assets at risk, may exercise discretion in making such loans. In the case that a loan is granted, however, before the closing, the lender is required to notify the applicant: 1) there is a flood hazard, and 2) no disaster aid will be available in the event of a flood.

COVERAGE REQUIRED

In the case where flood insurance is required, the policy must provide structural coverage in an amount equal to the loan (less the land value) or the maximum amount available under the NFIP, whichever is less. (For communities in the emergency phase of the NFIP, the maximum amount of coverage available for a residential structure is $35,000. In regular phase communities, the maximum amount available is $185,000. Lenders, however, must require insurance coverage only up to $70,000.)

Contents coverage is not required except where the loan is secured by the contents. The lender should advise the applicant to consider purchasing contents coverage for his own protection.

If flood insurance is required, the lender should have his customer provide a "Certificate of Proof of Purchase of Flood Insurance" completed by an insurance agent to keep in the loan files. The flood insurance coverage must be annually renewed and maintained for the duration of the loan.

LOAN PROCEDURES

Although specific guidelines have not been issued for lenders by FEMA, the following loan processing procedures have been suggested:

1. Lending institutions should maintain on file the flood insurance maps for communities in their area.

2. A certification should be placed in the loan file showing the procedure used to determine whether or not the property is in a flood hazard area.

3. A form should be placed in the loan file showing that a 10-day notice was given to the borrower if the property is in a special flood hazard area.

4. Proof of insurance should be kept in the loan file if insurance is required on the property.

5. An agreement should be made with the borrower that he will continue to keep the flood insurance in force for the life of the loan.

6. It is advisable for the lender to be named the mortgagee on the flood insurance policy.

7. A notice must be provided to the borrower of property in a special flood hazard area informing him if federal disaster assistance will be available in the event of flood damage to that property.

APPEALS

In instances where property owners feel that their property has been incorrectly included in the special flood hazard area, an appeal for a "Letter of Map Amendment" may be directed to the Federal Emergency Management Agency. A "Letter of Map Amendment" or LOMA would, if granted, officially remove the mandatory flood insurance purchase requirement from the structure

The lender could then remove the insurance requirement and the property owner would be eligible for a rebate of his current insurance premium. The "Letter of Map Amendment" should be placed in the loan file upon receipt of the lender.

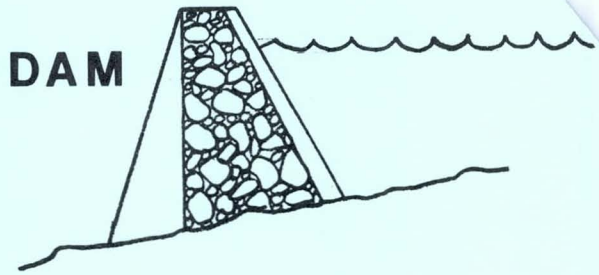
More detailed information on the "Letter of Map Amendment" process is in Chapter 21 of this Handbook.

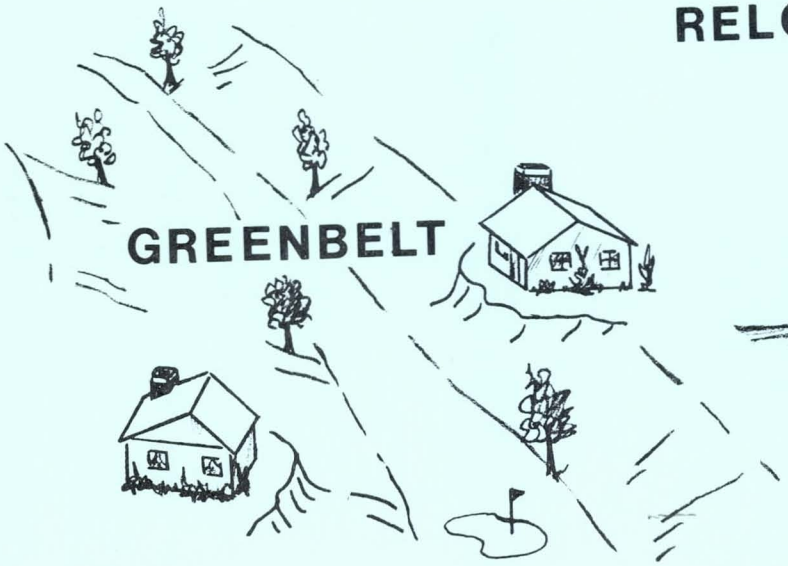
25. (RESERVED FOR FUTURE TOPIC)

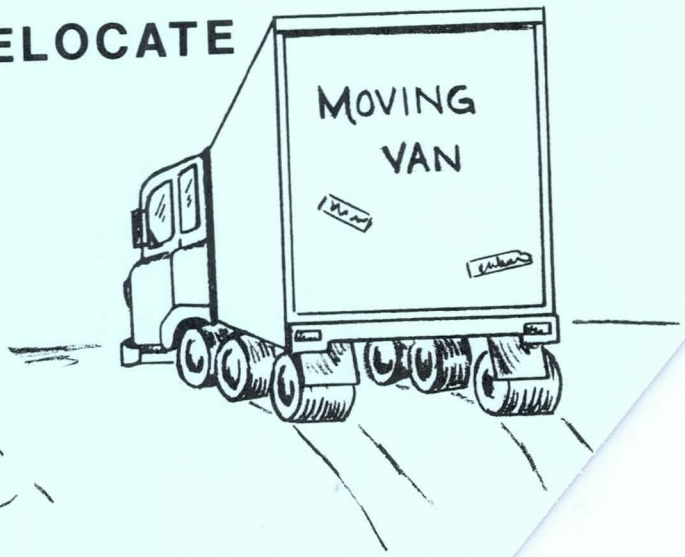
26. (RESERVED FOR FUTURE TOPIC)

PART IV

OTHER MEASURES TO REDUCE FLOOD LOSSES







27. INTRODUCTION TO PART IV

Floodplain management is intended to provide protection for future development from a flood which can be expected to be equalled or exceeded once every 100 years. However, many communities in Arizona have existing flood problems which will not be solved by floodplain management. There are other actions which a community and its residents may take to reduce damage to existing uses and minimize the disruption caused by a flood.

The first concern in a flood is the prevention of loss of life and the reductions of injury. Flood warning and disaster preparedness are the primary measures to reduce or solve these problems. Measures which can be worked on before a disaster to reduce the overall damage and trauma caused by flooding include the construction of flood control projects, floodproofing and relocation of flood-prone structures away from the floodplain.

Hazard mitigation measures are also aimed at reducing future flood losses. After flooding has occurred is the best time to assess the damages and define the most cost-effective methods of preventing it from recurring.

This can be accomplished in two ways - structurally and nonstructurally. Structural measures affect the floodwaters; nonstructural measures affect activity in the floodplain. Examples of structural methods are building a dam; rechanneling a stream or elevating an existing building. Nonstructural methods include flood warning systems and relocation.

28. EMERGENCY PREPAREDNESS

The Arizona Division of Emergency Services has been and will continue working with Arizona communities on emergency preparedness plans for floods and other local disasters. Preparedness planning includes both a determination of the specific actions that must be taken by the residents of the community and an assignment of tasks to be performed by various governmental agencies and volunteer groups during a particular type of emergency. A plan must be tailored to the needs and capabilities of the community.

A typical preparedness plan for a flood emergency would include the identification of the problems that would arise from a flood: which homes and businesses would be flooded or isolated; which transportation corridors would be affected; what public utilities would be impacted; and any indirect problems which might affect the public welfare, such as the contamination of a public water supply. The plan would identify the means of dealing with these problems and assign individuals or agencies to implement solutions during emergencies.

An example of this process is the series of actions which would be taken for a subdivision which is known to be subject to flooding. First an assessment would be made of the actual hazards which the residents would face. The Flood Insurance Study might be used to determine how deep the flooding would be during a major flood, how fast the water would rise, and how long the area would be flooded. If appropriate, evacuation routes would be chosen, and temporary housing would be considered. The residents should be informed of the hazard and told what to do if a flood occurs. If an accurate warning is available, the residents might have time to remove furnishings and take other actions to reduce damages. Public utilities should plan to cut power, gas and water to the area until the flood is past. The Sheriff or police would probably be involved in giving the notice to evacuate, assisting in the evacuation, and providing security against theft and vandalism while the area is evacuated.

The preparedness plans also consider measures to be taken during the recovery from the disaster. State, county and local officials would make an assessment to see if the damage warrants a county, State or Federal disaster declaration. An agency might have the responsibility for mapping the extent of flooding from high water marks. Various agencies might have specific responsibilities for direct assistance to residents and businesses which were damaged. The street or highway departments with jurisdiction and all utilities would immediately begin to restore service.

A current and workable emergency preparedness plan can save lives and greatly reduce property damage. Each community should periodically review its plan and ensure that all staff members

and public utilities are aware of their responsibilities under the plan.

These plans are tested periodically by having a disaster exercise with all affected state, local and volunteer agencies participating. In these exercises a scenario is written by staff members of Arizona Division of Emergency Services; Emergency Operating Centers are activated and the disaster situation is "played". When the exercise is over it is critiqued by all participants. If there are any "weak spots" in the preparedness plans, they are corrected at this time.

Any questions on your community's emergency preparedness plan should be addressed to your County Emergency Services Director or:

Arizona Division of Emergency Services
5636 East McDowell
Phoenix, Arizona 85008

29. Floodproofing

Floodproofing is an action which protects a structure and/or its contents against a flood which would otherwise cause damage. Floodproofing is used primarily to protect existing floodplain structures, although it is allowed for new commercial and industrial uses under the National Flood Insurance Act. For flood insurance purposes, floodproofing must require no human intervention to be effective.

There are two types of floodproofing which may be considered, depending on the cost of floodproofing and the nature of the facility to be protected. Wet floodproofing is a method which allows water to enter the structure with little or no damage. Dry floodproofing prevents floodwater up to a certain elevation from entering the facility.

Wet floodproofing may be effectively used where the structure itself would sustain little or no damage from a flood and where the uses of the facility can be protected from damage. An example of wet floodproofing is a building in the Salt River floodplain in Maricopa County. The requested use was for a facility where junk cars are dismantled for parts. The owner did not want to elevate the structure the 3 or 4 feet necessary to get it above the 100-year flood elevation because the cars are rolled in by hand. A permit was issued which required that the office and restrooms be elevated and that all electrical lines be placed above the flood elevation. The proposed location was amid numerous existing buildings, so the velocity of the floodwater was not considered a problem. To prevent collapse of the metal building from the pressure of water on the outside, expanded metal panels were used for some of the wall sections so that the water level inside the building could rise as water rose outside. The owner said that floodwater would not damage the parts which were to be stored in the building. If the building is flooded to the 100-year level, no files or office furniture will be damaged and utilities will not be affected. The owner will simply muck out the silt, hose down the building and go back to work.

Dry floodproofing may involve placing a dike or berm entirely around a property, with access provided by ramps over the dike. It may also include constructing a building with impermeable walls up to the flood elevation, with access to the building by ramps or stairs. A building which is floodproofed in this manner must be properly engineered to withstand the hydrostatic forces on the walls and buoyant forces on the entire structure.

Floodproofing is not considered suitable for new residential construction because of a risk which is inherent in floodproofing -- if a flood occurs which is higher than the elevation to which a building is floodproofed, the building will be suddenly

inundated up to the flood elevation. In an industrial or commercial building, it is assumed that people will be awake and aware of the flood threat, while in a residence, people may be asleep and unaware.

Floodproofing requires that the community maintain information in its files to indicate the structural soundness of the floodproofing measures, the floodproofed elevation of each building, and the elevation of the 100-year flood at the building's location.

30. FLOOD WARNING

Recognition that a flood is imminent and accurately forecasting the peak flood elevation and its arrival time can greatly improve a community's response to an emergency preparedness plan. Flood forecasting is a task which is generally too demanding for a single community, although most communities have developed at least a rudimentary procedure for obtaining flood information. Where a stream flows through more than one community, the downstream community may have a formal procedure for obtaining data from the upstream community. The community of Sedona has an elaborate and sophisticated system of upstream observers who report floods on tributaries to Oak Creek to the Red Rock Fire Department. The Fire Department has developed procedures (from recent floods) to forecast the arrival time and peak elevation at a bridge in Sedona.

The Flood Control District of Maricopa County has been working for several years to develop a system of radio-reporting raingauges and streamgauges. These gauges report to a computer which will forecast runoff from various watersheds which cause flooding in the County. The County was assisted in the planning of this system and the computer programs by the Arizona Department of Water Resources (ADWR) and the National Weather Service (NWS). A similar project is underway on the Canada del Oro watershed in Pima County.

The ADWR has been working in cooperation with the NWS and the United States Geological Survey (USGS) on a statewide flood warning system. This system consists of streamgauges and raingauges which send data via satellite to a receiving station in Phoenix. This data will be analyzed by computer and warnings will be issued through NWS channels to affected communities. When fully operational, the system will provide warning on the Santa Cruz, Rillito, San Pedro, San Francisco, Gila, Verde, Salt, Agua Fria, New, Hassayampa, and Little Colorado Rivers, Cave Creek, Tonto Creek, and Centennial Wash. As funds become available, this system will be expanded to include many of the smaller washes throughout the State where warning is needed.

Relatively inexpensive local floodwarning systems have been used successfully throughout the United States. These systems generally require constant inspection to ensure that they are in good operating condition and constant training of local officials in their response requirements. Any community which is interested in such a system should contact:

Joint Federal-State Flood Warning Office
2633 East Buckeye Road
Phoenix, Arizona 85034

31. EVACUATION OF THE FLOODPLAIN (RELOCATION)

The National Flood Insurance Act of 1968 requires that any floodplain structure damaged to more than 50% of its value must, if repaired, comply with the community's floodplain management ordinance, and the Arizona Revised Statutes require the same for any structure which needs anything more than "reasonable repair". This may mean that it is difficult or impossible to repair a severely damaged structure. For this reason, the Federal Government and the Arizona Legislature have looked at programs to provide assistance for owners of severely damaged structures.

The National Flood Insurance Act in Appendix A of Part 61 provides that if a structure is insured to 80% of its value or to the maximum allowed under the program (which is $185,000 for a single family residence, $200,000 for non-residential, and $250,000 for small business) the insurance will pay full replacement cost of the structure.

The Arizona Legislature recognized in 1979 that some communities would be so devastated by floods that they should be removed from the floodplain altogether. They determined that upon the request of at least five residents or business (and with several limitations), the Director of the Arizona Division of Emergency Services (ADES) could exchange State land for the floodplain land affected by the request. (ARS § 26-321 and § 26-322) by flood water.

The floodplain land exchange has been ruled unconstitutional. The State Land Department cannot sell land from the State Land Trust to any government agency in a private sale. All State Trust Lands must be sold at public auction. Also the State Land Department cannot diminish the value of State Trust Lands. They must increase the value of the trust land and increase its manageability. An exchange of Trust Lands for floodplain land would both diminish the value of the Trust Lands and decrease its manageablility.

It is possible under ARS §26-321, §26-322, for the State Legislature to direct that money be made available for the purchase of land which can be exchanged for floodplain land in relocation projects. Federal, State or privately owned land can be purchased.

In another area, the Kennecott Copper Corporation exchanged hillside land for floodplain land, ADES paid for site improvements and the residents paid to have their homes moved to the new site.

This program shows great promise for some of Arizona's most flood-prone communities.

Since this legislation, ADES has assisted in the relocation

of eight Arizona communities with a mix of Federal, State, local and private funds (See Figure 31-1). Through this program, 252 families, 25 businesses, a church and a community center have been or will be relocated away from flood danger.

Relocation of a community is a difficult undertaking, and ADES has used ingenuity and patience in performing this task. One community used its disaster relief funds and a grant from the Four Corners Regional Commission to pay for a new town hall to replace the old one which was damaged.

Questions on relocation should be addressed to:

Arizona Division of Emergency Services
5636 East McDowell
Phoenix, Arizona 85008

FIGURE 31-1 ARIZONA DIVISION OF EMERGENCY SERVICES

RELOCATION PROGRAM

1. VERDE LAKES ESTATES
   30 Families
   $300,000 Fully Funded

2. HOUND DOG ACRES
   25 Families
   Est. Cost $1,000,000
   888,000 Funded

3. ALLENVILLE
   55 Families
   Community Center, Park, Churches
   $3.5 Million Funded

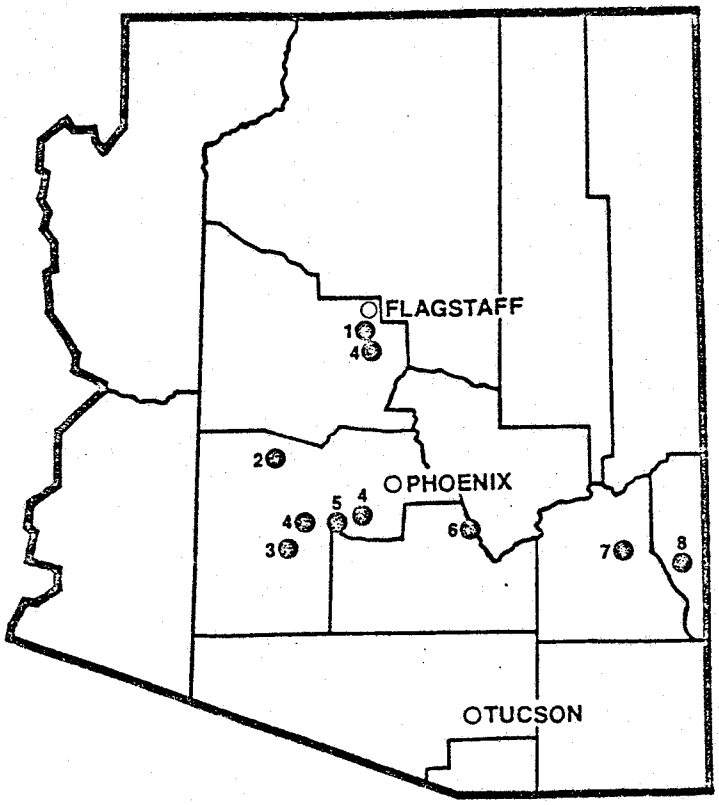
4. 1362 PROGRAM
   8 Families
   $370,000 Funded
   (East Allenville, S.W. Phoenix and Camp Verde)

5. HOLLY ACRES
   Final Determination Under Study

6. KEARNY
   8 Families
   $190,000
   ($60,000 Contributed by homeowners)
   Completed June, 1980

7. LITTLE HOLLYWOOD
   26 Families
   $300,000 Funded

8. DUNCAN
   100 Families
   25 Businesses
   $2.5 Million Funded;
   $1.5 Million Needed



32. STRUCTURAL FLOOD CONTROL MEASURES

Any construction effort which is designed to keep water away from properties which may be damaged by floods is a structural flood control measure. Floodproofing (see Chapter 29) may actually be a structural measure applied to a single structure. Structural measures consist of either a storage facility to catch floodwater and release it gradually or more efficient channel which will carry floodwater past a developed area without causing damage.

Flood control structures are usually quite expensive and are used to protect existing development rather than protect land for future development. The expense of flood control structures was one of the primary reasons for the National Flood Insurance Act of 1968.

Although some private developers of large parcels of land construct flood control measures in order to increase their amount of developable land, most structural flood control measures are constructed at public cost. A number of flood control structures have been built in Arizona, mostly with the financial assistance of the Soil Conservation Service or the U.S. Army Corp. of Engineers.

Prior to 1973, the planning and installation of flood control projects in Arizona was severely hampered by the inability of local sponsors to provide necessary project funding.

Although planning assistance and construction funds were available through programs administered by the Corps of Engineers and the Soil Conservation Service for certain categories of flood control projects, local sponsors were still required to provide 100 percent of the cost to acquire right-of-way and relocate utilities, roads, and bridges necessary to accomodate project construction. For smaller scale projects not eligible for federal programs, local sponsors were confronted with the additional burden of providing funding and personnel for project planning and design as well as for land rights, utiltiy relocations, and project construction. With increased Federal emphasis on floodplain management and other nonstructural measures, funding for these projects is becoming more and more difficult to obtain. Federally sponsored projects now under construction in Arizona were typically requested 20 or more years ago.

To assist sponsors in their efforts to implement flood control projects, the State Legislature created the Flood Control Assistance Program in 1973 which was directed toward expediting the planning and construction of federal projects within the State by providing financial assistance to local sponsors for reimbursement of 50 percent of the cost of local expenditures for project required right-of-way, utility, and road relocation work.

Due to the large number of smaller scale flooding problems throughout the State that do not meet the criteria for federal programs, and in recognition of the lengthy planning and funding authorization process encountered with federal projects, the State Legislature adopted two additional assistance programs in 1978. These programs were directed at assisting local sponsors by providing planning assistance as well as 50 percent of the funds required for land rights acquisition and project construction. These programs are not dependent upon any form of federal assistance, i.e., only State and local funds are involved. Specifically, the Flood Control Planning Program authorizes county flood control districts to request the Arizona Department of Water Resources to conduct studies and develop plans to control specific flooding problems within the districts. To complement the Planning Program, the State simultaneously enacted the Alternative Assistance Program which provides 50 percent of the installation cost of any flood control plan found to be economically justified as a result of the completed planning studies. The Alternative Assistance Program was subsequently modified in 1979 to allow participation, under certain conditions, by special flood control districts.

An additional assistance program, called the Flood Control Loan Program, was adopted in 1979. The objective of this program was to provide State loans for flood control projects implemented through the Alternative Assistance Program. These loans are provided in an effort to soften the impact and eliminate cash flow problems associated with the relatively large capital expenditures required of local sponsors in implementing flood control projects.

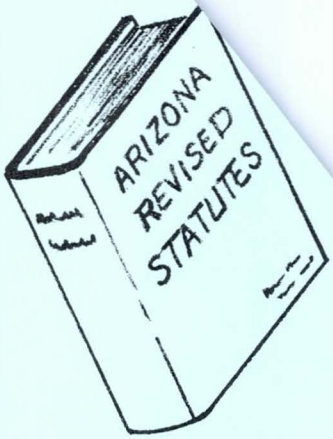
The Arizona Department of Water Resources (ADWR) is enabled by the Legislature to pay 50 percent of the cost of the local responsibility for these projects. The local responsibility includes the acquisition of rights-of-way and the relocation of utilities and roads. For most structural flood control measures, the local responsibility is at least half of the total project cost.

In 1978, the Arizona Legislature recognized that many communities needed smaller flood control projects than those supported by the Federal Government. They authorized the ADWR to undertake, at the request of the counties, planning studies to determine the feasibility and costs of such projects. They also authorized and funded the ADWR to pay 50 percent of the right-of-way, relocation and construction costs of such projects. At the same time, they named the Board of Supervisors for each county as the Board of Directors for a countywide flood control district and enabled them to assess a flood control tax to raise the revenues necessary to pay their portion of flood control projects. In 1979, the Legislature authorized the ADWR to loan the counties up to 50 percent of their share, so that a county needs only 25 percent of the cost of a project in order to get the project constructed.

Projects under these programs have proceeded from planning through construction in less than four years. A request for a reconnaissance study must be made to ADWR by the county flood control district (Board of Supervisors). As of July 1, 1982, 43 studies had been requested by 10 counties. Of the studies completed to date, 13 were determined to be infeasible, one was terminated at the request of the county, one has been constructed, three are planned for construction, and two are being reviewed by the counties which requested them.

Inquiries on any of the programs administered by the ADWR should be addressed to:

Chief, Flood Control and Planning Division
Arizona Department of Water Resources
99 East Virginia Avenue
Phoenix, Arizona 85004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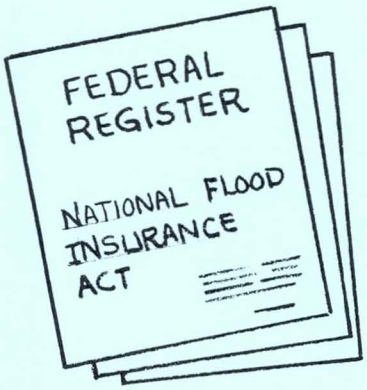
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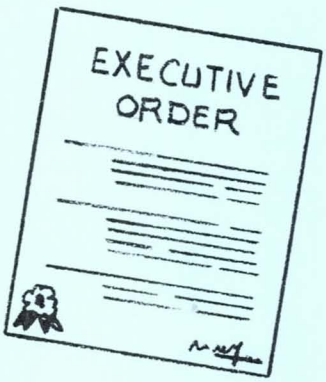
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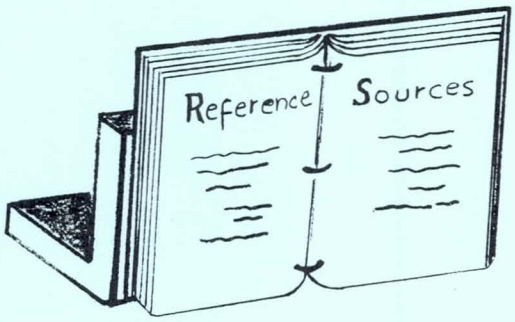
Reference
Sources

APPENDIX A

THE NATIONAL FLOOD INSURANCE ACT OF 1968

AS AMENDED

PART 59 - GENERAL PROVISIONS

PART 60 - CRITERIA FOR LAND MANAGEMENT AND USE

PART 61 - INSURANCE COVERAGE AND RATES

PART 62 - SALE OF INSURANCE AND ADJUSTMENT OF CLAIMS

PART 64 - COMMUNITIES ELIGIBLE FOR THE SALE OF INSURANCE

PART 65 - IDENTIFICTION AND MAPPING OF SPECIAL FLOOD HAZARD AREAS

PART 66 - CONSULTATION WITH LOCAL OFFICIALS

PART 67 - APPEALS FROM PROPOSED FLOOD ELEVATION DETERMINATIONS

PART 68 - ADMINISTRATIVE HEARING PROCEDURES

PART 70 - PROCEDURE FOR MAP CORRECTION

PART 75 - EXEMPTION OF STATE-OWNED PROPERTIES UNDER SELF-INSURANCE PLAN

PART 76 - STATE ASSISTANCE PROGRAM FOR THE NATIONAL FLOOD INSURANCE PROGRAM

PART 77 - ACQUISITION OF FLOOD DAMAGED STRUCTURES

NATIONAL FLOOD INSURANCE PROGRAM

PART 59—GENERAL PROVISIONS

Subpart A—General

Sec.
59.1 Definitions.
59.2 Description of program.
59.3 Emergency program.
59.4 References.

Subpart B—Eligibility Requirements

59.21 Purpose of subpart.

Sec.
59.22 Prerequisites for the sale of flood insurance.
59.23 Priorities for the sale of flood insurance under the regular program.
59.24 Suspension of community eligibility.

AUTHORITY: Sec. 7(d), 79 Stat. 670; 42 U.S.C. 3535(d); sec. 1306, 82 Stat. 575; 42 U.S.C. 4013; sec. 1361, 82 Stat. 587; 42 U.S.C. 4102; Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

SOURCE: 41 FR 46968, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

Subpart A—General

§ 59.1 Definitions.

As used in this subchapter—

"Act" means the statutes authorizing the National Flood Insurance Program that are incorporated in 42 U.S.C. 4001-4128.

"Actuarial rates"—see "risk premium rates."

"Administrator" means the Federal Insurance Administrator.

"Agency" means the Federal Emergency Management Agency, Washington DC.

"Applicant" means a community which indicates a desire to participate in the Program.

"Appurtenant Structure" means a structure which is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

"Area of shallow flooding" means a designated AO, AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

"Area of special flood-related erosion hazard" is the land within a community which is most likely to be subject to severe flood-related erosion losses. The area may be designated as Zone E on the Flood Hazard Boundary Map (FHBM). After the detailed evaluation of the special flood-related erosion hazard area in preparation for publication of the FIRM, Zone E may be further refined.

"Area of special flood hazard" is the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, AI-99, VO, or VI-30.

"Area of special mudslide (i.e., mudflow) hazard" is the land within a community most likely to be subject to severe mudslides (i.e., mudflows). The area may be designated as Zone M on the FHBM. After the detailed evaluation of the special mudslide (i.e., mudflow) hazard area in preparation for publication of the FIRM, Zone M may be further refined.

"Associate Director" means the Associate Director, State and Local Programs, and Support.

"Base flood" means the flood having a one percent chance of being equalled or exceeded in any given year.

"Building"—see *"structure."*

"Chargeable rates" mean the rates established by the Administrator pursuant to section 1308 of the Act for first layer limits of flood insurance on existing structures.

"Chief Executive Officer" of the community ("CEO") means the official of the community who is charged with the authority to implement and administer laws, ordinances and regulations for that community.

"Coastal high hazard area" means the area subject to high velocity waters, including but not limited to hurricane wave wash or tsunamis. The area is designated on a FIRM as Zone V1-30.

"Community" means any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce flood plain management regulations for the areas within its jurisdiction.

"Contents coverage" is the insurance on personal property within an enclosed structure, including the cost of debris removal, and the reasonable cost of removal of contents to minimize damage. Personal property may be household goods usual or incidental to residential occupancy, or merchandise, furniture, fixtures, machinery, equipment and supplies usual to other than residential occupancies.

"Criteria" means the comprehensive criteria for land management and use for flood-prone areas developed under 42 U.S.C. 4102 for the purposes set forth in Part 60 of this subchapter.

"Curvilinear Line" means the border on either a FHBM or FIRM that delineates the special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazard areas and consists of a curved or contour line that follows the topography.

"Deductible" means the fixed amount or percentage of any loss covered by insurance which is borne by the insured prior to the insurer's liability.

"Development" means 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.

"Director" means the Director of the Federal Emergency Management Agency.

"Eligible community" or *"participating community"* means a community for which the Associate Director has authorized the sale of flood insurance under the National Flood Insurance Program.

"Emergency Flood Insurance Program" or *"emergency program"* means the Program as implemented on an emergency basis in accordance with section 1336 of the Act. It is intended as a program to provide a first layer amount of insurance on all insurable structures before the effective date of the initial FIRM.

"Erosion" means the process of the gradual wearing away of land masses. This peril is not per se covered under the Program.

"Exception" means a waiver from the provisions of Part 60 of this subchapter directed to a community which relieves it from the requirements of a rule, regulation, order or other determination made or issued pursuant to the Act.

"Existing construction," means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures."

"Existing mobile home park or mobile home subdivision," means a parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale for which the construction of facilities for servicing the lot on which the mobile home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of flood plain management regulations adopted by a community.

"Existing structures" see *"existing construction."*

"Expansion to an existing mobile home park or mobile home subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the mobile homes are to be affixed (including the installation of utilities, either final site grading or pouring of concrete pads, or the construction of streets).

"Federal agency" means any department, agency, corporation, or other entity or instrumentality of the executive branch of the Federal Government, and includes the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation.

"Federal instrumentality responsible for the supervision, approval, regulation, or insuring of banks, savings and loan associations, or similar institutions" means the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Comptroller of the Currency, the Federal Home Loan Bank Board, the Federal Savings and Loan Insur-

ance Corporation, and the National Credit Union Administration.

"Financial assistance" means any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect Federal assistance, other than general or special revenue sharing or formula grants made to States.

"Financial assistance for acquisition or construction purposes" means any form of financial assistance which is intended in whole or in part for the acquisition, construction, reconstruction, repair, or improvement of any publicly or privately owned building or mobile home, and for any machinery, equipment, fixtures, and furnishings contained or to be contained therein, and shall include the purchase or subsidization of mortgages or mortgage loans but shall exclude assistance pursuant to the Disaster Relief Act of 1974 other than assistance under such Act in connection with a flood. It includes only financial assistance insurable under the Standard Flood Insurance Policy.

"First-layer coverage" is the maximum amount of structural and contents insurance coverage available under the Emergency Program.

"Flood" or *"Flooding"* means:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland or tidal waters.

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

(3) Mudslides (i.e., mudflows) which are proximately caused or precipitated by accumulations of water on or under the ground.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in (a)(1) of this section.

"Flood elevation determination" means a determination by the Associate Director of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

"Flood elevation study" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

"Flood Hazard Boundary Map" (FHBM) means an official map of a community, issued by the Associate Director, where the boundaries of the flood, mudslide (i.e., mudflow) related erosion areas having special hazards have been designated as Zone A, M, and/or E.

"Flood insurance" means the insurance coverage provided under the Program.

"Flood Insurance Rate Map" (FIRM) means an official map of a community, on which the Associate Director has delineated both the special hazard areas and the risk premium zones applicable to the community.

"Flood Insurance Study" see *"flood elevation study."*

"Flood plain" or *"flood-prone area"* means any land area susceptible to being inundated by water from any source (see definition of "flooding").

"Flood plain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and flood plain management regulations.

"Flood plain management regulations" means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a flood plain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of

flood damage prevention and reduction.

"Flood protection system" means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

"Flood proofing" means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

"Flood-related erosion" means the collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

"Flood-related erosion area" or *"flood-related erosion prone area"* means a land area adjoining the shore of a lake or other body of water, which due to the composition of the shoreline or bank and high water levels or wind-driven currents, is likely to suffer flood-related erosion damage.

"Flood-related erosion area management" means the operation of an overall program of corrective and preventive measures for reducing flood-related erosion damage, including but not limited to emergency preparedness plans, flood-related erosion control works, and flood plain management regulations.

"Floodway"—see *"regulatory floodway."*

"Floodway encroachment lines" mean the lines marking the limits of floodways on Federal, State and local flood plain maps.

"Freeboard" means a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

"General Counsel" means the General Counsel of the Federal Emergency Management Agency.

"Habitable Floor" means any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a "Habitable Floor."

"Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Independent scientific body" means a non-federal technical or scientific organization involved in the study of land use planning, flood plain management, hydrology, geology, geography, or any other related field of study concerned with flooding.

"Insurance adjustment organization" means any organization or person engaged in the business of adjusting loss claims arising under the Standard Flood Insurance Policy.

"Insurance company" or *"insurer"* means any person or organization authorized to engage in the insurance business under the laws of any State.

"Mangrove stand" means an assemblage of mangrove trees which are mostly low trees noted for a copious development of interlacing adventitous roots above the ground and which contain one or more of the following species: Black mangrove (Avicennia Nitida); red mangrove (Rhizophora Mangle); white mangrove (Languncularia Racemosa); and buttonwood (Conocarpus Erecta).

"Map" means the Flood Hazard Boundary Map (FHBM) or the Flood

Insurance Rate Map (FIRM) for a community issued by the Agency.

"Mean sea level" means the average height of the sea for all stages of the tide.

"Mobile home" means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers. The term includes, but it is not limited to, the definition of "mobile home" as set forth in regulations governing the Mobile Home Safety and Construction Standards Program (24 CFR 3282.7).

"Mobile home park or mobile home subdivision"—see *"existing mobile home park or mobile home subdivision"* or *"new mobile home park or mobile home subdivision."*

"Mudslide" (i.e., mudflow) describes a condition where there is a river, flow or inundation of liquid mud down a hillside usually as a result of a dual condition of loss of brush cover, and the subsequent accumulation of water on or under the ground preceded by a period of unusually heavy or sustained rain. A mudslide (i.e., mudflow) may occur as a distinct phenomenon while a landslide is in progress, and will be recognized as such by the Administrator only if the mudflow, and not the landslide, is the proximate cause of damage that occurs.

"Mudslide (i.e., mudflow) area management" means the operation of an overall program of corrective and preventive measures for reducing mudslide (i.e., mudflow) damage, including but not limited to emergency preparedness plans, mudslide control works, and flood plain management regulations.

"Mudslide (i.e., mudflow) prone area" means an area with land surfaces and slopes of unconsolidated material where the history, geology and climate indicate a potential for mudflow.

"New construction" means, for the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later. For flood plain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a flood plain management regulation adopted by a community.

"New mobile home park or mobile home subdivision" means a parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale for which the construction of facilities for servicing the lot on which the mobile home is to be affixed (including at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed on or after the effective date of flood plain management regulations adopted by a community.

"100-year flood" see *"base flood."*

"Participating community," also known as an "eligible community," means a community in which the Associate Director has authorized the sale of flood insurance.

"Person" includes any individual or group of individuals, corporation, partnership, association, or any other entity, including State and local governments and agencies.

"Policy" means the Standard Flood Insurance Policy.

"Premium" means the total premium payable by the insured for the coverage or coverages provided under the policy. The calculation of the premium may be based upon either chargeable rates or risk premium rates, or a combination of both.

"Principally above ground" means that at least 51 percent of the actual cash value of the structure, less land value, is above ground.

"Program" means the National Flood Insurance Program authorized by 42 U.S.C. 4001–4128.

"Project cost" means the total financial cost of a flood protection system (including design, land acquisition, construction, fees, overhead, and profits), unless the Federal Insurance Associate Director determines a given "cost" not to be a part of such project cost.

"Regular Program" means the Program authorized by the Act under which risk premium rates are required

for the first half of available coverage (also known as "first layer" coverage) for all new construction and substantial improvements started on or after the effective date of the FIRM, or after December 31, 1974, for FIRM's effective on or before that date. All buildings, the construction of which started before the effective date of the FIRM, or before January 1, 1975, for FIRMs effective before that date, are eligible for first layer coverage at either subsidized rates or risk premium rates, whichever are lower. Regardless of date of construction, risk premium rates are always required for the second layer coverage and such coverage is offered only after the Associate Director has completed a risk study for the community.

"Regulatory floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

"Risk premium rates" mean those rates established by the Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with Section 1307 of the Act and the accepted actuarial principles. "Risk premium rates" include provisions for operating costs and allowances.

"Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

"Sand dunes" mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.

"Scientifically incorrect". The methodology(ies) and/or assumptions which have been utilized are inappropriate for the physical processes being evaluated or are otherwise erroneous.

"Second layer coverage" means an additional limit of coverage equal to the amounts made available under the Emergency Program, and made available under the Regular Program.

"Servicing company" means a corporation, partnership, association, or any other organized entity which contracts with the Federal Insurance Administration to service insurance policies under the National Flood Insurance Program for a particular area.

"Sheet flow area"—see *"area of shallow flooding."*

"Special hazard area" means an area having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards, and shown on an FHBM or FIRM as Zone A, AO, AI-99, AH, VO, VI-30, M or E.

"Standard Flood Insurance Policy" means the flood insurance policy issued by the Federal Insurance Administrator, or an insurer pursuant to an arrangement with the Administrator pursuant to Federal statutes and regulations.

"Start of construction" means for flood plain management purposes the first placement of permanent construction of a structure (other than a mobile home) on a site, such as the pouring of slabs or footings or any work beyond the stage of excavation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not as part of the main structure. For a structure (other than a mobile home) without a basement or poured footings, the "start of construction" includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation. For mobile homes not within a mobile home park or mobile home subdivision, "start of construction" means the affixing of the mobile home to its permanent site. For mobile homes within mobile home parks or mobile home subdivisions, "start of construction" is the date on which the construction of facilities for servicing the site on which the mobile home is to be affixed (including, at a minimum, the construction of streets, either final site grading or the pouring of concrete pads, and installation of utilities) is completed. "Start of construction," for insurance purposes (for other than new construction or substantial im-

provements under the Coastal Barrier Resources Act [Pub. L. 97-348]) includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. Also, add after the definition of "Eligible community" the following definition: "Elevated Building" for insurance purposes, means a non-basement building which was initially designed or built to have the bottom of the lowest floor beam (or equivalent floor support) above the ground level by extended wall foundations, shear walls, posts, piers, pilings or columns such that there would be air space between the lowest floor beam and the ground.

"State" means any State, the District of Columbia, the territories and possessions of the United States, the Commonwealth of Puerto Rico, and the Trust Territory of the Pacific Islands.

"State coordinating agency" means the agency of the state government, or other office designated by the Governor of the state or by state statute at the request of the Associate Director to assist in the implementation of the National Flood Insurance Program in that state.

"Storm cellar" means a space below grade used to accommodate occupants of the structure and emergency supplies as a means of temporary shelter against severe tornado or similar wind storm activity.

"Structure" means, for flood plain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a mobile home. "Structure" for insurance coverage purposes, means a walled and roofed building, other than a gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a mobile home on foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

"Subsidized rates" mean the rates established by the Administrator involving in the aggregate a subsidization by the Federal Government.

"Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either, (a) before the improvement or repair is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

"Technically incorrect". The methodology(ies) utilized has been erroneously applied due to mathematical or measurement error, changed physical conditions, or insufficient quantity or quality of input data.

"Variance" means a grant of relief by a community from the terms of a flood plain management regulation.

"Water surface elevation" means the projected heights in relation to Mean Sea Level reached by floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

(National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended (42 U.S.C. 4001-4128); and Secretary's delegation of authority to Federal Insurance Administrator, 34 FR 2680, February 27, 1969, as amended (39 FR 2787, January 24, 1974); Reorganization Plan No. 3 of 1978 (43 FR 41943); E.O. 12127, dated March 31, 1979 (44 FR 19367))

[41 FR 46968, Oct. 26, 1976, as amended at 43 FR 7140, Feb. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 46 FR 1274, Jan. 6, 1981; 47 FR 43061, Sept. 30, 1982; 48 FR 31644, July 11, 1983; 48 FR 39068, Aug. 29, 1983; 48 FR 44543 and 44552, Sept. 29, 1983]

§ 59.2 Description of program.

(a) The National Flood Insurance Act of 1968 was enacted by Title XIII of the Housing and Urban Development Act of 1968 (Pub. L. 90-448, August 1, 1968) to provide previously unavailable flood insurance protection to property owners in flood-prone areas. Mudslide (as defined in § 59.1) protection was added to the Program by the Housing and Urban Development Act of 1969 (Pub. L. 91-152, December 24, 1969). Flood-related erosion (as defined in § 59.1) protection was added to the Program by the Flood Disaster Protection Act of 1973 (Pub. L. 93-234, December 31, 1973). The Flood Disaster Protection Act of 1973 requires the purchase of flood insurance on and after March 2, 1974, as a condition of receiving any form of Federal or federally-related financial assistance for acquisition or construction purposes with respect to insurable buildings and mobile homes within an identified special flood, mudslide (i.e., mudflow), or flood-related erosion hazard area that is located within any community participating in the Program. The Act also requires that on and after July 1, 1975, or one year after a community has been formally notified by the Associate Director of its identification as community containing one or more special flood, mudslide (i.e., mudflow), or flood-related erosion hazard areas, no such Federal financial assistance, shall be provided within such an area unless the community in which the area is located is then participating in the Program, subject to certain exceptions. See FIA published Guidelines at § 59.4(c).

(b) To qualify for the sale of federally-subsidized flood insurance a community must adopt and submit to the Associate Director as part of its application, flood plain management regulations, satisfying at a minimum the criteria set forth at Part 60 of this subchapter, designed to reduce or avoid future flood, mudslide (i.e., mudflow) or flood-related erosion damages. These regulations must include effective enforcement provisions.

(c) Minimum requirements for adequate flood plain management regulations are set forth in § 60.3 for flood-prone areas, in § 60.4 for mudslide (i.e., mudflow) areas and in § 60.5 for flood-related erosion areas. Those applicable requirements and standards are based on the amount of technical information available to the community.

(National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended (42 U.S.C. 4001-4128); and Secretary's delegation of authority to Federal Insurance Administrator, 34 FR 2680, February 27, 1969, as amended (39 FR 2787, January 24, 1974))

[41 FR 46968, Oct. 26, 1976, as amended at 43 FR 7140, Feb. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

§ 59.3 Emergency program.

The 1968 Act required a risk study to be undertaken for each community before it could become eligible for the sale of flood insurance. Since this requirement resulted in a delay in providing insurance, the Congress, in section 408 of the Housing and Urban Development Act of 1969 (Pub. L. 91-152, December 24, 1969), established an Emergency Flood Insurance Program as a new Section 1336 of the National Flood Insurance Act (42 U.S.C. 4056) to permit the early sale of insurance in flood-prone communities. The emergency program does not affect the requirement that a community must adopt adequate flood plain management regulations pursuant to Part 60 of this subchapter but permits insurance to be sold before a study is conducted to determine risk premium rates for the community. The program still requires upon the effective date of a FIRM the charging of risk premium rates for all new construction and substantial improvements and for higher limits of coverage for existing structures.

(National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968), effective January 28,

1969 (33 FR 17804, November 28, 1968), as amended (42 U.S.C. 4001-4128); and Secretary's delegation of authority to Federal Insurance Administrator, 34 FR 2680, February 27, 1969, as amended (39 FR 2787, January 24, 1974))

[43 FR 7140, Feb. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44543, Sept. 29, 1983]

§ 59.4 References.

(a) The following are statutory references for the National Flood Insurance Program, under which these regulations are issued:

(1) National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968), Pub. L. 90-448, approved August 1, 1968, 42 U.S.C. 4001 et seq.

(2) Housing and Urban Development Act of 1969 (Pub. L. 91-152, approved December 24, 1969).

(3) Flood Disaster Protection Act of 1973 (87 Stat. 980), Pub. L. 93-234, approved December 31, 1973.

(4) Section 816 of the Housing and Community Development Act of 1974 (87 Stat. 975), Pub. L. 93-383, approved August 22, 1974.

(5) Pub. L. 5-128 (effective October 12, 1977).

(6) The above statutes are included in 42 U.S.C. 4001 et seq.

(b) The following are references relevant to the National Flood Insurance Program:

(1) Executive Order 11988 (Floodplain Management, dated May 24, 1977 (42 FR 26951, May 25, 1977)).

(2) The Flood Control Act of 1960 (Pub. L. 86-645).

(3) Title II, section 314 oi Title III and section 406 of Title IV of the Disaster Relief Act of 1974 (Pub. L. 93-288).

(4) Coastal Zone Management Act (Pub. L. 92-583), as amended Pub. L. 94-370.

(5) Water Resources Planning Act (Pub. L. 89-90), as amended Pub L. 94-112 (October 16, 1975).

(6) Title I, National Environmental Policy Act (Pub. L. 91-190).

(7) Land and Water Conservation Fund Act (Pub. L. 89-578), and subsequent amendments thereto.

(8) Water Resources Council, Principals and Standards for Planning, Water and Related Land Resources (38 FR 24778-24869, September 10, 1973).

(9) Executive Order 11593 (Protection and Enchancement of the Cultural Environment), dated May 13, 1971 (36 FR 8921, May 15, 1971).

(10) 89th Cong., 2nd Session, H.D. 465.

(11) Required land use element for comprehensive planning assistance under section 701 of the Housing Act of 1954, as amended by the Housing and Community Development Act of 1974 (24 CFR 600.72).

(12) Executive Order 11990 (Protection of Wetlands, dated May 24, 1977 (42 FR 26951, May 25, 1977)).

(13) Water Resources Council (Guidance for Floodplain Management) (42 FR 52590, September 30, 1977).

(14) Unified National Program for Floodplain Management of the United States Water Resources Council, July 1976.

(c) The following reference guidelines represent the views of the Federal Insurance Administration with respect to the mandatory purchase of flood insurance under section 102 of the Flood Disaster Protection Act of 1973: Mandatory Purchase of Flood Insurance Guidelines (39 FR 26186-26193, July 17, 1974; 40 FR 16710, April 14, 1975; 40 FR 54277-54278, November 21, 1975; and 41 FR 2426, January 16, 1976).

(National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended (42 U.S.C. 4001-4128); and Secretary's delegation of authority to Federal Insurance Administrator, 34 FR 2680, February 27, 1969, as amended (39 FR 2787, January 24, 1974))

[41 FR 46968, Oct. 26, 1976, as amended at 43 FR 7140, Feb. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979]

Subpart B—Eligibility Requirements

§ 59.21 Purpose of subpart.

This subpart lists actions that must be taken by a community to become eligible and to remain eligible for the Program.

§ 59.22 Prerequisites for the sale of flood insurance.

(a) To qualify for flood insurance availability a community shall apply for the entire area within its jurisdiction, and shall submit:

(1) Copies of legislative and executive actions indicating a local need for flood insurance and an explicit desire to participate in the National Flood Insurance Program;

(2) Citations to State and local statutes and ordinances authorizing actions regulating land use and copies of the local laws and regulations cited;

(3) A copy of the flood plain management regulations the community has adopted to meet the requirements of §§ 60.3, 60.4 and/or § 60.5 of this subchapter. This submission shall include copies of any zoning, building, and subdivision regulations, health codes, special purpose ordinances (such as a flood plain ordinance, grading ordinance, or flood-related erosion control ordinance), and any other corrective and preventive measures enacted to reduce or prevent flood, mudslide (i.e., mudflow) or flood-related erosion damage;

(4) A list of the incorporated communities within the applicant's boundaries;

(5) Estimates relating to the community as a whole and to the flood, mudslide (i.e., mudflow) and flood-related erosion prone areas concerning:

(i) Population;

(ii) Number of one to four family residences;

(iii) Number of small businesses; and

(iv) Number of all other structures.

(6) Address of a local repository, such as a municipal building, where the Flood Hazard Boundary Maps (FHBM's) and Flood Insurance Rate Maps (FIRM's) will be made available for public inspection;

(7) A summary of any State or Federal activities with respect to flood plain, mudslide (i.e., mudflow) or flood-related erosion area management within the community, such as federally-funded flood control projects and State-administered flood plain management regulations;

(8) A commitment to recognize and duly evaluate flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards in all official actions in the areas having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards and to take such other official action reasonably necessary to carry out the objectives of the program; and

(9) A commitment to:

(i) Assist the Associate Director at his/her request, in his/her delineation of the limits of the areas having special flood, mudslide (i.e., mudflow) or flood-related erosion hazards;

(ii) Provide such information concerning present uses and occupancy of the flood plain, mudslide (i.e., mudflow) or flood-related erosion areas as the Administrator and the Associate Director may request;

(iii) Maintain for public inspection and furnish upon request, for the determination of applicable flood insurance risk premium rates within all areas having special flood hazards identified on a FHBM or FIRM, any certificates of flood-proofing, and information on the elevation (in relation to mean sea level) of the level of the lowest habitable floor (including basement if habitable) of all new or substantially improved structures, and include whether or not such structures contain a basement, and if the structure has been floodproofed, the elevation (in relation to mean sea level) to which the structure was floodproofed;

(iv) Cooperate with Federal, State, and local agencies and private firms which undertake to study, survey, map, and identify flood plain, mudslide (i.e., mudflow) or flood-related erosion areas, and cooperate with neighboring communities with respect to the management of adjoining flood plain, mudslide (i.e., mudflow) and/or flood-related erosion areas in order to prevent aggravation of existing hazards;

(v) Upon occurrence, notify the Associate Director in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed or no longer has authority to adopt and enforce flood plain management regulations for a particular area. In order that all FHBM's and FIRM's accurately represent the community's bound aries, include within such notification

a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished flood plain management regulatory authority.

(b) An applicant shall legislatively:

(1) Appoint or designate the agency or official with the responsibility, authority, and means to implement the commitments made in paragraph (a) of this section, and

(2) Designate the official responsible to submit an annual report to the Associate Director concerning the community participation in the Program including, but not limited to the development and implementation of flood plain management regulations.

(c) The documents required by paragraph (a) of this section and evidence of the actions required by paragraph (b) of this section shall be submitted to the Federal Emergency Management Agency, Washington DC 20472.

[41 FR 46968, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979 and amended at 48 FR 29318, June 24, 1983; 48 FR 44543 and 44552, Sept. 29, 1983]

§ 59.23 Priorities for the sale of flood insurance under the regular program.

Flood-prone, mudslide (i.e., mudflow) and flood-related erosion prone communities are placed on a register of areas eligible for ratemaking studies and then selected from this register for ratemaking studies on the basis of the following considerations—

(a) Recommendations of State officials;

(b) Location of community and urgency of need for flood insurance;

(c) Population of community and intensity of existing or proposed development of the flood plain, the mudslide (i.e., mudflow) and the flood-related erosion area;

(d) Availability of information on the community with respect to its flood, mudslide (i.e., mudflow) and flood-related erosion characteristics and previous losses;

(e) Extent of State and local progress in flood plain, mudslide (i.e., mudflow) area and flood-related erosion area management, including adoption of flood plain management regulations consistent with related ongoing programs in the area.

§ 59.24 Suspension of community eligibility.

(a) A community eligible for the sale of flood insurance shall be subject to suspension from the Program for failing to submit copies of adequate flood plain management regulations meeting the minimum requirements of paragraphs (b), (c), (d) or (e) of § 60.3 or paragraph (b) of § 60.4 or § 60.5, within six months from the date the Associate Director provides the data upon which the flood plain regulations for the applicable paragraph shall be based. Where there has not been any submission by the community, the Associate Director shall notify the community that 90 days remain in the six month period in order to submit adequate flood plain management regulations. Where there has been an inadequate submission, the Associate Director shall notify the community of the specific deficiencies in its submitted flood plain management regulations and inform the community of the amount of time remaining within the six month period. If, subsequently, copies of adequate flood plain management regulations are not received by the Associate Director, he shall, no later than 30 days before the expiration of the original six month period, provide written notice to the community and to the state and assure publication in the FEDERAL REGISTER under Part 64 of this subchapter, of the community's loss of eligibility for the sale of flood insurance, such suspension to become effective upon the expiration of the six month period. Should the community remedy the defect and the Associate Director receive copies of adequate flood plain management regulations within the notice period, the suspension notice shall be rescinded by the Associate Director. If the Associate Director receives notice from the State that it has enacted adequate flood plain management regulations for the community within the notice period, the suspension notice shall be rescinded by the Associate Director. The community's eligibility shall remain terminated after suspension

until copies of adequate flood plain management regulations have been received and approved by the Associate Director.

(b) A community eligible for the sale of flood insurance which fails to adequately enforce or repeals its flood plain management regulations meeting the minimum requirements set forth in §§ 60.3, 60.4 or § 60.5 shall be subject to suspension of its Program eligibility. Under such circumstances, the Associate Director shall grant the community 30 days in which to show cause why it should not be suspended. The Associate Director may conduct a hearing before commencing suspensive action. If a community is to be suspended, the Associate Director shall inform it upon 30 days prior written notice and publication in the FEDERAL REGISTER under Part 64 of this subchapter of its loss of eligibility for the sale of flood insurance. In the event of impending suspension, the Associate Director shall issue a press release to the local media explaining the reasons and effects of the suspension. The community's eligibility shall only be reinstated by the Associate Director upon his receipt of a local legislative or executive measure reaffirming the community's formal intent to adequately enforce the flood plain management regulations adopted in compliance with the requirements of this subpart, together with evidence of action taken by the community to abrogate, to the maximum extent possible, the action(s) which caused the suspension. In such cases, the Associate Director, in order to evaluate the community's performance under the terms of its submission, may either conditionally reinstate the community's eligibility or withhold reinstatement for a period not to exceed one year from the date of his receipt of the submission.

(c) The Administrator shall promptly notify the servicing agent and any insurers issuing flood insurance pursuant to an arrangement with the Administrator of those communities whose eligibility has been suspended. Flood insurance shall not be sold or renewed in any suspended community. Policies sold or renewed within a community during a period of ineligibility are deemed to be voidable by the Administrator whether or not the parties to sale or renewal had actual notice of the ineligibility.

[41 FR 46968, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44543 and 44552, Sept. 29, 1983]

PART 60—CRITERIA FOR LAND MANAGEMENT AND USE

Subpart A—Requirements for Flood Plain Management Regulations

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AUTHORITY: Sec. 7(d), 79 Stat. 670; 42 U.S.C. 3535(d); Sec. 1306, 82 Stat. 575; 42 U.S.C. 4013; Sec. 1361, 82 Stat. 587; 42 U.S.C. 4102; Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963).

SOURCE: 41 FR 46975, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

Subpart A—Requirements for Flood Plain Management Regulations

§ 60.1 Purpose of subpart.

(a) The Act provides that flood insurance shall not be sold or renewed under the program within a community, unless the community has adopted adequate flood plain management regulations consistent with Federal criteria. Responsibility for establishing such criteria is delegated to the Associate Director.

(b) This subpart sets forth the criteria developed in accordance with the Act by which the Associate Director will determine the adequacy of a community's flood plain management regulations. These regulations must be legally-enforceable, applied uniformly throughout the community to all privately and publicly owned land within flood-prone, mudslide (i.e., mudflow) or flood-related erosion areas, and the community must provide that the regulations take precedence over any less restrictive conflicting local laws, ordinances or codes. Except as otherwise provided in § 60.6, the adequacy of such regulations shall be determined on the basis of the standards set forth in § 60.3 for flood-prone areas, § 60.4 for mudslide areas and § 60.5 for flood-related erosion areas.

(c) Nothing in this subpart shall be construed as modifying or replacing the general requirement that all eligible communities must take into account flood, mudslide (i.e., mudflow) and flood-related erosion hazards, to the extent that they are known, in all official actions relating to land management and use.

(d) The criteria set forth in this subpart are minimum standards for the adoption of flood plain management regulations by flood-prone, mudslide (i.e., mudflow)-prone and flood-related erosion-prone communities. Any community may exceed the minimum criteria under this part by adopting more comprehensive flood plain management regulations utilizing the standards such as contained in Subpart C of this part. In some instances, community officials may have access to information or knowledge of conditions that require, particularly for human safety, higher standards than the minimum criteria set forth in Subpart A of this part. Therefore, any flood plain management regulations adopted by a State or a community which are more restrictive than the criteria set forth in this part are encouraged and shall take precedence.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

§ 60.2 Minimum compliance with flood plain management criteria.

(a) A flood-prone community applying for flood insurance eligibility shall meet the standards of § 60.3(a) in order to become eligible if a FHBM has not been issued for the community at the time of application. Thereafter, the community will be given a period of six months from the date the Associate Director provides the data set forth in § 60.3 (b), (c), (d), or (e) in which to meet the requirements of the applicable paragraph. If a community has received a FHBM, but has not yet applied for Program eligibility, the community shall apply for eligibility directly under the standards set forth in § 60.3(b). Thereafter, the community will be given a period of six months from the date the Associate Director provides the data set forth in § 60.3 (c), (d), or (e) in which to meet the requirements of the applicable paragraph.

(b) A mudslide (i.e., mudflow)-prone community applying for flood insurance eligibility shall meet the standards of § 60.4(a) to become eligible. Thereafter, the community will be given a period of six months from the date the mudslide (i.e., mudflow) areas having special mudslide hazards are delineated in which to meet the requirements of § 60.4(b).

(c) A flood-related erosion-prone community applying for flood insurance eligibility shall meet the standards of § 60.5(a) to become eligible. Thereafter, the community will be given a period of six months from the date the flood-related erosion areas having special erosion hazards are delineated in which to meet the requirements of § 60.5(b).

(d) Communities identified in Part 65 of this subchapter as containing

more than one type of hazard (e.g., any combination of special flood, mudslide [i.e., mudflow], and flood-related erosion hazard areas) shall adopt flood plain management regulations for each type of hazard consistent with the requirements of §§ 60.3, 60.4 and 60.5.

(e) Local flood plain management regulations may be submitted to the State Coordinating Agency designated pursuant to § 60.25 for its advice and concurrence. The submission to the State shall clearly describe proposed enforcement procedures.

(f) The community official responsible for submitting annual reports to the Associate Director pursuant to § 59.22(b)(2) of this subchapter shall also submit copies of each annual report to any State Coordinating Agency.

(g) A community shall assure that its comprehensive plan is consistent with the flood plain management objectives of this part.

(h) The community shall adopt and enforce flood plain management regulations based on data provided by the Associate Director. Without prior approval of the Associate Director, the community shall not adopt and enforce flood plain management regulations based upon modified data reflecting natural or man-made physical changes.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 29318, June 24, 1983; 48 FR 44552, Sept. 29, 1983]

§ 60.3 Flood plain management criteria for flood-prone areas.

The Associate Director will provide the data upon which flood plain management regulations shall be based. If the Associate Director has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review and reasonably utilize data available from other Federal, State or other sources pending receipt of data from the Associate Director. However, when special flood hazard area designations and water surface elevations have been furnished by the Associate Director, they shall apply. The symbols defining such special flood hazard designations are set forth in § 64.3 of this subchapter. In all cases the minimum requirements governing the adequacy of the flood plain management regulations for flood-prone areas adopted by a particular community depend on the amount of technical data formally provided to the community by the Associate Director. Minimum standards for communities are as follows:

(a) When the Associate Director has not defined the special flood hazard areas within a community, has not provided water surface elevation data, and has not provided sufficient data to identify the floodway or coastal high hazard area, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall:

(1) Require permits for all proposed construction or other development in the community, including the placement of mobile homes, so that it may determine whether such construction or other development is proposed within flood-prone areas;

(2) Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334;

(3) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements (including the placement of prefabricated buildings and mobile homes) shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure, (ii) be constructed with materials and utility equipment resistant to flood damage, and (iii) be constructed by methods and practices that minimize flood damage;

(4) Review subdivision proposals and other proposed new development to determine whether such proposals will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in a flood-prone

area, any such proposals shall be reviewed to assure that (i) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards;

(5) Require within flood-prone areas new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems; and

(6) Require within flood-prone areas (i) new and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and (ii) onsite waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.

(b) When the Associate Director has designated areas of special flood hazards (A zones) by the publication of a community's FHBM, but has neither produced water surface elevation data nor identified a floodway or coastal high hazard area, the community shall:

(1) Require permits for all proposed construction and other developments including the placement of mobile homes, within Zone A on the community's FHBM;

(2) Require the application of the standards in paragraphs (a) (2), (3), (4), (5) and (6) of this section to development within Zone A on the community's FHBM;

(3) Require that all subdivision proposals and other proposed new developments greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data;

(4) Obtain, review, and reasonably utilize any base flood elevation data available from a Federal, State, or other source, until such other data has been provided by the Associate Director, as criteria for requiring that (i) all new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated to or above the base flood level and (ii) all new construction and substantial improvements of nonresidential structures have the lowest floor (including basement) elevated or floodproofed to or above the base flood level;

(5) For the purpose of the determination of applicable flood insurance risk premium rates within Zone A on a community's FHBM, (i) obtain the elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not such structures contain a basement, (ii) obtain, if the structure has been floodproofed, the elevation (in relation to mean sea level) to which the structure was floodproofed, and (iii) maintain a record of all such information with the official designated by the community under § 59.22(a)(9)(iii);

(6) Notify, in riverine situations, adjacent communities and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Associate Director;

(7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;

(8) Require that all mobile homes to be placed within Zone A on a community's FHBM shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors. Specific requirements shall be that (i) over-the-top ties be provided at each of the four corners of the mobile home, with two additional ties per side at intermediate locations and mobile homes less than 50 feet long requiring one additional tie per side; (ii) frame ties be provided at each corner of the home with five additional ties per side at intermediate points and mobile homes less than 50 feet long requiring four additional ties per side; (iii) all components of the anchoring system be capable of carrying a force of 4,800 pounds; and (iv) any additions to the mobile home be similarly anchored;

(9) Require that an evacuation plan indicating alternate vehicular access and escape routes be filed with appro-

priate Disaster Preparedness Authorities for mobile home parks and mobile home subdivisions located within Zone A on the community's FHBM.

(c) When the Associate Director has provided a notice of final flood elevations for one or more special flood hazard areas on the community's FIRM and, if appropriate, has designated other special flood hazard areas without base flood elevations on the community's FIRM, but has not identified a regulatory floodway or coastal high hazard area, the community shall:

(1) Require the standards of paragraph (b) of this section within all A1-30 zones unnumbered A zones, AH zones, and AO zones, on the community's FIRM;

(2) Require that all new construction and substantial improvements of residential structures within Zones A1-30 and AH zones on the community's FIRM have the lowest floor (including basement) elevated to or above the base flood level, unless the community is granted an exception by the Associate Director for the allowance of basements and/or storm cellars in accordance with § 60.6(b)(3) and (b)(4);

(3) Require that all new construction and substantial improvements of nonresidential structures within Zones A1-30 and AH zones on the community's firm (i) have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(4) Provide that where floodproofing is utilized for a particular structure in accordance with paragraphs (c)(3) and (c)(8) of this section or (b)(3) of § 60.6 either (i) a registered professional engineer or architect shall certify that the floodproofing methods are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the base flood, and a record of such certificates indicating the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained with the official designated by the community under § 59.22(a)(9)(iii); or, (ii) a certified copy of a local regulation containing detailed flood-proofing specifications which satisfy the watertight performance standards of paragraph (c)(3) of this section or (b)(3) of § 60.6 shall be submitted to the Associate Director for approval;

(5) Require within Zones A1-30 on the community's FIRM for new mobile home parks and mobile home subdivisions, for expansions to existing mobile home parks and mobile home subdivisions, and for existing mobile home parks and mobile home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds 50% of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced, that (i) stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be at or above the base flood level, (ii) adequate surface drainage and access for a hauler are provided, and (iii) in the instance of elevation on pilings, lots are large enough to permit steps, piling foundations are placed in stable soil no more than ten feet apart, and reinforcement is provided for pilings more than six feet above the ground level;

(6) Require for all mobile homes to be placed within Zones A1-30 on the community's FIRM, but not into a mobile home park or mobile home subdivision that (i) stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be at or above the base flood level, (ii) adequate surface drainage and access for a hauler are provided, and (iii) in the instance of elevation on pilings, lots are large enough to permit steps, piling foundations are placed in stable soil no more than 10 feet apart, and reinforcement is provided for piers more than six feet above ground level;

(7) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of residential structures have

the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified);

(8) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of nonresidential structures (i) have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or (ii) together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard specified in § 60.3(c)(3)(ii);

(9) Require within any A99 zones on a community's FIRM the standards of paragraphs (a)(1) through (a)(4)(i) and (b)(5) through (b)(9) of this section;

(10) Require until a regulatory floodway is designated, that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

(11) Require within Zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(d) When the Associate Director has provided a notice of final base flood elevations within Zones A1-30 on the community's FIRM and, if appropriate, has designated AO zones A99 zones and unnumbered A zones on the community's FIRM, and has provided data from which the community shall designate its regulatory floodway, the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (c)(9) of this section;

(2) Select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point;

(3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway that would result in any increase in flood levels within the community during the occurrence of the base flood discharge;

(4) Prohibit the placement of any mobile homes, except in an existing mobile home park or mobile home subdivision, within the adopted regulatory floodway.

(e) When the Associate Director has provided a notice of final base flood elevations within Zones A1-30 on the community's FIRM and, if appropriate, has designated AO zones, A99 zones and unnumbered A zones on the community's FIRM, and has identified on the community's FIRM Zone V1-30 (coastal high hazard area), the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (c)(10) of this section;

(2) For the purpose of the determination of applicable flood insurance risk premium rates within Zone V1-30 on a community's FIRM, (i) obtain the elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not such structures contain a basement, (ii) obtain, if the structure has been flood-proofed, the elevation (in relation to mean sea level) to which the structure was floodproofed, and (iii) maintain a record of all such information with the official designated by the community under § 59.22(a)(9)(iii);

(3) Provide that all new construction within Zones V1-30 on the community's FIRM is located landward of the reach of mean high tide;

(4) Provide (i) that all new construction and substantial improvements within Zones V1-30 on the community's FIRM are elevated on adequately

anchored pilings or columns, and securely anchored to such piles or columns so that the lowest portion of the structural members of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level and (ii) that a registered professional engineer or architect certify that the structure is securely anchored to adequately anchored pilings or columns in order to withstand velocity waters and hurricane wave wash;

(5) Provide that all new construction and substantial improvements within Zones V1-30 on the community's FIRM have the space below the lowest floor free of obstructions or be constructed with "breakaway walls" intended to collapse under stress without jeopardizing the structural support of the structure so that the impact on the structure by abnormally high tides or wind-driven water is minimized. Such temporarily enclosed space shall not be used for human habitation;

(6) Prohibit the use of fill for structural support of buildings within Zones V1-30 on the community's FIRM;

(7) Prohibit the placement of mobile homes, except in existing mobile home parks and mobile home subdivisions, within Zones V1-30 on the community's FIRM;

(8) Prohibit man-made alteration of sand dunes and mangrove stands within Zones V1-30 on the community's FIRM which would increase potential flood damage.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 46 FR 1274, Jan. 6, 1981; 48 FR 44552, Sept. 29, 1983]

§ 60.4 Flood plain management criteria for mudslide (i.e., mudflow)-prone areas.

The Associate Director will provide the data upon which flood plain management regulations shall be based. If the Associate Director has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review, and reasonably utilize data available from other Federal, State or other sources pending receipt of data from the Associate Director. However, when special mudslide (i.e., mudflow) hazard area designations have been furnished by the Associate Director, they shall apply. The symbols defining such special mudslide (i.e., mudflow) hazard designations are set forth in § 64.3 of this subchapter. In all cases, the minimum requirements for mudslide (i.e., mudflow)-prone areas adopted by a particular community depend on the amount of technical data provided to the community by the Associate Director. Minimum standards for communities are as follows:

(a) When the Associate Director has not yet identified any area within the community as an area having special mudslide (i.e., mudflow) hazards, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall

(1) Require permits for all proposed construction or other development in the community so that it may determine whether development is proposed within mudslide (i.e., mudflow)-prone areas;

(2) Require review of each permit application to determine whether the proposed site and improvements will be reasonably safe from mudslides (i.e., mudflows). Factors to be considered in making such a determination should include but not be limited to (i) the type and quality of soils, (ii) any evidence of ground water or surface water problems, (iii) the depth and quality of any fill, (iv) the overall slope of the site, and (v) the weight that any proposed structure will impose on the slope;

(3) Require, if a proposed site and improvements are in a location that may have mudslide (i.e., mudflow) hazards, that (i) a site investigation and further review be made by persons qualified in geology and soils engineering, (ii) the proposed grading, excavations, new construction, and substantial improvements are adequately designed and protected against mudslide (i.e., mudflow) damages, (iii) the proposed grading, excavations, new construction and substantial improvements do not aggravate the existing hazard by creating either on-site or

off-site disturbances, and (iv) drainage, planting, watering, and maintenance be such as not to endanger slope stability.

(b) When the Associate Director has delineated Zone M on the community's FIRM, the community shall:

(1) Meet the requirements of paragraph (a) of this section; and

(2) Adopt and enforce a grading ordinance or regulation in accordance with data supplied by the Associate Director which (i) regulates the location of foundation systems and utility systems of new construction and substantial improvements, (ii) regulates the location, drainage and maintenance of all excavations, cuts and fills and planted slopes, (iii) provides special requirements for protective measures including but not necessarily limited to retaining walls, buttress fills, subdrains, diverter terraces, benchings, etc., and (iv) requires engineering drawings and specifications to be submitted for all corrective measures, accompanied by supporting soils engineering and geology reports. Guidance may be obtained from the provisions of the 1973 edition and any subsequent edition of the Uniform Building Code, sections 7001 through 7006, and 7008 through 7015. The Uniform Building Code is published by the International Conference of Building Officials, 50 South Los Robles, Pasadena, California 91101.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

§ 60.5 Flood plain management criteria for flood-related erosion-prone areas.

The Associate Director will provide the data upon which flood plain management regulations for flood-related erosion-prone areas shall be based. If the Associate Director has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review, and reasonably utilize data available from other Federal, State or other sources, pending receipt of data from the Associate Director. However, when special flood-related erosion hazard area designations have been furnished by the Associate Director they shall apply. The symbols defining such special flood-related erosion hazard designations are set forth in § 64.3 of this subchapter. In all cases the minimum requirements governing the adequacy of the flood plain management regulations for flood-related erosion-prone areas adopted by a particular community depend on the amount of technical data provided to the community by the Associate Director. Minimum standards for communities are as follows:

(a) When the Associate Director has not yet identified any area within the community as having special flood-related erosion hazards, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall

(1) Require the issuance of a permit for all proposed construction, or other development in the area of flood-related erosion hazard, as it is known to the community;

(2) Require review of each permit application to determine whether the proposed site alterations and improvements will be reasonably safe from flood-related erosion and will not cause flood-related erosion hazards or otherwise aggravate the existing flood-related erosion hazard; and

(3) If a proposed improvement is found to be in the path of flood-related erosion or to increase the erosion hazard, require the improvement to be relocated or adequate protective measures to be taken which will not aggravate the existing erosion hazard.

(b) When the Associate Director has delineated Zone E on the community's FIRM, the community shall

(1) Meet the requirements of paragraph (a) of this section; and

(2) Require a setback for all new development from the ocean, lake, bay, riverfront or other body of water, to create a safety buffer consisting of a natural vegetative or contour strip. This buffer will be designated by the Associate Director according to the flood-related erosion hazard and erosion rate, in conjunction with the anticipated "useful life" of structures, and depending upon the geologic, hydrologic, topographic and climatic characteristics of the community's land. The buffer may be used for suit-

able open space purposes, such as for agricultural, forestry, outdoor recreation and wildlife habitat areas, and for other activities using temporary and portable structures only.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

§ 60.6 Variances and exceptions.

(a) The Associate Director does not set forth absolute criteria for granting variances from the criteria set forth in §§ 60.3, 60.4, and 60.5. The issuance of a variance is for flood plain management purposes only. Insurance premium rates are determined by statute according to actuarial risk and will not be modified by the granting of a variance. The community, after examining the applicant's hardships, shall approve or disapprove a request. While the granting of variances generally is limited to a lot size less than one-half acre (as set forth in paragraph (a)(2) of this section), deviations from that limitation may occur. However, as the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases. The Associate Director may review a community's findings justifying the granting of variances, and if that review indicates a pattern inconsistent with the objectives of sound flood plain management, the Associate Director may take appropriate action under § 59.24(b) of this subchapter. Variances may be issued by a community for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or a State Inventory of Historic Places, without regard to the procedures set forth in this section. Procedures for the granting of variances by a community are as follows:

(1) Variances shall not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result;

(2) Variances may be issued by a community for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the procedures of paragraphs (a) (3), (4), (5) and (6) of this section;

(3) Variances shall only be issued by a community upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;

(5) A community shall notify the applicant in writing over the signature of a community official that (i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as $25 for $100 of insurance coverage and (ii) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions as required in paragraph (a)(6) of this section; and

(6) A community shall (i) maintain a record of all variance actions, including justification for their issuance, and (ii) report such variances issued in its annual report submitted to the Associate Director.

(b)(1) The requirement that each flood-prone, mudslide (i.e., mudflow)-prone, and flood-related erosion prone community must adopt and submit adequate flood plain management regulations as a condition of initial and continued flood insurance eligibility is statutory and cannot be waived, and such regulations shall be adopted by a community within the time periods specified in §§ 60.3, 60.4 or § 60.5. However, certain exceptions from the standards contained in this subpart may be permitted where the Associate Director recognizes that, because of extraordinary circumstances, local conditions may render the application

of certain standards the cause for severe hardship and gross inequity for a particular community. Consequently, a community proposing the adoption of flood plain management regulations which vary from the standards set forth in §§ 60.3, 60.4, or § 60.5, shall explain in writing to the Associate Director the nature and extent of and the reasons for the exception request and shall include sufficient supporting economic, environmental, topographic, hydrologic, and other scientific and technical data, and data with respect to the impact on public safety and the environment.

(2) The Associate Director shall prepare a Special Environmental Clearance to determine whether the proposal for an exception under paragraph (b)(1) of this section will have significant impact on the human environment. The decision whether an Environmental Impact Statement or other environmental document will be prepared, will be made in accordance with the procedures set out in 44 CFR Part 10. Ninety or more days may be required for an environmental quality clearance if the proposed exception will have significant impact on the human environment thereby requiring an EIS.

(3) In accordance with paragraph (b)(1) of this section, a community may propose flood plain management regulations which adopt standards for basements below the base flood level. The Associate Director may approve the proposal when the basements are to be designed so that below the base flood level the structure is watertight (i.e., completely dry without human intervention during flooding) with walls impermeable to the passage of water and structural components with the capability to resist hydrostatic and hydrodynamic loads and effects of buoyancy.

(4) In accordance with paragraph (b)(1) of this section, a community may propose flood plain management regulations to permit storm cellars below the base flood level. The Associate Director may approve the proposal for storm cellars (as defined in § 59.1 of this subchapter) after the community has demonstrated an historical need for storm cellars as a means of shelter against recorded occurrences of severe tornado or similar wind storm activities in the area and based upon a community's acknowledgement that (i) all new storm cellars shall be limited to nonhabitable uses, (ii) all electrical, heating and other mechanical equipment shall be above the base flood level for all new storm cellars; and (iii) the design of storm cellars shall assure that the integrity of the main structure during time of flooding is maintained.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44543 and 44552, Sept. 29, 1983]

§ 60.7 Revisions of criteria for flood plain management regulations.

From time to time Part 60 may be revised as experience is acquired under the Program and new information becomes available. Communities will be given six months from the effective date of any new regulation to revise their flood plain management regulations to comply with any such changes.

§ 60.8 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

Subpart B—Requirements for State Flood Plain Management Regulations

§ 60.11 Purpose of this subpart.

(a) A State is considered a "community" pursuant to § 59.1 of this subchapter; and, accordingly, the Act provides that flood insurance shall not be sold or renewed under the Program unless a community has adopted adequate flood plain management regulations consistent with criteria established by the Associate Director.

(b) This subpart sets forth the flood plain management criteria required for State-owned properties located within special hazard areas identified by the Associate Director. A State shall satisfy such criteria as a condition to the purchase of a Standard Flood Insurance Policy for a State-owned structure or its contents, or as a condition to the approval by the Ad-

ministrator, pursuant to Part 75 of this subchapter, of its plan of self-insurance.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

§ 60.12 Flood plain management criteria for State-owned properties in special hazard areas.

(a) The State shall comply with the minimum flood plain management criteria set forth in §§ 60.3, 60.4, and 60.5. A State either shall:

(1) Comply with the flood plain management requirements of all local communities participating in the program in which State-owned properties are located; or

(2) Establish and enforce flood plain management regulations which, at a minimum, satisfy the criteria set forth in §§ 60.3, 60.4, and 60.5.

(b) The procedures by which a state government adopts and administers flood plain management regulations satisfying the criteria set forth in §§ 60.3, 60.4 and 60.5 may vary from the procedures by which local governments satisfy the criteria.

(c) If any State-owned property is located in a non-participating local community, then the State shall comply with the requirements of paragraph (a)(2) of this section for the property.

§ 60.13 Noncompliance.

If a State fails to submit adequate flood plain management regulations applicable to State-owned properties pursuant to § 60.12 within six months of the effective date of this regulation, or fails to adequately enforce such regulations, the State shall be subject to suspensive action pursuant to § 59.24. Where the State fails to adequately enforce its flood plain management regulations, the Associate Director shall conduct a hearing before initiating such suspensive action.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

Subpart C—Additional Considerations in Managing Flood-Prone, Mudslide (i.e., Mudflow)-Prone and Flood-Related Erosion-Prone Areas

§ 60.21 Purpose of this subpart.

The purpose of this subpart is to encourage the formation and adoption of overall comprehensive management plans for flood-prone, mudslide (i.e., mudflow)-prone and flood-related erosion-prone areas. While adoption by a community of the standards in this subpart is not mandatory, the community shall completely evaluate these standards.

§ 60.22 Planning considerations for flood-prone areas.

(a) The flood plain management regulations adopted by a community for flood-prone areas should:

(1) Permit only that development of flood-prone areas which (i) is appropriate in light of the probability of flood damage and the need to reduce flood losses, (ii) is an acceptable social and economic use of the land in relation to the hazards involved, and (iii) does not increase the danger to human life;

(2) Prohibit nonessential or improper installation of public utilities and public facilities in flood-prone areas.

(b) In formulating community development goals after the occurrence of a flood disaster, each community shall consider—

(1) Preservation of the flood-prone areas for open space purposes;

(2) Relocation of occupants away from flood-prone areas;

(3) Acquisition of land or land development rights for public purposes consistent with a policy of minimization of future property losses;

(4) Acquisition of frequently flood-damaged structures;

(c) In formulating community development goals and in adopting flood plain management regulations, each community shall consider at least the following factors—

(1) Human safety;

(2) Diversion of development to areas safe from flooding in light of the need to reduce flood damages and in

light of the need to prevent environmentally incompatible flood plain use;

(3) Full disclosure to all prospective and interested parties (including but not limited to purchasers and renters) that (i) certain structures are located within flood-prone areas, (ii) variances have been granted for certain structures located within flood-prone areas, and (iii) premium rates applied to new structures built at elevations below the base flood substantially increase as the elevation decreases;

(4) Adverse effects of flood plain development on existing development;

(5) Encouragement of floodproofing to reduce flood damage;

(6) Flood warning and emergency preparedness plans;

(7) Provision for alternative vehicular access and escape routes when normal routes are blocked or destroyed by flooding;

(8) Establishment of minimum floodproofing and access requirements for schools, hospitals, nursing homes, orphanages, penal institutions, fire stations, police stations, communications centers, water and sewage pumping stations, and other public or quasi-public facilities already located in the flood-prone area, to enable them to withstand flood damage, and to facilitate emergency operations;

(9) Improvement of local drainage to control increased runoff that might increase the danger of flooding to other properties;

(10) Coordination of plans with neighboring community's flood plain management programs;

(11) The requirement that all new construction and substantial improvements in areas subject to subsidence be elevated above the base flood level equal to expected subsidence for at least a ten year period;

(12) For riverine areas, requiring subdividers to furnish delineations for floodways before approving a subdivision;

(13) Prohibition of any alteration or relocation of a watercourse, except as part of an overall drainage basin plan. In the event of an overall drainage basin plan, provide that the flood carrying capacity within the altered or relocated portion of the watercourse is maintained;

(14) Requirement of setbacks for new construction within Zones V1-30 on a community's FIRM;

(15) Requirement of additional elevation above the base flood level for all new construction and substantial improvements within Zones A1-30 and V1-30 on the community's FIRM to protect against such occurrences as wave wash and floating debris, to provide an added margin of safety against floods having a magnitude greater than the base flood, or to compensate for future urban development;

(16) Requirement of consistency between state, regional and local comprehensive plans and flood plain management programs;

(17) Requirement of pilings or columns rather than fill, for the elevation of structures within flood-prone areas, in order to maintain the storage capacity of the flood plain and to minimize the potential for negative impacts to sensitive ecological areas;

(18) Prohibition, within any floodway or coastal high hazard area, of plants or facilities in which hazardous substances are manufactured.

§ 60.23 Planning considerations for mudslide (i.e., mudflow)-prone areas.

The planning process for communities identified under Part 65 of this subchapter as containing Zone M, or which indicate in their applications for flood insurance pursuant to § 59.22 of this subchapter that they have mudslide (i.e., mudflow) areas, should include—

(a) The existence and extent of the hazard;

(b) The potential effects of inappropriate hillside development, including

(1) Loss of life and personal injuries, and

(2) Public and private property losses, costs, liabilities, and exposures resulting from potential mudslide (i.e., mudflow) hazards;

(c) The means of avoiding the hazard including the (1) availability of land which is not mudslide (i.e., mudflow)-prone and the feasibility of developing such land instead of further encroaching upon mudslide (i.e., mudflow) areas, (2) possibility of public acquisition of land, easements, and de-

velopment rights to assure the proper development of hillsides, and (3) advisability of preserving mudslide (i.e., mudflow) areas as open space;

(d) The means of adjusting to the hazard, including the (1) establishment by ordinance of site exploration, investigation, design, grading, construction, filing, compacting, foundation, sewerage, drainage, subdrainage, planting, inspection and maintenance standards and requirements that promote proper land use, and (2) provision for proper drainage and subdrainage on public property and the location of public utilities and service facilities, such as sewer, water, gas and electrical systems and streets in a manner designed to minimize exposure to mudslide (i.e., mudflow) hazards and prevent their aggravation;

(e) Coordination of land use, sewer, and drainage regulations and ordinances with fire prevention, flood plain, mudslide (i.e., mudflow), soil, land, and water regulation in neighboring communities;

(f) Planning subdivisions and other developments in such a manner as to avoid exposure to mudslide (i.e., mudflow) hazards and the control of public facility and utility extension to discourage inappropriate development;

(g) Public facility location and design requirements with higher site stability and access standards for schools, hospitals, nursing homes, orphanages, correctional and other residential institutions, fire and police stations, communication centers, electric power transformers and substations, water and sewer pumping stations and any other public or quasi-public institutions located in the mudslide (i.e., mudflow) area to enable them to withstand mudslide (i.e., mudflow) damage and to facilitate emergency operations; and

(h) Provision for emergencies, including:

(1) Warning, evacuation, abatement, and access procedures in the event of mudslide (i.e., mudflow),

(2) Enactment of public measures and initiation of private procedures to limit danger and damage from continued or future mudslides (i.e., mudflow),

(3) Fire prevention procedures in the event of the rupture of gas or electrical distribution systems by mudslides,

(4) Provisions to avoid contamination of water conduits or deterioration of slope stability by the rupture of such systems,

(5) Similar provisions for sewers which in the event of rupture pose both health and site stability hazards and

(6) Provisions for alternative vehicular access and escape routes when normal routes are blocked or destroyed by mudslides (i.e., mudflow);

(i) The means for assuring consistency between state, areawide, and local comprehensive plans with the plans developed for mudslide (i.e., mudflow)-prone areas;

(j) Deterring the nonessential installation of public utilities and public facilities in mudslide (i.e., mudflow)-prone areas.

§ 60.24 Planning considerations for flood-related erosion-prone areas.

The planning process for communities identified under Part 65 of this subchapter as containing Zone E or which indicate in their applications for flood insurance coverage pursuant to § 59.22 of this subchapter that they have flood-related erosion areas should include—

(a) The importance of directing future developments to areas not exposed to flood-related erosion;

(b) The possibility of reserving flood-related erosion-prone areas for open space purposes;

(c) The coordination of all planning for the flood-related erosion-prone areas with planning at the State and Regional levels, and with planning at the level of neighboring communities;

(d) Preventive action in E zones, including setbacks, shore protection works, relocating structures in the path of flood-related erosion, and community acquisition of flood-related erosion-prone properties for public purposes;

(e) Consistency of plans for flood-related erosion-prone areas with comprehensive plans at the state, regional and local levels.

§ 60.25 State coordination.

(a) State participation in furthering the objectives of this part should include:

(1) Encouraging and assisting communities in qualifying for participation in the Program;

(2) Enacting where necessary, legislation to enable counties and municipalities to regulate flood, mudslide (i.e., mudflow) and flood-related erosion area development;

(3) Designating an agency of the State government to be responsible for coordinating Federal, State, and local aspects of flood plain, mudslide (i.e., mudflow) area and flood-related erosion area management activities in the State;

(4) Assisting in the delineation of flood-related erosion areas, mudslide (i.e., mudflow) areas, riverine floodways, and coastal high hazard areas, and providing all relevant technical data to the Associate Director;

(5) Establishing minimum State flood plain, mudslide (i.e., mudflow) and flood-related erosion regulatory standards consistent with those established in this part;

(6) Guiding and assisting municipal and county public bodies and agencies in developing flood plain, mudslide (i.e., mudflow) and flood-related erosion area management plans and flood plain management regulations;

(7) Recommending priorities for rate-making studies among those communities of the State which qualify for such studies;

(8) Communicating flood plain, mudslide (i.e., mudflow) and flood-related erosion area information to local governments and to the general public;

(9) Participating in flood, mudslide (i.e., mudflow) and flood-related erosion warning and emergency preparedness programs;

(10) Assisting communities in disseminating information on minimum elevations for structures permitted in flood plain areas having special hazards, and in disseminating other information relating to mudslide (i.e., mudflow) and flood-related erosion areas having special hazards;

(11) Advising public and private agencies (particularly those whose activities or projects might obstruct drainage or the flow of rivers or streams or increase slope instability) on the avoidance of unnecessary aggravation of flood, mudslide (i.e., mudflow) and flood-related erosion hazards,

(12) Requiring that proposed uses of flood plain, mudslide (i.e., mudflow) and flood-related erosion areas conform to standards established by State environmental and water pollution control agencies to assure that proper safeguards are being provided to prevent pollution during periods of flooding;

(13) Providing local communities with information on the Program, with particular emphasis on the coordination of State and Federal requirements pertaining to the management of flood-prone, mudslide (i.e., mudflow)-prone, and flood-related erosion-prone areas;

(14) Assuring coordination and consistency of flood plain management and planning with comprehensive planning at the state, areawide and local levels;

(15) Amending state recording acts so that the following may be recorded for the public's knowledge: (i) a parcel of land and/or a structure is located within a flood-prone, mudslide (i.e., mudflow) and/or flood-related erosion prone area and (ii) a variance has been granted for building at an elevation below the base flood level, thereby resulting in increased premium rates for flood insurance under the Program.

(16) Assuring coordination between its State Coordinating Agency and any State office established to supervise state participation in the Coastal Zone Management Program;

(17) Providing notification to the Administrator and the Associate Director in the event a participating community violates the Program's requirements;

(18) Assuring coordination efforts in the event a dispute over enactment and administration of flood plain management regulations arises between communities.

(b) For States whose flood plain, mudslide (i.e., mudflow) area and flood-related erosion area management program substantially encom-

pass the activities described in paragraph (a) of this section, the Associate Director shall:

(1) Give special consideration to State priority recommendations before selecting communities for ratemaking studies from the register described in § 59.23 of this subchapter;

(2) Accept State approved and certified local flood plain management regulations as meeting the requirements of this part.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44543 and 44552, Sept. 29, 1983]

§ 60.26 Local coordination.

(a) Local flood plain, mudslide (i.e., mudflow) and flood-related erosion area management, forecasting, emergency preparedness, and damage abatement programs should be coordinated with relevant Federal, State, and regional programs;

(b) A community adopting flood plain management regulations pursuant to these criteria should coordinate with the appropriate State agency to promote public acceptance and use of effective flood plain, mudslide, (i.e., mudflow) and flood-related erosion regulations;

(c) A community should notify adjacent communities prior to substantial commercial developments and large subdivisions to be undertaken in areas having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards.

PART 61—INSURANCE COVERAGE AND RATES

Sec.

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APPENDIX A (1)—FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION—STANDARD FLOOD INSURANCE POLICY—DWELLING FORM—INSURING AGREEMENT

APPENDIX A (2)—FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION—STANDARD FLOOD INSURANCE POLICY—GENERAL PROPERTY FORM

AUTHORITY: Sec. 7(d), 79 Stat. 670; 42 U.S.C. 3535(d); sec. 1306, 82 Stat. 575 (42 U.S.C. 4013); Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

SOURCE: 43 FR 2570, Jan. 17, 1978, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

§ 61.1 Purpose of part.

This part describes the types of properties eligible for flood insurance coverage under the Program, the limits of such coverage, and the premium rates actually to be paid by insureds. The specific communities eligible for coverage are designated by the Associate Director, State and Local Programs and Support from time to time as applications are approved under the emergency program and as ratemaking studies of communities are completed prior to the regular program. Lists of such communities are periodically published under Part 64 of this subchapter.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943); E.O. 12127, dated March 31, 1979 (44 FR 19367); Delegation of Authority to Federal Insurance Administrator)

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 39068, Aug. 29, 1983]

§ 61.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

§ 61.3 Types of coverage.

Insurance coverage under the Program is available for structures and their contents. Coverage for each may be purchased separately. One policy to provide insurance for more than one structure is not available under the Program. Buildings entirely in, on or over water and buildings partially over water into which boats are floated are not eligible for coverage; other buildings partially over water may be covered upon submission of the details of the risk to the NFIP for the assignment of a rate commensurate with the risk and presentment of the correct premium to the NFIP.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943); E.O. 12127, dated March 31, 1979 (44 FR 19367); Delegation of Authority to Federal Insurance Administrator)

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 39068, Aug. 29, 1983]

§ 61.4 Limitations on coverage.

(a) All flood insurance made available under the Program is subject:

(1) To the Act, the Amendments thereto, and the Regulations issued under the Act;

(2) To the terms and conditions of the Standard Flood Insurance Policy, which shall be promulgated by the Administrator for substance and form, and which is subject to interpretation by the Administrator as to scope of coverage pursuant to the applicable statutes and regulations;

(3) To the specified limits of coverage set forth in the Application and Declarations page of the policy; and

(4) To the maximum limits of coverage set forth in § 61.6.

(b) Insurance under the Program is available only for loss due to flood, as defined in § 59.1 of this subchapter. The policy covers damage from a general condition of flooding in the area which results from other than natural causes, such as the breaking of a dam, but does not cover damage which results from causes on the insured's own property or within his control or from any condition which causes damage, which condition is substantially confined to the insured's premises or properties immediately adjacent thereto.

(c) The policy does not cover losses from rain, snow, sleet, hail, or water spray that do not result in a general condition of flooding. It covers losses from freezing or thawing, or from the pressure or weight of ice and water, only where they occur simultaneously with and as a part of flood damage. It covers losses from mudslide (i.e., mudflow) but does not cover damage from landslides or from earthquakes or similar earth movements. The policy does not cover erosion which is not flood-related, claims resulting from occurrences already in progress at the time of the inception date of the term of the policy, or losses caused by land slippage rather than mudslide (see definition of mudslide/mudflow in § 59.1 of this subchapter). Damage by seepage and sewer backup may be covered only when directly resulting from a flooding situation. Abnormal erosion caused by high water levels accompanied by violent wave action along a lake or other body of water is considered a flood (see definition of flood-related erosion in § 59.1 of this subchapter). However, there is no coverage where normal, continuous wave action, accompanied by erosion or the gradual and anticipated wearing away of the land is the proximate cause of property damage.

(d) The policy protects against loss to contents only at the location described in the application, except that contents necessarily removed from the premises for preservation from a flood are protected against loss or damage from flood at the new location, if placed in a fully enclosed building, pro rata for a period of 45 days.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943); E.O. 12127, dated March 31, 1979 (44 FR 19367); Delegation of Authority to Federal Insurance Administrator)

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 39068, Aug. 29, 1983]

§ 61.5 Special terms and conditions.

(a) No new flood insurance or renewal of flood insurance policies shall be written for properties declared by a duly constituted State or local zoning or other authority to be in violation of any flood plain, mudslide (i.e., mudflow) or flood-related erosion area management or control law, regulation, or ordinance. No new flood insurance shall be written for any building, and its contents, if the building was newly constructed or substantially improved on or after October 1, 1983, in an area designated as an undeveloped coastal barrier within the Coastal Barrier Resources System established by the Coastal Barrier Resources Act (Pub. L. 97-348).

(b) In order to reduce the administrative costs of the Program, of which the Federal Government pays a major share, payment of the full policyholder premium must be made at the time of application.

(c) Because of the seasonal nature of flooding, refunds of premiums upon cancellation of coverage by the insured are permitted only if the insurer ceases to have an ownership interest in the covered property at the location described in the policy. Refunds of premiums for any other reason are subject to the conditions set forth in § 62.5 of this subchapter.

(d) Each loss sustained by the insured is subject to a deductible provision under which the insured bears a portion of the loss before payment is made under the policy. The amount of the deductible for each loss occurrence is (1) For structural (i.e., insured building) losses, $500.00; and (2) for contents (i.e., insured personal property) losses, $500.00; and (3) for the reasonable expenses incurred in connection with the temporary removal of an insured mobile home or insured contents (personal property) from the described premises and away from the peril of flood, $50.00.

Optional Deductibles, All Zones, are available as follows:

CATEGORY ONE—1 TO 4 FAMILY BUILDING AND CONTENTS COVERAGE POLICIES

Options	Building/contents
	$500/$500
	$1,000/$1,000
	$2,000/$1,000
	$3,000/$1,000
	$4,000/$2,000
	$5,000/$2,000

CATEGORY TWO—1 TO 4 FAMILY BUILDING COVERAGE ONLY OR CONTENTS COVERAGE ONLY POLICIES

Options	Building	Contents*
	$500	$500
	1,000	1,000
	2,000	2,000
	3,000	3,000
	4,000	4,000
	5,000	5,000

* Also applies to residential unit contents in other residential building or in multi-unit condominium building.

CATEGORY THREE—OTHER RESIDENTIAL AND NONRESIDENTIAL POLICIES

Options	Policy combining building and contents	Single coverage only policy (either building or contents)
	$500/$500	$500
	1,000/1,000	1,000
	2,000/2,000	2,000
	3,000/3,000	3,000
	4,000/4,000	4,000
	5,000/5,000	5,000

NOTE: Any other combination may be submitted for rating to the NFIP.

(e) Payment for a loss under the policy does not reduce the amount of insurance applicable to any other loss during the policy term which arises out of a separate flood occurrence, but all losses arising out of a continuous or protracted occurrence are deemed to have arisen out of a single occurrence.

(f) The following property and contents for residential structures are not insurable under the Program:

(1) Accounts, bills, currency, deeds, evidences of debt, money, coins,

medals, postage stamps, securities, bullion, manuscripts, or other valuable papers or records; and contents used in connection with any incidental commercial occupancy or use of the building;

(2) On and after October 1, 1982, newly constructed and substantially improved buildings located seaward of mean high tide, or entirely in, on or over water;

(3) Fences, retaining walls, seawalls, swimming pools, bulkheads, wharves, piers, bridges, docks; other open structures located on or over water, including boathouses or other similar structures or buildings into which boats are floated or personal property in the open;

(4) Land values, lawn, trees, shrubs or plants, growing crops, or livestock; underground structures and equipment servicing the building including wells, septic tanks or septic systems; those portions of walks, driveways and other paved or poured surfaces outside the foundation walls of the building;

(5) Animals, birds, fish; aircraft, any self-propelled vehicle or machine and motor vehicles (other than motorized equipment pertaining to the service of the premises, operated principally on the premises of the insured, and not licensed for highway use) including their parts and equipment, trailers on wheels and other recreational vehicles whether affixed to a permanent foundation or on wheels; watercraft including their furnishings and equipment; and business property;

(6) Units which are primarily containers, rather than buildings (such as gas and liquid tanks);

(7) Buildings and their contents, including machinery and equipment, which are part of the building, where more than 49 percent of the actual cash value of such buildings is below ground, unless the lowest level is at or above the base flood elevation (in the Regular Program) or the adjacent ground level (in the Emergency Program) by reason of earth having been used as an insulation material in conjunction with energy efficient building techniques;

(8) On and after October 1, 1982, a mobile home located within a FEMA designated Special Flood Hazard area that is not affixed to a permanent site (anchored) to resist flotation, collapse, or lateral movement by providing over-the-top ties to ground anchors or that otherwise meet the community's flood plain management requirements;

(9) A mobile home and its contents located within a FEMA designated coastal high hazard area (Zones V1-V30 on a FEMA Flood Insurance Rate Map) which is not located in a mobile home park or subdivision in existence and open for business prior to June 1, 1982.

(10) Enclosures, contents, machinery, building components, equipment and fixtures located at an elevation lower than the lowest elevated floor of an elevated building (except for the required utility connections and the footing, foundation, posts, pilings, piers or other foundation walls and anchorage system as required for the support of the elevated building), including a mobile home; finished basement walls, floors, ceilings and other improvements to a basement having its floor subgrade on all sides, and contents, machinery, building equipment and fixtures in such basement areas; except that coverage is provided in basement areas and in areas below the lowest elevated floor of an elevated building for sump pumps, well-water tanks, oil tanks, furnaces, hot water heaters, clothes washers and dryers, food freezers, air conditioners, heat pumps and electrical junction and circuit breaker boxes; and coverage is also provided in basement areas and in areas below the lowest elevated floor of an elevated building for stairways and staircases attached to the building which are not separated from the building by elevated walkways.

(11) Any building, and its contents, if the building was newly constructed or substantially improved on or after October 1, 1983, in an area designated as an undeveloped coastal barrier, within the Coastal Barrier Resources System established by the Coastal Barrier Resources Act (Pub. L. 97-348).

(g) The following property and contents for non-residential structures are not insurable under the Program:

(1) Accounts, bills, currency, deeds, evidences of debt, money, coins,

medals, postage stamps, securities, bullion, manuscripts, or other valuable papers or records;

(2) Except for the insurability of "animals, birds and fish," at paragraph (f)(5) of this section, all of the kinds of uninsurable property and contents referenced at paragraphs (f) (2) through (5) and at paragraphs (f) (7) through (10).

(3) Units which are primarily containers, rather than buildings (such as gas and liquid tanks, chemical or reactor container tanks or enclosures, brick kilns, and similar units) and their contents (Silos and grain storage buildings including their contents, may be insured even though they may be of container-type construction);

(4) Any building, and its contents, if the building was newly constructed or substantially improved on or after October 1, 1983, in an area designated as an undeveloped coastal barrier within the Coastal Barrier Resources System established by the Coastal Barrier Resources Act (Pub. L. 97-348).

(h) The following rules provide for voidance, reduction or reformation of coverage issued under a Standard Flood Insurance Policy by the insurer:

(1) Voidance: This policy shall be void and of no legal force and effect in the event that any one of the following conditions occurs:

(i) The property listed on the application is not eligible for coverage, in which case the policy is void from its inception date;

(ii) The community in which the property is located was not participating in the National Flood Insurance Program on the policy's inception date and did not qualify as a participating community during the policy's term and before the occurrence of any loss, in which case the policy is void from its inception date;

(iii) During the term of the policy, the participation in the National Flood Insurance Program of the community in which the insured property is located ceases, in which case the policy shall be deemed void effective at the end of the last day of the policy year in which such cessation occurred and shall not be renewed; in the event the voided policy included three policy years in a contract term of three years, the insured shall be entitled to a pro-rata refund of any premium applicable to the remainder of the policy's term after voidance of the policy.

(iv) The insured or the insured's agent has (A) sworn falsely, or (B) fraudulently or willfully concealed or misrepresented any material fact (including facts relevant to the rating of the policy) in the application for coverage, or upon any renewal of coverage, or in connection with the submission of any claim brought under this policy, in which case this entire policy shall be void as of the date the wrongful act was committed, or from its inception if this policy is a renewed policy and the wrongful act occurred in connection with an application for renewal or endorsement of a policy issued to the insured in a prior year and affects the rating of or premium amount received for this policy. Refunds of premiums, if any, shall be subject to offsets for the insurer's administrative expenses (including the payment of agent's commissions for any voided policy year, in connection with the issuance of the policy).

(v) The premium received by the insurer for the issuance of the policy, in the case of an application for a new policy or a policy renewal, is less than $50.00, in which case the policy is void from its inception date.

(2) Reduction of coverage limits or reformation. In the event that the premium payment received by the insurer is not sufficient to purchase the amounts of building coverage and contents (personal property) coverage requested or in the event a rating error has been innocently made by the insured or the agent on the application, renewal, endorsement or other form (whether evident or not) resulting in insufficient premium being received by the insurer for the purchase of the amounts of coverage requested, then:

(i) If the insufficient premium or other rating error is discovered by the insurer prior to a loss under the policy, the policy shall be deemed to provide only such coverage as can be purchased, for the entire term of the policy, with the amount of premium received; *Provided,* The insured may increase any reduced coverage(s) at any time by payment of the correct

premium for the additional coverage limits requested and any such correct premium received by the insurer prior to any loss under the policy shall result in coverage being provided for the loss up to the additional amount of coverage requested by the insured. The application of the insufficient premium received to the provision of flood insurance coverage shall be made as follows:

(A) In the event that only one kind of coverage (building coverage or contents coverage) has been requested, the insured shall receive the limits of that kind of coverage which can be purchased for the amount of premium received, less the expense constant;

(B) In the event that both building coverage and contents coverage have been requested, the insurer shall determine the percentage ratio that each kind of insurance bears to the total amount of coverage requested, apportion the total premium received by the percentage ratio for each kind of coverage, and the insured shall receive, as to each kind of coverage requested, the amount of coverage which can be purchased by the premium amount as apportioned for each kind of coverage; where both building and contents coverage are requested and where the application of the above percentage ratio causes the premium received, as apportioned by the ratio, to produce an amount of premium for one of the kinds of coverages to be more than sufficient to purchase the amount of insurance of that kind of coverage requested by the insured, any such excess of apportioned premium will be applied to obtain an additional amount of the other kind of coverage, until the amount of insurance requested for the other coverage is obtained;

(C) Provided, however, under this paragraph (h)(2)(i) of this section as to any mortgagee (or trustee) named in the policy, the insurer shall give anotice of additional premium due and the right of reformation shall continue in force for the benefit only of the mortgagee (or trustee), up to the amount of the insured's indebtedness, for thirty (30) days after written notice to the mortgagee (or trustee).

(ii) If the insufficient premium or other rating error is discovered by the insurer at the time of a loss under the policy, the policy shall be deemed to provide coverage pursuant to the provisions of paragraph (h)(2)(i), of this section, unless:

(A) The insured or the insured's agent has sworn falsely or fraudulently or willfully concealed or misrepresented any material fact (including facts relevant to the rating of this policy) in the application for coverage, or upon any renewal of coverage, or in connection with the submission of any claim brought under this policy, in which case this entire policy shall be void as of the date the wrongful act was committed, or from its inception if this policy is a renewal policy and the wrongful act occurred in connection with an application for or renewal or endorsement of a policy issued to the insured in a prior year and affects the rating of or premium amount received for this policy. Refunds of premiums, if any, shall be subject to offsets for the insurer's administrative expenses (including the payment of agent's commissions for any voided policy year, in connection with the issuance of the policy), or

(B) Provided paragraph (h)(2)(ii)(A), of this section, does not apply, the insured remits and the insurer receives the additional premium required to purchase the limits of coverage for each kind of coverage as was initially requested by the insured within thirty (30) days from the date the insurer gives the insured written notice of additional premium due or within sixty (60) days of the loss if no notice of premium is received by the insured, in which case the policy shall be reformed, from its inception date, to provide flood insurance coverage to the insured in the amounts of coverage initially requested. Silence or other failure to remit the additional premium required or non-receipt of such premium by the insurer within thirty (30) days from the date of notice of premium due or within sixty (60) days of the loss, whichever is sooner, shall be deemed to be refusal to pay the additional premium due and any subsequent payment of the additional premium due shall not reform the policy from its inception date but shall only add the additional

amounts of coverage to the policy for the remainder of its term, pursuant to 44 CFR 61.11, with any excess of premium paid being returned to the insured. Provided, however, under this subsection "B" as to any mortgagee (or trustee) named in the policy, the insurer shall give a notice of additional premium due and the right of reformation shall continue in force for the benefit only of the mortgagee (or trustee), up to the amount of the insured indebtedness, for thirty (30) days after written notice to the mortgagee (or trustee).

(i) The standard flood insurance policy is authorized only under terms and conditions established by Federal statute, the program's regulations, the Administrator's interpretations and the express terms of the policy itself. Accordingly, representations regarding the extent and scope of coverage which are not consistent with the National Flood Insurance Act of 1968, as amended, or the Program's regulations, are void, and the duly licensed property or casualty agent acts for the insured and does not act as agent for the Federal Government, the Federal Emergency Management Agency, or the servicing agent.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943); E.O. 12127, dated March 31, 1979 (44 FR 19367); Delegation of Authority to Federal Insurance Administrator)

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 47 FR 19140, May 4, 1982; 48 FR 39068, Aug. 29, 1983]

EFFECTIVE DATE NOTE: In § 61.5, paragraph (d) was revised at 48 FR 39068, Aug. 29, 1983, effective April 1, 1984. For the convenience of the user, the superseded text is set forth below.

§ 61.5 Special terms and conditions.

* * * * *

(d) Each loss sustained by the insured is subject to a deductible provision under which the insured bears a portion of the loss before payment is made under the policy. The amount of the deductible for each loss occurrence is:

(1) For structural (i.e., insured building) losses, $500.00; and

(2) For contents (i.e., insured personal property) losses, $500.00. (At the policyholder's option, when purchasing a flood insurance policy covering property located in a coastal high hazard area the amount of the deductible for each loss occurrence may be $3,000.00. The loss deductible shall apply separately to each building loss and contents (personal property) loss including, as to each, debris removal); and

(3) For the reasonable expenses incurred in connection with the temporary removal of an insured mobile home or insured contents (personal property) from the described premises and away from the peril of flood, $50.00.

* * * * *

§ 61.6 Maximum amounts of coverage available.

(a) Pursuant to section 1306 of the Act, the following are the limits of coverage available under the emergency program and under the regular program.

	Emergency program		Regular program—Total amount available
	First layer	Second layer	
Single family residential			
Except in Hawaii, Alaska, Guam, U.S. Virgin Islands	35,000	150,000	185,000
In Hawaii, Alaska, Guam, U.S. Virgin Islands	50,000	[1] 150,000	185,000
Other residential			
Except in Hawaii, Alaska, Guam, U.S. Virgin Islands	100,000	150,000	250,000
In Hawaii, Alaska, Guam, U.S. Virgin Islands	150,000	[2] 150,000	250,000
Small business	100,000	150,000	250,000
Churches and other properties	100,000	100,000	200,000
Contents			
Residential	10,000	50,000	60,000
Small business	100,000	200,000	300,000

	Emergency program		Regular program—Total amount available
	First layer	Second layer	
Churches, other properties (per unit)	100,000	100,000	200,000

[1] NOTE: Add to 35,000.
[2] NOTE: Add to 100,000.

(b) The maximum limits of coverage required under the Act are twice the amounts available under First Layer Coverage.

§ 61.7 Risk premium rate determinations.

(a) Pursuant to section 1307 of the Act, the Administrator is authorized to undertake studies and investigations to enable him/her to estimate the risk premium rates necessary to provide flood insurance in accordance with accepted actuarial principles, including applicable operating costs and allowances. Such rates are also referred to in this subchapter as "actuarial rates."

(b) The Administrator is also authorized to prescribe by regulation the rates which can reasonably be charged to insureds in order to encourage them to purchase the flood insurance made available under the Program. Such rates are referred to in this subchapter as "chargeable rates." For areas having special flood, mudslide (i.e., mudflow), and flood-related erosion hazards, chargeable rates are usually lower than actuarial rates.

§ 61.8 Applicability of risk premium rates.

Risk premium rates are applicable to all flood insurance made available for:

(a) Any structure, the construction or substantial improvement of which was started after December 31, 1974 or on or after the effective date of the initial FIRM, whichever is later.

(b) Coverage which exceeds the following limits:

(1) For dwelling properties in States other than Alaska, Hawaii, the Virgin Islands, and Guam (i) $35,000 aggregate liability for any property containing only one unit, (ii) $100,000 for any property containing more than one unit, and (iii) $10,000 liability per unit for any contents related to such unit.

(2) For dwelling properties in Alaska, Hawaii, the Virgin Islands, and Guam (i) $50,000 aggregate liability for any property containing only one unit, (ii) $150,000 for property containing more than one unit, and (iii) $10,000 aggregate liability per unit for any contents related to such unit.

(3) For churches and other properties (i) $100,000 for the structure and (ii) $100,000 for contents of any such unit.

(c) Any structure or the contents thereof for which the chargeable rates prescribed by this part would exceed the risk premium rates.

§ 61.9 Establishment of chargeable rates.

(a) Pursuant to section 1308 of the Act, chargeable rates per year per $100 of flood insurance are established as follows for all areas designated by the Administrator under Part 64 of this subchapter for the offering of flood insurance.

RATES FOR NEW AND RENEWAL POLICIES

Type of structure	Rates per year per $100 coverage on	
	Structure	Contents
(1) Residential	$0.45	$0.55
(2) All other (including hotels and motels) with normal occupancy of less than 6 months in duration	.55	1.10

(b) The contents rate shall be based upon the use of the individual premises for which contents coverage is purchased.

(42 U.S.C. 4001 et. seq., Reorg. Plan No. 3 of 1978 (3 CFR 1978 Comp. 329) and E.O. 12127 (44 FR 19367))

[48 FR 44554, Sept. 29, 1983]

EFFECTIVE DATE NOTE: Section 61.9 was revised at 48 FR 44554, Sept. 29, 1983, effective October 31, 1983. For the convenience of the user, the superseded text is set forth below.

§ 61.9 Establishment of chargeable rates.

(a) Pursuant to section 1308 of the Act, chargeable rates per year per $100 of flood insurance are established as follows for all areas designated by the Associate Director, State and Local Programs and Support under Part 64 of this subchapter for the offering of flood insurance:

RATES FOR NEW AND RENEWAL POLICIES

Type of structure	Rates per year per $100 coverage	
	Structures	Contents
(1) Residential	$0.40	$0.50
(2) All other (including hotels and motels with normal occupancy of less than 6 months in duration)	.50	1.00

(b) The contents rate shall be based upon the use of the individual premises for which contents coverage is purchased.

(42 U.S.C. 4001 et seq., Reorganization Plan No. 3 of 1978 (3 CFR 1978 Comp. 329) and Executive Order 12127 (44 FR 19367); Delegation of Authority to Federal Insurance Administrator)

[46 FR 42675, Aug. 24, 1981, as amended at 48 FR 39069, Aug. 29, 1983]

§ 61.10 Minimum premiums.

The minimum premium required for any policy, regardless of the term or amount of coverage, is $50.00.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001—4128; Reorganization Plan No. 3 of 1978 (43 FR 41943), Executive Order 12127, dated March 31, 1979 (44 FR 19367), Executive Order 11988, dated May 24, 1977 and 44 CFR Part 9, Delegation of Authority to Federal Insurance Administrator)

[46 FR 13514, Feb. 23, 1981]

§ 61.11 Effective date and time of coverage under the Standard Flood Insurance Policy—New Business Applications and Endorsements.

(a) The effective date and time of any new or added or increase in the amount of flood insurance coverage shall be 12:01 a.m. of the day following the application date and the presentment of payment of premium in the following cases:

(1) During the 30-day period which follows a community's initial eligibility for flood insurance under the emergency program;

(2) During the 30-day period which follows a community's initial eligibility for flood insurance under the regular program;

(b) Where title to property is conveyed, any new or added coverage or increase in the amount of coverage with respect to the property shall be effective as of the time title to the property is transferred to the purchaser, provided the written request for the new or added coverage is received by the NFIP (P.O. Box 459, Lanham, Maryland 20706) when:

(1) The flood insurance policy is applied for and the presentment of payment of premium is made at or prior to the transfer of title; or

(2) The existing flood insurance policy on the property was assigned to the purchaser at or before the transfer of title to the property.

(c) Except as provided by (a) or (b) of this section the effective date and time of any new policy shall be 12:01 a.m. (local time) on the 5th calendar day after the application date and the presentment of payment of premium; for example, a flood insurance policy applied for with the payment of the premium on April 1 to cover property located in a community that has been participating in the program longer than 30 days will become effective at 12:01 a.m. on April 6.

(d) Adding new coverage or increasing the amount of coverage in force is permitted during the term of any policy. The additional premium for any new coverage or increase in the amount of coverage shall be calculated pro rata in accordance with the rates currently in force.

(e) With respect to any submission of an application in connection with new business, the payment by an Insured to an Insured's agent or the issuance of premium payment by the agent does not constitute payment to the NFIP. Therefore, it is important that an application for Flood Insurance and its premium be mailed to the NFIP (P.O. Box 459, Lanham, Maryland 20706) promptly in order to have the effective date of the coverage based on the application date plus the waiting period. If the application and the premium payment are received at the NFIP within ten (10) days from

the date of application, the waiting period will be calculated from the date of application. Also, as an alternative, in those cases where the application and premium payment are mailed by certified mail within four (4) days from the date of application, the waiting period will be calculated from the date of application even though the application and premium payment are received at the NFIP after ten (10) days following the date of application. Thus, if the application and premium payment are received after ten (10) days from the date of the application or are not mailed by certified mail within four (4) days from the date of application, the waiting period will be calculated from the date of receipt by the NFIP. To determine the effective date of any coverage added by endorsement to a flood insurance policy already in effect, substitute the term "endorsement" for the term "application" in this paragraph (e).

(National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968); effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended (42 U.S.C. 4001-4128); and Secretary's delegation of authority to Federal Insurance Administrator (43 FR 7719, February 24, 1978); Reorganization Plan No. 3 of 1978 (43 FR 41943), Executive Order 12127, dated March 31, 1979 (44 FR 19367), Executive Order 11988, dated May 24, 1977, and 44 CFR Part 9, Delegation of Authority to Federal Insurance Administrator)

[43 FR 50427, Oct. 30, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 46 FR 13514, Feb. 23, 1981; 48 FR 39069, Aug. 29, 1983; 48 FR 44544, Sept. 29, 1983]

§ 61.12 Rates based on a flood protection system involving Federal funds.

(a) Where the Associate Director determines that a community has made adequate progress on the construction of a flood protection system involving federal funds which will significantly limit the area of special flood hazards, the applicable risk premium rates for any property, located within a special flood hazard area intended to be protected directly by such system will be those risk premium rates which would be applicable when the system is complete.

(b) Adequate progress in paragraph (a) of this section means that the community has provided information to the Associate Director sufficient to determine that substantial completion of the flood protection system has been effected because:

(1) 100 percent of the total financial project cost of the completed flood protection system has been authorized;

(2) At least 60 percent of the total financial project cost of the completed flood protection system has been appropriated;

(3) At least 50 percent of the total financial project cost of the completed flood protection system has been expended;

(4) The flood protection system's physical features are under construction and 50 percent completed as measured by the actual expenditure of the estimated construction budget funds; and

(5) The community has not been responsible for any delay in the completion of the system.

(c) Each request by a community for a determination must be submitted in writing to the Engineering Branch, Office of Natural and Technological Hazards, Office of State and Local Programs and Support, Federal Emergency Management Agency, Washington DC, and contain a complete statement of all relevant facts relating to the flood protection system, including, but not limited to, supporting technical data (e.g., U.S. Army Corps of Engineers flood protection project data), cost schedules, budget appropriation data and the extent of federal funding of the system's construction. Such facts shall include information sufficient to identify all persons affected by such flood protection system or by such request: a full and precise statement of intended purposes of the flood protection system; and a carefully detailed description of such project, including construction completion target dates. In addition, true copies of all contracts, agreements, leases, instruments, and other documents involved must be submitted with the request. Relevant facts reflected in documents, however, must be included in the statement and not merely incorporated by reference, and must be accompanied by an analysis of their

bearing on the requirements of paragraph (b) of this section, specifying the pertinent provisions. The request must contain a statement whether, to the best of the knowledge of the person responsible for preparing the application for the community, the flood protection system is currently the subject matter of litigation before any Federal, State or local court or administrative agency, and the purpose of that litigation. The request must also contain a statement as to whether the community has previously requested a determination with respect to the same subject matter from the Associate Director, detailing the disposition of such previous request. As documents become part of the file and cannot be returned, the original documents should not be submitted.

(d) The effective date for any risk premium rates established under this section shall be the date of final determination by the Associate Director that adequate progress toward completion of a flood protection system has been made in a community.

(e) A responsible official of a community which received a determination that adequate progress has been made towards completion of a flood protection system shall certify to the Associate Director annually on the anniversary date of receipt of such determination that no present delay in completion of the system is attributable to local sponsors of the system, and that a good faith effort is being made to complete the project.

(f) A community for which risk premium rates have been made available under section 1307(e) of the National Flood Insurance Act of 1968, as amended, shall notify the Associate Director if, at any time, all progress on the completion of the flood protection system has been halted or if the project for the completion of the flood protection system has been canceled.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943); E.O. 12127, dated March 31, 1979 (44 FR 19367); Delegation of Authority to Federal Insurance Administrator)

[43 FR 2570, Jan. 17, 1978, Redesignated at 44 FR 31177, May 31, 1979, and amended at 47 FR 43061 Sept. 30, 1982; 48 FR 39069, Aug. 29, 1983; 48 FR 44552, Sept. 29, 1983]

§ 61.13 Standard Flood Insurance Policy.

(a) *Incorporation of forms.* Each of the Standard Flood Insurance Policy forms included in Appendix "A" hereto ("General Property" and "Dwelling Building and Contents") and by reference incorporated herein shall be incorporated into the Standard Flood Insurance Policy.

(b) *Endorsements.* All endorsements to the Standard Flood Insurance Policy shall be final upon publication in the FEDERAL REGISTER for inclusion in Appendix A.

(c) *Applications.* The application and renewal application forms utilized by the National Flood Insurance Program shall be the only application forms used in connection with the Standard Flood Insurance Policy.

(d) *Waivers.* The Standard Flood Insurance Policy and required endorsements must be used in the Flood Insurance Program, and no provision of the said documents shall be altered, varied, or waived other than through the issuance of an appropriate amendatory endorsement, approved by the Administrator as to form and substance for uniform use.

(e) *Oral and written binders.* No oral binder or contract shall be effective. No written binder shall be effective unless issued with express authorization of the Administrator.

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979 and amended at 44 FR 62517, Oct. 31, 1979]

§ 61.14 Standard Flood Insurance Policy Interpretations.

(a) *Definition.* A Standard Flood Insurance Policy Interpretation is a written determination by the Administrator construing the scope of the flood insurance coverage that has been and is provided under the policy.

(b) *Publication and requests for interpretation.* The Administrator shall, pursuant to these regulations from time to time, issue interpretative rulings regarding the provisions of the Standard Flood Insurance Policy. Such Interpretations shall be published in the FEDERAL REGISTER, made

a part of Appendix C to these regulations, and incorporated by reference as part of these regulations. Any policyholder or person in privity with a policyholder may file a request for an interpretation in writing with the Federal Insurance Administration, Federal Emergency Management Agency, Washington, DC 20472.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943); E.O. 12127, dated March 31, 1979 (44 FR 19367); Delegation of Authority to Federal Insurance Administrator)

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 39072, Aug. 29, 1983]

§ 61.15 Assumption of Liabilities under all Outstanding Flood Insurance Policies issued by the National Flood Insurers Association.

On January 1, 1978, all Standard Flood Insurance Policies issued by the National Flood Insurers Association prior to January 1, 1978, which have their annual policy period extending into the calendar year 1978, shall be considered to be Standard Flood Insurance Policies issued by the Federal Insurance Administration, Federal Emergency Management Agency, Washington, DC.

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 47 FR 43061, Sept. 30, 1982]

APPENDIX A (1)

FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION

STANDARD FLOOD INSURANCE POLICY

[Issued Pursuant to the National Flood Insurance Act of 1968, or Any Acts Amendatory Thereof]

DWELLING FORM—INSURING AGREEMENT

Agreement of Insurance Between the Federal Emergency Management Agency (FEMA), as Insurer, (hereinafter known as "we", "our", and "us") and the Insured (hereinafter known as "you" and "your"). Based upon your having paid the correct amount of premium, our reliance on the accuracy of the information and statements you have furnished in the application for this policy about the property to be insured and subject to all the terms of this policy, the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 et seq.), and regulations issued by us (Title 44, Code of Federal Regulations), we insure you and your legal representatives against all "Direct Physical Loss by or from Flood" to the insured property as defined in the "Definitions Section" of this Agreement to the extent of the actual cash value of the property at the time of loss but not exceeding (1) the cost of replacing the insured building at the time of loss with material of like kind and quality and (2) the actual cash value of any insured personal property at the time of loss.

Now therefore, in consideration of the foregoing and the mutual promises exchanged herein, we and you agree, further, as follows:

Article I—Persons Insured

We insure only:

A. The named insured and legal representatives;

B. Any mortgagee and loss payee named in the application and declaration page in the order of precedence and to the extent of their interest but for no more, in the aggregate, than the interest of the named insured.

Article II—Definitions

"Actual Cash Value" means the replacement cost of an insured item of property at the time of loss, less the value of physical depreciation as to the item damaged.

"Application" means the statement made and signed by you or your agent, and giving information on the basis of which we determine the acceptability of the risk, the policy to be issued and the correct premium payment, which must accompany the application for the policy to be issued. The application is a part of this flood insurance policy.

"Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"Building" means a walled and roofed structure, other than a gas or liquid storage tank that is principally above ground and affixed to a permanent site, including a mobile home on foundation, subject to Article V(H), and a walled and roofed building in the course of construction, alteration or repair. This policy does not cover more than one building.

"Cancellation" means that ending of the insurance coverage provided by this policy prior to the expiration date.

"Coastal High Hazard Area" means an area subject to high velocity waters, including hurricane wave wash and tsunami.

"Declaration Page" is a computer generated summary of information furnished by you in the application for insurance. The declarations page is a part of this flood insurance policy.

"Direct Physical Loss by or from Flood" means any loss in the nature of actual loss of or physical damage evidenced by physical changes to the insured property (building or personal property contents) which is directly and proximately caused by a "flood" (as defined in this Agreement), while the insured property is located: 1. at the property address shown on the application for this insurance, which is a part of this Agreement; and 2. for forty-five days, at another place above ground level, or outside of the special flood hazard area to which any of the property shall necessarily be removed by you in order to protect and preserve it from flood or from the imminent danger of flood (provided, personal property so removed must be placed in a fully enclosed building or otherwise reasonably protected from the elements to be insured against loss), in which case the reasonable expenses incurred by you including the value of your own labor at prevailing Federal minimum wage rates in moving your insured property away from the peril of flood and storing your property at the temporary location shall be reimbursed to you. The term "Direct Physical Loss by or from Flood" shall not include compensation for loss of access, loss of use, loss of profits, or loss resulting from interruption of business, profession or manufacture, or reimbursement for your additional living expenses, incurred by reason of your having to live in rented quarters while the insured building is being repaired or replaced, or allowance for any increased cost of repair or reconstruction as a result of any ordinance regulating reconstruction or repair, or other economic loss.

"Doublewide Mobile Home" means a building which is fully anchored and affixed to its permanent site, and which is designed and constructed as a modular or manufactured building and which has axles and wheels used solely for transportation to the lot or construction site where it is to be assembled as a nonmovable, permanent building; such a building is not considered to be a mobile home for purposes of this policy.

"Dwelling" means a building designed for use as a residence for no more than four families.

"Expense Constant": The expense constant is a flat charge per policy term, paid by the Insured to defray the Federal Government's policy-writing and other expenses.

"Expiration Date" means the ending of the insurance coverage provided by this policy on the expiration date shown on the declaration page.

"Flood": Wherever in this policy the term "flood" occurs, it shall be held to mean:

A. A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters.

2. The unusual and rapid accumulation or runoff of surface waters from any source.

3. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in subparagraph A-2, above and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, including your premises, as when earth is carried by a current of water and deposited along the path of the current.

B. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding the cyclical levels which result in flooding as defined in A-1 above.

"Policy" means the entire written contract between you and us; it includes this printed form, the application, and declarations page, any endorsements which may be issued and any renewal certificates indicating that coverage has been instituted for a new policy and policy term. Only one building, specifically described by you in the application, may be insured under this policy.

"Walled and Roofed" means the building has in place two or more exterior, rigid walls and the roof is fully secured so that the building will resist flotation, collapse and lateral movement.

Article III—Losses Not Covered

We only provide coverage for direct physical loss by flood which means we do not cover:

A. Losses from other casualties, including:

1. Loss caused by theft, loss of profits, fire, windstorm, wind, explosion, earthquake, land sinkage, land subsidence, landslide, gradual erosion, or any other earth movement except such mudslides (i.e., mudflows) or erosion as is covered under the peril of flood.

2. Loss caused by rain, snow, sleet, hail, water spray, freezing, thawing, the pressure or weight of ice or water, sewer backup and seepage of water unless your property has been, at the same time, damaged by a flood.

3. Water or moisture damage resulting primarily from any condition substantially confined to the insured building or from any condition which is within your control (including but not limited to design, structural or mechancial defects, failures, stoppages or breakages of water or sewer lines, drains, pumps, fixtures or equipment).

B. Losses of the following nature:

1. Loss caused by your failure to use means reasonably accessable to you to save the property from loss resulting from a

flood and to preserve the property after a flood; however, the reasonable expenses incurred by you in saving and preserving the property at the premises after a flood—including the value of your own labor at prevailing Federal minimum wage rates—may, at our sole option be a covered loss.

2. A loss which is already in progress as of 12:01 A.M. of the first day of the policy term, or as to any increase in the limits of coverage which is requested by you, a loss which is already in progress when you request the additional coverage.

3. A loss from a flood which is confined to the premises on which your insured property is located unless the flood is displaced over two acres of the premises.

4. A loss caused by your modification to the insured property or the described premises on which the insured property is located, which materially increases the risk of flooding.

5. Loss caused internationally by you or any member of your household.

Article IV—Property Covered

We will pay for physical damage caused by flood to the building at the property address you have furnished, as well as the contents of the building, if you have purchased contents coverage, and provided you have paid the correct premium for the insurance, as follows:

A. We cover your dwelling, which includes:

1. A residential building, designed for principal use as a dwelling place for no more than four families;

2. Additions and extensions attached to and in contact with the dwelling;

3. Building equipment, fixtures and outdoor equipment used in connection with the dwelling while stored inside the dwelling or another fully enclosed building at the property address;

4. Materials and supplies to be used in constructing, altering or repairing the dwelling or another building insured by us at the property address while stored inside a fully enclosed building (i) at the property address or (ii) on an adjacent property at the time of loss, or (iii) in case of another building at the property address which does not have walls on all sides, while stored and secured to prevent flotation out of the building during flooding (the flotation out of the building shall be deemed by you and us to establish the conclusive presumption that the materials and supplies were not reasonably secured to prevent flotation, in which case no coverage is provided for such materials and supplies under this policy).

5. As appurtenant structures, detached garages and carports located at the described premises, at your option at the time of loss, in an amount up to 10% of the amount of insurance you have purchased to cover the dwelling, including additions to the dwelling; to the extent you exercise this option, you reduce the amount of insurance available to cover loss relating to A(1) (2) (3) and (4), above, to the dwelling and this option may not be chosen so as to extend coverage to buildings: (i) occupied, rented or leased in whole or in part for dwelling purposes (or held for such use), or (ii) used in whole or in part for personal or commercial manufacturing or farming purposes (or held for such uses), or (iii) which are boathouses.

B. We cover your Personal Property as contents incidental to the occupancy of the building as a dwelling under the policy, subject to "C" below, and that belonging to members of your family in your household and, at your option within the limits of contents coverage purchased for personal property loss, guests' and servants' personal property and the personal property of others for which you may be responsible—all while stored within a building at the property address. Personal property in the open and not stored in a building shall not be covered against loss by flood under this policy. However, personal property located in buildings having in place two or more rigid walls and a fully secured roof are covered if the contents are secured to prevent flotation out of the building during flooding; the flotation out of the building during flooding of any such contents shall be deemed by you and us to establish the conclusive presumption that the contents were not reasonably secured to prevent flotation. At you option at the time of loss, in an amount up to 10% of the amount of insurance you have purchased to cover personal property, this policy will also cover:

1. Loss to improvements, alterations, and additions made by you, as a Tenant, to an insured building at the property address;

2. If you are an individual condominium unit owner, loss to the interior walls, floors, and ceilings of your unit that are not otherwise covered under a condominium association policy.

C. Limitation: As a limitation on "B", above, we shall not reimburse you for loss in any one flood as to the following personal property to the extent the total loss of such property exceeds $250.00: paintings, etchings, pictures, tapestries, art, glass windows and other works of art (such as but not limited to statuary, marbles, bronzes, antique furniture, rare books, antique silver, necklaces, bracelets, gems, precious or semi-precious stones, articles of gold, silver, or platinum and furs or any article containing fur which represents its principal value.

D. Debris Removal: Within the limits of your coverage, we cover any expense you incur, including the value of your own labor at prevailing Federal minimum wage rates, as a result of removing debris of, on or from

the insured property so long as the debris problem was directly caused by a flood.

E. Demolition Coverage: Within the limits of your coverage, you may apply all or part of the proceeds of any flood insurance claim you make under this policy toward the expenses you incur in removing damaged portions of the insured building from the property location following a flood loss.

Article V—Property not Covered

We do not cover and will not pay for damage to or loss of any of the following:

A. Accounts, bills, currency, deeds, evidences of debt, money, coins, medals, postage stamps, securities, bullion, manuscripts, or other valuable papers or records and contents used in connection with any incidental commercial occupancy or use of the building.

B. On and after October 1, 1982, newly constructed or substantially improved buildings located seaward of mean high tide, or entirely in, on, or over water.

C. Fences, retaining walls, seawalls, outdoor swimming pools, bulkheads, wharves, piers, bridges, docks; other open structures located on or over water, including boat houses or other similar structures or buildings into which boats are floated or personal property in the open.

D. Land values, lawn, trees, shrubs or plants, growing crops, or livestock; underground structures and equipment including wells, septic tanks or septic systems; those portions of walks, driveways and other paved or poured surfaces, outside the foundation walls of the building.

E. Animals, birds, fish; aircraft, any self-propelled vehicle or machine and motor vehicles (other than motorized equipment pertaining to the service of the premises, operated principally on the premises of the insured, and not licensed for highway use) including their parts and equipment, trailers on wheels and other recreational vehicles whether affixed to a permanent foundation or on wheels; watercraft including their furnishings and equipment; and business property.

F. Enclosures, contents, machinery, building components, equipment and fixtures located at an elevation lower than the lowest elevated floor of an elevated building (except for the required utility connections and the footing, foundation, posts, pilings, piers or other foundation walls and anchorage system as required for the support of the elevated building), including a mobile home; finished basement walls, floors, ceilings and other improvements to a basement having its floor subgrade on all sides, and contents, machinery, building equipment and fixtures in such basement areas; except that, as to this subparagraph (F), coverage is provided in basement areas and in areas below the lowest elevated floor of an elevated building for sump pumps, well-water tanks, oil tanks, furnaces, hot water heaters, clothes washers and dryers, food freezers, air conditioners, heat pumps and electrical junction and circuit breaker boxes; and coverage is also provided in basement areas and in areas below the lowest elevated floor of an elevated building for stairways and staircases attached to the building which are not separated from the building by elevated walkways.

G. Buildings and their contents, including machinery and equipment, which are part of the building, where more than 49 percent of the actual cash value of such buildings is below ground, unless the lowest level is at or above the base flood elevation (in the Regular Program) or the adjacent ground level (in the Emergency Program) by reason of earth having been used as an insulation material in conjunction with energy efficient building techniques;

H. On and after October 1, 1982, a mobile home located or placed within a FEMA designated Special Flood Hazard Area that is not affixed to a permanent site (anchored) to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors or that otherwise does not meet the community's flood plain management requirements, unless it is a mobile home on a foundation continuously insured by the National Flood Insurance Program at the same site at least since September 30, 1982.

I. Units which are primarily containers, rather than buildings (such as gas and liquid tanks).

J. A mobile home and its contents located within a FEMA designated coastal high hazard area (Zones VI-V30 on a FEMA Flood Insurance Rate Map) which is not located in a mobile home park or subdivision in existence and open for business prior to June 1, 1982.

K. A building, and its contents, newly constructed or substantially improved on or after October 1, 1983, in an area designated as an undeveloped coastal barrier within the Coastal Barrier Resources System established by the Coastal Barrier Resources Act (Pub. L. 97-348).

Article VI—Deductibles

A. Each loss to your insured property is subject to a deductible provision under which your bear a portion of the loss before payment is made under the policy.

B. The loss deductible shall apply separately to each building loss and personal property (contents) loss including, as to each, appurtenant structure, debris removal, and any reasonable expenses incurred after a flood under Article II or Article III in connection with the preservation and

saving of insured property from flood or from the imminent danger of flood.

C. The amount of the deductible for each loss occurrence is determined as follows: We shall be liable only when such loss exceeds $500.00, or the amount of any higher deductible which you selected when you applied for this insurance or when you raised the deductible by endorsement.

D. In the case of reasonable expenses incurred pursuant to Article II in the temporary removal of an insured mobile home or insured personal property from the described premises and away from the peril of flood, the amount of the deductible shall be $50.00.

Article VII—Replacement Cost Provisions

Subject to Article VI and the limits of building coverage you have purchased, these provisions shall apply only to a Single Family Dwelling which is the principal residence of the insured and which is covered under this policy. Outdoor antennas and aerials, carpeting, awnings, appliances and other outdoor equipment, all whether attached to the insured building or not, are excluded from the replacement cost coverage. For purposes of this Article VII, a single family dwelling qualifies as your principal residence provided that, at the time of the loss, you or your spouse have lived in your building for either (1) 80% of the calendar year immediately preceding the loss or (2) 80% of the period of your ownership of the insured building, if less than one calendar year immediately preceded the loss. For purposes of this Article, the replacement cost provisions do not apply to a condominium unit within a vertical building having one or more condominium units in it not contiguous to the ground. Under this Article:

A. If at the time of loss the total amount of insurance applicable to said dwelling is 80% or more of the full replacement cost of such dwelling, or is the maximum amount of insurance available under the National Flood Insurance Program, the coverage of this policy applicable to such dwelling is extended to include the full cost of repair or replacement (without deduction for depreciation).

B. If at the time of loss the total amount of insurance applicable to said dwelling is less than 80% of the full replacement cost of such dwelling and less than the maximum amount of insurance available under the National Flood Insurance Program, our liability for loss under this policy shall not exceed the larger of the following amounts:

1. The actual cash value (meaning replacement cost less depreciation) of that part of the dwelling damaged or destroyed; or

2. That portion of the full cost of repair or replacement without deduction for depreciation of that part of the dwelling damaged or destroyed, which the total amount of insurance applicable to said dwelling bears to 80% of the full replacement cost of such dwelling.

If 80% of the full replacement cost of such dwelling is greater than the maximum amount of insurance available under the National Flood Insurance Program, use the maximum amount in lieu of the 80% figure in the application of this limit.

C. Our liability for loss under this policy shall not exceed the smallest of the following amounts:

1. The limit of liability of this policy applicable to the damaged or destroyed building.

2. The replacement cost of the dwelling or any part thereof identical with such dwelling on the same premises and intended for the same occupancy and use; or

3. The amount actually and necessarily expended in repairing or replacing said dwelling or any part thereof intended for the same occupancy and use.

D. When the full cost of repair or replacement is more than $1,000 or more than 5% of the whole amount of insurance applicable to said dwelling, we shall not be liable for any loss under paragraph A or subparagraph B-2 of these provisions unless and until actual repair or replacement is completed.

E. In determining if the whole amount of insurance applicable to said dwelling is 80% or more of the full replacement cost of such dwelling, the cost of excavations, underground flues and pipes, underground wiring and drains, and brick, stone and concrete foundations, piers and other supports which are below the under surface of the lowest basement floor, or where there is no basement, which are below the surface of the ground inside the foundation walls, shall be disregarded.

F. You may elect to disregard this condition in making claim hereunder, but such election shall not prejudice your right to make further claim within 180 days after loss for any additional liability brought about by these provisions.

G. These Replacement Cost Provisions do not apply to any mobile home or personal property (contents) covered under this policy, nor do they apply to any loss where insured property is abandoned and remains as debris at the property address following a loss.

H. If your dwelling sustains a total loss or if we should pay you the entire building loss proceeds under these replacement cost provisions, there is no requirement that you rebuild the building at the insured property address.

Article VIII—General Conditions and Provisions

A. Pair and Set Clause: If you lose an article which is part of a pair or set, we will have the option of paying you an amount equal to the cost of replacing the lost article, less depreciation, or an amount which represents the fair proportion of the total value of the pair or set that the lost article bears to the pair or set.

B. Concealment, Fraud: We will not cover you under this policy, which shall be void, nor can this policy be renewed or any new flood insurance coverage be issued to you if you have sworn falsely, or willfully concealed or misrepresented any material fact, or done any fraudulent act concerning this insurance (See "F," below). In addition we will not cover you under this policy, which shall be void, in the event you have willfully concealed or misrepresented any fact on a "Recertification Questionnaire," which causes us to issue a policy to you based on a premium amount which is less than the premium amount which would have been payable by you were it not for the misstatement of fact (see "G," below).

C. Other Insurance: You may have other flood insurance covering the dwelling and personal property and, if you have such other insurance in effect at the time of a loss, we will not pay a greater portion of any loss than the proportion that our building and personal property (contents) insurance bears to the total flood insurance covering the dwelling and personal property.

D. Amendments, Waivers, Assignment: This Standard Flood Insurance Policy cannot be amended nor can any of its provisions be waived without the express written consent of the Federal Insurance Administrator. No action we take under the terms of this policy can constitute a waiver of any of our rights. Except in the case of (1) a contents only policy and (2) a policy issued to cover a building in the course of construction, assignment of this policy, in writing, is allowed upon transfer of title without the consent of the Administrator.

E. Cancellation of Policy By You:

1. You can cancel this policy at any time but a refund of premium money will only be made to you when:

a. You cancel because you have transferred ownership of the insured property to someone else. In this case, we will refund to you, once we receive your written request for cancellation (signed by you), the excess of premiums paid by you which apply to the unused portion of the policy's term, pro-rata but with retention of the expense constant.

b. You cancel because we have determined that your property is not, in fact, in a special flood hazard area; and you were required to purchase flood insurance coverage by a private lender or Federal agency pursuant to P.L. 93-234, § 102; and the lender or Federal agency no longer requires the retention by you of the coverage. In this event, if no claims have been paid or are pending, your premium payments will be refunded to you in full, according to our applicable regulations, but with retention of the expense constant.

F. Voidance, Reduction or Reformation of the Coverage By Us:

1. Voidance: This policy shall be void and of no legal force and effect in the event that any one of the following conditions occurs:

a. The property listed on the application is not eligible for coverage, in which case the policy is void from its inception;

b. The community in which the property is located was not participating in the National Flood Insurance Program on the policy's inception date and did not qualify as a participating community during the policy's term and before the occurrence of any loss for which you may receive compensation under the policy, in which case the policy is void from its inception date;

c. If, during the term of the policy, the participation in the National Flood Insurance Program of the community in which your property is located ceases, in which case the policy shall be deemed void effective at the end of the last day of the policy year in which such cessation occurred and shall not be renewed; in the event the voided policy included three policy years in a contract term of three years, you shall be entitled to a pro-rata refund of any premium applicable to the remainder of the policy's term after voidance of the policy;

d. In the event you or your agent have (i) sworn falsely or (ii) fraudulently or willfully concealed or misrepresented any material fact (including facts relevant to the rating of this policy) in the application for coverage, or upon any renewal of coverage, or in connection with the submission of any claim brought under the policy, in which case this entire policy shall be void as of the date the wrongful act was committed or from its inception if this policy is a renewal policy and the wrongful act occurred in connection with an application for or renewal or endorsement of a policy issued to you in a prior year and affects the rating of or premium amount received for this policy. Refunds of premiums, if any, shall be subject to offsets for our administrative expenses (including the payment of agent's commissions for any voided policy year, in connection with the issuance of the policy);

e. The premium you submit is less than $50.00 in connection with any application for a new policy or policy renewal, in which case the policy is void from its inception date.

2. Reduction of coverage limits or reformation. In the event that the premium pay-

ment received by us is not sufficient to purchase the amounts of building coverage and contents (personal property) coverage requested or in the event a rating error has been innocently made by you or your agent on the application, renewal, endorsement, or other form (whether evident or not) resulting in insufficient premium being received by us for the purchase of the amounts of coverage requested, then:

(i) If the insufficient premium or other rating error is discovered by us prior to a loss under the policy, the policy shall be deemed to provide only such coverage as can be purchased, for the entire term of the policy, for the amount of premium received; provided, you may increase any reduced coverage(s) at any time by payment of the correct premium for the additional limits of coverage requested and any such correct premium received by us prior to any loss under the policy shall result in coverage being provided for the loss up to the additional amount of coverage requested by you. The application of the insufficient premium received to the provision of flood insurance coverage shall be made as follows:

a. In the event that only one kind of coverage (building coverage or contents coverage) has been requested, you shall receive the limits of that kind of coverage which can be purchased for the amount of premium received, less the expense constant;

b. In the event that both building coverage and contents coverage have been requested, we shall determine the percentage ratio that each kind of insurance bears to the total amount of coverage requested, apportion the total premium received by the percentage ratio for each kind of coverage, and you shall receive, as to each kind of coverage requested, the amount of coverage which can be purchased by the premium amount as apportioned for each kind of coverage; where both building and contents coverage are requested and where the application of the above percentage ratio causes the premium received, as apportioned by the ratio, to produce an amount of premium for one of the kinds of coverage to be more than sufficient to purchase the amount of insurance of that kind of coverage requested by you, any such excess of apportioned premium will be applied to obtain an additional amount of the other kind of coverage until the amount of insurance requested for the other coverage is obtained;

c. Provided, however, under this subsection (2.) (i) as to any mortgagee (or trustee) named in the policy, we shall give a notice of additional premium due and the right of reformation shall continue in force for the benefit only of the mortgagee (or trustee), up to the amount of your indebtedness, for thirty (30) days after written notice to the mortgagee (or trustee).

(ii) If the insufficient premium or other rating error is discovered by us at the time of a loss under the policy, the policy shall be deemed to provide coverage pursuant to the provisions of (i), above, unless:

a. You or your agent has sworn falsely or fraudulently or willfully concealed or misrepresented any material fact (including facts relevant to the rating of this policy) in the application for coverage, or upon any renewal of coverage, or in connection with the submission of any claim brought under this policy, in which case this entire policy shall be void as of the date the wrongful act was committed or from its inception if this policy is a renewal policy and the wrongful act occurred in connection with an application for or renewal or endorsement of a policy issued to you in a prior year and affects the rating of or premium amount received for this policy.

Refunds of premiums, if any, shall be subject to offsets for our administrative expenses (including the payment of agent's commissions for any voided policy year, in connection with the issuance of the policy);

b. Provided (ii) a., above does not apply, you remit and we receive the additional premium required to purchase the limits of coverage for each kind of coverage as was initially requested by you within thirty (30) days from the date we give you written notice of additional premium due or within sixty (60) days of the loss if no notice of premium due is received by you, in which case the policy shall be reformed, from its inception date, to provide flood insurance coverage to you in the amounts of coverage initially requested. Silence or other failure to remit the additional premium required or non-receipt of such premium by us within thirty (30) days from the date of notice of premium due or within sixty (60) days of the loss, whichever is sooner, shall be deemed to be refusal to pay the additional premium due and any subsequent payment of the additional premium due shall not reform the policy from its inception date but shall only add the additional amounts of coverage to the policy for the remainder of its term, pursuant to 44 CFR 61.11, with any excess of premium paid being returned to you. Provided, however, under this subsection "B" as to any mortgagee (or trustee) named in the policy, we shall give a notice of additional premium due and the right of reformation shall continue in force for the benefit only of the mortgagee (or trustee), up to the amount of your indebtedness, for thirty (30) days after written notice to the mortgagee (or trustee).

G. Policy Renewal: The term of this policy commences on its inception date and ends on its expiration date, as shown on the "Declaration Page" which is attached to the policy. We are under no obligation to send

you any renewal notice or other notice that your policy term is coming to an end and the receipt of any such notice by you shall not be deemed to be a waiver of this provision on our part. We are under no obligation to assure that policy changes reflected in endorsements submitted by you during the policy term and accepted by us are included in any renewal notice or new policy which we send to you. "Policy changes" includes the addition by you of new coverage (e.g. contents coverage added to a building coverage policy or vice versa) or any increases in the amounts of coverage.

This policy shall not be renewed and the coverage provided by it shall not continue into any successive policy term unless the premium payment for any successive policy term is received by us at the National Flood Insurance Program (NFIP), prior to the expiration date of this policy, subject to Article VIII (F.), above. The renewal premium payment shall be deemed to be received by the NFIP if the renewal payment is mailed to the NFIP prior to the expiration date and is received by the NFIP prior to or within five (5) days following the expiration date or if the renewal payment is mailed by certified mail to the NFIP prior to the expiration date. In all other cases, whether the renewal premium payment is received by the NFIP after the expiration date of this policy or not, this policy shall be deemed terminated as of the expiration date of the last policy term for which the premium payment was timely received by the NFIP and, in that event, we shall not be obligated to provide you with any cancellation, termination, policy lapse, or policy renewal notice advising you of any such cancellation, termination, policy lapse or policy renewal; provided, however, with respect to any mortgagee (or trustee) named in the declarations form attached to this policy, this insurance shall continue in force only for the benefit of such mortgagee (or trustee) for 30 days after written notice to the mortgagee (or trustee) of termination of this policy, and shall then terminate.

In connection with the renewal of this policy, you will be requested during the policy term to recertify, on a Recertification Questionnaire we will provide you, the rating information used to rate your most recent application for or renewal of insurance.

Notwithstanding your responsibility to submit the appropriate renewal premium in sufficient time to permit its receipt by us prior to the expiration of the policy being renewed, we have established a business procedure for mailing renewal notices to assist insureds in meeting their responsibility. Regarding our business procedure, evidence of the placing of any such notices into the U.S. Postal Service, addressed to you at the address appearing on your most recent application or other appropriate form (received by the NFIP prior to to the mailing of the renewal notice by us), does, in all respects, for purposes of the NFIP presumptively establish delivery to you for all purposes irrespective of whether you actually received the notice. However, in the event we determine that, through any circumstances, any renewal notice was not placed into the U.S. Postal Service, or, if placed, was prepared or addressed in a manner which we determine could preclude the likelihood of it being actually and timely received by you prior to the due date for the renewal premium, the following procedures shall be followed:

In the event that you or your agent notifies us not later than one year after the date on which the payment of the renewal was due, of a nonreceipt of a renewal notice prior to the due date for the renewal premium, which we determine was attributable to the above circumstances, we shall mail a second bill providing a revised due date, which shall be thirty days after the date on which the bill is mailed. If the renewal payment is received by such revised due date, the policy shall be renewed as of the date on which the prior policy would have expired. If the renewal payment requested by reason of the second bill is not received by the revised due date, no renewal shall occur and the policy shall remain an expired policy as of the expiration date prescribed on the policy.

H. Alterations and Repairs: You may, at any time, make alterations, additions and repairs to the insured property and complete structures in the course of construction. Consistent with your obligation to protect insured property damaged by a flood from further damage, as set forth in "I", below, you may also—following a loss by flood—make reasonable repairs of a temporary or permanent nature to protect the damaged, insured property from further damage and, to the extent you keep an accurate record of such repair expenditures, the cost of any such repairs—including the value of your own labor at prevailing Federal minimum wage rates—shall be included in determining the amount of loss covered by this policy.

I. Requirements in Case of Loss: Should a flood loss occur to your insured property, you must:

1. Notify us in writing as soon as practicable;

2. Protect the property from further damage;

3. As soon as reasonably possible, separate the damaged and undamaged property, putting it in the best possible order so that we may examine it; and

4. Within 60 days after the loss, send us a proof of loss, which is your statement as to

the amount you are claiming under the policy signed and sworn to by you and furnishing us with the following information.

a. The date and time of the loss,

b. A brief explanation of how the loss happened,

c. Your interest in the property damaged (for example, "owner") and the interests, if any, of others in the damaged property,

d. The actual cash value of each damaged item of insured property after depreciation is deducted from the cost of replacement of the property (unless the policy's "REPLACEMENT COST PROVISIONS" apply, in which case the replacement cost without allowance for depreciation should be furnished) and the amount of damages sustained,

e. Names of mortgagees or anyone else having a lien, charge or claim against the insured property,

f. Details as to any other contracts of insurance covering the property, whether valid or not,

g. Details of any changes in ownership, use, occupancy, location or possession of the insured property since the policy was issued,

h. Details as to who occupied any insured building at the time of loss and for what purpose, and

i. The amount you claim is due under this policy to cover the loss, including statements concerning:

(i) The limits of coverage stated in the policy,

(ii) The cost to repair or replace the damaged property (whatever costs less).

5. The insurance adjuster whom we hire to investigate your claim may furnish you with a proof of loss form, and she or he may help you to complete it. However, this is a matter of courtesy only, and you must still send us a proof of loss within 60 days after the loss even if the adjuster does not furnish the form or help you complete it. In completing the proof of loss, you must use your own judgment concerning the amount of loss and the justification for that amount; the adjuster is not authorized to approve or disapprove claims or to tell you whether your claim will be approved by us.

6. We may, at our option, waive the requirement for the completion and filing of a Proof of Loss in certain cases, in which event you will be required to sign and, at our option, swear to an adjuster's report of the loss which includes information about your loss and the damages needed by us in order to adjust your claim;

7. Any false statements made in the course of presentment of a claim under this policy may be punishable by fine or imprisonment under the applicable Federal laws.

J. Our Options After a Loss: Options we may, in our sole discretion, exercise after a loss include the following:

1. *Evidence of Loss*—If we specifically request it, in writing, you may be required to furnish us with a complete inventory of the destroyed, damaged and undamaged property, including details as to quantities, costs, actual cash values, amounts of loss claims, and any written plans and specifications for repair of the damaged property which you can make reasonably available to us.

2. *Examination Under Oath*—We may require you to show us or our designee, the damaged property, to be examined under oath by our designee and to sign any transcripts of such examinations; to, at such reasonable times and places as we may designate, permit us to examine and make extracts and copies of all books of accounts, bills, invoices and other vouchers, or certified copies thereof if the originals are lost, pertaining to the damaged property.

3. *Options to Repair or Replace*—We may take all or any part of the damaged property at the agreed or appraised value and, also, to repair, rebuild or replace the property destroyed or damaged with other of like kind and quality within a reasonable time, on giving you notice of our intention to do so within 30 days after the receipt of the proof of loss herein required under "I", above.

4. *Adjustment Options*—We may adjust loss to any insured property of others with the owners of such property or with you for their account. Any such insurance under this policy shall not inure directly or indirectly to the benefit of any carrier or other bailee for hire.

K. When Loss Payable: Loss is payable within 60 days after you file your proof of loss (or within 90 days after the insurance adjuster files an adjuster's report signed and sworn to by you in lieu of a proof of loss) and ascertainment of the loss is made either by agreement between us and you expressed in writing or by the filing with us of an award as provided in paragraph "M", below. If we reject your proof of loss in whole or in part, you may accept such denial of your claim, or exercise your rights under this policy, or file an amended proof of loss as long as it is filed within 60 days of the date of the loss or any extension of time allowed by the Administrator.

L. Abandonment. You may not abandon damaged or undamaged insured property to us. However, we may permit you to keep damaged, insured property ("salvage") after a loss and reduce the amount of the loss proceeds payable to you under the policy by the value of the salvage.

M. Appraisal. If at any time after a loss, we are unable to agree with you as to the actual cash value—or, if applicable, replacement cost—of the damaged property so as to determine the amount of loss to be paid to you, then, on the written demand of either

one of us, each of us shall select a competent and disinterested appraiser and notify the other of the appraiser selected within 20 days of such demand. The appraisers shall first select a competent and disinterested umpire; and failing, after 15 days, to agree upon such umpire, then, on your request or our request, such umpire shall be selected by a judge of a court of record in the State in which insured property is located. The appraisers shall then appraise the loss, stating separately replacement cost, actual cash value and loss to each item; and, failing to agree, shall submit their differences, only, to the umpire. An award in writing, so itemized, of any two (appraisers or appraiser and umpire) when filed with us shall determine the amount of actual cash value and loss or, should this policy's replacement cost provisions apply, the amount of replacement cost and loss. Each appraiser shall be paid by the party selecting him and the expenses of appraisal and umpire shall be paid by both of us equally.

N. Loss Clause. If we pay you for damage to property sustained in a flood loss, you are still eligible, during the term of the policy, to collect for a subsequent loss due to another flood. Of course, all loss arising out of a single, continuous flood of long duration shall be adjusted as one flood loss.

O. Mortgagee Clause—(Applicable to building items only and effective only when policy is made payable to a mortgagee (or trustee) named in the application and declarations form attached to this policy or of whom the Insurer has actual notice prior to the payment of loss proceeds under this policy.)

Loss, if any, under this policy, shall be payable to the aforesaid as mortgagee (or trustee) as interest may appear under all present or future mortgages upon the property descibed in which the aforesaid may have an interest as mortgagee (or trustee), in order of precedence of said mortgages, and this insurance, as to the interest of the mortgagee (or trustee) only therein, shall not be invalidated by any act or neglect of the mortgagor or owner of the described property, nor by any foreclosure or other proceedings or notice of sale relating to the property, nor by any change in the title or ownership of the property, nor by the occupation of the premises for purposes more hazardous than are permitted by this policy; provided, that in case the mortgagor or owner shall neglect to pay any premium due under this policy, the mortgagee (or trustee) shall, on demand, pay the same.

Provided, also, that the mortgagee (or trustee) shall notify the Insurer of any change of ownership or occupancy or increase of hazard which shall come to the knowledge of said mortgagee (or trustee) and, unless permitted by this policy, it shall be noted thereon and the mortgagee (or trustee) shall, on demand, pay the premium for such increased hazard for the term of the use thereof; otherwise this policy shall be null and void.

If this policy is cancelled by the Insurer, it shall continue in force for the benefit only of the mortgagee (or trustee) for 30 days after written notice to the mortgagee (or trustee) of such cancellation and shall then cease, and the Insurer shall have the right, on like notice, to cancel this agreement.

Whenever the Insurer shall pay the mortgagee (or trustee) any sum for loss under this policy and shall claim that, as to the mortgagor or owner, no liability therefor existed, the Insurer shall, to the extent of such payment, be thereupon legally subrogated to all the rights of the party to whom such payment shall be made, under all securities held as collateral to the mortgage debt, or may, as its option, pay to the mortgagee (or trustee) the whole principal due or to grow due on the mortgage with interest, and shall thereupon receive a full assignment and transfer of the mortgage and of all such other securities; but no subrogation shall impair the right of the mortgagee (or trustee) to recover the full amount of said mortgagee's (or trustee's) claim.

P. Mortgagee obligations—If the insured fails to render proof of loss, the named mortgagee (or trustee) upon notice, shall render proof of loss in the form herein specified within 60 days thereafter and shall be subject to the provisions of this policy relating to appraisal and time of payment and of bringing suit.

Q. Conditions for filing a lawsuit—You may not sue us to recover money under this policy unless you have complied with all the requirements of the policy. If you do sue, you must start the suit within twelve (12) months from the date we mailed you notice that we have denied your claim, or part of your claim, and you must file the suit in the United States District Court for district in which the insured property was located at the time of the loss.

R. Subrogation—Whenever we make a payment for a loss under this policy, we are subrogated to your right to recover for that loss from any other person. That means that your right to recover for a loss that was partly or totally caused by someone else is automatically transferred to us, to the extent that we have paid you for the loss. We may require you to acknowledge this transfer in writing. After the loss, you may not give up our right to recover this money or do anything which would prevent us from recovering it. If you make any claim against any person who caused your loss and recover any money, you must pay us back first before you may keep any of that money.

Article IX—Liberalization Clause

While this policy is in force, should we have adopted any forms, endorsements, rules or regulations by which this policy could be broadened or extended for your benefit by endorsement or substitution of policy form, then, such matters shall be considered to be incorporated in this policy without additional premium charge and shall inure to your benefit as though such endorsement of substitution of policy form had been made.

Article X—What Law Governs

This policy is governed by the flood insurance regulations issued by FEMA, the National Flood Insurance Act of 1968, as amended (42 U.S.C. s4001, *et seq.*) and Federal common law.

In witness whereof, we have signed this policy below and hereby enter into this Insurance Agreement.

JEFFREY S. BRAGG,
Administrator, Federal Insurance Administration.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943), Executive Order 12127, dated March 31, 1979 (44 FR 19367) E.O. 11988, dated May 24, 1977 and 44 CFR 9, Delegation of Authority to Federal Insurance Administrator)

[47 FR 19142, May 4, 1982, as amended at 48 FR 39069, Aug. 29, 1983; 48 FR 42818, Sept. 20, 1983]

APPENDIX A (2)

FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION

STANDARD FLOOD INSURANCE POLICY

[Issued Pursuant to the National Flood Insurance Acts of 1968, or Any Act Amendatory Thereof]

GENERAL PROPERTY FORM

In consideration of the payment of the premium, in reliance upon the statements in the application and declarations form made a part hereof and subject to all the terms of this policy, the Insurer does insure the Insured and legal representatives, to the extent of the actual cash value of the property at the time of loss, but not exceeding the amount which it would cost to repair or replace the property with material of like kind and quality within a resonable time after such loss. Without allowance for any increased cost of repair or reconstruction by reason of only ordinance or law regulating construction or repair, and without compensation for loss resulting from interruption of business or manufacture, nor in any event for more than the interest of the insured, against all *direct loss by or from "flood"* as defined herein, to the property described while located or contained as described in the application and declarations form attached hereto or pro rata for 45 days at each proper place to which any of the property shall necessarily be removed for preservation from the peril of "Flood", but not elsewhere.

Assignment of this policy by the Insured is allowed. The Insurer under this Policy is the Federal Emergency Management Agency.

PERSONS INSURED

The following are insured under this policy:

A. The named insured and legal representatives:

B. Any mortgagee and loss payee named in the application and declaration page in the order of precedence and to the extent of their interest but for no more, in the aggregate, than the interest of the named insured.

DEFINITIONS

Definitions—As used in this Policy:

"Actual cash value" means the replacement cost of an insured item of property at the time of loss, less the value of physical depreciation as to the item damaged.

"Application" means the statement made and signed by the Insured, or the Insured's agent, and giving information on the basis of which the Insurer determines the acceptability of the risk, the policy to be issued and the correct premium payment, which must accompany the application for the policy to be issued. The application is a part of this flood insurance policy.

"Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"Building" means a walled and roofed structure, other than a gas or liquid storage tank that is principally above ground and affixed to a permanent site, including a walled and roofed building in the course of construction, alteration or repair and a mobile home on foundation, subject to Paragraph "H" of the provision titled "Property Not Covered". This policy does not cover more than one building.

"Cancellation" means that ending of the insurance coverage provided by this policy prior to the expiration date.

"Coastal high hazard area" means an area subject to high velocity waters, including hurricane wave wash and tsunamis.

"Declarations page" is a computer generated summary of information furnished by the Insured in the application for insurance. The declarations page is a part of this flood insurance policy.

"Direct physical loss by or from flood" means any loss in the nature of actual loss of or physical damage, evidence by physical changes, to the insured property (building or personal property contents) which is directly and proximately caused by a "flood" (as defined in this Agreement), while the insured property is located: 1. at the property address shown on the application for this insurance, which is a part of this Agreement; and 2. for forty-five days, at another place above ground level or outside of the special flood hazard area to which any of the property shall necessarily be removed in order to protect and preserve it from a flood or from the imminent danger of flood (provided, personal property so removed must be placed in a fully enclosed building or otherwise reasonably protected from the elements to be insured against loss). The term "Direct Physical Loss by or from Flood" shall not include compensation for loss of use, loss of access, loss of profits or loss resulting from interruption of business, profession or manufacture, allowance for any increased cost of repair or reconstruction as a result of any ordinance or repair regulating reconstruction or repair, or other economic loss.

"Double-wide mobile home" means a building which is fully anchored and affixed to its permanent site, and which is designed and constructed as a modular or manufactured building an which has axles and wheels used solely for transportation to the lot or construction site where it is to be assembled as a non-movable, permanent building; such a building is not considered to be a mobile home for purposes of this policy.

"Expense constant" is a flat charge per policy term, paid by the Insured, to defray the Federal Government's policywriting and other expense.

"Expiration date" means the ending of the insurance coverage provided by this policy on the expiration date shown on the declaration page.

"Flood": Wherever in this policy the term "flood" occurs, it shall be held to mean:

A. A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters.

2. The unusual and rapid accumulation or runoff of surface waters from any source.

3. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in subparagraph A-2 above and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

B. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding the cyclical levels which result in flooding as defined in A-1 above.

"Policy" means the entire written contract between the Insured and the Insurer, including this printed form, the application and declarations page, any endorsements which may be issued and any renewal certificates indicating that coverage has been instituted for a new policy and policy term. Only one building, specifically described by you in the application, may be insured under this policy.

"Walled and roofed" means the building has in place two or more exterior, rigid walls and the roof is fully secured so that the building will resist flotation, collapse and lateral movement.

PERILS EXCUDED

The Insurer shall not be liable for loss:

A. By (1) rain, snow, sleet, hail or water spray; (2) freezing, thawing or by the pressure or weight of ice or water except where the property covered has been simultaneously damaged by flood; (3) water moisture or mudslide (i.e., mudflow) damage of any kind resulting primarily from conditions, causes or occurrences which are solely related to the described premises or are within the control of the insured (including but not limited to design, structural or mechanical defects, failures, stoppages or breakages of water or sewer lines, drains, pumps, fixtures, or equipment) or any condition which causes flooding which is substantially confined to the described premises or properties immediately adjacent thereto or; (4) seepage backup of water, or hydrostatic pressure not related to a condition of "flood" as defined;

B. Caused directly or indirectly by (1) hostile or warlike action in time of peace or war, including action in hindering, combating or defending against an actual, impending or expected attack, (a) by any government or sovereign power (de jure or de facto), or by any authority maintaining or using military, naval or air forces, or (b) by military, naval or air forces, or (c) by an agent of any such government, power, authority or forces, it being understood that any discharge, explosion or use of any weapon of war employing nuclear fission or fusion shall be conclusively presumed to be such a hostile or warlike action by such a government power authority or forces; (2) insurrection, rebellion, revolution, civil war, usurped power, or action taken by govern-

mental authority in hindering combating or defending against such an occurrence;

C. By nuclear reaction or nuclear radiation or radioactive contamination, all whether controlled or uncontrolled, or due to any act or condition incident to any of the foregoing whether such loss be direct or indirect, proximate or remote, or be in whole or in part caused by, contributed to, or aggravated by the peril insured against by this policy;

D. By theft or by fire windstorm explosion earthquake landslide or any other earth movement except such mudslide or erosion as is covered under the peril of flood;

E. Caused by or resulting from power, heating or cooling failure, unless such failure results from physical damage to power, heating or cooling equipment situated on premises where the property covered is located caused by the peril insured against.

F. Caused directly or indirectly by neglect of the Insured to use all reasonable means to save and preserve the property at the time of and after an occurrence of the peril insured against by this policy; but for contents covered herein and subject to the terms of the policy including the limits of liability, the Insurer will reimburse the Insured for reasonable expenses necessarily incurred by him in complying with the requirements of this paragraph including but not limited to reasonable expenses for removal or temporary storage (not exceeding 45 days), or both of insured contents, from the described premises because of the imminent danger of flood.

G. Caused intentionally by the Insured.

H. Which is already in progress as of 12:01 a.m. of the first day of the policy term.

I. From a flood which is confined to the premises on which the insured property is located unless the flood is displaced over two acres of the insured premises.

J. Caused by any modification by the Insured to the insured property or the described premises on which the insured property is located which materially increases the risk of flooding.

PROPERTY COVERED

A. Building. When the insurance under this policy covers a building, such insurance shall include additions and extensions attached thereto; permanent fixtures, machinery and equipment forming a part of and pertaining to the service of the building; personal property of the insured as landlord used for the maintenance or service of the building including fire extinguishing apparatus, floor coverings, refrigerating and ventilating equipment, all while within the described building; also, materials and supplies while within an enclosed structure located on the described premises or adjacent thereto, intended for use in construction alteration or repair of such building or appurtenant private structures on the described premises.

B. Contents. When the insurance under this policy covers contents, coverage shall be for either household contents or other than household contents, but not for both.

1. When the insurance under this policy covers other than household contents, such insurance shall cover merchandise and stock, materials and stock supplies of every description; furniture, fixtures, machinery and equipment of every description all owned by the insured; improvements and betterments (as hereinafter defined) to the building if the insured is not the owner of the building and when not otherwise covered; all while within the described inclosed building.

2. When the insurance under this policy covers household contents, such insurance shall cover all household and personal property usual or incidental to the occupancy of the premises as a residence—except animals, birds, fish, business property, other property not covered under the provisions of this policy, and any property more specifically covered in whole or in part by the other insurance including the peril insured against in this policy; belonging to the Insured or members of the Insured's family of the same household, or for which the Insured may be liable, or, at the option of the Insured, belonging to a servant or guest of the Insured; all while within the described building.

The Insured, if not the owner of the described building, may apply up to 10% of the amount of insurance applicable to the household contents covered under this item, not as an additional amount of insurance, to cover loss to improvements and betterments (as hereinafter defined) to the described building.

The Insured, if an individual condominium unit owner in the described building, may apply up to 10% of the amount of insurance on contents covered under this policy, not as an additional amount of insurance, to cover loss to the interior walls floors and ceilings that are not otherwise covered under a condominium association policy on the described building.

The Insurer shall not be liable for loss in any one occurrence for more than $250 in the aggregate on paintings, etchings, pictures, tapestries, art glass windows and other works of art (such as but not limited to statuary, marbles, bronzes, antique furniture, rare books, antique silver, porcelains, rare glass, and bric-a-brac), jewelry, watches, necklaces, bracelets, gems, precious and semi-precious stones, articles of gold, silver, platinum and furs and any article containing fur which represents its principal value.

3. When the insurance under this policy covers improvements and betterments, such

insurance shall cover the Insured's used interest in improvements and betterments to the described building.

(a) The term "improvements and betterments" wherever used in this policy is defined as fixtures, alterations, installations, or additions comprising a part of the described building and made, or acquired, at the expense of the Insured exclusive of rent paid by the Insured, but which are not legally subject to removal by the Insured.

(b) The word "lease" wherever used in this policy shall mean the lease or rental agreement, whether written or oral, in effect as of the time of loss.

(c) In the event improvements and betterments are damaged or destroyed during the term of this policy by the peril insured against, the liability of the Insurer shall be determined as follows:

(1) If repaired or replaced at the expense of the Insured within a reasonable time after such loss, the actual cash value of the damaged or destroyed improvements and betterments.

(2) If not repaired or replaced within a reasonable time after such loss, that proportion of the original cost at time of installation of the damaged or destroyed improvements and betterments which the unexpired term of the lease at the time of loss bears to the period(s) from the date(s) such improvements and betterments were made to the expiration date of the lease.

(3) If repaired or replaced at the expense of others for the use of the Insured, there shall be no liability hereunder.

C. Debris Removal. This insurance covers expense incurred in the removal of debris of or on the building or contents covered hereunder, which may be occasioned by loss caused by the peril insured against in this policy.

The total liability under this policy for both loss to property and debris removal expense shall not exceed the amount of insurance applying under this policy to the property covered.

PROPERTY NOT COVERED

This policy shall not cover:

A. Accounts, bills, currency, deeds, evidences of debt, money, coins, medals, postage stamps, securities, bullion, manuscripts, or other valuable papers or records.

B. On and after October 1, 1982, newly constructed and substantially improved buildings located seaward of mean high tide, or entirely in, on, or over water.

C. Fences, retaining walls, seawalls, swimming pools, bulkheads, wharves, piers, bridges, docks; other open stuctures located on or over water, including boathouses or other similar structures or buildings into which boats are floated; or personal property in the open.

D. Land values, lawn, trees, shrubs or plants, growing crops, or livestock; underground structures and equipment including wells, septic tanks or septic systems; those portions of walks, driveways and other paved or poured surfaces outside the foundation walls of the building.

E. Aircraft, any self-propelled vehicle or machine and motor vehicles (other than motorized equipment pertaining to the service of the premises, operated principally on the premises of the insured, and not licensed for highway use) including their parts and equipment, trailers on wheels and other recreational vehicles whether affixed to a permanent foundation or on wheels; watercraft including their furnishings and equipment; and business property.

F. Enclosures, contents machinery, building components, equipment and fixtures located at an elevation lower than the lowest elevated floor of an elevated building (except for the required utility connections and the footing, foundation, posts, pilings, piers or other foundation walls and anchorage system as required for the support of the elevated building), including a mobile home; finished basement walls, floor, ceilings and other improvement to a basement having its floor subgrade on all sides, and contents machinery, building equipment and fixtures in such basement areas; except that, as to this subparagraph (F), coverage is provided in basement areas and in areas below the lowest elevated floor of an elevated building for sump pumps, well-water tanks, oil tanks, furnaces, heat pumps and electrical junction and circuit breaker boxes; and coverage is also provided in basement areas and in areas below the lowest elevated floor of an elevated building for stairways and staircases attached to the building which are not separated from the building by elevated walkways.

G. Buildings and their contents, including machinery and equipment, which are part of the building, where more than 49 percent of the actual cash value of such buildings is below ground, unless the lowest level is at or above the base flood elevation (in the Regular Program) or the adjacent ground level (in the Emergency Program) by reason of earth having been used as an insulation material in conjunction with energy efficient building techniques;

H. On and after October 1, 1982, a mobile home located or placed within a FEMA designated Special Flood Hazard Area that is not affixed to a permanent site (anchored) to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors or that otherwise does not meet the community's flood plain management requirements, unless it is a mobile home on a foundation continuously insured at the same site by the National

Flood Insurance Program, at least since September 30, 1982.

I. Units which are primarily containers, rather than buildings (such as gas and liquid tanks, chemical or reactor container tanks or enclosures, brick kilns, and similar units) and their contents (Silos and grain storage buildings including their contents, may be insured even though they may be of container-type construction).

J. A mobile home and its contents located within a FEMA designated coastal high hazard area (Zones V1-V30 on a FEMA Flood Insurance Rate Map) which is not located in a mobile home park or subdivision in existence and open for business prior to June 1, 1982.

K. A building, and its contents, newly constructed or substantially improved on or after October 1, 1983, in an area designated as an undeveloped coastal barrier within the Coastal Barrier Resources System established by the Coastal Barrier Resources Act (Pub. L. 97-348).

DEDUCTIBLES

A. With respect to loss to the building and debris removal covered hereunder, Insurer shall be liable for only that portion of the loss in any one occurrence which is in excess of $500.00.

B. With respect to loss to contents, the reasonable expenses incurred by the Insured pursuant to paragraph "F" of "Perils Excluded," and debris removal coverage hereunder, the Insurer shall be liable for only that portion of the loss in any one occurrence which is in excess of $500.00.

C. In lieu of the $500.00 deductible, the amount of the deductible in "A" and "B," above, shall be the higher amount selected, as an option, by the Insured when applying for this insurance or when raising the deductible by endorsement.

D. In the case of reasonable expenses incurred in the removal of an insured mobile home or personal property from the insured premises away from the peril of flood, the amount of the deductible shall be $50.00.

GENERAL CONDITIONS AND PROVISIONS

A. Pair and Set Clause. If there is loss of an article which is part of a pair or set, the measure of loss shall be a reasonable and fair proportion of the total value of the pair or set, giving consideration to the importance of said article, but such loss shall not be construed to mean total loss of the pair or set.

B. Concealment, Fraud. This entire policy shall be void and no renewal nor new flood insurance coverage can be issued to the Insured if, whether before or after the loss, the Insured has willfully concealed or misrepresented any material fact or circumstance concerning this insurance or the subject thereof, or the interest of the Insured therein, or in case of any fraud or false swearing by the Insured relating thereto (see "E," below). In addition, this entire policy shall be void if the Insured has willfully concealed or misrepresented any fact on a "Recertification Questionnaire," which causes the Insurer to issue a policy to the Insured based on a premium amount which is less than the premium amount which would have been payable by the Insured if it were not for the misrepresentation of fact (see "J," below).

C. Other Insurance. The Insured shall not be liable for a greater proportion of any loss, less the amount of deductible, from the peril of flood than the amount of insurance under this policy bears to the whole amount of flood insurance (excluding therefrom any amount of "excess insurance" as hereinafter defined) covering the property, or which would have covered the property except for the existence of this insurance, whether collectible or not.

In the event that the whole amount of flood insurance (excluding therefrom any amount of "excess insurance" as hereinafter defined) covering the property exceeds the maximum amount of insurance permitted under the provisions of the National Flood Insurance Act of 1968, or any acts amendatory thereof, it is hereby understood and agreed that the insurance under this policy shall be limited to a proportionate share of the maximum amount of insurance permitted on such property under said Act, and that a refund of any extra premium paid, computed on a pro rata basis, shall be made by the insurer upon request in writing submitted not later than 2 years after the expiration of the policy term during which such extra amount of insurance was in effect.

"Excess Insurance" as used herein shall be held to mean insurance of such part of the actual cash value of the property as is in excess of the maximum amount of insurance permitted under said Act with respect to such property.

D. Added and Waiver Provision. The extent of the application of insurance under this policy and of the contribution to be made by the Insurer in case of loss, and any other provision or agreement not inconsistent with the provisions of this policy, may be provided for in writing added hereto, but no provision may be waived except such as by the terms of this policy is subject to change.

No permission affecting this insurance shall exist, or waiver of any provision be valid, unless granted herein or expressed in writing added hereto. No provision, stipulation or forfeiture shall be held to be waived by any requirement or proceeding on the part of the Insurer relating to appraisal or to any examination provided for herein.

E. Voidance, Reduction or Reformation of the Coverage:

1. Voidance: This policy will be void and of no legal force and effect in the event that any one of the following conditions occurs:

a. The property listed on the application is not eligible for coverage, in which case the policy is void from its inception;

b. The community in which the property is located was not participating in the National Flood Insurance Program on the policy's inception date and did not qualify as a participating community during the policy's term and before the occurrence of any loss for which the insured may receive compensation under the policy, in which case the policy is void from its inception;

c. If, during the term of the policy, the participation in the National Flood Insurance Program of the community in which the insured's property is located ceases, in which case the policy shall be deemed void effective at the end of the last day of the policy year in which such cessation occurred and shall not be renewed; in the event the voided policy included three policy years in a contract term of three years, the insured shall be entitled to a pro-rata refund of any premium applicable to the remainder of the policy's term after voidance of the policy;

d. The insured or the insured's agent has (i) sworn falsely or (ii) fraudulently or willfully concealed or misrepresented any material fact (including facts relevant to the rating of this policy) in the application for coverage, or upon any renewal of coverage, or in connection with the submission of any claim brought under the policy, in which case this entire policy shall be void as of the date the wrongful act was committed and coverage prior to the date of the wrongful act shall not be affected, provided, refunds of premiums, if any, shall be subject to offsets for the insurer's administrative expenses (including the payment of agent's commissions through prior policy years, if any) in connection with the issuance of the policy;

e. The premium submitted is less than $50.00 in connection with any application for a new policy or policy renewal, in which case the policy is void from its inception.

(2) Reduction of coverage limits or reformation. In the event that the premium payment received by the insurer is not sufficient to purchase the amounts of building coverage and contents (personal property) coverage requested or in the event a rating error has been innocently made by the insured or the agent on the application, renewal, endorsement or other form (whether evident or not) resulting in insufficient premium being received by the insurer for the purchase of the amounts of coverage requested, then:

(i) If the insufficient premium or other rating error is discovered by the insurer prior to a loss under the policy, the policy shall be deemed to provide only such coverage as can be purchased, for the entire term of the policy, with the amount of premium received; *Provided*, the insured may increase any reduced coverage(s) at any time by payment of the correct premium for the additional limits of coverage requested and any such correct premium received by the insurer prior to any loss under the policy shall result in coverage being provided for the loss up to the additional amount of coverage requested by the insured; the application of the insufficient premium received to the provision of flood insurance coverage shall be made as follows:

A. In the event that only one kind of coverage (building coverage or contents coverage) has been requested, the insured shall receive the limits of that kind of coverage which can be purchased for the amount of premium received, less the expense constant;

B. In the event that both building coverage and contents coverage have been requested, the insurer shall determine the percentage ratio that each kind of insurance bears to the total amount of coverage requested, apportion the total premium received by the percentage ratio for each kind of coverage, and the insured shall receive, as to each kind of coverage requested, the amount of coverage which can be purchased by the premium amount as apportioned for each kind of coverage; where both building and contents coverage are requested and a coverage's proportion of the premium paid is more than sufficient to obtain the amount of insurance requested for that coverage, any excess of that proportion of the total premium will be applied to obtain an additional amount of the other kind of coverage until the amount of insurance requested for the other coverage is obtained;

(ii) If the insufficient premium or other rating error is discovered by the insurer at the time of a loss under the policy, the policy shall be deemed to provide coverage pursuant to the provisions of (i), above, unless:

A. The insured or the insured's agent has sworn falsely or fraudulently or willfully concealed or misrepresented any material fact (including facts relevant to the rating of this policy) in the application for coverage, or upon any renewal of coverage, or in connection with the submission of any claim brought under this policy, in which case this entire policy shall be void as of the date the wrongful act was committed and coverage prior to the date of the wrongful act shall not be affected, provided, refunds of premiums, if any, shall be subject to offsets for the insurer's administrative expenses (including the payment of agent's commissions through prior policy years, if any) in

connection with the issuance of the policy, or

B. Provided (ii)A., above, does not apply, the insured remits and the insurer receives the additional premium required to purchase the limits of coverage for each kind of coverage as was initially requested by the insured within thirty (30) days from the date the insurer gives the insured written notice of additional premium due or within sixty (60) days of the loss if no notice of premium due is received by the insured, in which case the policy shall be reformed, from its inception date, to provide flood insurance coverage to the insured in the amount(s) of coverage initially requested. Silence or other failure to remit the additional premium required or non-receipt of such premium by the insurer within thirty (30) days from the date of notice of premium due or within sixty (60) days of the loss, whichever is sooner, shall be deemed to be refusal to pay the additional premium due and any subsequent payment of the additional premium due shall not reform the policy from its inception date but shall only add the additional amounts of coverage to the policy for the remainder of its term, pursuant to 44 CFR 61.11, with any excess of premium paid being returned to the insured. *Provided, however,* under this subsection "B" as to any mortgagee (or trustee) named in the policy, the insurer shall give a notice of additional premium due and the right of reformation shall continue in force for the benefit only of the mortgagee (or trustee), up to the amount of the insured indebtedness, for thirty (30) days after written notice to the mortgagee (or trustee).

F. Conditions Suspending or Restricting Insurance. Unless otherwise provided in writing added hereto, the Insurer shall not be liable for loss occurring while the hazard is increased by any means within the control or knowledge of the Insured, provided, however, this insurance shall not be prejudiced by any act or neglect of any person (other than the insured), when such act or neglect is not within the control of the Insured.

G. Alterations and Repairs. Permission is granted to make alterations, additions and repairs, and to complete structures in course of construction. In the event of loss hereunder, the Insured is permitted to make reasonable repairs, temporary or permanent, provided such repairs are confined solely to the protection of the property from further damage and provided further that the Insured shall keep an accurate record of such repair expenditures. The cost of any such repairs directly attributable to damage by the peril insured against shall be included in determining the amount of loss hereunder. Nothing herein contained is intended to modify the policy requirements applicable in case loss occurs, and in particular the requirement that in case loss occurs the Insured shall protect the property from further damage.

H. Property of Others (Servants and Guests Only). Unless otherwise provided in writing added hereto, loss to any property of others covered under this policy shall be adjusted with the Insured for the account of the owners of said property, except that the right to adjust such loss with said owners is reserved to the Insurer. Any such insurance under this policy shall not inure directly or indirectly to the benefit of any carrier or other bailee for hire.

I. Liberalization Clause. If during the period that insurance is in force under this policy, or within 45 days prior to the inception date thereof, on behalf of the Insurer there be adopted under the National Flood Insurance Act of 1968, or any acts amendatory thereof, any forms, endorsements, rules or regulations by which this policy could be extended or broadened, without additional premium charge, by endorsement or substitution of form, then such extended or broadened insurance shall inure to the benefit of the Insured hereunder as though such endorsement or substitution of form had been made.

J. Policy Renewal. The term of this policy commences on its inception date and ends on its expiration date, as shown on the "Declarations Page" which is attached to the policy. The Insurer is under no obligation to send any renewal notice or other notice that the policy term is coming to an end and the receipt of any such notice by the Insured, Mortgagee or Agent of the Insured shall not be deemed to be a waiver of this provision on the Insurer's part. The Insurer is under no obligation to assure that policy changes reflected in endorsements submitted by the Insured or Agent during the policy term and accepted by the Insurer are included in any renewal notice or new policy which is sent. "Policy changes" includes the addition of new coverage (e.g. contents coverage added to a building coverage policy or vice versa) or any increases in the amounts of coverage.

This policy shall not be renewed and the coverage provided by it shall not continue into any successive policy term unless the premium payment for any such successive policy term is received by the National Flood Insurance Program (NFIP), prior to the expiration date of this policy, subject to "General Condition "E"", above. The renewal premium payment shall be deemed to be received by the NFIP if the renewal payment is mailed to the NFIP prior to the expiration date and is received by the NFIP prior to or within five (5) days following the expiration date or if the renewal payment is mailed by certified mail to the NFIP prior to the expiration date.

In all cases, whether the renewal premium payment is received by the NFIP after the expiration date of this policy or not, this policy shall be deemed terminated as of the expiration date of the last policy term for which the premium was timely received by the NFIP and the Insurer shall not be obliged to provide the Insured with any cancellation, termination, policy lapse, or policy renewal notice advising the Insured of any such cancellation, termination, policy lapse or policy renewal; *Provided, however,* with respect to any mortgagee (or trustee) named in the Declaration form attached to this policy, this insurance shall continue in force only for the benefit of such mortgagee (or trustee) for 30 days after written notice to the mortgagee (or trustee) of termination of this policy, and shall then terminate.

In connection with the renewal of this policy, the Insured will be requested during the policy term to recertify, on a Recertification Questionnaire provided by the Insurer, the rating information used to rate the most recent application for or renewal of insurance.

Notwithstanding the above mentioned responsibility of the Insured to submit the appropriate renewal premium in sufficient time to permit its receipt by the NFIP prior to the expiration of the policy being renewed, the Insurer has established a business procedure for mailing renewal notices to assist Insureds in meeting their responsibility. Regarding the Insurer's business procedure, evidence of the placing of any such notices into the U.S. Postal Service, addressed to the Insured at the address appearing on the Insured's most recent application or other appropriate form (received by the NFIP prior to the mailing of the renewal notice by the Insurer), does, in all respects, for purposes of the NFIP presumptively establish delivery to the Insured for all purposes irrespective of whether the Insured actually received the notice. However, in the event that the Insurer determines that, through any circumstances, any renewal notice was not placed into the U.S. Postal Service, or, if placed, was prepared or addressed in a manner which the Insurer determines could preclude the likelihood of it being actually and timely received by the Insured prior to the due date for the renewal premium the following procedures shall be followed:

In the event that the Insured or his agent notifies the Insurer, not later than one year after the date on which the payment of the renewal was due, of a non-receipt of a renewal notice prior to the due date for the renewal premium, which the Insurer determines was attributable to the above circumstances, the Insurer shall mail a second bill providing a revised due date, which shall be thirty days after the date on which the bill is mailed. If the renewal payment is received by such revised due date, the policy shall be renewed as of the date on which the prior policy would have expired. If the renewal payment requested by reason of the second bill is not received by the revised due date, no renewal shall occur and the policy shall remain an expired policy as of the expiration date prescribed on the policy.

K. Cancellation of Policy or Reduction in Amount of Insurance. This policy may be cancelled at any time at the request of the Insured, in which case the Insurer shall, upon demand and surrender of this policy, refund the excess of paid premiums above the pro-rata premium earned with retention of the expense constant; provided, however, that the premium paid for the then current policy term shall be fully earned if the Insured retains an interest in the property covered at the location described in the application and declarations form.

The amount of insurance under this policy may be reduced at any time at the request of the Insured, in which case the Insurer shall, upon demand, refund the excess of paid premium above the pro-rata premium earned for the amount of the reduction; provided, however, that the premium paid for the then current policy term shall be fully earned to the extent that the Insured retains an interest in the property covered at the location described in the application and declarations form.

L. Loss Clause. Payment of any loss under this policy shall not reduce the amount of insurance applicable to any other loss during the policy term which arises out of a separate occurrence of the peril insured against hereunder provided, that all loss arising out of a continuous or protracted occurrence shall be deemed to constitute loss arising out of a single occurrence.

M. Mortgagee Clause (Applicable to building items only and effective only when policy is made payable to a mortgagee (or trustee) named in the application and declarations form attached to this policy or of whom the Insurer has actual notice prior to the payment of loss proceeds under this policy): Loss, if any, under this policy, shall be payable to the aforesaid as mortgagee (or trustee) as interest may appear under all present or future mortgages upon the property described in which the aforesaid may have an interest as mortgagee (or trustee), in order of precedence of said mortgages, and this insurance, as to the interest of the mortgagee (or trustee) only therein, shall not be invalidated by any act or neglect of the mortgagor or owner of the described property, nor by any foreclosure or other proceedings or notice of sale relating to the property, nor by any change in the title or ownership of the property, nor by the occupation of the premises for purposes more hazardous than are premitted by this policy;

Provided, That in case the mortgagor or owner shall neglect to pay any premium due under this policy, the mortgagee (or trustee) shall, on demand, pay the same.

Provided, also, that the mortgagee (or trustee) shall notify the Insurer of any change of ownership or occupancy or increase of hazard which shall come to the knowledge of said mortgagee (or trustee) and, unless permitted by this policy, it shall be noted thereon and the mortgagee (or trustee) shall, on demand, pay the premium for such increased hazard for the term of the use thereof; otherwise this policy shall be null and void.

If this policy is cancelled by the Insurer, it shall continue in force for the benefit only of the mortgagee (or trustee) for 30 days after written notice to the mortgagee (or trustee) of such cancellation and shall then cease, and the Insurer shall have the right, on like notice, to cancel this agreement.

Whenever the Insurer shall pay the mortgagee (or trustee) any sum for loss under this policy and shall claim that, as to the mortgagor or owner, no liability therefor existed, the Insurer shall, to the extent of such payment, be thereupon legally subrogated to all the rights of the party to whom such payment shall be made, under all securities held as collateral to the mortgage debt, or may, at its option, pay to the mortgagee (or trustee) the whole principal due or to grow due on the mortgage with interest, and shall thereupon receive a full assignment and transfer of the mortgage and of all such other securities; but no subrogation shall impair the right of the mortgagee (or trustee) to recover the full amount of said mortgagee's (or trustee's) claim.

N. Morgagee Obligations. If the Insured fails to render proof of loss, the named mortgagee (or trustee), upon notice, shall render proof of loss in the form herein specified within 60 days thereafter and shall be subject to the provisions of this policy relating to appraisal and time of payment and of bringing suit.

O. Loss Payable Clause (Applicable to contents items only). Loss, if any, shall be adjusted with the Insured and shall be payable to the Insured and loss payee as their interests may appear.

P. Requirements in Case of Loss. The Insured shall give written notice, as soon as practicable, to the Insurer of any loss, protect the property from further damage, forthwith separate the damaged and undamaged property and put it in the best possible order. Within 60 days after the loss, unless such time is extended in writing by the Insurer, the Insured shall render to the Insurer, a proof of loss, signed and sworn to by the Insured stating the knowledge and belief of the Insured as to the following: the time and origin of the loss, the interest of the Insured and of all others in the property, actual cash value of each item thereof and the amount of loss thereto, all encumbrances thereon, all other contracts of insurance, whether valid or not, covering any of said property, any changes in the title, use, occupation, location, possession or exposures of said property since the issuing of this policy, by whom and for what purpose any building herein described and the several parts thereof were occupied at the time of loss. The Insured, at the option of the Insurer, may be required to furnish a complete inventory of the destroyed, damaged and undamaged property, showing in detail quantities, costs, actual cash value and amount of loss claimed, and verified plans and specifications of any building, fixtures or machinery destroyed or damaged.

The Insured, as often as may be reasonably required, shall exhibit to any person designated by the Insurer all that remains of any property herein described, and submit to examinations under oath by any person named by the Insurer, and subscribe the same; and, as often as may be reasonably required, shall produce for examination all books of account, bills, invoices and other vouchers, or certified copies thereof if originals be lost, at such reasonable time and place as may be designated by the Insurer or its representative, and shall permit extracts and copies thereof to be made.

The Insurer may, at its option, waive the requirement for the completion and filing of a Proof of Loss in certain cases, in which event the Insured will be required to sign and, at the Insurer's option, swear to an adjuster's report of the loss which includes information about the loss and the damages needed by the Insurer before the loss can be adjusted.

Any false statements made in the course of presentment of a claim under this policy may be punishable by fine or imprisonment under the applicable Federal laws.

Q. Appraisal. In case the Insured and the Insurer shall fail to agree as to the actual cash value of the amount of loss, then, on the written demand of either, each shall select a competent and disinterested appraiser and notify the other of the appraiser selected within 20 days of such demand. The appraisers shall first select a competent and disinterested umpire; and failing for 15 days to agree upon such umpire, then, on request of the Insured or the Insurer, such umpire shall be selected by a judge of a court of record in the State in which the insured property is located. The appraisers shall then appraise the loss, stating separately actual cash value and loss to each item; and, failing to agree, shall submit their differences, only, to the umpire. An award in writing, so itemized, of any two when filed with the Insurer shall determine the amount of actual cash value and loss.

Each appraiser shall be paid by the party selecting him and the expenses of appraisal and umpire shall be paid by the parties equally.

R. Options. It shall be optional with the Insurer to take all, or any part, of the property at the agreed or appraised value, and also to repair, rebuild or replace the property destroyed or damaged with other of like kind and quality within a reasonable time, on giving notice of its intention so to do within 30 days after the receipt of the proof of loss herein required.

S. Abandonment. There shall be no abandonment to the Insurer of any property.

However, the Insurer may permit the Insured to keep damaged, insured property ("salvage") after a loss and reduce the amount of the loss proceeds payable to the Insured under the policy by the value of the salvage.

T. When Loss Payable. Loss is payable within 60 days after the Insured files the proof of loss (or within 90 days after the insurance adjuster files an adjuster's report signed and sworn to by the Insured in lieu of a proof of loss) and ascertainment of the loss is made either by agreement between the Insurer and the Insured, expressed in writing, or by the filing with the Insurer of an award as provided in paragraph "Q", above. If the Insurer rejects the Insured's proof of loss in whole or in part, the Insured may accept such denial of the claim, or exercise the Insured's rights under this policy, or file an amended proof of loss as long as it is filed within 60 days of the date of the loss or any extension of time allowed by the Administrator.

U. Action Against the Insurer. No suit or action on this policy for the recovery of any claim shall be sustainable in any court of law or equity unless all the requirements of this policy shall have been complied with, and unless commenced within 12 months next after the date of mailing of notice of disallowance or partial disallowance of the claim. An action on such claim against the Insurer may be instituted, without regard to the amount in controversy, in the United States District Court for the district in which the property shall have been situated.

V. Subrogation. In the event of any payment under this policy, the Insurer shall be subrogated to all the Insured's right of recovery therefor against any party, and the Insurer may require from the Insured an assignment of all rights of recovery against any party for loss to the extent that payment therefor is made by the Insurer. The Insured shall do nothing after loss to prejudice such right; however, this insurance shall not be invalidated should the Insured waive in writing prior to a loss any or all right of recovery against any party for loss occurring to the described property.

IN WITNESS WHEREOF, the Insurer has executed and attested these presents; but this policy shall not be valid unless countersigned by the duly authorized representative of the Insurer.

GLORIA M. JIMENEZ,
Federal Insurance Administrator.

Endorsement 1

CONDOMINIUM ASSOCIATION ENDORSEMENT

If the named Insured on this policy is a condominium association, then at the time of loss by flood the following terms, subject to all other provisions of the policy, will apply:

1. The building coverage of this policy, subject to the stated limits will cover damage to all building items covered under the policy and owned in common by the condominium association members.

2. The building coverage of this policy, subject to the stated limits, is extended to cover damage to all structural items within the Individual Condominium Units, including walls, floors, ceilings, and their related coverings, such as paint, paper, panelling, carpeting, and tile. Also covered are installed appliances for heating, cooling, plumbing and electrical purposes. The structural items may be original installations or replacement or additional items.

3. The building coverage outlined in paragraph 2 above has application only to the extent that the policy's stated limits have not been exhausted under paragraph 1.

4. The policy deductible relating to the building coverage shall be applied against the total damage to all of the building's structural elements and not against the covered loss, and shall not be applied separately in the case of each unit sustaining damage.

5. The contents coverage of this policy covers damage, subject to the stated limits, to all contents items owned in common by the association members and contained in the insured building or removed therefrom in accordance with the policy's terms.

6. The policy deductible relating to contents coverage shall be applied against the total damage to all contents owned in common by the condominium association members and contained in the insured building or removed therefrom in accordance with the policy's terms and not against the covered loss.

7. Loss under this endorsement shall be adjusted with the condominium association and shall be payable to the insurance trustee of record, as designated by the association.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and

Urban Development Act of 1968), 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41934), Executive Order 12127, dated March 31, 1979 (44 FR 19367) E.O. 11988, dated May 24, 1977 and 44 CFR 9, Delegation of Authority to Federal Insurance Administrator)

[43 FR 2570, Jan. 17, 1978, as amended at 44 FR 32215, June 5, 1979. Redesignated at 44 FR 31177, May 31, 1979 and amended at 47 FR 19147, May 4, 1982; 48 FR 39069, Aug. 29, 1983; 48 FR 42818, Sept. 20, 1983]

PART 62—SALE OF INSURANCE AND ADJUSTMENT OF CLAIMS

Subpart A—Issuance of Policies

Sec.
62.1 Purpose of part.
62.2 Definitions.
62.3 Servicing agent.
62.4 Limitations on sale of policies.
62.5 Premium refund.
62.6 Minimum commissions.

Subpart B—Claims Adjustment and Judicial Review

62.21 Claims adjustment.
62.22 Judicial review.

AUTHORITY: Sec. 7(d), 79 Stat. 670; 42 U.S.C. 3535(d); sec. 1306, 82 Stat. 575 (42 U.S.C. 4013); Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

SOURCE: 43 FR 2573, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, unless otherwise noted.

Subpart A—Issuance of Policies

§ 62.1 Purpose of part.

The purpose of this part is to set forth the manner in which flood insurance under the Program is made available to the general public in those communities designated as eligible for the sale of insurance under Part 64 of this subchapter, and to prescribe the general method by which the Administrator exercises his/her responsibility regarding the manner in which claims for losses are paid.

§ 62.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

§ 62.3 Servicing agent.

(a) Pursuant to sections 1345 and 1346 of the Act, the Administrator has entered into the Agreement with a servicing agent to authorize it to assist in issuing flood insurance policies under the Program in communities designated by the Associate Director and to accept responsibility for delivery of policies and payment of claims for losses as prescribed by and at the discretion of the Administrator.

(b) The following company has been contracted to act as a servicing agent for the Federal Insurance Administration: Computer Sciences Corporation, 9901-A George Palmer Highway, Lanham, Maryland 20706.

(c) The servicing agent will arrange for the issuance of flood insurance to any person qualifying for such coverage under Parts 61 and 64 of this subchapter who submits an application to the servicing agent in accordance with the terms and conditions of the contract between the Agency and the servicing agent.

(d) Applications and premiums should be mailed to: National Flood Insurance Program, P.O. Box 459, Lanham, Maryland 20706.

(Reorganization Plan No. 3 of 1978, Executive Order 12127 and Executive Order 12148)

[43 FR 2573, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544, Sept. 29, 1983]

§ 62.4 Limitations on sale of policies.

(a) The servicing agent shall be deemed to have agreed, as a condition of its contract that it shall not offer flood insurance under any authority or auspices in any amount within the maximum limits of coverage specified in § 61.6 of this subchapter, in any area the Associate Director designates in Part 64 of this subchapter as eligible for the sale of flood insurance under the Program, other than in accordance with this part, and the Standard Flood Insurance Policy.

(b) The agreement and all activities thereunder are subject to Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d, and to the applicable Federal regulations and requirements issued from time to time pursuant thereto.

No person shall be excluded from participation in, denied the benefits of, or subjected to discrimination under the Program, on the ground of race, color, sex, creed or national origin. Any complaint or information concerning the existence of any such unlawful discrimination in any matter within the purview of this part should be referred to the Administrator.

(Reorganization Plan No. 3 of 1978, Executive Order 12127 and Executive Order 12148)

[43 FR 2573, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544, Sept. 29, 1983]

§ 62.5 Premium refund.

A Standard Flood Insurance Policyholder whose property has been determined not to be in a special hazard area after the map revision or a Letter of Map Amendment under Part 70 of this subchapter may cancel the policy within the current policy year provided (a) he was required to purchase or to maintain flood insurance coverage, or both, as a condition for financial assistance, and (b) his property was located in an identified special hazard area as represented on an effective FHBM or FIRM when the financial assistance was provided. If no claim under the policy has been paid or is pending, the full premium shall be refunded for the current policy year, and for an additional policy year where the insured had been required to renew the policy during the period when a revised map was being reprinted.

§ 62.6 Minimum commissions.

(a) The earned commission which shall be paid to any property or casualty insurance agent or broker duly licensed by a state insurance regulatory authority, with respect to each policy or renewal the agent duly procures for an insured, shall not be less than $10 and is computed as follows:

(1) In the case of a new or renewal policy, the following commissions shall apply based on the total premiums paid for the policy term:

Policy term	Premium amount	Commissions (percent)
1 year	1st of $2,000	15
	Excess of $2,000	5
3 years	1st of $6,000	15
	Excess of $6,000	5

(2) In the case of mid-term increases in amounts of insurance added by endorsement, the following commissions shall apply based on the total premium paid for the increased amounts of insurance:

Premium amounts	Commission (percent)
1st of $2,000	15
Excess of $2,000	5

(b) Any refunds of premiums authorized under this subchapter shall not affect a previously earned commission; and no agent shall be required to return that earned commission, unless the refund is made to establish a common policy term anniversary date with other insurance providing coverage against loss by other perils in which case a return of commission will be required by the agent on a pro rata basis. In such cases, the policy shall be immediately rewritten for a new term with the same amount(s) of coverage and with premium calculated at the then current rate and, as to return premium, returned, pro rata, to the insured based on the former policy's premium rate.

(National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968), 42 U.S.C. 4001—4128; Reorganization Plan No. 3 of 1978 (43 FR 41943), Executive Order 12127, dated March 31, 1979 (44 FR 19367) Executive Order 11988, dated May 24, 1977 and 44 CFR Part 9, Delegation of Authority to Federal Insurance Administrator)

[46 FR 13515, Feb. 23, 1981]

Subpart B—Claims Adjustment and Judicial Review

§ 62.21 Claims adjustment.

(a) In accordance with the Agreement, the servicing agent shall ar-

range for the prompt adjustment and settlement and payment of all claims arising from policies of insurance issued under the program. Investigation of such claims may be made through the facilities of its subcontractors or insurance adjustment organizations, to the extent required and appropriate for the expeditious processing of such claims.

(b) All adjustment of losses and settlements of claims shall be made in accordance with the terms and conditions of the policy and Parts 61 and 62 of this subchapter.

§ 62.22 Judicial Review.

(a) Upon the disallowance by the Federal Insurance Administration or the servicing agent of any claim on grounds other than failure to file a proof of loss, or upon the refusal of the claimant to accept the amount allowed upon any such claim, after appraisal pursuant to policy provisions, the claimant within one year after the date of mailing by the Federal Insurance Administration or the servicing agent of the notice of disallowance or partial disallowance of the claim may, pursuant to 42 U.S.C. 4072, institute an action on such claim against the Director of the Federal Emergency Management Agency in the U.S. District Court for the district in which the insured property or the major portion thereof shall have been situated, without regard to the amount in controversy.

(b) Service of process for all judicial proceedings where a claimant is suing Director pursuant to 42 U.S.C. 4071 shall be made upon the appropriate United States Attorney, the Attorney General of the United States, and the Director of the Federal Emergency Management Agency.

[43 FR 2573, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 47 FR 43061 Sept. 30, 1982]

PART 63—[RESERVED]

PART 64—COMMUNITIES ELIGIBLE FOR THE SALE OF INSURANCE

Sec.
64.1 Purpose of part.
64.2 Definitions.
64.3 Flood Insurance Maps.
64.4 Effect on community eligibility resulting from boundary changes, governmental reorganization, etc.
64.5 Relationship of rates to zone designations.
64.6 List of eligible communities.

AUTHORITY: Sec. 7(b), 79 Stat. 670; 42 U.S.C. 3535(d); Sec. 1361, 82 Stat. 587; 42 U.S.C. 4102; Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

SOURCE: 41 FR 46986, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

§ 64.1 Purpose of part.

(a) 42 U.S.C. 4012(c), 4022 and 4102 require that flood insurance in the maximum limits of coverage under the regular program shall be offered in communities only after the Associate Director, State and Local Programs and Support (herein the Associate Director) has: (1) Identified the areas of special flood, mudslide (i.e., mudflow) or flood-related erosion hazards within the community; and/or (2) completed a risk study for the applicant community. The priorities for conducting such risk studies are set forth in §§59.23 and 60.25 of this subchapter. The purpose of this part is to define the types of zones which the Agency will use for identifying the hazard areas on maps.

(b) 42 U.S.C. 4056 authorizes an emergency implementation of the National Flood Insurance Program whereby the Associate Director may make subsidized coverage available to eligible communities prior to the completion of detailed risk studies for such areas. This part also describes procedures under the emergency program and lists communities which become eligible under the NFIP.

(National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended; 42 U.S.C. 4001-4128; Executive Order 12127, 44 FR 19367; and delegation of authority to the Associate Director)

[48 FR 28278, June 21, 1983]

§ 64.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

§ 64.3 Flood Insurance Maps.

(a) The following maps may be prepared by the Associate Director for use in connection with the sale of flood insurance:

(1) Flood Insurance Rate Map (FIRM): This map is prepared after the risk study for the community has been completed and the risk premium rates have been established. It indicates the risk premium rate zones applicable in the community and when those rates are effective. The symbols used to designate those zones are as follows:

Zone symbol	
A	Area of special flood hazard without water surface elevations determined.
A1-99	Area of special flood hazard with water surface elevations determined.
A0	Area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft.
AH	Areas of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) feet, and with water surface elevations determined.
V1-30	Area of special flood hazards, with velocity, that is inundated by tidal floods (coastal high hazard area).
V0	Area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft. and with velocity.
B	Area of moderate flood hazards.
C	Area of minimal hazards.
D	Area of undetermined but possible, flood hazards.
M	Area of special mudslide (i.e., mudflow) hazards.
N	Area of moderate mudslide (i.e., mudflow) hazards.
P	Area of undetermined, but possible, mudslide hazards.
E	Area of special flood-related erosion hazards.

Areas identified as subject to more than one hazard (flood, mudslide (i.e., mudflow), flood-related erosion) will be designated by use of the proper symbols in combination.

(2) Flood Hazard Boundary Map (FHBM). This map is issued by the Associate Director delineating Zones A, M, and E within a community.

(b) Notice of the issuance of new or revised FHBMs or FIRMs is given in Part 65 of this subchapter. The mandatory purchase of insurance is required within designated Zones A, A1-99, A0, V1-30, V0, M, and E.

(c) The FHBM or FIRM shall be maintained for public inspection at the following locations:

(1) The information office of the State agency or agencies designated by statute or the respective Governors to cooperate with the Associate Director in implementing the Program whenever a community becomes eligible for Program participation and the sale of insurance pursuant to this section or is identified as flood prone.

(2) One or more official locations within the community in which flood insurance is offered.

(3) [Reserved]

(4) The official record copy of each official map shall be maintained in FEMA files in Washington, D.C.

(42 U.S.C. 4001 et seq., Reorganization Plan No. 3 of 1978 (3 CFR 1978 Comp. 329) and Executive Order 12127 (44 FR 19367); Executive Order 12148)

[41 FR 46986, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 46 FR 1274, Jan. 6, 1981; 48 FR 28278, June 21, 1983; 48 FR 44544 and 44552, Sept. 29, 1983]

§ 64.4 Effect on community eligibility resulting from boundary changes, governmental reorganization, etc.

(a) When a community not participating in the Program acquires by means of annexation, incorporation, or otherwise, an area within another community participating in the Program, no new flood insurance shall be

made available as of the effective date of annexation until the newly acquiring community participates in the Program. Until the effective date of participation, existing flood insurance policies remain in effect until the policy's date of expiration, but shall not be renewed.

(b) When a community participating in the Program acquires by means of annexation, incorporation, or otherwise, another area which was previously located in a community either participating or not participating in the Program, the community shall have six months from the date of acquisition to formally amend its flood plain management regulations in order to include all flood-prone areas within the newly acquired area. The amended regulations shall satisfy the applicable requirements in § 60.3 of this subchapter based on the data previously provided by the Associate Director. In the event that the newly acquired area was previously located in a community participating in the Program, the provisions of this section shall only apply if the community, upon acquisition, and pending formal adoption of the amendment to its flood plain management regulations, certifies in writing over the signature of a community official that within the newly acquired area the flood plain management requirements previously applicable in the area remain in force. In the event that the newly-acquired area was previously located in a community not participating in the Program, the provisions of the section shall only apply if the community, upon acquisition, and pending formal adoption of the amendments to its flood plain management regulations, certifies in writing over the signature of a community official that it shall enforce within the newly-acquired area the requirements of § 60.3(b) of this subchapter. During the six month period, existing flood insurance policies shall remain in effect until their date of expiration may be renewed, and new policies may be issued. Failure to satisfy the applicable requirements in § 60.3 shall result in the community's suspension from Program participation pursuant to § 59.24 of this subchapter.

(c) When an area previously a part of a community participating in the Program becomes autonomous or becomes a portion of a newly autonomous community resulting from boundary changes, governmental reorganization, changes in state statutes or constitution, or otherwise, such new community shall be given six months from the date of its independence, to adopt flood plain management regulations within the special hazard areas subject to its jurisdiction and to submit its application for participation as a separate community in order to retain eligibility for the sale of flood insurance. The regulations adopted by such new community shall satisfy the applicable requirements in § 60.3 of this subchapter based on the data previously provided by the Associate Director. The provisions of this section shall only apply where the new community upon the date of its independence certifies in writing over the signature of a community official that, pending formal adoption of flood plain management regulations, the flood plain management requirements previously applicable in that area remain in effect. During the six month period, existing flood insurance policies shall remain in effect until their dates of expiration may be renewed, and new policies may be issued. Failure to satisfy the applicable requirements in § 60.3 of this subchapter shall result in the community's suspension from Program participation pursuant to § 59.24 of this subchapter.

(d) Where any community or any area within a community had in effect a FHBM or FIRM, but all or a portion of that community has been acquired by another community, or becomes autonomous, that map shall remain in effect until it is superseded by the Associate Director, whether by republication as part of the map of the acquiring community, or otherwise.

(e) When a community described in paragraph (a), (b), (c), or (d) of this section has flood elevations in effect, no new appeal period under Parts 66, 67, and 68 of this subchapter will begin except as new scientific and technical data are available.

[41 FR 46986, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

§ 64.5 Relationship of rates to zone designations.

(a) In order to expedite a community's qualification for flood insurance under the emergency program, the Associate Director may authorize the sale of such insurance without designating any Zones A, M, or E within a community, provided the community has previously adopted flood plain management regulations meeting the requirements of § 60.3(a), § 60.4(a) or § 60.5(a) of this subchapter. When the Associate Director has obtained sufficient technical information to delineate Zones A, M, or E, he/she shall delineate the tentative boundaries on a FHBM.

(b) Upon the effective date of the FIRM, flood insurance will continue to be available throughout the entire community at chargeable rates (i.e., subsidized) for first layer coverage of existing structures, but will be only available at risk premium rates for all new construction and substantial improvements. Upon the effective date of a FIRM, second layer coverage is available only at risk premium rates for all structures.

(c) Detailed insurance information may be obtained from the servicing companies. See Part 62 of this subchapter.

[41 FR 46986, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983]

§ 64.6 List of eligible communities.

The sale of flood insurance pursuant to the National Flood Insurance Program (42 U.S.C. 4001-4128) is authorized for the communities set forth under this section. Previous listings under this part continue in effect until revised.

EDITORIAL NOTE: For references to FR pages showing lists of eligible communities, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

PART 65—IDENTIFICATION AND MAPPING OF SPECIAL HAZARD AREAS

Sec.
65.1 Purpose of part.
65.2 Definitions.
65.3 Requirement to submit new technical data.
65.4 List of communities submitting new technical data.

AUTHORITY: Sec. 7(d), 79 Stat. 670; 42 U.S.C. 3535(d), Sec. 1360, 82 Stat. 587, 42 U.S.C. 4101; Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

§ 65.1 Purpose of part.

42 U.S.C. 4104 authorizes the Director to identify and publish information with respect to all areas within the United States having special flood, mudslide (i.e., mudflow) and flood-related erosion hazards. The purpose of this part is to outline the steps a community needs to take in order to assist the Agency's effort in providing up-to-date identification and publication, in the form of the maps described in Part 64, on special flood, mudslide (i.e., mudflow) and flood-related erosion hazards.

[48 FR 28278, June 21, 1983]

§ 65.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

[41 FR 46987, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 65.3 Requirement to submit new technical data.

A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. Within six months of the date that such information becomes available, a community shall notify the Associate Director of the changes by submitting technical or scientific data in accordance with this paragraph. Such submission is necessary so that upon confirmation of those physical changes affecting flood-

ing conditions risk premium rates and flood plain management requirements will be based upon current data.

(a) The Chief Executive Officer (CEO) of a community participating in the Program shall submit to the Associate Director technical or scientific information indicating that the base flood elevations on the community's FIRM do not accurately reflect flood risks as they currently exist. Such information shall include, but not necessarily be limited to:

(1) A topographic map exhibiting ground elevation contours in greater detail than maps available at the time of the flood insurance study, or exhibiting topographic or ground elevation changes since the flood insurance study was performed; and

(2) Hydrologic data which has become available since the flood insurance study was performed, such as photographs or historical records of a major flooding occurrence or a flood study or information developed by an appropriate authoritative source, such as a Federal or State agency, a County Water Control District, and a County, City or private registered professional engineer. Hydrologic information shall be of sufficient detail so that the hydrologic computations may be evaluated by the Associate Director; or

(3) Information about flood control projects, such as stream channelization, construction of new dams, reservoirs, artificial canals, private levees, or flood protection systems. Such information shall:

(i) Be submitted at least six months prior to the expected completion date of the project, and

(ii) Include a complete plan of the project with cross sections and dimensions, together with a detailed map of the affected area indicating changes in base flood elevations caused by construction of the project, and

(iii) Be reflected on the community's FIRM only after the project has been completed, except as may be provided in this subchapter.

(b) The technical and scientific information indicating changes in base flood elevations shall be submitted to Engineering Branch, Natural Hazards Division, Office of Natural and Technological Hazards, Federal Emergency Management Agency, Washington, DC.

(c) Upon receipt of the scientific or technical data, the Associate Director shall (1) mail an acknowledgement to the CEO, and (2) notify the CEO within 90 days that:

(i) The base flood elevations on the effective FIRM are correct and shall not be modified; or

(ii) The flood elevations on the effective FIRM shall be modified, and new base flood elevations shall be established under the provisions of Part 67 of this subchapter; or

(iii) An additional 90 days is required to evaluate the scientific or technical data submitted.

[41 FR 46987, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 47 FR 43061 Sept. 30, 1982. Redesignated at 48 FR 28278, June 21, 1983, and amended at 48 FR 44553, Sept. 29, 1983]

§ 65.4 List of communities submitting new technical data.

This section provides a cumulative list of communities where modifications of the base flood elevation determinations have been made because of submission of new scientific or technical data. Due to the need for expediting the modifications, the revised map is already in effect and the appeal period commences on or about the effective date of the modified map. An interim rule, followed by a final rule, will list the revised map effective date, local repository and the name and address of the community Chief Executive Officer. The map(s) is (are) effective for both floodplain management and insurance purposes.

[48 FR 40891, Sept. 12, 1983]

EDITORIAL NOTE: For a list of communities issued under this section and not carried in the CFR see the List of CFR Sections Affected appearing in the Findings Aids section of this volume.

PART 66—CONSULTATION WITH LOCAL OFFICIALS

Sec.
66.1 Purpose of part.
66.2 Definitions.
66.3 Establishment of community case file and flood elevation study docket.

Sec.
66.4 Appointment of consultation coordination officer.
66.5 Responsibilities for consultation and coordination.

AUTHORITY: 42 U.S.C. 4001 et seq., Reorganization Plan No. 3 of 1978 (3 CFR 1978 Comp. 329) and Executive Order 12127 (44 FR 19367), unless otherwise noted.

§ 66.1 Purpose of part.

(a) The purpose of this part is to comply with section 206 of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4107) by establishing procedures for flood elevation determinations of Zones A1-99 and V1-30 within the community so that adequate consultation with the community officials shall be assured.

(b) The procedures in this part shall apply when base flood elevations are to be determined or modified.

(c) The Associate Director or his delegate shall:

(1) Specifically request that the community submit pertinent data concerning flood hazards, flooding experience, plans to avoid potential hazards, estimate of historical and prospective economic impact on the community, and such other appropriate data (particularly if such data will necessitate a modification of a base flood elevation).

(2) Notify local officials of the progress of surveys, studies, investigations, and of prospective findings, along with data and methods employed in reaching such conclusions; and

(3) Encourage local dissemination of surveys, studies, and investigations so that interested persons will have an opportunity to bring relevant data to the attention of the community and to the Associate Director.

(4) Carry out the responsibilities for consultation and coordination set forth in § 66.5 of this part.

[41 FR 46988, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 47 FR 771, Jan. 7, 1982; 48 FR 44553, Sept. 29, 1983]

§ 66.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

[41 FR 46988, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 66.3 Establishment of community case file and flood elevation study docket.

(a) A file shall be established for each community at the time initial consideration is given to studying that community in order to establish whether or not it contains flood-prone areas. Thereafter, the file shall include copies of all correspondence with officials in that community. As the community is tentatively identified, provided with base flood elevations, or suspended and reinstated, documentation of such actions by the Associate Director shall be placed in the community file. Even if a map is administratively rescinded or withdrawn after notice under Part 65 of this subchapter or the community successfully rebuts its flood-prone designation, the file will be maintained indefinitely.

(b) A portion of the community file shall be designated a flood elevation study consultation docket and shall be established for each community at the time the contract is awarded for a flood elevation study. The docket shall include copies of (1) all correspondence between the Associate Director and the community concerning the study, reports of any meetings among the Agency representatives, property owners of the community, the state coordinating agency, study contractors or other interested persons, (2) relevant publications, (3) a copy of the completed flood elevation study, and (4) a copy of the Associate Director's final determination.

(c) A flood elevation determination docket shall be established and maintained in accordance with Part 67 of this subchapter.

(Reorganization Plan No. 3 of 1978; Executive Order 12127 and Executive Order 12148)

[41 FR 46988, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544 and 44553, Sept. 29, 1983]

§ 66.4 Appointment of consultation coordination officer.

The Associate Director for State and Local Programs and Support (Associate Director) may appoint an employee of the Federal Emergency Management Agency, or other designated

Federal employee, as the Consultation Coordination Officer, for each community when an analysis is undertaken to establish or to modify flood elevations pursuant to a new study or a restudy. When a CCO is appointed by the Associate Director, the responsibilities for consultation and coordination as set forth in § 66.5 shall be carried out by the CCO. The Associate Director shall advise the community and the state coordinating agency, in writing, of this appointement.

[47 FR 771, Jan. 7, 1982]

§ 66.5 Responsibilities for consultation and coordination.

(a) Contact shall be made with appropriate officials of a community in which a proposed investigation is undertaken, and with the state coordinating agency.

(b) Local dissemination of the intent and nature of the investigation shall be encouraged so that interested parties will have an opportunity to bring relevant data to the attention of the community and to the Associate Director.

(c) Submission of information from the community concerning the study shall be encouraged.

(d) Appropriate officials of the community shall be fully informed of (1) The responsibilities placed on them by the Program, (2) the administrative procedures followed by the Federal Emergency Management Agency, (3) the community's role in establishing elevations, and (4) the responsibilities of the community if it participates or continues to participate in the Program.

(e) Before the commencement of an initial Flood Insurance Study, the CCO or other FEMA representative, together with a representative of the organization undertaking the study, shall meet with officials of the community. The state coordinating agency shall be notified of this meeting and may attend. At this meeting, the local officials shall be informed of (1) The date when the study will commence, (2) the nature and purpose of the study, (3) areas involved, (4) the manner in which the study shall be undertaken, (5) the general principles to be applied, and (6) the intended use of the data obtained. The community shall be informed in writing if any of the six preceding items are or will be changed after this initial meeting and during the course of the ongoing study.

(f) The community shall be informed in writing of any intended modification to the community's final flood elevation determinations or the development of new elevations in additional areas of the community as a result of a new study or restudy. Such information to the community will include the data set forth in paragraph (e) of this section. At the discretion of the Chief of the Natural and Technological Hazards Division in each FEMA Regional Office, a meeting may be held to accomplish this requirement.

[47 FR 771, Jan. 7, 1982]

PART 67—APPEALS FROM PROPOSED FLOOD ELEVATION DETERMINATIONS

Sec.

67.1 Purpose of part.
67.2 Definitions.
67.3 Establishment and maintenance of a flood elevation determination docket (FEDD).
67.4 Proposed flood elevation determination.
67.5 Right of appeal.
67.6 Basis of appeal.
67.7 Collection of appeal data.
67.8 Appeal procedure.
67.9 Final determination in the absence of an appeal by the community.
67.10 Rates during pendency of final determination.
67.11 Notice of final determination.
67.12 Appeal to District Court.

AUTHORITY: Sec. 1304(a), 82 Stat. 574 (42 U.S.C. 4012); Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

SOURCE: 41 FR 46989, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

§ 67.1 Purpose of part.

The purpose of this part is to establish procedures implementing the pro-

visions of section 110 of Flood Disaster Protection Act of 1973.

§ 67.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

§ 67.3 Establishment and maintenance of a flood elevation determination docket (FEDD).

The Associate Director shall establish a docket of all matters pertaining to flood elevation determinations. The docket files shall contain the following information:

(a) The name of the community subject to the flood elevation determination;

(b) A copy of the notice of the proposed flood elevation determination to the Chief Executive Officer (CEO) of the Community;

(c) A copy of the notice of the proposed flood elevation determination published in a prominent local newspaper of the community;

(d) A copy of the notice of the proposed flood elevation determination published in the FEDERAL REGISTER;

(e) Copies of all appeals by private persons received by the Associate Director from the CEO;

(f) Copies of all comments received by the Associate Director on the notice of the proposed flood elevation determination published in the FEDERAL REGISTER.

(g) A copy of the community's appeal or a copy of its decision not to appeal the proposed flood elevation determination;

(h) A copy of the flood insurance study for the community;

(i) A copy of the FIRM for the community;

(j) Copies of all materials maintained in the flood elevation study consultation docket; and

(k) A copy of the final determination with supporting documents.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 67.4 Proposed flood elevation determination.

The Associate Director shall propose flood elevation determinations in the following manner:

(a) Publication of the proposed flood elevation determination for comment in the FEDERAL REGISTER;

(b) Notification by certified mail, return receipt requested, of the proposed flood elevation determination to the CEO; and

(c) Publication of the proposed flood elevation determination in a prominent local newspaper at least twice during the ten day period immediately following the notification of the CEO.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 67.5 Right of appeal.

(a) Any owner or lessee of real property, within a community where a proposed flood elevation determination has been made pursuant to section 1363 of the National Flood Insurance Act of 1968, as amended, who believes his property rights to be adversely affected by the Associate Director's proposed determination, may file a written appeal of such determination with the CEO, or such agency as he shall publicly designate, within ninety days of the second newspaper publication of the Associate Director's proposed determination.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 67.6 Basis of appeal.

(a) The sole basis of appeal under this part shall be the possession of knowledge or information indicating that the elevations proposed by FEMA are scientifically or technically incorrect. Because scientific and technical correctness is often a matter of degree rather than absolute (except where mathematical or measurement error or changed physical conditions can be demonstrated), appellants are required to demonstrate that alternative methods or applications result in more correct estimates of base flood elevations, thus demonstrating that FEMA's estimates are incorrect.

(b) *Data requirements.* (1) If an appellant believes the proposed base flood elevations are technically incorrect due to a mathematical or measurement error or changed physical conditions, then the specific source of the error must be identified. Supporting data must be furnished to FEMA including certifications by a registered professional engineer or licensed land surveyor, of the new data necessary for FEMA to conduct a reanalysis.

(2) If an appellant believes that the proposed base flood elevations are technically incorrect due to error in application of hydrologic, hydraulic or other methods or use of inferior data in applying such methods, the appeal must demonstrate technical incorrectness by:

(i) Identifying the purported error in the application or the inferior data.

(ii) Supporting why the application is incorrect or data is inferior.

(iii) Providing an application of the same basic methods utilized by FEMA but with the changes itemized.

(iv) Providing background technical support for the changes indicating why the appellant's application should be accepted as more correct.

(v) Providing certification of correctness of any alternate data utilized or measurements made (such as topographic information) by a registered professional engineer or licensed land surveyor, and

(vi) Providing documentation of all locations where the appellant's base flood elevations are different from FEMA's.

(3) If any appellant believes the proposed base flood elevations are scientifically incorrect, the appeal must demonstrate scientific incorrectness by:

(i) Identifying the methods, or assumptions purported to be scientifically incorrect.

(ii) Supporting why the methods, or assumptions are scientifically incorrect.

(iii) Providing an alternative analysis utilizing methods, or assumptions purported to be correct.

(iv) Providing technical support indicating why the appellant's methods should be accepted as more correct and

(v) Providing documentation of all locations where the appellant's base flood elevations are different from FEMA's.

(Sec. 1363 of the National Flood Insurance Act of 1968, as amended 82 Stat. 574 (42 U.S.C. 4001 et seq.); Reorganization Plan No. 3 of 1978 (43 FR 41943) and E.O. 12127, dated March 31, 1979 (44 FR 19367))

[48 FR 31644, July 1, 1983]

§ 67.7 Collection of appeal data.

(a) Appeals by private persons to the CEO shall be submitted within ninety (90) days following the second newspaper publication of the Associate Director's proposed flood elevation determination to the CEO or to such agency as he may publicly designate and shall set forth scientific or technical data that tend to negate or contradict the Associate Director's findings.

(b) Copies of all individual appeals received by the CEO shall be forwarded, as soon as they are received, to the Associate Director for information and placement in the Flood Elevation Determination Docket.

(c) The CEO shall review and consolidate all appeals by private persons and issue a written opinion stating whether the evidence presented is sufficient to justify an appeal on behalf of such persons by the community in its own name.

(d) The decision issued by the CEO on the basis of his review, on whether an appeal by the community in its own name shall be made, shall be filed with the Associate Director not later than ninety days after the date of the second newspaper publication of the Associate Director's proposed flood elevation determination and shall be placed in the FEDD.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 67.8 Appeal procedure.

(a) If a community appeals the proposed flood elevation determination, the Associate Director shall review and take fully into account any technical or scientific data submitted by the community that tend to negate or contradict the information upon which

his/her proposed determination is based.

(b) The Associate Director shall resolve such appeal by consultation with officials of the local government, or by administrative hearings under the procedures set forth in Part 68 of this subchapter, or by submission of the conflicting data to an independent scientific body or appropriate Federal agency for advice.

(c) The final determination by the Associate Director where an appeal is filed shall be made within a reasonable time.

(d) Nothing in this section shall be considered to compromise an appellant's rights granted under § 67.12.

(e) The Associate Director shall make available for public inspection the reports and other information used in making the final determination. This material shall be admissible in a court of law in the event the community seeks judicial review in accordance with § 67.12.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 67.9 Final determination in the absence of an appeal by the community.

(a) If the Associate Director does not receive an appeal from the community within the ninety days provided, he shall consolidate and review on their own merits the individual appeals which, in accordance with § 67.7 are filed within the community and forwarded by the CEO.

(b) The final determination shall be made pursuant to the procedures in § 67.8 and, modifications shall be made of his proposed determination as may be appropriate, taking into account the written opinion, if any, issued by the community in not supporting such appeals.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 67.10 Rates during pendency of final determination.

(a) Until such time as a final determination is made and proper notice is given, no person within a participating community shall be denied the right to purchase flood insurance at the subsidized rate.

(b) After the final determination and upon the effective date of a FIRM, risk premium rates will be charged for new construction and substantial improvements. The effective date of a FIRM shall begin not later than six months after the final flood elevation determination.

§ 67.11 Notice of final determination.

The Associate Director's notice of the final flood elevation determination for a community shall be in written form and published in the FEDERAL REGISTER, and copies shall be sent to the CEO, all individual appellants and the State Coordinating Agency.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

EDITORIAL NOTE: For the list of communities issued under this section, and not carried in the CFR, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

§ 67.12 Appeal to District Court.

(a) An appellant aggrieved by the final determination of the Associate Director may appeal such determination only to the United States District Court for the District within which the community is located within sixty days after receipt of notice of determination.

(b) During the pendency of any such litigation, all final determinations of the Associate Director shall be effective for the purposes of this title unless stayed by the court for good cause shown.

(c) The scope of review of the appellate court shall be in accordance with the provisions of 5 U.S.C. 706, as modified by 42 U.S.C. 4104(b).

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544 and 44553, Sept. 29, 1983]

PART 68—ADMINISTRATIVE HEARING PROCEDURES

Sec.
68.1 Purpose of part.
68.2 Definitions.
68.3 Right to administrative hearings.

Sec.
68.4 Hearing board.
68.5 Establishment of a docket.
68.6 Time and place of hearing.
68.7 Conduct of hearings.
68.8 Scope of review.
68.9 Admissible evidence.
68.10 Burden of proof.
68.11 Determination.
68.12 Relief.

AUTHORITY: Sec. 1304(a), 1363 of the National Flood Insurance Act of 1968, as amended, 82 Stat. 574 (42 U.S.C. 4011-4104); Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Associate Director, State and Local Programs and Support.

SOURCE: 47 FR 23449, May 29, 1982, unless otherwise noted.

§ 68.1 Purpose of part.

The purpose of this part is to establish procedures for appeals of the Associate Director's base flood elevation determinations, whether proposed pursuant to section 1363(e) of the Act (42 U.S.C. 4104) or modified because of changed conditions or newly acquired scientific and technical information.

§ 68.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part. For the purposes of this part, "Director" shall mean the Director of the Federal Emergency Management Agency and "Associate Director" shall mean Associate Director for State and Local Programs and Support.

§ 68.3 Right to administrative hearings.

If a community appeals the Associate Director's flood elevation determination established pursuant to § 67.8 of this subchapter, and the Associate Director has determined that such appeal cannot be resolved by consultation with officials of the community or by submitting the conflicting data to an independent scientific body or appropriate Federal agency for advice, the Associate Director shall hold an adminsitrative hearing to resolve the appeal.

§ 68.4 Hearing board.

(a) Each hearing shall be conducted by a three member hearing board (hereinafter "board"). The board shall consist of a hearing officer (hereinafter "Judge") appointed by the Director based upon a recommendation by the Office of Personnel Management and two members selected by the Judge who are qualified in the technical field of flood elevation determinations. The Judge shall consult with anyone he deems appropriate to determine the technical qualifications of individuals being considered for appointment to the board. The board members shall not be FEMA employees.

(b) The Judge shall be responsible for conducting the hearing, and shall make all procedural rulings during the course of the hearing. Any formal orders and the final decision on the merits of the hearing shall be made by a majority of the board. A dissenting member may submit a separate opinion for the record.

(c) A technically qualified alternate will be appointed by the Judge as a member of the board when a technically qualified appointed member becomes unavailable. The Director will appoint an alternate Judge if the appointed Judge becomes unavailable.

§ 68.5 Establishment of a docket.

The General Counsel shall establish a docket for appeals referred to him/her by the Associate Director for administrative hearings. This docket shall include, for each appeal, copies of all materials contained in the flood elevation determination docket (FEDD) file on the matter, copies of all correspondence in connection with the appeal, all motions, orders, statements, and other legal documents, a transcript of the hearing, and the board's final determination.

§ 68.6 Time and place of hearing.

(a) The time and place of each hearing shall be designated by the Judge for that hearing. The Associate Director and the General Counsel shall be promptly advised of such designations.

(b) The board's notice of the time and place of hearing shall be sent by the Flood Insurance Docket Clerk by registered or certified mail, return receipt requested, to all appellants. Such notice shall include a statement indicating the nature of the proceedings

and their purpose and all appellants' entitlement to counsel. Notice of the hearing shall be sent no later than 30 days before the date of hearing unless such period is waived by all appellants.

§ 68.7 Conduct of hearings.

(a) The Judge shall be responsible for the fair and expeditious conduct of proceedings.

(b) The Associate Director shall be represented by the General Counsel or his/her designee.

(c) One administrative hearing shall be held for any one community unless the Associate Director for good cause shown grants a separate hearing or hearings.

(d) The Chief Executive Officer (CEO) of the community or his/her designee shall represent all appellants from that community; *Provided,* That any appellant may petition the board to allow such appellant to make an appearance on his/her own behalf. Such a petition shall be granted only upon a showing of good cause.

(e) Hearings shall be open to the public.

(f) A verbatim transcript will be made of the hearing. An appellant may order copies of the transcribed verbatim record directly from the reporter and will be responsible for payments.

§ 68.8 Scope of review.

Review at administrative hearings shall be limited to: An examination of any information presented by each appellant within the 90 day appeal period indicating that elevations proposed by the Associate Director are scientifically or technically incorrect; the FIRM; the flood insurance study; its backup data and the references used in development of the flood insurance study; and responses by FEMA to the issues raised by the appellant(s).

§ 68.9 Admissible evidence.

(a) Legal rules of evidence shall not be in effect at adminstrative hearings. However, *only* evidence relevant to issues within the scope of review under § 68.8 shall be admissible.

(b) Documentary and oral evidence shall be admissible.

(c) Admissibility of non-expert testimony shall be within the discretion of the board.

(d) All testimony shall be under oath.

(e) *Res judicata*/collateral estoppel. Where there has been a previous determination, decision or finding of fact by the Director, one of his delegees, an administrative law judge, hearing officer, or hearing board regarding the base flood elevations of any other community, such determination, decision, or finding of fact shall not be binding on the board and may only be admissible into evidence if relevant.

§ 68.10 Burden of proof.

The burden shall be on appellant(s) to prove that the flood elevation determination is not scientifically or technically correct.

§ 68.11 Determination.

The board shall render its written decision within 45 days after the conclusion of the hearing. The entire record of the hearing including the board's decision will be sent to the Director for review and approval. The Director shall make the final base flood elevation determination by accepting in whole or in part or by rejecting the board's decision.

§ 68.12 Relief.

The final determination may be appealed by the appellant(s) to the United States district court as provided in Section 1363(f) of the Act (42 U.S.C. 4104).

PART 69—[RESERVED]

PART 70—PROCEDURE FOR MAP CORRECTION

MAPPING DEFICIENCIES UNRELATED TO COMMUNITY-WIDE ELEVATION DETERMINATIONS

Sec.
70.1 Purpose of part.
70.2 Definitions.
70.3 Right to submit technical information.
70.4 Review by the Associate Director.
70.5 Letter of Map Amendment.
70.6 Distribution of Letter of Map Amendment.

Sec.
70.7 Notice of Letter of Map Amendment.
70.8 Premium refund after Letter of Map Amendment.

AUTHORITY: Sec. 1304(a), 82 Stat. 574 (42 U.S.C. 4011); Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

SOURCE: 41 FR 46991, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

MAPPING DEFICIENCIES UNRELATED TO COMMUNITY-WIDE ELEVATION DETERMINATIONS

§ 70.1 Purpose of part.

The purpose of this part is to provide an administrative procedure whereby the Associate Director will review the scientific or technical submissions of an owner or lessee of property who believes his property has been inadvertently included in designated A, A0, A1-99, V0 and V1-30 Zones, as a result of the transposition of the curvilinear line to either street or to other readily identifiable features. The necessity for this part is due in part to the technical difficulty of accurately delineating the curvilinear line on either a FHBM or FIRM. Where there has been a final base flood elevation determination, any alteration of the topography shall not be subject to this procedure. Appeals of such determinations are subject to the provisions of Part 67 of this subchapter.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 70.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

§ 70.3 Right to submit technical information.

(a) Any owner or lessee of property (applicant) who believes his property has been inadvertently included in a designated A, A0, A1-99, V0 and V1-30 Zones on a FHBM or a FIRM, may submit scientific or technical information to the Associate Director for his/her review.

(b) Scientific and technical information for the purpose of this part may include, but is not limited to the following:

(1) An actual copy of the recorded plat map bearing the seal of the appropriate recordation official (e.g. County Clerk, or Recorder of Deeds) indicating the official recordation and proper citation (Deed or Plat Book Volume and Page Numbers), or an equivalent identification where annotation of the deed or plat book is not the practice.

(2) A topographical map showing (i) ground elevation contours, (ii) the total area of the property in question, (iii) the location of the structure or structures located on the property in question, (iv) the elevation of the lowest floor (including basement) of the structure or structures and (v) an indication of the curvilinear line which represents the area subject to inundation by a base flood. The curvilinear line should be based upon information provided by any appropriate authoritative source, such as a Federal Agency, the appropriate state agency (e.g. Department of Water Resources), a County Water Control District, a County or City Engineer, a Federal Emergency Management Agency Flood Insurance Study, or a determination by a Registered Professional Engineer;

(3) A copy of the FHBM or FIRM indicating the location of the property in question;

(4) A certification by a Registered Professional Engineer or Licensed Land Surveyor of the type of structure and that the lowest floor (including basement) of the structure is above the base flood level. Where there has been a final flood elevation determination, and fill has altered the topography, such certification should include the date that the fill was placed on the property.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544 and 44553, Sept. 29, 1983]

§ 70.4 Review by the Associate Director.

The Associate Director, after reviewing the scientific or technical information submitted under the provisions of § 70.3, shall notify the applicant in writing of his/her determination within 60 days from the date of receipt of the applicant's scientific or technical information that:

(a) The property is within a designated A, A0, A1-99, V0 or V1-30 Zone, and shall set forth the basis of such determination; or

(b) The property should not be included within a designated A, A0, A1-99, V0, or V1-30 Zone and that the FHBM or FIRM will be modified accordingly; or

(c) An additional 60 days is required to make a determination.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 70.5 Letter of Map Amendment.

Upon determining from available scientific or technical information that a FHBM or a FIRM requires modification under the provisions of § 70.4(b), the Associate Director shall issue a Letter of Map Amendment which shall state:

(a) The name of the Community to which the map to be amended was issued;

(b) The number of the map;

(c) The identification of the property to be excluded from a designated A, A0, A1-99, V0 or V1-30 Zone.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44553, Sept. 29, 1983]

§ 70.6 Distribution of Letter of Map Amendment.

(a) A copy of the Letter of Map Amendment shall be sent to the applicant who submitted scientific or technical data to the Associate Director.

(b) A copy of the Letter of Map Amendment shall be sent to the local map repository with instructions that it be attached to the map which the Letter of Map Amendment is amending.

(c) A copy of the Letter of Map Amendment shall be sent to the map repository in the state with instructions that it be attached to the map which it is amending.

(d) A copy of the Letter of Map Amendment will be sent to any community or governmental unit that requests such Letter of Map Amendment.

(e) [Reserved]

(f) A copy of the Letter of Map Amendment will be maintained by the Agency in its community case file.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544 and 44553, Sept. 29, 1983]

§ 70.7 Notice of letter of map amendment.

(a) The Associate Director, State and Local Programs and Support, shall not publish a notice in the FEDERAL REGISTER that the FIRM for a particular community has been amended by letter determination pursuant to this part unless such amendment includes alteration or change of base flood elevations established pursuant to Part 67. Where no change of base flood elevations has occurred, the Letter of Map Amendment provided under §§ 70.5 and 70.6 serves to inform the parties affected.

(National Flood Insurance Act of 1968 (Title XIII of Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended; 42 U.S.C. 4001-4128; Executive Order 12127, 44 FR 19367; and delegation of authority to the Associate Director; Executive Order 12148)

[48 FR 28278, June 21, 1983, and 48 FR 44544, Sept. 29, 1983]

EDITORIAL NOTE: For a list of communities issued under this section and not carried in the CFR see the List of CFR Sections Affected appearing in the Finding Aids Section of this volume.

§ 70.8 Premium refund after Letter of Map Amendment.

A Standard Flood Insurance Policyholder whose property has become the subject of a Letter of Map Amendment under this part may cancel the policy within the current policy year and receive a premium refund under the conditions set forth in § 62.5 of this subchapter.

PART 71—IMPLEMENTATION OF COASTAL BARRIER RESOURCES ACT

Sec.
71.1 Purpose of part.
71.2 Definitions.
71.3 Denial of flood insurance.
71.4 Documentation.
71.5 Violations.

AUTHORITY: Sec. 1306, 82 Stat. 575 (42 U.S.C. 4013). Reorganization Plan No. 3 of 1978 (43 FR 41943), E.O. 12127, dated March 31, 1979 (44 FR 19367), sec. 11, Pub. L. 97-348.

SOURCE: 48 FR 37039, Aug. 16, 1983, unless otherwise noted.

§ 71.1 Purpose of part.

This part implements section 11 of the Coastal Barrier Resources Act (Pub. L. 97-348) as that act amends the National Flood Insurance Act of 1968 (42 U.S.C. 400a *et seq.*).

§ 71.2 Definitions.

(a) Except as otherwise provided in this part, the definitions set forth in Part 59 of this subchapter are applicable to this part.

(b) For the purpose of this part a structure is "new construction" *unless* it means the following criteria:

(1)(i) A legally valid building permit or equivalent documentation was obtained for the construction of such structure prior to October 18, 1982; and

(ii) The start of construction (see Part 59) took place prior to October 18, 1982; *or*

(2)(i) A legally valid building permit or equivalent documentation was obtained for the construction of such structure prior to October 1, 1983; and

(ii) The structure constituted an insurable building, having walls and a roof permanently in place no later than October 1, 1983.

(c) For the purpose of this part, a structure is a "substantial improvement" if the substantial improvement (see Part 59) of such structure took place on or after October 1, 1983.

(d) For the purpose of this part, "new flood insurance coverage" means a new or renewed policy of flood insurance.

§ 71.3 Denial of flood insurance.

No new flood insurance coverage may be provided on or after October 1, 1983, for any new construction or substantial improvement of structure located on any coastal barrier within the Coastal Barrier Resources System established by section 4 of the Coastal Barrier Resources Act.

§ 71.4 Documentation.

(a) In order to obtain flood insurance for a structure which is not covered by a policy of flood insurance as of October 1, 1983, the owner of the structure must submit the documentation described in this section in order to show that such structure is eligible to receive flood insurance.

(b) The documentation must be submitted to the Federal Insurance Administration.

(c) Where the start of construction of the structure took place prior to October 18, 1982, the documentation shall consist of:

(1) A legally valid building permit or its equivalent for the construction of the structure dated prior to October 18, 1982;

(i) If the community did not have a building permit system at the time the structure was built, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit;

(ii) If the building permit was lost or destroyed, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permt. This statment must also include a certification that the official has inspected the structure and found no evidence that the structure was not in compliance with the building code at the time it was built; and

(2) A written statement signed by the community official responsible for building permits, attesting to the fact that he or she knows of his/her own knowledge or from official community records, that:

(i) The start of construction took place prior to October 18, 1982; and

(ii) The structure has not been substantially improved since September 30, 1983.

(d) Where the start of construction of the structure took place on or after October 18, 1982, but the structure was completed (walls and roof premanently in place) prior to October 1, 1983, the documentations shall consist of:

(1) A legally valid building permit or its equivalent for the construction of the structure dated prior to October 1, 1983;

(i) If the community did not have a building permit system at the time the structure was built, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit;

(ii) If the building permit was lost or destroyed, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit. This statement must also include a certification that the official has inspected the structure and found no evidence that the structure was not in compliance with the building code at the time it was built; and

(2) A written statement signed by the community official responsible for building permits, attesting to the fact that he or she knows of his/her own knowledge or from official community records, that:

(i) The structure constituted an insurable building, having walls and a roof permanently in place no later than October 1, 1983; and

(ii) The structure has not been substantially improved since September 30, 1983; and

(3) A community issued final certificate of occupancy or other use permit or equivalent proof certifying the the building was completed (walled and roofed) by October 1, 1983.

(Approved by the Office of Management and Budget under Control No. 3067-0120)

§ 71.5 Violations.

(a) Any flood insurance policy which has been issued where the terms of this section have not been complied with or is otherwise inconsistent with the provisions of this section, is void *ab initio* and without effect.

(b) Any false statements or false representations of any kind made in connection with the requirements of this part may be punishable by fine or imprisonment under 18 U.S. Code section 1001.

PARTS 72-74—[RESERVED]

PART 75—EXEMPTION OF STATE-OWNED PROPERTIES UNDER SELF-INSURANCE PLAN

Subpart A—General

Sec.
75.1 Purpose of part.
75.2 Definitions.
75.3 Burden of proof.

Subpart B—Standards for Exemption

75.10 Applicability.
75.11 Standards.
75.12 Application by a State for exemption.
75.13 Review by the Administrator.
75.14 States exempt under this part.

AUTHORITY: Sec. 7(d), 79 Stat. 670 7(d); 42 U.S.C. 3535(d); and 42 U.S.C. 4128; Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367) and delegation of authority to Federal Insurance Administrator (44 FR 20963), unless otherwise noted.

SOURCE: 41 FR 46991, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

Subpart A—General

§ 75.1 Purpose of part.

The purpose of this part is to establish standards with respect to the Administrator's determinations that a State's plan of self-insurance is adequate and satisfactory for the purposes of exempting such State, under the provisions of section 102(c) of the Act, from the requirement of purchasing flood insurance coverage for State-owned structures and their contents in areas identified by the Associate Director as A, A0, M, V, V0, and E Zones, in which the sale of insurance has been made available, and to establish the procedures by which a State may request exemption under section 102(c).

(Reorganization Plan No. 3 of 1978, Executive Order 12127 and Executive Order 12148)

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544, Sept. 29, 1983]

§ 75.2 Definitions.

The definitions set forth in Part 59 of this subchapter are applicable to this part.

§ 75.3 Burden of proof.

In any application made by a State to the Administrator for certification of its self-insurance plan, the burden of proof shall rest upon the State making application to establish that its policy of self-insurance is adequate and equals or exceeds the standards provided in this part.

Subpart B—Standards for Exemption

§ 75.10 Applicability.

A State shall be exempt from the requirement to purchase flood insurance in respect to State-owned structures and, where applicable, their contents located or to be located in areas identified by the Associate Director as A, A0, M, V, V0 and E Zones, and in which the sale of flood insurance has been made available under the National Flood Insurance Act of 1968, as amended, provided that the State has established a plan of self-insurance determined by the Administrator to equal or exceed the standards set forth in this subpart.

(Reorganization Plan No. 3 of 1978, Executive Order 12127 and Executive Order 12148)

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544, Sept. 29, 1983]

§ 75.11 Standards.

(a) In order to be exempt under this part, the State's self-insurance plan shall, as a minimum:

(1) Constitute a formal policy or plan of self-insurance created by statute or regulation authorized pursuant to statute.

(2) Specify that the hazards covered by the self-insurance plan expressly include the flood and flood-related hazards which are covered under the Standard Flood Insurance Policy.

(3) Provide coverage to state-owned structures and their contents equal to that which would otherwise be available under a Standard Flood Insurance Policy.

(4) Consist of a self-insurance fund and/or a commercial policy of insurance or reinsurance for which provision is made in statute or regulation and which is funded by periodic premiums or charges allocated for state-owned structures and their contents in areas identified by the Associate Director as A, A0, M, V, V0, and E Zones. The person or persons responsible for such self-insurance fund shall report on its status to the chief executive authority of the State, or to the legislature, or both, not less frequently than annually. The loss experience shall be shown for each calendar or fiscal year from inception to current date based upon loss and loss adjustment expense incurred during each separate calendar or fiscal year compared to the premiums or charges for each of the respective calendar or fiscal years. Such incurred losses shall be reported in aggregate by cause of loss under a loss coding system adequate, as a minimum, to identify and isolate loss caused by flood, mudslide (i.e., mudflow) or flood-related erosion. The Administrator may, subject to the requirements of paragraph (a)(5) of this section, accept and approve in lieu of, and as the reasonable equivalent of the self-insurance fund, an enforceable commitment of funds by the State, the enforceability of which shall be certified to by the State's Attorney General, or other principal legal officer. Such funds, or enforceable commitment of funds in amounts not less than the limits of coverage which would be applicable under Standard Flood Insurance Policies, shall be used by the State for the repair or restoration of State-owned structures and their contents damaged as a result of flood-related losses occurring in areas identified by the Associate Director as A, A0, M, V, V0, and E Zones.

(5) Provide for the maintaining and updating by a designated State official or agency not less frequently than annually of an inventory of all State-owned structures and their contents within A, A0, M, V, V0, and E Zones. The inventory shall: (i) Include the lo-

cation of individual structures; (ii) include an estimate of the current replacement costs of such structures and their contents, or of their current economic value; and (iii) include an estimate of the anticipated annual loss due to flood damage.

(6) Provide the flood loss experience for State-owned structures and their contents based upon incurred losses for a period of not less than the 5 years immediately preceding application for exemption, and certify that such historical information shall be maintained and updated.

(7) Include, pursuant to § 60.12 of this subchapter, a certified copy of the flood plain management regulations setting forth standards for State-owned properties within A, A0, M, V, V0, and E Zones.

(b) The Administrator shall determine the adequacy of the insurance provisions whether they be based on available funds, an enforceable commitment of funds, commercial insurance, or some combination thereof, but has discretion to waive specific requirements under this part.

(Reorganization Plan No. 3 of 1978, Executive Order 12127 and Executive Order 12148)

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544, Sept. 29, 1983]

§ 75.12 Application by a State for exemption.

Application for exemption made pursuant to this part shall be made by the Governor or other duly authorized official of the State accompanied by sufficient supporting documentation which certifies that the plan of self-insurance upon which the application for exemption is based meets or exceeds the standards set forth in § 75.11.

§ 75.13 Review by the Administrator.

(a) The Administrator may return the application for exemption upon finding it incomplete or upon finding that additional information is required in order to make a determination as to the adequacy of the self-insurance plan.

(b) Upon determining that the State's plan of self-insurance is inadequate, the Administrator shall in writing reject the application for exemption and shall state in what respects the plan fails to comply with the standards set forth in § 75.11 of this subpart.

(c) Upon determining that the State's plan of self-insurance equals or exceeds the standards set forth in § 75.11 of this subpart, the Administrator shall certify that the State is exempt from the requirement for the purchase of flood insurance for State-owned structures and their contents located or to be located in areas identified by the Associate Director as A, A0, M, V, V0, and E Zones. Such exemption, however, is in all cases provisional. The Administrator shall review the plan for continued compliance with the criteria set forth in this part and may request updated documentation for the purpose of such review. If the plan is found to be inadequate and is not corrected within ninety days from the date that such inadequacies were identified, the Administrator may revoke his certification.

(d) Documentation which cannot reasonably be provided at the time of application for exemption shall be submitted within six months of the application date. The Administrator may revoke his certification for a State's failure to submit adequate documentation after the six month period.

(Reorganization Plan No. 3 of 1978, Executive Order 12127 and Executive Order 12148)

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44544, Sept. 29, 1983]

§ 75.14 States exempt under this part.

The following States have submitted applications and adequate supporting documentation and have been determined by the Administrator to be exempt from the requirement of flood insurance on State-owned structures and their contents because they have in effect adequate State plans of self-insurance: Florida, Georgia, Iowa, Maine, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, and Vermont.

(Reorganization Plan No. 3 of 1978, Executive Order 12127 and Executive Order 12148)

[48 FR 44544, Sept. 29, 1983]

PART 76—STATE ASSISTANCE PROGRAM FOR THE NATIONAL FLOOD INSURANCE PROGRAM

Sec.
76.1 Purpose.
76.2 Description of program.
76.3 Eligible applicants.
76.4 Administrative procedures.
76.5 General provision for cooperative agreement.
76.6 Ineligible tasks.

AUTHORITY: The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act 1973, 42 U.S.C. 4001 et seq.; Reorganization Plan No. 3 of 1978, 43 FR 41943; Executive Order 12127, effective April 1, 1979, 44 FR 19367.

SOURCE: 45 FR 79072, Nov. 28, 1980, unless otherwise noted.

§ 76.1 Purpose.

(a) The State Assistance Program is designed to promote an intergovernmental flood hazard mitigation partnership by providing States with the opportunity to strengthen their role in NFIP flood hazard mitigation activities. The Program will provide individual States an opportunity to complement NFIP activities by developing, implementing, and evaluating approaches to accomplish NFIP objectives through State programs. It is intended that each State undertake activities consistent with its demonstrated capability in NFIP and flood hazard mitigation activities. The Program is designed to increase existing State capabilities as well as develop new ones. In turn, States will assist in increasing their communities' capabilities to develop, implement, and administer flood hazard mitigation measures.

(b) Adequate State participation in NFIP coordination and flood hazard mitigation activities is one of the best means available to ensure that the NFIP is effectively implemented at the local level. As more communities are converted to the Regular Program, greater demands are placed on States to assist their local communities in meeting NFIP requirements. Increased State involvement is necessary to help ensure the proper implementation and administration of NFIP flood plain management standards at the local level. Through the State Assistance Program, FEMA, in concert with individual States, will be able to provide quality community assistance.

§ 76.2 Description of Program.

The State Assistance Program is designed for all States which submit acceptable applications regardless of their present level of involvement or degree of expertise in NFIP and flood hazard mitigation activities. It is structured to recognize the fact that States have individual needs and different levels of sophistication in dealing with the NFIP. Thus, the State Assistance Program allows each State the flexibility necessary to develop its application to accommodate the unique characteristics of the State and its communities, and allows each State to undertake an appropriate level of effort.

(a) *Program Elements.* The State Assistance Program has been designed around three Program Elements: *Assessment, General Assistance and Public Information,* and *Community Services;* each encompassing its own general objective. Each objective for the State's project (the "Project Objective") chosen by the State shall be derived from one of the three general objectives defined under the Program Elements. The State shall then choose tasks that meet its chosen Project Objectives. The Program Elements are structured in order of increased levels of capability needed to accomplish their tasks. *Assessment* tasks demand the least capability; *Community Services* tasks demand the most capability. The State shall choose objectives and tasks from the Program Elements that are consistent with its demonstrated capability and develop a project designed to provide a foundation upon which to progress towards Program Elements requiring higher capabilities. Accomplishing the objectives of the Program Elements requiring less capability is a prerequisite for choosing elements requiring higher capability. A State's project may contain a mix of tasks chosen from among the different

elements, provided the State "qualifies" for each element. In delineating a project, States shall choose Project Objectives and corresponding tasks that are derived from the following Program Elements:

(1) *Assessment.* The general objective of the *Assessment* element is to provide a State with the opportunity to examine and evaluate current State and local NFIP and flood hazard mitigation activities. A plan designed to expand the State's role in NFIP coordination and flood hazard mitigation activities will result. Its implementation will become the basis for future State Assistance Program funding. Generally, this element is designed for States which have not developed a formal State-wide hazard mitigation program and have been minimally involved in NFIP activities.

(2) *General Assistance and Public Information.* The general objective of the *General Assistance and Public Information* element is to provide a State with the opportunity to develop a Statewide information base and coordination network. Under this element States will promote an increased understanding of the NFIP and its concepts and provisions, develop information dissemination and retrieval systems, and create approaches to maximize the coordinated use of Federal and State resources for flood hazard mitigation.

(3) *Community Services.* The general objective of the *Community* Services element is to provide States with an opportunity to work closely with local government officials in the mechanics of implementing and administering flood hazard mitigation programs. The tasks are designed for States which have already demonstrated a leadership role through strong State flood hazard mitigation laws, programs, and policies.

(b) *Funding Approach.* Each State will be provide a target funding figure which is based on an objective formula. Each State will then develop an application using the target figure to guide the scope of work. Both the scope of work and the funding figure provided to FEMA will be subject to negotiation. To be funded, each application must provide for new or substantially expanded activities. The State Assistance Program is not intended to provide funds for on-going state activities in related areas of planning or technical assistance. Furthermore, any subcontracting must be justified as to how it meets the objectives of the Program.

(1) *Apportionment Formula.* Each State will be targeted for an amount of assistance funds determined by an objective formula. An apportionment formula has been developed to guarantee a fair share of the Program's funds to each State interested in assistance. The formula weighs data for each State reflecting the magnitude of lives at risk to flood hazards, the extent of flood hazard within communities, development pressures and historical flood damage.

(2) *Formula Factors.* The four factors used to derive a percentage of the total State Assistance Program's fiscal year funds for each State include: Population in Special Flood Hazard Areas; Number of Communities Participating in the Regular Program of the National Flood Insurance Program; Total Increase in Households from Census Bureau Data; and, Flood Damages by National Flood Insurance Program Flood Insurance Claims. The first factor, Population in Special Flood Hazard Areas, reflects the magnitude of lives at risk in flood hazard areas in each State. The second factor, Number of Communities Participating in the Regular Program, relates to priorities established by FEMA Regional Offices for flood hazard mapping purposes. Study priorities generally are based on the severity of flooding and damage potential in each community. The third factor, Total Increase in Households, indicates which States are experiencing increasing development pressures which may increase flood risks. The fourth factor, Flood Damage by National Flood Insurance Program Flood Insurance Claims, weighs the relative historical flood damage sustained by each States. All factors are weighted equally.

(c) *Application Evaluation Criteria.* All State applications will be evaluated as to how well they meet the following critera:

(1) *Objectives expressed*—specific and clearly stated objectives which relate to the national objectives of the State Assistance Program;

(2) *Needs*—explanation and understanding of the needs to be addressed by the tasks;

(3) *Tasks defined*—clear and cogent definitions of the tasks to be undertaken;

(4) *Implementation*—description of how these tasks will be accomplished, the approaches used to achieve the objectives, and the results, products and benefits expected to be derived from each task;

(5) *Coordination*—explanation of a plan of coordination with FEMA programs and offices, other federal agencies and other state agencies and programs;

(6) *Capacity*—demonstration of an acceptable level of performance in dealing with the NFIP to undertake more sophisticated tasks covered in the *General Assistance and Public Information* and *Community Services* elements.

(7) *Sustainability*—demonstration of the extent to which a state will be able to integrate NFIP standards into the overall framework of state and community planning and development activities to achieve maximum sustainability.

(8) *Consistency*—with FEMA programs and policies, particularly the NFIP.

(9) *State Evaluation* component—definition of an evaluation system for the State's project which includes:

(i) Clearly stated *objectives.*

(ii) *Tasks* to be undertaken.

(iii) *Performance indicators* (quantifiable expressions of the project objectives).

(iv) *Performance standards* (desired level of achievement for a performance indicator.

(v) *Data sources* (base from which information about performance indicators can be obtained).

(vi) *Narrative comments* addressing what other impacts the project had, problems encountered, the overall success of the project, etc.

(10) *Organizational Qualifications*—current and previous experience in related projects of comparable scope, preferably demonstrated knowledge in dealing with the NFIP.

(11) *Project Management and Workplan*—demonstration of an appropriate project management and work plan.

(d) *Supplemental Projects*—(1) *General.* Each State's application for the target amount of funding may contain a supplement proposing innovative tasks involving an additional level of effort than that proposed in the principal application and requesting an additional level of funding. The task(s) proposed in the supplemental application must be related in scope to the effort proposed in the principal application. An innovative task may take any of several forms. It may be a product, process, an organizational arrangement or technique. Each innovative task should encompass a concept that is untried, unique, and/or advances the state of the art of flood hazard mitigation. Proposed tasks which have been undertaken before or are in use at the present may be considered for demonstration if the application identifies and addresses the question of the special nature or circumstances surrounding the proposed task which would warrant its consideration for funding as a supplemental project.

(2) *Application Procedure.* Requests for funding of supplemental tasks must be identified separately as an addendum to the principal application for the target amount of funding. The supplemental application must be submitted concurrently with the principal application. In addition, the supplemental application must include the items required in § 76.4(c)(3) (iii)-(viii), discussed below, which constitutes the documentation for the supplemental request. The supplemental application will be evaluated separately from the principal application. All requests for supplemental funding of tasks will be presented to the Associate Director at one time so that priorities may be weighed and funds may best be distributed.

(3) *Review Criteria.* Each task proposed for supplemental funding must be justified specifically as to how it meets the following criteria:

(i) The unique capabilities, related experiences, facilities or techniques and the commitment which the applicant possesses and offers for achieving the objectives of the task.

(ii) The extent to which the identified problem is common to a substantial number of States and the proposed approach can be adopted and replicated in a number of other States.

(iii) The overall technical merit of the proposed tasks including the specific impacts of the innovation.

(iv) The availability of supplemental funds for innovative tasks in light of competing needs.

[45 FR 79072, Nov. 28, 1980, as amended at 48 FR 44553, Sept. 29, 1983]

§ 76.3 Eligible applicants.

Each State, the District of Columbia, Puerto Rico, the Virgin Islands and Guam are eligible to participate in the State Assistance Program. The Governor of each State and representative of the District of Columbia, Puerto Rico, the Virgin Islands and Guam have been requested by letter to designate a lead agency to coordinate projects under the State Assistance Program and to receive a Request for Application for the State Assistance Program. The designated lead agency will be considered the State Coordinating Agency for purposes of the National Flood Insurance Program.

§ 76.4 Administrative procedures.

(a) *Size of award.* The amount of each award will be determined by the objective apportionment formula set forth in § 76.2(b) of this part. Each applicant should, therefore, submit an application within the range of its target amount derived from the apportionment formula which will be provided to each applicant in the Request for Application letter.

(b) *Project period.* The typical project period will be twelve months.

(c) *Submission procedures.* Each applicant shall comply with the following submission procedures:

(1) *Issuance of Request for Application.* Each designated State agency will receive a Request for Application package from the State's respective Federal Emergency Management Agency Regional Director.

(2) *How to submit.* Each State shall submit the original application and three copies to its respective Federal Emergency Management Agency Regional Office.

(3) *Application package.* The application package for the State Assistance Program shall consist of the following:

(i) A letter of transmittal signed by the chief executive officer of the State or the designated State agency.

(ii) A copy of the Agreement Articles for Cooperative Agreement.

(iii) Standard Form 424, Federal Assistance, prescribed by OMB Circular No. A-102. (Non-construction, long-form)

(iv) A detailed Program Narrative Statement developed according to the Special Instructions provided as part of the Request for Application package provided to the States.

(v) Budget information on OMB Form 80-R0186.

(vi) Standard Form 270 "Request for Advance or Reimbursement," as required by OMB Circular A-102 and FEMA General Provisions for Cooperative Agreements.

(vii) [Reserved]

(viii) A copy of Assurances as required by the FEMA General Provisions for Cooperative Agreement (provided to each State as part of the Request for Application package).

(ix) Any other information transmitted in the Request for Application which is requested as part of the application package.

(d) *Reporting requirements*—(1) *Project Performance Reporting Requirements.* Each State shall submit a narrative evaluation of its level of achievement of project objectives. Each State shall report actual levels of performance standards achieved for project objectives against levels expressed by the State as desirable in its application. In addition, each State shall compare percentage of tasks accomplished against percentages projected for each month in the State's application. These narrative reports shall be submitted at intervals specified in the Agreement Articles for Cooperative Agreement.

(2) *Financial Reporting Requirements.*

(i) Standard Form 270 "Request for Advance or Reimbursement" is the voucher form to be submitted for all bills for reimbursement.

(ii) Standard Form 272 "Federal Cash Transactions Report" must be submitted each reporting period.

(iii) Standard Form 269 "Financial Status Report" must be submitted each reporting period.

(iv) A narrative report projecting the percentage of cost expanded per task by month must be submitted each reporting period.

(3) *Project Completion Reporting Requirements.* At the conclusion of the project the State must submit the following:

(i) Final Standard Forms 272 and 269.

(ii) A narrative report which includes an analysis of the project's success in achieving the Project Objectives.

(e) *Agreement Articles for Cooperative Agreement under the State Assistance Program.* The Agreement Articles shall be the basic terms to which the State and FEMA agree. The Agreement Articles shall become part of the Cooperative Agreement.

[45 FR 79072, Nov. 28, 1980, as amended at 48 FR 29318, June 24, 1983]

§ 76.5 General provisions for cooperative agreement.

The legal funding instrument for the State Assistance Program for the National Flood Insurance Program shall be cooperative agreement. All States will be required to comply with FEMA General Provisions for Cooperative Agreement. The General Provisions for Cooperative Agreement shall be provided to the States as part of the Request for Application Package. The General Provisions shall become part of the Cooperative Agreement.

§ 76.6 Ineligible tasks.

The following is a list of tasks which are ineligible tasks. This list of examples of ineligible tasks is merely illustrative and does not constitute a list of all ineligible tasks.

(a) *Public works, facilities and site or other improvement.* The general rule is that public works, facilities and site or other improvements are ineligible to be acquired, constructed, reconstructed, rehabilitated or installed.

(b) *Purchase of equipment.* The purchase of equipment is generally ineligible.

(c) *Analysis of NFIP or its products.* Tasks choices in no way analyze or recommend changes to the NFIP or its products. For example, proposed tasks shall not duplicate or potentially conflict with hydrologic and hydraulic engineering activities performed by the Agency.

(d) *Flood Insurance Studies.* Flood Insurance Studies shall not be conducted under the State Assistance Program.

(e) Any task which is not within the general scope of the State Assistance Program's objectives.

[45 FR 79072, Nov. 28, 1980, as amended at 48 FR 44544, Sept. 29, 1983]

PART 77—ACQUISITION OF FLOOD DAMAGED STRUCTURES

GENERAL PROVISIONS

Sec.
77.1 Definitions.
77.2 Criteria for acquisition.

GENERAL PROVISIONS

§ 77.1 Definitions.

(a) Definitions found in § 59.1 of this subchapter are applicable to this section.

(b) Furthermore, the following definitions are established:

Damaged Substantially Beyond Repair—means where (a) damages to the improved real property are such that as a condition of repair as imposed by a state or local government, the structure must be elevated or floodproofed to or above the 100-year flood elevation, or (b) damages to the improved real property equals or exceed 50 percent of the structure's fair market or actual cash value, whichever is less, or (c) where damages to the improved real property are such that repair is physically impossible or infeasible.

Flood Risk Area—See definition for *Special Hazard Area* in § 59.1, or other

area subject to flooding as determined by the Associate Director.

Significantly Increased Construction Cost—occurs when a specific State or local statute, ordinance, or code requires that improvements be made to a structure as a condition of the repair of damages sustained, such that the actual cost of repair would be greater by 25 percent than the cost which would be required for repair of the damages only.

Sound Land Management and Use—The process wherein the governmental body responsible for land use regulation in a political jurisdiction plans and regulates the use of land within its jurisdiction in order to promote the reduction of property exposure to flood hazard and the protection of environmental values of flood plains. Sound use of land acquired by FEMA and transferred to local governments pursuant to Section 1362 of Pub. L. 95-128 is use for primarily open space and recreational purposes to minimize potential for any future flood damage, with a general prohibition of enclosed structures unless functionally dependent for some recreational or open space use. The criteria set forth in paragraphs (d)(1) through (4), of § 77.2 and restrictions to be placed in deeds used to convey title to real property from the Federal Government to local governments will set forth more specific requirements to be used in determining what constitutes sound Land Management and Use for individual land parcels.

(National Flood Insurance Act of 1968 (Title XIII of Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended; 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367); and delegation of authority to Federal Insurance Administrator)

[45 FR 50282, July 28, 1980, as amended at 48 FR 44553, Sept. 29, 1983]

§ 77.2 Criteria for acquisition.

(a) The objectives of the Flooded Property Purchase Program under the National Flood Insurance Program are:

(1) To reduce future flood insurance and disaster assistance costs by removing repetitively and/or substantially damaged structures from flood risk areas;

(2) To provide an opportunity for owners of repetitively and substantially damaged structures to be permanently removed from flood risk areas, and to reduce risk to life from flooding; and

(3) To complement Federal, State and local efforts to restore flood plain values, protect the environment and provide recreational and open space resources.

(b) The Associate Director will, when he or she deems it to be in the public interest, enter into negotiation with property owners whose improved real property has been damaged by flooding for the purpose of purchasing such buildings and associated land or lot for transfer by sale, lease, or donation to a community when the following conditions are met:

(1) The property must be located in a flood risk area as determined by the Associate Director;

(2) The property must have been covered by a flood insurance policy under the National Flood Insurance Program at the time damage took place.

(3) The building, while covered by flood insurance under the National Flood Insurance program, must have been damaged substantially beyond repair or must have been damaged not less than three previous times during the preceding five year period, each time the cost of repair equalling 25 percent or more of the structure's value, or must have been damaged from a single casualty of any nature so that a statute, ordinance or regulation precludes its repair or restoration or permits repair or restoration only at significantly increased cost.

(4) A state or local community must enter into an agreement authorized by ordinance or legally binding resolution to take title to and manage the property in a manner consistent with sound land managment use as determined by the Associate Director.

(5) The community must agree to remove without cost to the Federal Emergency Management Agency (FEMA), by demolition, relocation, donation or sale any damaged structures

to which the community accepts title from FEMA, provided the Associate Director may, when it is in the public interest to do so, agree to assume a part or all of the cost of such removal.

(c) Title to the real property acquired by FEMA shall be conveyed to local communities subject to specific restrictive covenants, conditions and agreements which will run with the land and be binding on subsequent successors, grantees and assigns. These restrictive covenants, conditions and agreements will be recited in the deed a community receives from FEMA and the community shall join in the execution of the deed.

(d) The general criteria from which specific deed restrictions will be developed may include, among other things, that:

(1) The land must be dedicated in perpetuity for open space purposes, or such other purposes as the Associate Director may agree are consistent with the objectives set forth in paragraphs (a)(1) through (3) of this section; that the community shall faithfully manage the land for its dedicated purposes; that the community shall not erect or permit to be erected and structures or other improvements on the land unless such structures are, except for restrooms, open on all sides and functionally related to a designated open space use without the prior approval in writing of the Associate Director; and that the community shall not permit any use which will create a threat to human life from flooding.

(2) In general, allowable open space uses include parks for outdoor recreational activities, nature reserves, cultivation, grazing, camping (except where adequate warning time is not available to allow evacuation), temporary storage in the open of wheeled vehicles which are easily movable (except mobile homes), unimproved parking lots, buffer zones, or open space areas that are part of Planned Unit Developments (PUD's). Structures functionally related to these uses are open-sided picnic and camping facilities, kiosks and refreshment stands or nonhabitable, elevated or floodproofed service structures associated with a marina.

(3) The rights to enforce the restrictive covenants shall be assigned to the Director as assignee, together with a declaration that any future violation of the restrictive covenants or agreements, delivered in writing to the Chief Executive Officer within thirty (30) days from the date the Associate Director receives actual notice of the violation, shall be deemed, at the Associate Director's option, to cause a reversion of title to FEMA; and

(4) The property shall be transferred subject to zoning and building laws and ordinances; easements, agreements, reservations, covenants and restriction of record; any state of facts an accurate survey might show; encroachments and variations from the record lines of hedges, retaining walls, sidewalks and fences;

(e) Any structures, as described at paragraph (d)(2) of this section, and built in accordance with the deed restrictions shall be floodproofed or elevated to withstand the effects of the 500 year or .02 percent chance flood.

(f) Appraisals for the determination of compensation for flood damaged real property will be undertaken in conformance with the "Uniform Appraisal Standards for Federal Land Acquisitions" published by the Interagency Land Acquisition Conference, GPO (1973). Appraisals will reflect the adjusted (for time) pre-damage fair market value (FMV) of the structure and land to the extent that this FMV may have been reduced or depressed in the open market as a result of flooding. Actual compensation of FMV will be inclusive of any flood insurance claim payments made or to be made as a result of the most recent flood event to the extent that repairs have not yet been made.

(g) Agreement to sell real property on the part of owners will be completely voluntary. No property owners will be required to sell their properties under Section 1362.

(h) Relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. 4601 et seq.) is not available to property owners who sell their properties under Section 1362.

(National Flood Insurance Act of 1968 (Title XIII of Housing and Urban Development Act of 1968), effective January 28, 1969 (33 FR 17804, November 28, 1968), as amended; 42 U.S.C. 4001-4128; Reorganization Plan No. 3 of 1978 (43 FR 41943) and Executive Order 12127, dated March 31, 1979 (44 FR 19367); and delegation of authority to Federal Insurance Administrator)

[45 FR 50282, July 28, 1980, as amended at 48 FR 44553, Sept. 29, 1983]

PARTS 78-79—[RESERVED]

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APPENDIX B

PORTIONS OF THE ARIZONA REVISED STATUTES WHICH PERTAIN TO FLOODPLAIN MANAGEMENT AND FLOOD CONTROL

ARS § 45-2341 THROUGH § 45-2909 - FLOOD CONTROL

§ 45-2341. Definitions

In this article, unless the context otherwise requires:

1. "Area of jurisdiction" means the incorporated and unincorporated areas of the county, including public lands, excluding those incorporated areas of cities or towns which have elected to assume floodplain management powers and duties pursuant to § 45-2350.

2. "Board" means the Board of Directors of a flood control district organized under this article.

3. "District" means a flood control district organized pursuant to this article.

4. "Flood" or "Floodwaters" means a temporary rise in water level including groundwater or overflow of water into lands not normally covered by water.

5. "Floodplain" means the areas adjoining the channel or a watercourse including areas where drainage is or may be restricted by man-made structures which have been or may be covered partially or wholly by floodwater from the one hundred-year flood.

6. "Floodplain regulations" means the codes, ordinances and other regulations adopted pursuant to this article relating to the use of land and construction within the floodway and floodplain areas.

7. "Floodway" means the channel of a river or other watercourse and the adjacent land areas necessary in order to discharge the one hundred-year flood without cumulatively increasing the water surface elevation more than one foot.

8. "One Hundred-Year Flood" or "Base Flood" means a flood that has a one per cent chance of being equalled or exceeded in a one year period, based on the criteria established by the director of water resources.

9. "Person" means an individual or his agent, firm, partnership, association, corporation, or agent of the aforementioned groups, or this state or its agencies or political subdivisions.

10. "Regulatory Flood Elevation" means the elevation which is one foot above the base flood elevation for a watercourse for which the base flood elevation has been determined and shall be as determined by the criteria developed by the director of water resources for all other watercourses.

11. "Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature on or over which waters flow at least periodically. Water course includes specifically designated areas in which substantial flood damage may occur.

§ 45-2342. Organization of county flood control district

A. Each county shall organize a county flood control district to include and govern its area of jurisdiction.

B. The county board of supervisors shall be the board of directors of the district. The directors shall not receive compensation for their services as such but are entitled to reimbursement for their necessary expenses in attending district meetings and for necessary expenses incurred in traveling within and without this state if necessary to carry on the affairs of the district.

C. County flood control districts are in addition to any other flood control district organized pursuant to article 1.1 of this chapter, and the mere existence of a county flood control district does not of itself affect the existence or operation or any flood control district organized pursuant to article 1.1 of this chapter.

§ 45-2343. Powers, duties and immunities of district and board

A. A county flood control district organized under this article is a public political taxing subdivision of this state and has all the powers, privileges and immunities granted generally to municipal corporations by the constitution and laws of this state including immunity of its property and bonds from taxation.

B. The board of directors shall exercise all powers and duties in the acquisition and operation of the properties of the district and in carrying out its regulatory functions under this article as are ordinarily exercised by the governing body of a municipal corporation.

C. A district organized under this article, acting through its board of directors, may:

1. Acquire by eminent domain or otherwise rights-of-way for and contruct, operate and maintain flood control works and storm drainage facilites within or without the district for benefit of the district.

2. Acquire by eminent domain or otherwise and own and dispose of real and personal property within the boundaries of the district. Section 9-403 does not apply to a flood control district organized under this article.

3. Contract and join with this state, the United States or any other flood control district or floodplain board, municipality, political subdivision, governmental agency, irrigation or agricultural improvement district, association, corporation or individual in acquiring, constructing, maintaining and operating flood control works, and regulating floodplains.

4. Enter into contracts or indemnity to indemnify this state, the United States, any other flood control district, municipality, political subdivision, governmental agency, irrigation or agricultural improvement district, association, corporation or individual against liability by virtue of injuries, losses or damages occurring through the use of their facilities, structures, streets, right-of-way or properties in connection with the operation of a flood control district and the regulation of floodplains.

5. Acquire and maintain existing flood control and drainage facilities within the district for the benefit of the district if mutually agreeable to the owners of such facilities.

6. Acquire, convert and maintain surplus irrigation facilities as storm drainage facilities if mutually agreeable to owners of such facilities.

7. Construct, maintain and operate flood control and storm drainage facilites and regulate floodplains in the district by agreement with this state, counties, other municipal corporations, political subdivisions and other persons and reimburse such agencies or persons for the cost of the work.

8. On the dissolution of any other flood control district, assume the assets and obligations of the other district.

9. Enter into intergovernmental agreements with other public agencies pursuant to title 11, chapter 7, article 3 to carry out the objects and purposes of the district.

10. Apply for, obtain, expend and repay flood control loans pursuant to chapter 14, article 3 of this title.

11. Apply to the director of water resources for alternative flood control assistance for flood control projects pursuant to section 45-2721, except that the director shall not grant any such assistance for any project unless he has approved the project in advance of planning.

12. Sue and be sued, enter into contracts and generally do all things which may be necessary to construct, acquire and maintain facilities, operate the district and perform its regulatory functions and which are in the interests of the district.

13. Adopt such rules and bylaws for its orderly operation as it sees fit.

14. Appoint a chief engineer and general manager, who may be the county engineer.

15. Appoint a treasurer, who may be the county treasurer, an attorney, who may be the county attorney, and other employees it considers desirable and necessary to carry out the purposes of the district. Any other work required by the district may be performed by regular employees of the county on assignment by the board of supervisors, except that regular county employees shall not undertake construction projects with an estimated cost of five thousand dollars or more.

16. Allow variances from the terms or regulations adopted pursuant to this article to the extent permitted by section 45-2349, subsection b, paragraph 6 if, owing to peculiar conditions, a strict interpretation would work an unnecessary hardship, if in granting the variance the general intent and purpose of this article and the regulations will be preserved.

D. The board shall adopt and enforce floodplain regulations as provided in section 45-2349.

E. The board may adopt a fee schedule for review of applications for permits and variances from or interpretations of the floodplain regulations.

F. The affirmative vote of a majority of the board of directors is necessary to approve any measure. One member may adjourn any meeting at which a quorum is not present.

G. The board shall keep a proper written record of all of its proceedings, which shall be open to public inspection.

H. The accounts of the district are subject to annual and other audits as provided by law.

§ 45-2344. Establish zones in the district

A. The board may divide the area of jurisdiction into two or more zones, the boundaries of which shall be described in a resolution adopted at a hearing held pursuant to subsection c.

B. The board may alter the boundary lines of any previously established zone or zones pursuant to subsection c.

C. Before establishing zones or altering their boundary lines, the board shall fix a date for a hearing, which shall be not less than twenty-one days nor more than forty days from the date of the resolution. Any interested citizen may appear at the hearing and be heard on any matter relating to the reasonableness of establishing the zones. Notice of the hearing shall be pubished once a week for three consecutive weeks in a newspaper of general circulation in the area of jurisdiction and zone and shall be posted in not less than thirty public places in the zone. The posting and the first date of the publications shall be not less than three weeks before the date of the hearing.

D. The board shall meet at the time and place fixed for the hearing and may adjourn the hearing from time to time. At the hearing any interested owner of real property in the proposed zone may appear and be heard on any matter relating to the establishment of the zone and may allege that his real property in the proposed zone will not be benefited by the proposed improvements. If after the hearing it appears to the board that the establishment of the zone is necessary and desirable to carry out the objects and purposes of the district in the proposed zone and that all property in the zone will benefit by the establishment of the zone, the board shall establish the zone. If the board determines that any property in the proposed zone is not benefited, it shall delete the property from the zone. Thereupon the board shall adopt a resolution and a map showing department of revenue a certified copy of the resolution and a map showing the zone and its boundaries. The board shall publish a copy of the resolution once a week for three consecutive weeks in a newspaper of general circulation in the area of jurisdiction and zone and shall post a copy of the resolution in not less than thirty public places in the zone.

E. A party aggrieved by action of the board in establishing a zone may bring an action in the superior court in county in which the area action shall be heard in a trial de novo. The action must be instituted not more than thirty-five days after the last publication or date of posting, whichever is later, of the copy of the resolution establishing the zone.

§ 45-2345. Assistance for floodplain delineations; duties of director

A. The director of water resources shall develop and adopt criteria for establishing the one hundred-year flood and delineating floodplains.

B. If a district is required to delineate a floodplain pursuant

to section 45-2349 and the floodplain has not been delineated with sufficient accuracy to allow adoption of regulations pursuant to section 45-2349, the district may request the director for assistance in delineating the floodplain.

C. If sufficient monies have been appropriated, the director may either provide the engineering and technical services necessary to delineate the floodplains and floodway and determine water surface profile data associated with such delineations or disburse monies for such services to the requesting district.

D. If a district chooses to be reimbursed for costs incurred to have floodplains delineated after the effective date of this article, monies appropriated to the director shall be disbursed on order of the director after application by the district showing the necessity and purpose of the expenditures for which reimbursement is required.

E. The director may refuse to provide financial or technical assistance allowed by this section if, in the opinion of the director, such assistance is not necessary for the district to comply with section 45-2349.

§ 45-2346. Assistance for topographic mapping

If sufficient monies have been appropriated, state monies or assistance allowed by this chapter may be provided to a district to aid in preparing topographic maps or to gather other elevation or channel cross-sectional data necessary, as determined by the director, for making hydraulic and hydrologic computations for determining floodplain and floodway limits.

§45-2347. Director may contract for work

The director may contract with private persons, firms or other governmental agencies to carry out his duties under this article.

§ 45-2348. Assistance in flood insurance program

A. The director is designated as the state coordinator of the national flood insurance program to assist local jurisdictions in complying with the requirements of such program and state law.

B. The director is designated as the state coordinator of the United States army corps of engineers floodplain management services program and shall coordinate floodplain information studies of federal, state and local agencies and make recommendations to such agencies.

§ 45-2349. Floodplain delineation; regulation of use

A. Except as provided in section 45-2350, the board within its area of jurisdiction shall delineate or may by rule require developers of land to delineate for areas where development is ongoing or imminent, and thereafter as development becomes imminent, floodplains consistent with the criteria developed by the director of water resources.

B. Except as provided in section 45-2350, the board shall adopt and enforce regulations governing floodplains and floodplain management in its area of jurisdiction which shall include the following:

1. Regulations for all development of land, construction of residential, commercial or industrial structures or uses of any kind which may divert, retard or obstruct floodwater and threaten public health, safety or the general welfare.

2. Regulations which establish minimum flood protection elevations and flood damage prevention requirements for uses, structures and facilities which are vulnerable to flood damage. Regulations adopted under this section shall comply with state and local land use plans and ordinances, if any.

3. Regulations which provide for coordination by the district with all other interested and affected political subdivisions and state agencies.

4. Regulations that require any residential structure built in a floodplain to be constructed so as to place the lowest floor elevation of the structure at or above the regulatory flood elevation and that require commercial or industrial structures to be floodproofed or elevated to or above the regulatory flood elevation and that prohibit any activity in a designated floodway, including fill, that would increase the water surface elevation during a base flood.

5. Regulations to allow a mobile home located in a floodplain on the effective date of this article to be replaced by another mobile home if:

   a. The mobile home to be replaced was not damaged by a flood to more than fifty per cent of its value before the flood.

   b. The replacement mobile home is elevated so that the bottom of the structural frame or the lowest point of any attached appliances, whichever is lower, is at or above the regulatory flood elevation.

6. Regulations that require all new placement of mobile homes to be anchored to prevent flotation, collapse or movement.

7. Variance procedures to permit variances from the regulations that do not result in danger or damage to persons or property in floodplains in the area of jurisdiction. Variances may be granted only if special circumstances, such as size, shape, topography, location or surroundings of the property, would cause the strict application of the regulations to deprive the property, of privileges enjoyed by similar property in the floodplain. A variance is subject to conditions to ensure that the variance does not constitute a grant of special privileges inconsistent with the limitations on similar property in the floodplain.

C. Waste disposal systems shall not be installed wholly or partially in a regulatory floodway.

D. Water supply, water treatment and sewage collection and disposal system, built in a regulatory floodplain shall be designed to prevent or minimize floodwater infiltrating the systems and to prevent or minimize floodwater contamination during the base flood.

E. Floodplain regulations enacted pursuant to this article may only be adopted after a public hearing at which parties in interest and other citizens have an opportunity to be heard. At least thirty days before the hearing, a notice of the time and place of hearing shall be published in a newspaper of general circulation within the county or, if no newspaper of circulation is regularly published, in a newspaper of general circulation nearest the area of jurisdiction. A notice of any hearing accompanied by a copy of each of the proposed regulations shall be furnished to the director at least thirty days before the date of the hearing. A copy of any regulations adopted by a district pursuant to this article shall within five days thereafter be filed with the director and with each political subdivision and municipal corporation in the area of jurisdiction.

F. All development of land, construction of residential, commercial or industrial structures or future development within delineated floodplain areas is prohibited unless floodplain regulations have been adopted pursuant to this article for such floodplain area and area in full force and effect.

G. Before adopting regulations the board may issue a special permit authorizing construction or development if the board finds that construction or development is not a danger to persons or property.

H. Unless expressly provided, this article and any regulations adopted pursuant to this article do not affect:

1. Existing legal uses of property or the right to continuation of such legal use. However, if a nonconforming use of land, building or structure is discontinued for twelve months or destroyed to the extent of fifty per cent of its value, as determined by a competent appraiser, any further use shall comply with this article and regulations of the district.

2. Reasonable repair or alteration of property for the purposes for which the property was legally used on the effective date of this section or any regulations affecting such property takes effect, except that any alteration, addition or repair to a nonconforming building or structure which would result in increasing its flood damage potential by fifty per cent or more shall be either floodproofed or elevated to or above the regulatory flood elevation.

3. Reasonable repair or structures constructed with the written authorization required by section 45-2353.

4. Facilities constructed or installed pursuant to a certificate of environmental compatibility issued pursuant to title 40, chapter 2, Article 6.2.

I. Within one hundred twenty days after completion of construction of any flood control protective works which changes the rate of flow during the flood or the configuration of the floodplain upstream or downstream from or adjacent to the project, the person or agency responsible for installation of the project shall provide to the governing bodies of all jurisdictions affected by the project a new delineation of all floodplains affected by the project. The new delineation shall be done according to the criteria adopted by the director of water resources.

J. On the granting of a variance, permit or waiver for the construction of a structure which is otherwise contrary to the adopted floodplain regulation of the area, the board shall provide written notice to the grantees of such variance, permit or waiver that, if the structure is a dwelling unit or business as defined by section 26-321, the land on which the structure is located is ineligible for exchange of state land pursuant to the flood relocation and land exchange program provided for by title 26, chapter 2, article 2. The board shall record a copy of the notice in the office of the county recorder in a manner so that it appears in the chain of title of the affected parcel of land.

K. A flood control district or appropriate public agency which

has failed to adopt or enforce floodplain regulations required by this section shall not be eligible for disaster relief identified by section 35-192, subsection d, paragraphs 3 and 5. The director of water resources shall advise the director of the division of emergency services within the department of emergency and military affairs of such failure to comply.

§ 45-2350. Assumption of powers and duties by cities and towns; resolution; definitions

A. The powers and duties prescribed by section 45-2349 for floodplain management may be assumed by the governing body of an incorporated city or town within its area of jurisdiction if the incorporated city or town declares by public resolution that it intends to assume the powers and duties, including the adoption of floodplain management regulations, pursuant to this article. An incorporated city or town currently engaged in floodplain management may continue to exercise the floodplain management powers and duties pursuant to this article in its area of jurisdiction by passing a resolution declaring its intent to do so before the effective date of this article.

B. If the assumption of powers and duties under this section occurs:

1. The city or town shall advise the district and any adjacent jurisdiction having responsibility for floodplain management in writing and provide a copy of any development plan of all applications for flooplain use permits or variances to develop land in a floodplain or floodway within one mile of the boundary between the city's or town's area of jurisdiction and the area of jurisdiction of the district. The city or town shall also advise the district and any adjacent jurisdiction having responsibility for floodplain management in writing and provide a copy of any development plan of any major development proposed within a floodplain or floodway which could affect floodplains, floodways or watercourses outside the city's or town's area of jurisdiction. Written notice and a copy of the plan of development shall be sent to any adjacent jurisdiction no later than three working days after having been received by the city or town.

2. The district shall advise the city or town in writing and provide a copy of any development plan of any application for a floodplain use permit or variance to develop land in a floodplain or floodway within one mile of the boundary between the district's area of jurisdiction and that of the city or town. The district shall also advise the city or town in writing and provide a copy of any development plan of any major

development proposed within a floodplain or floodway which could affect floodplains, floodways or watercourses within the city's or town's area of jurisdiction. Written notice and a copy of the plan of development shall be sent to any adjacent jurisdiction no later than three working days after having been received by the district.

C. Nothing in this section shall act to delay approval of a development plan by a city, town, county or district.

D. If the city or town assuming the floodplain management and regulation function declares by resolution that it no longer wishes the powers and duties, then the powers and duties shall be assumed by the district.

E. If the assumption of powers and duties occur under this section, for purposes of applying this article to the city or town:

1. "Area of jurisdiction" means the lands within the municipal boundaries of the city or town.

2. "Board" means the governing body of a city or town.

§ 45-2351. Citizens' flood control advisory board; qualifica tion; functions

A. The board of supervisors of a county having a population exceeding one million persons according to the latest federal decennial census may appoint a citizens' flood control advisory board consisting of seven members. Five members shall be resident taxpayers and qualified electors of the district, at least three of whom shall be residents of the cities in the district. At least one of the board members who are residents of cities shall be a resident of the largest city in the district. The city engineer of the largest city in the district and the chief engineer or manager of a major irrigation or agricultural improvement district, or their respresentatives, shall be ex officio members of the advisory board with all rights and privileges granted to other board members.

B. In appointing members of the advisory board the board of supervisors shall designate which appointive member shall serve for one year, which for two years, which for three years, which for four years and which for five years. Thereafter the term of each appointive member is five years except for a member appointed to an unexpired term.

C. The citizens' flood control advisory board may request information from the chief engineer and general manager and his staff, engineering personnel from cities in the district and any other person with a knowledge of flood control

practices. They may recommend the employment of consultants for the purpose of obtaining technical information and recommendations regarding flood control and floodplain management practices.

D. The advisory board shall study the flood control, floodplain regulation, drainage and water conservation needs of the district, shall meet with and advise the board as requested by the board and may submit to the board reports and recommendations relating to such studies, but the recommendations are advisory only.

§ 45-2352. Board of review

A. The board of supervisors of a county having a population exceeding one million persons according to the latest federal decennial census may establish a board of review, which may be the advisory board or a committee of the advisory board to sit in review and make decisions as follows:

1. Interpret regulations adopted pursuant to this article if the meaning of a word, phrase or section is in doubt, if there is dispute between the appellant and district employees or if location of a floodway or floodplain is in doubt.

2. Allow variances from the terms or regulations adopted pursuant to this article to the extent permitted by section 45-2349, subsection b, paragraph 6 if, owing to peculiar conditions, a strict interpretation would work an unnecessary hardship, if in granting the variance the general intent and purposes of this article and the regulations will be preserved.

B. Appeals to the review board may be taken by any person who feels that there is error or doubt in the interpretation of the regulation or that due to unusual circumstances attaching to his property an unnecessary hardship is being inflicted on him. The appeal shall state whether it is a plea for an interpretation or a variance and the grounds for the appeal.

C. A person aggrieved in any manner by an action of the review board may within thirty days appeal to the district board.

§ 45-2353. Authorization required for construction in water courses; exceptions

A. Except as provided in section 45-2365 and in this section, a person shall not construct any structure which will divert, retard or obstruct the flow of waters in any watercourse without securing written authorization from the board of the district in which the watercourse is located.

B. Written authorization is not required nor shall the board prohibit:

1. The construction of bridges, culverts, dikes and other structures necessary for the construction of public highways, roads and streets intersecting or crossing a watercourse.

2. The construction of storage dams for watering livestock or wildlife and structures on banks of a watercourse to prevent erosion of or damage to adjoining land if the structure will not divert, retard or obstruct the natural channel of the watercourse or dams for the conservation of floodwaters as permitted by chapter 3 of this title.

3. Construction of tailing dams and waste disposal areas used in connection with mining and metallurgical operations. This paragraph does not exempt those sand and gravel operations which will divert, retard or obstruct the flow of waters in a watercourse from complying with and acquiring authorization from the board pursuant to regulations adopted by the board under this article.

4. Other construction if it is determined by the board that written authorization is unnecessary.

5. Any flood control district, county, city, town or other political subdivision from exercising powers granted to it under this article.

6. The construction of streams, waterways, lakes and other auxiliary facilities in conjunction with development of public parks and recreation facilities by a public agency or political subdivision.

7. The construction and erection of poles, towers, foundations, support structures, guywires, and other facilities related to power transmission as constructed by any utility whether a public service corporation or a political subdivision.

C. Before any construction authorized by subsection b of this section may begin, the person must submit plans for the construction to the board for review and comment.

D. In addition to other penalties or remedies otherwise provided by law, this state, a political subdivision or a person who may be damaged or has been damaged as a result of the unauthorized diversion, retardation or obstruction of a watercourse has the right to commence, maintain and prosecute any appropriate action or pursue any remedy to enjoin, abate or otherwise prevent any person from violating

or continuing to violate this section or regulations adopted pursuant to this article. If a person is found to be in violation of this section, the court shall require the violator to either comply with this section if authorized by the board or remove the obstruction and restore the watercourse to its original state. The court may also award such monetary damages as are appropriate to the injured parties resulting from the violation including reasonable costs and attorney fees.

§ 45-2354. Declaration of public nuisance; abatement

Every new structure, building, fill, excavation or development located or maintained in a floodplain since August 8, 1973 in violation of this article or of floodplain regulations established by the board and without written authorization from the board is a public nuisance per se and may be abated, prevented or restrained by action of this state or any of its political subdivisions.

§ 45-2355. Viloation; classification

A. It is unlawful for a person to divert, retard or obstruct the flow of waters in a watercourse if it creates a hazard to life or property without securing the written authorization required by section 45-2353.

B. A person who violates this section is guilty of a class 2 misdemeanor.

§ 45-2356. Survey and report of flood control problems and facilities; comprehensive program; adoption by board; hearing

A. After a flood control district has been established in a county having a population of over three hundred thousand persons according to the latest federal decennial census, the board shall cause the chief engineer to make or have made by the flood control engineer or by qualified private engineers a survey of the flood control problems of the district and to prepare a report describing existing flood control facilities in the area, recommendations as to cooperation between the district and the owner or owners of existing facilities, recommendations and a preliminary plan for the construction or other acquisition of facilities to carry out the purpose of the district, a description of the property proposed to be acquired or damaged in performing the work, a program for carrying out the regulatory functions, a map showing the district boundaries and location of the work proposed to be done and property taken or damaged, an estimate of the cost of the proposed work and such other things as the board of directors may request. Before submission to the board of directors the report shall be submitted to the citizens' advisory board if one is

established for its review and recommendations. The report shall be prepared at least every five years beginning in 1985 and shall indicate the past efforts of the district in eliminating or minimizing flood control problems and state the planned future work of the district to eliminate or minimize flood control problems.

B. The chief engineer and his staff shall then prepare a comprehensive program of flood hazard mitigation, taking into consideration the recommendations submitted in the report. When a comprehensive program satisfactory to the board is available, the board shall tentatively adopt and schedule a public hearing on the program and the performance of the proposed work. The comprehensive program shall be reviewed and modified as necessary to reflect the past and future planned flood control works of the district. Notice of the hearing shall be given by publication once a week for two consecutive weeks in a newspaper of general circulation in the area of jurisdiction, the first of which shall be at least ten days before the date fixed for the hearing.

C. The chief engineer and his staff shall prepare and submit to the board a five year capital improvement program in a form approved by the board. The program and annual extensions shall be submitted to the board at least three months before the final date for submission of the annual budget. The program shall separately identify capital improvements for engineering, rights-of-way and land acquisition and construction with such supporting explanations, cost estimates and completion schedules as the board may require. The program shall be annually reviewed for endorsement by the citizens' advisory board if one is established.

D. After a flood control district has been established in a county with a population of fewer than three hundred thousand persons, the chief engineer may conduct a survey of flood control problems, prepare a comprehensive program for flood control and a five year capital improvement program pursuant to this section. He shall at least make an assessment of flood control problems in the area of jurisdiction and make an annual report of his findings and recommendations for dealing with them to the board.

§ 45-2357. Development of flood control plan by director of water resources

A. On the application of a district organized pursuant to this article, and subject to available appropriations, the director of water resources shall conduct a study and, if deemed justified by the director, develop a flood control plan to address any flood control problem in the area of jurisdiction of the district.

B. The director shall conduct such studies and develop such plans for counties having a population of fewer than one million persons. If personnel are available and if monies are specifically authorized by the legislature, the director may conduct such studies and develop such plans for counties having a population of one million or more persons. The director shall perform his responsiblities under this section in such a manner as to spread the benefits of such assistance among all counties of this state.

C. In operating pursuant to this section, the director may utilize his own engineers and resources or may contract for outside consulting engineers and resources.

D. Any plan developed by the director pursuant to this section shall, to the extent practicable, resolve the particular flood control or regulation problem. The practicality of any solution to a flood control or regulation problem shall be determined jointly by the director and the flood control district based on cost effectiveness and design criteria developed by the director.

§ 45-2358. Resolution calling for bond election; notice; manner of conducting election

A. After a county flood control district has been established pursuant to this article, the board may order that facilities be acquired, constructed, operated and maintained from available monies or the district. If sufficient monies are not available, the board may submit to the electors of the district qualified to vote under article VII, section 13, constitution of Arizona, at an election to obtain approval for incurring bonded indebtedness of the district to obtain revenue to acquire by purchase, construction or otherwise all or any portion of such facilities. The resolution shall set forth the purpose of the indebtedness, the amount of the indebtedness, the maximum number of years for which the indebtedness is to be incurred, the maximum rate of interest to be paid and the date of the election and shall list the voting places to be used at the election. The resolution constitutes a notice of the election and shall be published once each week for three consecutive weeks in a newspaper of general circulation in the area of jurisdiction, or if there is no such newspaper, then notice shall be posted in not less than three public places within the area of jurisdiction, the first of which publications shall be not less than twenty days before the date fixed for the election. Publication on the same day of each week is sufficient whether or not a daily newspaper is used for the publication.

B. Except as otherwise expressly provided, the election shall be called and held and the results canvassed in the manner provided by the laws of this state for holding elections on

the issuance of bonds by counties for general county purposes. The board may for purposes of the election treat the entire district as a single precinct or may divide the district into such precincts and fix such polling places as it may see fit.

C. If a majority of the votes cast on the proposition is in favor of incurring the bonded indebtedness proposed, the bonds so authorized may be sold and issued by the board of directors either at one time or in blocks.

§ 45-2359. Form, issuance and sale of bonds; limitation on bonded indebtedness; payment of bonds and interest

A. The bonds authorized pursuant to section 45-2358 shall be issued for the general purpose or purposes provided in the voted proposition, which may be the acquisition by purchase, construction or otherwise of any facilities designed to further the objects or purposes of the district or for improving and extending any such facilities, or any combination of such purposes, and may include the payment of all legal, engineering and fiscal expenses reasonably incurred in connection with the authorized purposes of the bonds and with the authorization and issuance of the bonds as well as expenses incurred in connection with the original organization of the district. The bonds shall be fully negotiable for all purposes and shall never be issued in an amount which, together with all other existing bonded indebtedness of the district then outstanding, exceeds in total principal amount five per cent of the assessed valuation of taxable property in the district as computed from the last assessment roll for county purposes completed before issuing the bonds. The limitation on bonded indebtedness does not apply in those districts which embrace portions of two or more irrigation districts which have water delivery contracts with the United States pursuant to federal reclamation laws.

B. The bonds are the general obligation of the district and the full faith, credit and resources of the district shall be pledged for their payment. The board shall certify to the board of supervisors to levy annually on all taxable real property in the district secondary property taxes fully sufficient without limitations as to rate or amount to pay principal of and interest on such bonds as principal and interest fall due.

C. The bonds shall mature at such time or times not more than forty years from their date, shall bear interest at such rate or rates set by the accepted bid which shall not exceed the maximum rate of interest stated in the resolution calling the election, shall be payable at such place or places within or without this state and generally shall be issued in such manner and with such details as may be

provided in the resolution. The bonds may be made callable on any interest payment date at a premium not to exceed three per cent of their face amount. If the district has any source of revenues other than from the proceeds of taxes, all or such part of the revenues as the board of directors may deem advisable may, in the descretion of the board, be pledged to the payment of the bonds.

D. The board may provide in the resolution authorizing bonds that the bonds shall recite that they are issued under authority of this article. Such recital conclusively imports full compliance with this article and all bonds issued containing the recital are incontestable for any cause whatsoever after their delivery for value.

E. The board may provide for the publication of any resolution or other proceeding adopted by the board in a newspaper of general circulation in the area of jurisdiction. For a period of thirty days after the date of publication any person in interest may contest the legality of the resolution or proceedings of any bonds which may be authorized, or the provisions made for the security and payment of the bonds, and after such time no person has any cause of action to contest the regularity, formality, legality or source of payment for any cause whatsoever.

F. Subject to this section, the board shall declare by resolution its intention to sell such bonds and shall fix the date, hour and place of sale and shall give notice of the sale of bonds by publication for at least ten days in a newspaper of general circulation in the area of jurisdiction and in any other newspaper as the board directs. The notice shall state that sealed bids only will be received by the board for the purchase of the bonds, and the bonds will be awarded to the highest responsible bidder at a price of not less than par and accrued interest, and that a good faith check equal to two per cent of the principal amount of bonds to be sold must accompany all sealed bids. The board may reject any and all bids. The bonds may be in denominations or multiples of one thousand dollars and shall be signed by such officers of the board as are designated by resolution adopted by the board. Any bonds bearing the signature of officers in office at the date of signing are valid and binding for all purposes, notwithstanding that before their delivery any such person whose signature appears on the bonds may no longer be an officer.

G. Bonds may be issued by the district after the issuance of all of the first bonds but must be issued pursuant to the making of a supplemental engineer's program and a hearing as prescribed in this section.

H. Bonds issued under authority of this article do not enjoy a priority over other bonds issued under this article by

reason of time of authorization or issuance. Bonds issued under this article are not taxable by this state or by any county, city, town or other political subdivision of this state.

I. All bonds issued under this article are legal investments for all trust funds, including those under jurisdiction of this state, and for the funds of all insurance companies, banks and trust companies, for the investment of state monies and for all sinking funds under the control of this state and political subdivisions of this state.

§ 45-2360. Certification and levy of taxes; limitation

A. The district shall annually, not less than fifteen days before the first day of the month in which the county board of supervisors is required by law to levy county taxes, certify to the board of supervisors:

1. The amount of taxes to be levied in each year on the taxable real property in the district as it considers necessary or appropriate to pay the expenses of administering the district and maintaining and operating the district's flood control system, carrying out its regulatory functions and to carry out any of the objects and purposes of this article of common benefit to the district. The maintenance and operation tax proceeds not used for current expenses of maintenance and operation may either be paid into a reserve to be accumulated for such purpose or may be used for extending, improving and constructing the flood control system including acquiring rights-of-way.

2. The amount of taxes necessary to be levied to pay the principal and interest falling due during the ensuing year on, or to provide a sinking fund for, any bonds issued pursuant to section 45-2359.

B. The taxes collected pursuant to this section shall be paid to the district treasurer and used solely for the purpose for which they were levied.

C. The board of supervisors at the time of levying general county taxes shall levy and cause to be collected in the manner prescribed by law for county taxes a tax on the taxable real property in the district sufficient to provide the amounts set forth in subsection A of this section.

D. If the district fails to certify to the board of supervisors any of the amounts of taxes necessary to be levied as required by this section, the board of supervisors shall ascertain the amount which should have been certified and shall levy the tax sufficient to produce such amount.

§ 45-2361. Right-of-way

A right-of-way in, under, along or across a public highway, public street or public property within a flood control district shall be granted to the district if found by the board to be necessary or convenient for performing any work authorized by this article and if designs for district works and designs for highway, street and public property improvements are mutually satisfactory to controlling public agencies. If necessary to carry out such work, the board may bring actions to condemn any needed property, which suits may be brought under any statute applicable to the bringing of condemnation suits by municipal corporations or other political subdivisions of this state.

§ 45-2362. Permission required to connect to storm water drain; fee; violation; classification

A person desiring to make a connection to any storm water drain of a flood control district or to cause storm waters to be emptied into any ditch or drain of the district shall first apply to the district for permission to make the connection. The district may require the connection to be made in such manner as it directs and may impose reasonable conditions and such reasonable connection fee as it deems proper or, if reasonably justified by the circumstances, may refuse permission. A person making a connection which causes floodwaters to be so discharged without first having obtained permission is guilty of a class 2 misdemeanor.

§ 45-2363. Authority to issue refunding bonds; procedures; disposition of proceeds

Any bond issued under this article may be refunded pursuant to resolution adopted by the board of directors in the manner provided in this article for the issuance or other bonds, except that an engineer's report or hearing need not be obtained or held, and it is not necessary to submit the question of the issuance of the refunding bonds at an election. Refunding bonds so authorized may be sold and the proceeds of sale applied to or escrowed for the payment of the bonds to be refunded in such manner as may be provided in the authorizing resolution, or may be delivered in exhange for the bonds to be refunded, or may be in part sold and in part exchanged. No bonds may be refunded under this section unless they either mature or are recallable for redemption under their terms within twelve months from the date of the issuance of the refunding bonds or unless the holders voluntarily surrender them for exchange or payment.

§ 45-2364. Cooperation in flood control projects

A district may cooperate with the United States and this state or any instrumentality, department, agency or political or municipal subdivision of either in the construction, maintenance and operation of flood control project and the enforcement of this

article and regulations adopted pursuant to it. To that end, the district may:

1. Enter into appropriate agreements.

2. Aquire and provide without cost to the cooperating entity land, easements, rights-of-way and services necessary for the construction of flood control projects and the regulation of floodplains.

3. Hold and save any cooperating entity free from any claim for damages arising from the construction, maintenance and operation of flood control projects and the regulation of floodplains.

4. Maintain and operate all works according to regulations prescribed by the cooperating entity.

5. Establish and enforce flood channel limits and floodplain regulations, if any, satisfactory to the cooperating entity.

§ 45-2365. Limitation on powers

A county flood control district may not exercise any power or authority granted by this article, nor may it undertake or cooperate in planning, authorizing, constructing, acquiring, extending, improving, maintaining or operating any flood control structures, dam systems or projects on any portion of a watershed supplying water to any dam and reservoir existing within this state having a designed water storage capacity of fifty thousand acre feet or more, or to any existing diversion dam and canal system having facilities within this state designed to divert and carry not less than one thousand cubic feet per second, without first obtaining the written consent of the agency, district, association, company or organization owning or operating or being served by such dam, reservoir, diversion dam or canal system. Such consent, however, is only required from irrigation districts and agricultural improvement districts organized pursuant to the laws of this state and defined under this title, and any other associations or organizations operating such dams, reservoirs, diversion dams and canal systems as part of a federal reclamation project. This section does not prohibit the district from adopting and enforcing such regulations as are duly enacted pursuant to this article.

§ 45-2366. Compliance; enforcement

If any board, district or governing body fails to comply with or violates the requirements of this article, the attorney general shall take prompt and appropriate legal action to compel compliance by the jurisdiction and its elected officials. The attorney general may, in this discretion, seek the following remedies under this section:

1. An order compelling the offending jursidiction and its elected officials to comply with the requirements of this article or cease the violation.

2. An order vesting the powers and duties under this article in the district in the event that an incorporated city or town has assumed the powers and duties pursuant to section 45-2350.

§ 45-2721. Alternative flood control assistance to flood control districts

A. Any flood control district organized pursuant to chapter 10, article 4 or this title may, subject to available appropriations, qualify for assistance from this state for any flood control project if such project is being developed pursuant to a plan developed pursuant to section 45-2352.

B. Assistance granted pursuant to this article shall be administered by the director of water resources and shall not exceed for any single flood control project an amount equal to fifty per cent of the total cost of the flood control project or five million dollars, whichever amount is less.

C. For funds appropriated for alternative flood control assistance after January 1, 1979, no county flood control district is eligible to receive more than thirty per cent of any single appropriation.

§ 45-2723. Floodplain regulations; effect of failure to adopt

The director shall not expend or disburse any monies pursuant to this article for the following functions located or to be located in an area for which the appropriate public agency has failed to adopt and enforce for its area of jurisdiction floodplain regulations required by chapter 10, article 4 of this title:

1. Flood control works.

2. Flood repairs

3. Flood hazard mitigation

4. Assistance in developing flood control plans or delineating floodplains.

5. Payment of any costs of lands, easements or rights-of-way or for any other purpose for a flood control project.

§ 45-2731. Flood control loans

A. The director of water resources may grant loans from the

flood control loan fund established by section 45-2732 to defray the cost to a county flood control district, organized pursuant to chapter 10, article 4 of this title, for flood control projects eligible for alternative flood control assistance under article 2 of this chapter. Loans may be granted, subject to the provisions of this article, in such manner and upon such terms and conditions as may be prescribed by the director.

B. Upon application, the director shall make full and careful investigation of the qualifications of the applicant district and the proposed project. The director shall determine whether the proposed project would provide meaningful flood control and is in the best interests of this state.

C. The loans granted by the director shall be for not more than twenty-five per cent of the cost of a project or two and one-half million dollars, whichever is less, and for a term of not more than twenty years.

D. Unless prior approval of the joint legislative budget committee is obtained, no single loan may be made for more than thirty per cent of the funds available in the flood control loan fund at any given time and no loan may be made to any flood control district which at the time of the loan application had more than thirty per cent of the outstanding loans of the fund.

E. The loans shall bear interest at the following rates:

1. If the loan is for a term of not more than five years, the rate is three per cent per year.

2. If the loan is for a term of more than five years, but not more than ten years, the rate is five per cent per year.

3. If the loan is for a term of more than ten years, the rate is six per cent per year.

F. Each loan shall be evidenced by a contract between the district and the director, acting on behalf of this state. The contracts shall provide for the loan payment by this state of a stated sum defraying up to twenty-five per cent of the costs of the flood control projects. The contract shall provide for equal annual payments of principal and interest for the term of the loan.

G. The district board shall each year levy a tax sufficient to pay the annual amount of prinicipal and interest due on the loan.

H. The attorney general may commence whatever actions are

necessary to enforce the contract and achieve repayment of loans provided by the director pursuant to this article.

§ 45-2902. Rio Salado development district

A. There is established a Rio Salado development district with jurisdiction to exercise the powers and duties prescribed by this article over not to exceed the natural bed of the Salt river and of the Gila river from Granite Reef Dam to the confluence of the Gila and Agua Fria Rivers and the adjoining lands included within the one hundred year floodplain of the Salt river, as defined and established pursuant to law on January 1, 1980. The actual boundaries of the district shall be designated by the board within the prescribed limits subject to approval by the governing board of that portion of the proposed district boundary that lies within that governing body's jurisdiction.

B. Areas without the prescribed boundaries may be included within the district with the approval of the unit of local government having general police jurisdiction over the area.

C. The district is a non-tax levying political subdivision of this state and is not a municipal corporation of this state.

§ 45-2909. Rio Salado technical advisory council

A. There is established a Rio Salado technical advisory council, consisting of one representative to be appointed by each of the following:

1. The city of Mesa.

2. The city of Phoenix.

3. The city of Tempe.

4. Maricopa county.

5. The Salt River Pima-Maricopa Indian community.

6. The state land department.

7. The director of water resources.

8. The department of transportation.

9. The Arizona game and fish department.

10. The Arizona outdoor recreation coordinating commission.

11. The Arizona state parks board.

12. The office of economic planning and development.

13. The United States army corps of engineers or its successor.

14. The United States Bureau of Reclamation or its successor.

15. The United States soil conservation service or its sucessor.

16. The flood control district of Maricopa county or a successor county flood control district organized under chapter 10, article 4 of this title.

17. The Salt River project or a successor agricultural improvement district organized under chapter 4 of this title.

18. The Arizona wildlife federation or any similiar organization designated by the board.

19. Valley forward association or any similar private organization, as designated by the board, having a similar purpose.

20. The Maricopa association of governments or a successor association or council of governments established pursuant to statute or executive order.

21. The Phoenix building and construction trades council.

22. The Rio Salado association as provided in this article.

B. The board may appoint other appropriate organizations to be represented on the council.

C. Members of the council shall serve at the pleasure of the appointing authority.

D. The council shall provide technical assistance to the board in the performance of its duties and coordinate the technical aspects of all plans, programs and projects of the member agencies as they affect the duties of the board.

Sec. 9. Succession of county flood control district

A. County flood control districts and special flood control districts organized under title 45, chapter 10, articles 1 and 5, Arizona Revised Statutes, as repealed by this act shall be reorganized to become county flood control districts under title 45, chapter 10, article 4, Arizona Revised Statutes, as added by this act.

B. A county flood control district organized under title 45, chapter 10, article 4, Arizona Revised Statutes, as added by

this act succeeds to the authority, powers and duties of the county or special flood control district organized in the respective county under title 45, chapter 10, article 1 or 5, Arizona Revised Statutes, as repealed by this act. The act does not affect the validity of any action taken or obligation incurred, including bonds issued, before the effective date of this act by a county or special flood control district pursuant to title 45, chapter 10, article 1 or 5, Arizona Revised Statutes, as repealed by this act.

C. Rules, regulations and ordinances adopted by a county, city, town or flood control district pursuant to title 45, chapter 10, article 1, 4 or 5, Arizona Revised Statutes, as repealed by this act continue in effect until superseded by rules, regulations and ordinances adopted by a city, town or county flood control district pursuant to title 45, chaper 10, article 4, Arizona Revised Statutes, as added by this act.

APPENDIX D

PORTIONS OF THE ARIZONA REVISED STATUTES PERTAINING TO FLOOD RELOCATION AND LAND EXCHANGE

ARS § 26-321 THROUGH § 26-322 - FLOOD RELOCATION AND LAND EXCHANGE

ARTICLE 2. FLOOD RELOCATION AND LAND EXCHANGE

§ 26-321. Definitions

In this article, unless the context otherwise requires:

1. "Business" means a commercial, civic, governmental or religious enterprise which is determined by the director to be incompatible with proper floodplain management. Business does not include a farm, ranch or any other agricultural, horticultural, livestock or poultry enterprise.

2. "director" means the director of the division of emergency services.

3. "Dwelling unit" means a place of residence and may be located in a single or multiple dwelling building.

4. "Floodplain" means the relatively flat areas or lowlands adjoining the channel of a watercourse, or areas where drainage is or may be restricted by man-made structures which have been or may be covered partially or wholly by floodwater from a one hundred year flood as delineated pursuant to title 45, chapter 10 or 15 or pursuant to federal law. If a floodplain of a watercourse has not been delineated, floodplain means an area near the watercourse which could be delineated under such chapters or pursuant to federal law.

5. "Governing board" means the governing body of an incorporated town, city, charter city or county, as applicable.

6. "Resident" means a natural person who actually resides in a dwelling unit for not less than nine months per year.

§ 26-322. Determination of eligibility for flood relocation and land exchange

A. The governing board shall petition the director to designate a specific land area within a floodplain as eligible for flood relocation assistance and exchange for state land pursuant to § 37-610 if five or more residents, businesses or combination of both from such area so request the governing board in writing and if the requirements of subsection B of this section are met.

B. Before petitioning the director, the governing board shall determine that:

   1. A majority of the residents and businesses located in the specific area of the floodplain have signed a petition with the governing board requesting relocation.

2. A suitable parcel of state land or a parcel of land held by another governmental entity is available within a reasonable distance from the floodplain area, not to exceed twenty-five miles, which is capable of supporting those who wish to relocate on such parcel of land.

C. The director shall determine the eligibility of a floodplain area for flood relocation assistance. Eligibility shall occur only if all of the following apply:

1. The area is in a floodplain, as certified by the director of water resources.

2. There is no approved or authorized flood control project which would, upon completion, protect the area as certified by the director of water resources.

3. There are funds available in the floodplain land exchange fund to compensate the state trust for the estimated amount of exchanges involving private land valued at less than the state land for which it is exchanged or for the purchase of an available parcel of state land, state trust land or other public or private land as prescribed by subsection E of this section. The director of the division of emergency services shall obtain certification from the state land department that such funds are available.

4. There are funds available from federal, state and local sources for support of the relocation process.

D. If it is determined by the governing board pursuant to subsection B, paragraph 2 of this section that a parcel of land held by a governmental entity other than the state is available for exchange, the director shall attempt to secure such land for the relocation program.

E. The director may purchase land to support the relocation using funds from the floodplain land exchange fund if he determines, in consultation with the state land commissioner, that the purchase is in the best interest of this state. If the director so determines, he may exchange the purchased land with land belonging to residents in floodplain areas.

F. If private land within such a floodplain is not exchanged to this state pursuant to this section, the division may, upon the determination of the director, condemn such land.

G. The director may enter into contracts of indemnity to indemnify any public or private agency, association, corporation or other entity or any individual against liability by

virtue of injuries, losses or damages in connection with the administration of this article.

H. Lands purchased or exchanged for flood relocation purposes which are adjacent to any area currently being used for agricultural purposes must include a buffer zone of one-quarter mile from any school ground or campus and one hundred feet from any dwelling unit.

APPENDIX E

EXECUTIVE ORDER 77-6 - FLOODPLAIN MANAGEMENT

WHEREAS, there is a need that the State of Arizona comply with the floodplain management provisions contained in Section 1910.12 of the National Flood Insurance Program; and

WHEREAS, the communities of the State of Arizona with 100% enrollment in the program, and the State Legislature with the enactment of Article 4, Floodplain Management, A.R.S. § 45-231-2346, have recognized the need for, and their responsibility for floodplain management in Arizona; and

WHEREAS, the Federal Insurance Administration, Department of Housing and Urban Development has indicated that there is additional need for a commitment for the State and its agencies to comply with the intent of the National Flood Insurance Act of 1968, as amended; and

WHEREAS, the Federal Insurance Administration has indicated that the issuance of an executive order would be acceptable to the Federal Insurance Administration as an interim measure of the State's management of its flood plains; and

WHEREAS, it is the intent of the State of Arizona to comply with the floodplain management provisions contained in the National Flood Insurance Program;

NOW, THEREFORE, I, Raul H. Castro, Governor of the State of Arizona, by virtue of the powers and authority vested in me by the Constitution and laws of this State as Chief Executive Officer do hereby order and direct that:

In furtherance of the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 et seq.), and the Flood Disaster Protection Act of 1973 (Public Law 93-234, 87 Stat. 975), in order to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of the floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

SECTION 1. Each Arizona State agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for

(a) acquiring, managing and disposing of State lands and facilities;

(b) providing state-undertaken, -financed, or -assisted construction and improvement; and

(c) conducting state activities affecting land use, including but not limited to water and related land resource planning, regulating, and licensing activities.

SECTION 2. In carrying out the activities described in Section 1 of the order, each state agency has the responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget requests reflect consideration for flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of this order following the rules and regulations of the local floodplain board authorized under A.R.S. §45-2343(C)(1-4) and following the intent of the National Flood Insurance Act of 1968, and amended and the Flood Protection Act of 1973.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

GOVERNOR

DONE at the Capitol in Phoenix this twenty-seventh day of September in the Year of Our Lord One Thousand Nine Hundred and Seventy-seven and of the Independence of the United States the Two Hundred and Second.

ATTEST:

Secretary of State

APPENDIX F

Subrogation - A Federal Regulatory Tool To Enforce Flood Plain Management

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Subrogation - A Federal Regulatory Tool
To Enforce Flood Plain Management

by Robert D. Sokolove*

"Flood losses are mounting and uneconomic uses of the nation's flood plains are inadvertantly encouraged. . . While flood protection of existing property should receive public support, supplemental measures should assure that future developments in the flood plains yield benefits in excess of their costs to the nation. This would require a new set of initiatives by... Federal Agencies... to stimulate and support sound planning at the local Government and citizen level."

A Unified National Program for Managing Flood Losses, House Document No. 465, 89th Cong., 2d. Sess., submitted to Congress August, 1966.[1]

INTRODUCTION

For many years, both the Congress and various Executive Agencies have expressed a concern about the nationwide problems associated with floods and the concommitant development of flood plains. Generally, the only "answer" or alternative proposed by the Federal Government to the increasing flood risk was a larger investment in hardware or protective works, most notably those under the auspices of the U.S. Army Corps of Engineers.

Over time, more studies concluded that the Federal investment in protective measures such as dams, levees and channel improvements alone were neither significantly reducing the flood risks nor were cost effective in terms of the disaster assistance the Government was still called upon to provide.[2]

The August and September, 1966 studies referenced above basically concluded that as protective measures were inadequate, the ultimate beneficial uses of the flood plain did not "exceed the estimated total costs", and that there was "an eventual net loss to society."[3] The August study went on to conclude that "(any) public investment which encourages sub-marginal development adds to (these losses)."[4]

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It was further suggested that the ultimate apportionment of responsibility for the risk of development in flood prone areas should be bourne by thos occupying the flood plain. No longer would the Government be the exclusive protector of development in flood prone areas with its construction of dams and levees. What began to evolve for the first time in 1966 was Congress' interest in flood plain management - on a national scale.

In sum, Congress felt that by the use of various incentives including the control of federal monies and the use of sanctions, including the cutoff of those monies, it could encourage communities across the country to regulate development in flood prone areas. Thus, in 1968 came the emergence of the National Flood Insurance Program.

THE NATIONAL FLOOD INSURANCE PROGRAM - THE REGULATORY SCHEME

The objectives delineated in the two 1966 studies were ultimately adopted by Congress when it passed the National Flood Insurance Act of Congress stated, inter alia, that "annual losses throughout the nation from floods and mudslides are increasing at an alarming rate, largely as a result of the accelerating development of and concentration of populations in, areas of flood and mudslide hazard,"[6] "that despite the installation of preventive and protective works and the adoption of other public programs designed to reduce losses caused by flood damage, these methods have not been sufficient to protect adequately against growing exposure to future flood losses"[7] and "that the availability of Federal loans, grants...and other forms of financial assistance are often determining factors in the utilization of land and the location and construction of public and of private industrial, commercial and residential facilities."[8]

The 1968 Flood Act provided flood insurance at actuarial rates for new construction and substantial improvements made to existing structures. It also provides subsidized insurance to properties that were already in existence at the time the area in which they were located was identified as an area having special flood hazards.

However, the 1968 Flood Act required flood-prone communities, as a strict condition of participation in the benefits of the flood program, to adopt and enforce local flood plain management measures to mitigate future flood losses. These measures will be discussed later in this paper.

Significantly, by 1973 Congress believed that the benefit of flood insurance under the National Flood Insurance Program (NFIP) did not itself provide sufficient incentive to assure local community participation in the Program. Consequently, Congress enacted the Flood Disaster Protection Act of 1973[9] wherein it opted to make participation in the NFIP a mandatory precondition in flood-prone communities for the financing of numerous Federal benefit programs.

Under its responsibility to identify all flood-prone areas nationwide and establish the relative flood risk associated with that area, the Federal Insurance Administration (FIA) (now under the Federal Emergency Management Agency, FEMA) adopted the 100-year flood as its standard. The 100-year flood standard was encouraged by a preeminant group of hydrologic engineers, planners and others including Dr. Gilbert White, who met at the request of FIA. Subsequently the 100-year standard gained express Congressional approval[10] and became the basic planning standard for all Federal agencies by Executive Order in 1977.[11]

THE FLOOD MAPS - THE VEHICLE FOR ENFORCEMENT

With the exception of the earliest communities to enter the NFIP, two kinds of flood maps are generally prepared for each community designated as flood prone. The first map FIA prepares is the Flood Hazard Boundary Map (FHBM) which depicts the approximate boundaries of the 100-year flood but delineates no water surface elevations. Usually the FHBM is based on existing data which has been provided by local, state or Federal agencies such as the U.S. Army Corps of Engineers, the Soil Conservation Service and the National Oceanic and Atmospheric Administration.

While the FHBM is in effect, the community is required to undertake "reasonable" flood plain management measures to the extent that the necessary data has been provided to them by FEMA. Because no water surface elevations have been provided, there is not yet a requirement to elevate structures to the level of the 100-year flood.

Just the same, according to the attendant Federal Regulations, a community given a FHBM must review building applications, subdivision proposals and applications for placement of mobile homes to ensure that the proposed development will be reasonably safe from flooding.[12]

It was intended that communities with substantial flood prone areas would be provided with a Flood Insurance Rate Map (FIRM). Certainly, since the passage of the 1973 Flood Act, the FIRM has been the primary tool by which the communities could attempt to mitigate the flood risk in flood prone areas. It is ironic that at the present time, funding for the completion of FIRMs has been substantially cut leaving thousands of communities with nothing more than the elementary risk assessment capabilities generated by the Flood Hazard Boundary Maps. In any event, a closer look at the preparation of the FIRM and the implications surrounding its adoption are warranted.

Current technical procedures for performng flood insurance studies are fairly standardized by the Federal Emergency Management Agency, particularly in riverine flooding situations. They are specified in the Flood Insurance Study Guidelines and Specifications that form a part of all current

flood insurance study contracts. The present method of performing a flood insurance study essentially consists of the following identifiable activities: 1) Preliminary Reconnaissance; 2) Literature Survey and Data Collection; 3) Field Surveying; 4) Hydrologic Analysis; 5) Hydraulic Analysis; 6) Preparation of Reports and Maps. A brief description of these activities follows:

Preliminary Reconnaissance is needed for the hydrologic/hydraulic engineer to familiarize himself with the general characteristic of the drainage basins, the stream and its valleys, for estimation of parameters like Manning's "N", expansion/contraction coefficients, and for inspecting the bridges and other structures for proper modeling in the hydraulic analysis. It is also used to locate the cross-sections to be surveyed by the surveyor.

Literature Survey and Data Collection - This phase of the study consists of collecting any available hydraulic, hydrologic or other information related to the basin under study. Any completed or ongoing flood insurance study reports and any available information from other sources are collected and researched with a view to obtain information that may be utilized in the study either directly or for the purpose of comparison. Typical information would include flood flow magnitude, flood heights, high water marks of historical floods and, starting water reference elevations, which may or may not be available.

Field Survey - The number and desirable locations of cross-sections are determined in this stage, followed by surveying in the field. Cross-section data at the selected locations are thus obtained and the elevation reference marks established. Engineering judgment is of paramount importance in loating the cross-sections for surveying. The number of cross-sections, however, is in most cases dependent upon budget. If available, good topographic maps may be used to supplement the surveyed cross-sections, at least in the overbank area.

Hydrologic Analysis - Various hydrologic methods are used for determining the flood plains. The U.S Water Resources Council's recommendation (Bulletin #17) has traditionally been followed for areas with gaged records. For ungaged areas, rainfall-runoff models which utilize Unit Hydrographs such as HEC-1 and TR-20 programs may be used. Other methods include regional frequency analysis, use of drainage area relationship between the basin under study and a similar but gaged basin, and the rational formula for small areas. Sometimes the discharge computed at the most downstream point of the basin is reduced in the upstream direction along the stream at discrete points to account for reduction in drainage area, with the reduction being based upon drainage area ratios or other factors.

Hydraulic Analysis - Computed flows are then translated into flood profiles through step-backwater computations in the stream

channel, most commonly utilizing digital computer programs like HEC-2, E431, or WSP2. Starting elevation is obtained from any downstream control/structure or known stage-discharge relationship, if the information is available. Sometimes the computations start with normal depth, or with critical depth. Manning's "n" value is selected on the basis of the estimation made in the field and/or comparing the photographs, if taken, of the channel and valley sections in the office with the standard and calibrated photographs. In soem rare cases, where sufficient historical flood marks are available and the flood estimates are known, reconstruction of the past flood and determination of Manning's "n" value may be possible. Backwater is computed for various floods and also for the floodway. Flood hazard factors are computed and zones determined.

Preparation of Map and Report - The information developed is then presented in the standard format as specifed in the Guidelines and Specifications. Usually the work maps are prepared utilizing the best available topographic map and the latest community map. One-hundred and five-hundred year flood boundaries are then plotted on the map at the cross-sections. Between cross-sections, the boundaries are interpolated. The floodway is also similarly located on the map. Sound engineering judgment is of significant importance in interpolating the floodway because of its sensitive nature. At a later state, the information from the best available topographic work is transferred to the "would be-FIRM" whose scales are usually smaller.[13]

THE REGULATIONS

All Federal regulatory programs seem to consist of a set of standards or rules by which the parties must interact and a scheme by which compliance with the rules can be encouraged or mandated. The National Flood Insurance Program is no exception. A description of the standards is appropriate. A discussion of the enforcement of those standards will follow.

The basic regulatory structures of the flood program are found at 44 C.F.R. § 60.3 and are entitled, "Flood Plain Management Criteria for Flood-Prone Areas." The regulations apply to all new construction and substantial improvements to existing structures.[14] They include, inter alia, that,

1. No structure can be built in the floodway that would increase the height of the one-hundred year flood by one foot or more. The floodway is that path within the flood plain by which the water from a flood flows out of the region. If a structure is built in the floodway it will not only be subjected to greater danger, but also will block the flow of water out of the flood plain and thereby increase the height to which the water rises.

2. All residential buildings constructed in the flood plain must have their lowest floor, including the basement, above the height of the one-hundred year flood level.

3. All non-residential buildings constructed in the flood plain must be constructed with the lowest floor above the one-hundred year flood level, or the structure must be designed so that all parts of the building below that level will be floodproofed.

4. If floodproofing is used, a registered professional engineer must certify that the floodproofing measures are adequate to withstand the expected flood depths, pressures and uplift forces.

5. All mobile homes within the floodplain must be elevated above the one-hundred year flood level in accordance with detailed specifications including appropriate anchoring standards.

The regulations also require that communities review subdivision proposals and other proposed new developments where no FIRM has yet been issued, to determine whether such proposed development will be "reasonably safe from flooding."[15] This requirement mandates that the community "assure adequate drainage is provided to reduce exposure to flood hazards. As will be discussed later in this paper, it is this kind of language which the Federal Government now suggests has created a contractual duty between it and participating communities.

In coastal high hazard areas known as velocity or "v-zones", communities must meet not only the aforementioned requirements, but must also require that all new construction and substantial improvements are,

> " elevated on adequately anchored pilings or columns and securely anchored to such piles or columns so that the lowest portion of the structural members of the lowest floor is elevated to or above the base flood level [the level of the 100-year flood] and that a registered professional engineer or architect certify that the structure is securely anchored to adequately anchored pilings or columns in order to withstand velocity waters and hurricane wave wash..."[16]

It is obvious the responsibility and potential liability this regulation places on the attendant architect or engineer who is called upon to inspect a V-zone structure after its completion. Add to this the increased exposure provided by FEMA's implementation of wave heights into the existing coastal FIRMs, and it becomes apparent that an architect or engineer should be very careful before he "certifies" that a structure complies with this Regulation.

ENFORCEMENT

The controlling Federal law including the Flood Disaster Protection Act of 1973[17] and the Regulations promulgated pursuant to the Act require that enforcement of the flood plain management provisions are to be undertaken by the various states and local participating communities. This concept was the subject of a major law suit filed by a number of individuals and communities as well as the State of Missouri in 1978. The law suit, entitled Texas Landowners Rights Association v. Harris,[18] challenged the constitutionality of the Flood Program, claiming that participation by communites was actually mandatory rather than voluntary and that the Federal Government was unlawfully intruding the exclusive domain of the states and communities to control and regulate their land use.

The position of the Government was that as long as states and communities receive the Federal benefits bestowed as part of the Flood Program, the Government may condition receipt of these benefits on reasonable flood plain management enforcement measures to be undertaken by the participating communities. The Federal District Court for the District of Columbia ruled in favor of the Government and the Court's decision was subsequently upheld by the Circuit Court of Appeals for the District of Columbia and the United States Supreme Court.

The Texas Landowners case has left little doubt that as long as a community chooses to participate in the National Flood Insurance Program, it will be required to adopt and enforce the flood plain management measures described in the section above. Enforcement primarily requires that each participating community develop and monitor a permit system to insure that all the requirements found in section 60.3 of the Flood Program Regulations are met. The intent of the Flood Act and the spirit of the Regulations would suggest that what the Federal Government really expects of the local communities is a thorough policing effort on their part, without the need for the Federal Government to be actively involved in the day-to-day local land use decision making process.

The key question is whether satisfactory enforcement is presently taking place under the existing system and if not, why not? On a nationwide scale, the most correct answer is probably that no one really knows.

If flood loss claims data examination provides an indication of the adequacy of community enforcement of flood plain regulations, the result is ambiguous. To be sure, over the last few years the number of losses has increased dramatically. The amount of damage per loss has steadily increased. However, the number of policy holders insured by the National Flood Insurance Program has more than doubled in the last eight years[19] and inflation has made a critical impact on the dollar amounts associated with each flood loss.

Other evidence in terms of loss analysis is also misleading. There has not been a major hurricane to hit the state of Louisiana since Betsy in 1966. Yet through 1977, a total of 10,052 claims were paid in the amount of $28,150,065. Through December 31, 1980, a total of 38,212 claims were paid at a cost to the Government of over $201 million. Can this rise be attributed to an increase in the number of flood policies and inflation? Should it be attributed to the floodcausing rains in the New Orleans metropolitan area on May 3, 1977 and April 12, 1980? Or, based on loss data here, would it be appropriate to question whether enforcement of the flood Regulations is taking place?

Another type of analysis which reflects on the enforecement issue compares the location of flood losses with the Flood Insurance Rate Maps, to determine if the losses are occurring only in the areas where they "should be occurring". This can be accomplished by calculating the magnitude of a particular event (the hydrology indicating a fifty-year flood for example) and examining the maps to see if areas are flooding which should only be prone to a much greater occurrence. The few attempts by FEMA at this type of analysis have revealed that flood waters have affected areas that according to the maps, should not be affected.

One could conclude that the flood waters are being diverted into areas they should not and poor flood management or enforcement is the cause. On the other hand, it may well suggest that the flood maps are simply not accurate.

Other attempts by FEMA to accurately monitor community flood plain management are admittedly insufficient given the number of communities participating in the Flood Program.[20] Every year, each of FEMA's ten Regional Offices conducts evaluations in specific communities to ascertain ordinance compliance, the basis for variances which have been granted and other needs for technical assistance. But a FEMA official in the Denton, Texas Regional Office stated that if all they did was conduct evaluations such as this, it would still take ten years to visit each of the participating communities.

It is a fair statement that after the initial adoption of the flood plain management ordinances which are a condition precedent to participation in the Flood Program, most communities can feel rather secure that the Federal Government will not be looking over their shoulders, monitoring their land use decisions. It may well be that a large number of participating communities have accomplished nothing more than effectuated the paperwork necessary to get into the program, with little regard for the actual enforcement required by the ordinances they have prepared.

This is by no means a suggestion that all or even most of the communities which are a part of the Flood Program have been

less than altruistic in their flood mitigation measures or have entered a Government program under false pretenses. Just the same, it must be noted that in many communities the flood plain is so pervasive that strict compliance with the Flood Program's Regulations takes a back seat to the competing developmental interests.

It is not the scope of this paper to make judgments regarding the appropriateness of strong flood plain management enforcement where heavy developmental demands exist. However, an observation from the viewpoint of the Government on this issue is probably relevant.

All too often after a major flood event has occurred, there appears information from local citizens, the media, attorneys who are filing law suits, private insurance companies, various governmental agencies and other sources suggesting that but for the actions or inactions of a community in regulating flood plain development, the flooding would not have occurred or at least, would not have been so prevalent.

To the extent that this information proves true, it becomes apparent that many have not taken enforcement of the floodplain management ordinances seriously, hoping to beat the odds of an eventual disaster. Beside, the rationale may go, because our community is "participating" in the Flood Program, our citizens will be entitled to Federal flood insurance and Federal disaster assistance should that 100-year flood occur.

Pursuant to Federal law, communities which fail to adopt or enforce the mandatory flood plain management Regulations are subject to suspension of eligibility from the Flood Program.[21] Often a community makes the decision that after weighing the Federal benefits of participation (Federal flood insurance, eligibility for Federal disaster assistance and other Federal financial assistance for structures in the flood plain) versus the requirements imposed by participation, it wold rather forego involvement and chooses not to adopt the ordinances. These communities are summarily "suspended" from participating.

However, as a possible testament to the difficulties of monitoring enforcement over the twelve years of the Flood Program, no community has ever been suspended from eligibility for failure to enforce the required flood plain management ordinances. Again, it may be difficult to catch a non-compliant community before a major flood occurs. But, with a history where not one of the 17,091 participating communities has ever been suspended for failing to enforce, and where there is strong evidence that some communities have not been enforcing their ordinances, little can be made of the deterrent effect the suspension procedure has provided.

It took the potential cutoff of Federal financial assistance found in the 1973 Flood Disaster Protection Act[22] to increase

participation in the Flood Program from 2,856 communities to the present 17,091. These additional 14,000 plus communities adopted the mandatory ordinances required by the Act and the Regulations. It appears though, that the mere threat of suspension from the program has not been sufficient in the Government's opinion to ensure enforcement of the mandatory ordinances.

The Government is beginning to pursue the age old legal doctrine of subrogation as a prospective tool in deterrence, to effectuate sound flood plain management.

SUBROGATION

An entire thesis could be written on the doctrine of subrogation. Yet, the theory behind the doctrine is quite simple. As stated in Black's Law Dictionary, subrogation is,

> "A legal fiction through which a person who, not as a volunteer or in his own wrong, pays the debt of another, is substituted to all rights and remedies of the other, and the debt is treated as still existing for his benefit."[23]

Put into an insurance context, it is generally agreed that once full payment is made by an insurer, that insurer, as subrogee, gains all the rights held by the insured to recover that payment from a responsible third party. Some commentators have gone so far as to suggest that the right of subrogation arises at the time the contract is made between the insured and the insurer.[24]

A common example of subrogation in an insurance context would be as follows: "X" is insured by insurance company "Y" for damage caused to his automobile. "X", while driving, is struck by "Z" who causes $1,000.00 damage to "X's" car. Company "Y", having a duty to pay and once having paid "X" $1,000.00 for his damage becomes subrogated to the rights of "X". Company "Y" may then exercise its rights in subrogation against "Z", the responsible party.

Most, if not all first party property insurance policies have a standard subrogation clause included therein. The Standard Flood Insurance Policy (SFIP) issued by the Federal Government to the 1.9 million insureds is no exception. The clause states,

> "In the event of any payment under this policy, the Insurer shall be subrogated to all the Insured's right of recovery therefor against any party, and the Insurer may require from the Insured an assignment of all rights of recovery against any party for loss to the extent that payment therefor is made by the Insurer."

As simple as it may seem, that little subrogation clause has provided the Federal Government, and FEMA in particular, with a novel but workable approach to flood plain management. The key to the entire scheme lies in the numbers.

Start with the fact that all 1.9 million Flood Program policy holders have the same Standard Flood Insurance Policy. Consequently, all are contractually bound by the same subrogation provision. What the provision in the policy allows is for the Government, once full payment has been made on a flood loss, to recover its money from the person or entity which caused, contributed to, or aggravated the damage by flood.

In a typical flood situation, the opportunity to pursue subrogation does not arise. For example, a strong coastal storm surge damaging a beach area provides little opportunity to hold a "wrongdoer" responsible. Heavy rains causing a flood swollen river to overtop its banks and inundate the flood plain, likewise, suggests little subrogation possibility.

On a small scale, subrogation often may be pursued, yet still creating no apparent impetus to manage development in the flood plain more strictly. A typical case is where heavy rains have occurred in and around a small subdivision. Normally the water would be drained by a small creek but on this particular day, a road maintenance crew has carelessly dumped two loads of asphalt into the creek, thus creating a damming effect. The resulting flood damages three homes, each insured by the Federal Government. Once the Government has paid the homeowners, it may bring a legal action against the party responsible for the maintenance crew"s activities to recover the money it has paid the homeowners.

The example above suggests, of course, that the maintenance crew was negligent or in some other way breached a duty it had to reasonably protect the homeowner's property. Even so, an isolated incident as this, followed by a recovery action on the part of the insurer - Government will be unlikely to create a groundswell of enthusiasm for tougher flood plain management. Nor will a community feel compelled under these facts to take a closer look at its section 60.3 enforcement procedures.

However, most communities can not afford to be held responsible for a huge flood loss where they have, for example, allowed scores of homes to built below the Base Flood Elevation - and the Federal Government knows it. Nor do most developers or their hydrologic engineers want to have to defend a suit alleging that in designing their development as they have, extraordinary runoff has created a flooding condition in an adjacent area.

As stated earlier, the key is in the numbers or, put more succinctly, in the size and scope of potential liability. As the potential for liability grows and the certainty of a recovery action by the Government increases, a strong deterrent exists for

those who would not enthusiastically enforce and comply with the flood plain management Regulations.

To put this matter into perspective, it is appropriate to examine the recent law suits filed by the Federal Government in the New Orleans metropolitan area, asking for $93 million in damages.[25] Because this writer was employed at the time by FEMA and participated in the preparation of the suits, this discussion shall be limited to those facts which are not privileged.

The suits named a total of forty-five defendants including the state of Louisiana, two parishes (counties), a number of levee districts, drainage districts, developers, insurance companies and engineers. The facts alleged that contrary to the applicable Federal Regulations, particularly those found in Section 60.3 pursuant to flood plain management, the Parishes of Jefferson and St. Bernard allowed or negligently approved new construction or substantial improvements below the level of the 100-year flood.

The Government also contends that drainage canals were not properly cleaned of debris, that pump stations were not operational, that developments were approved where no provisions were made to assure that adjacent areas would not be adversely affected by runoff, that adequate drainage was not provided in newly approved subdivisions and that development took place in areas where the communities, by their own engineers, were told that flooding would occur.

The legal theories under which the Government argues it should prevail include, inter alia, negligence and breach of contract. The negligence theory is rather obvious - it suggests that the failure to maintain the drainage system, the improper alteration of the system, the careless placement and design of subdivisions, and the construction of buildings below the level of the 100-year flood (contrary to the enforcement provisions of the Federal Regulations) all amounted to negligent activity.

The contract theory essentially is as follows. When the Parishes entered into the Flood Program, they agreed to undertake the enforcement responsibilities mandated by the Federal Regulations. In return, the Government provided flood insurance, disaster assistance and all the other federal financial assistance a community is eligible for once it becomes a participant in the Flood Program. By failing to enforce their flood plain management ordinances, the Government alleges that the agreement or "contract" was breached by the participating communities.

Naturally, a suit of this magnitude is not representative of the subrogation actions the Government is likely to bring in the future. It is illustrative of the fact, however, that where the Government believes a third party is responsible for causing or aggravating a flood in which it was called upon to expend large sums of money, no case is too big to pursue.

The effect of the mere filing of these two law suits was staggering by all accounts. Within days after the suits were filed, newspapers nationwide, including The Wall Street Journal and The Atlanta Constitution, ran detailed stories describing the Government's efforts to recover its flood payments where communities allegedly did not enforce their flood plain management ordinances. The major Omaha, Nebraska newspaper, The World Herald, ran a front page headline stating, "Federal Suit Signals Opening of Reagan Anti-Fraud Battle." Although fraud was not alleged in the law suits, it became clear that for the first time, many began to take the Federal Government seriously in its efforts to promote sound flood plain management and penalize those who failed to adequately enforce.

The most telltale sign the suits were having an effect in promoting enforcement came not from the media but from other participating communities. For weeks after the law suits were filed, many individuals from communities all over the country were calling FEMA to inquire if their community was "under investigation" and what set of facts would be necessary to bring a similar action in their area.

The long term effects these suits and other subrogation actions will have in promoting the enforcement of flood plain management by participating communities is still somewhat unclear. Much could depend on the outcome of this first major subrogation action in the New Orleans area.

But like an IRS audit, the mere trauma of having to defend yourself, win or lose, makes an awful lot of people pay their taxes. Further yet, how many communities could afford to lose a major law suit similar to the ones filed in Louisiana. The Government is hoping that this consideration alone will encourage enforcement of the ordinances that ordinarily may not be given the attention they deserve.

In spite of the potential effects on flood plain management subrogation offers, it is by no means a panacea. It is extremely costly and time consuming to investigate and bring a subrogation action. Years of little or no enforcement could take place during the pendancy of a law suit. The political pressure not to bring a suit are enormous which raises the spector of unequal enforcement by the Federal Government. And finally, a subrogation action by its definition suggests that a flood has occurred, damage existed, the Government was called upon to pay and a third party is responsible - here, the subrogation deterrent did not work.

WARNING TO ENGINEERS -
SUBROGATION MAY BE HAZARDOUS TO YOUR WORK

The smaller subrogation actions invariably involve a clogged culvert, an uphill neighbor who has changed the direction of his

storm drains or a construction crew that inadvertently dammed a drainage canal.

The larger actions would appear to suggest negligence associated with either design or inspection; certification of a dam as safe just before it fails, design of a subdivision drainage system, certification of homes actually built below the 100-year flood level, designed overload on existing drainage systems.

Each of the latter category generally involves the participation of an engineer. This is by no means an indictment of the profession. Rather, it suggests that after eliminating the possibility of suing God for causing rain to fall, the next logical place the Government will look is to see who was responsibible for creating the system to accomodate the rain water.

The most prevalent story the people at FEMA have heard is, "I have lived in my house for twenty-five years and we never had a flood - at least not until that new subdivision went up over on that hill. Now we flood every time it rains." Even a small Government agency, tucked away in Washington, begins to sense generic weaknesses - real or imagined.

Consequently, a sharp claims examiner or subrogation attorney should look for evidence of new development which could have altered and/or increased the runoff, overdevelopment which could have taxed a drainage system past its design capacity, enroachment in floodways backing water far into and past the natural flood plain and faulty maintenance of existing drainage systems.

The above list does not begin to describe the multitude of factual situations which could give rise to a potential subrogation action. Just the same, let the engineer beware. It is not sufficient to design a safe, efficient drainage system for your developer if it may cause a negative impact on surrounding areas - even if the local jurisdiction approves and adopts your plan. In this instance, FEMA may well sue both you and the community some day and let you fight between yourselves as to who, if anyone, is the responsible party.

CONCLUSION

The use of subrogation as a vehicle to promote and enforce flood plain management is a simple concept in theory yet, its tangible results will be quite difficult to ascertain. Although possible viewed as an action of last resort, the Government views subrogation as a vehicle to be used prospectively, with deterrence as the tool, to effectuate the enforcement of flood plain management.

If communities are not adequately enforcing their flood ordinances and if the Government's failure to suspend a single

community for non-enforcement is a contributing factor, then it appears to the Government that nothing is lost by giving subrogation a try.

FOOTNOTES

1) The findings in this study ultimately led Congress to establish the National Flood Insurance Program (NFIP).
2) Id. and see, Insurance and Other Programs for Financial Assistance to Flood Victims, Committee Print, Committee on Banking and Currency, U.S. Senate, September 1966.
3) Note 1 at p. 15
4) Note 1 at p. 14
5) Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448.
6) 42 U.S.C. 4002 (a) (1)
7) 42 U.S.C. 4001 (a) (2)
8) 42 U.S.C. 4002 (a) (2)
9) P.L. 93-234, 42 U.S.C. 4001 et. seq.
10) S. Rep. No. 583, 93d. Cong., 1st Sess., 5.
11) Exec. Order 11988, 42 F.R. 26951, (May 25, 1977)
12) 44 C.F.R. 60.3(b) (previously 24 C.F.R. 1910.3(b))
13) For a more detailed discussion on the methodologies employed in developing the FIRM, see, Robert D. Sokolove, "Legal Standard for Sustaining Methodology Used to Make Flood Plain Determinations for the Flood Insurance Program," on file with the Regulatory Branch, Office of General Counsel, U.S. Department of Housing and Urban Development.
14) "Substantial improvement" is defined by the regulations as any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure..." 44 C.F.R. § 59.1.
15) 44 C.F.R. 60.3(a)
16) 44 C.F.R. 60.3(E) (4)
17) See Note 9.
18) 453 F.Supp. 1025, affirmed 598 F.2d 311, cert. den. 100 S.Ct. 267, 444 U.S. 927, 62 L.Ed. 2d 184, (1979).
19) A September, 1981 FEMA publication indicates that there are now over 1.9 million policy holders, one million of whom reside in Atlantic and Gulf Coast communities.
20) As of September, 1981, there were 17,091 communities participating in the National Flood Insurance Program.
21) 44 C.F.R. § 59.24.
22) Supra, Note 9.
23) Black's Law Dictionary, 4th Ed., p. 1595 (1968).
24) Couch on Insurance, 2d, § 61:5.
25) These suits filed in the Federal District court for the Eastern District of Louisiana are titled U.S. v. Parish of Jefferson, et al., Civil Action No. 81-1810 and U.S. v. Parish of St. Bernard, et al., Civil Action No. 81-1808. They were filed on May 1, 1981 and at the present time, legal motions on the right of the Government to maintain such legal actions are being argued.