



94-297 JUL 22 1994



FLOODPLAIN MANAGEMENT

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

VOLUME 12, NO. 43

NEWSLETTER

SPRING 1994

HOW TO SURVIVE A *COMMUNITY ASSISTANCE VISIT*

First, every floodplain administrator should know what a Community Assistance Visit (CAV) is and who conducts it. Essentially, it is a monitoring of a community's progress in implementing a local floodplain management program. A CAV is conducted by representatives of the Federal Emergency Management Agency (FEMA) or the Texas Natural Resource Conservation Commission (TNRCC).

The following is a list of things you should do to help you and your community survive a CAV. When FEMA or TNRCC representatives call on your community, will you be ready? Are you:

1. Making locally adopted floodplain management regulations, at a minimum, consistent with FEMA criteria established under Section 60.3?
2. Enforcing local regulations?
3. Reviewing all development permits to determine if a flood hazard exists?
4. Ensuring new residential structures are elevated to or above the 100-year base flood elevation?
5. Ensuring new non-residential structures are elevated or floodproofed up to or above the 100-year base flood elevation?
6. Keeping records of:
 - a. Elevations of the lowest first floor (including basements),
 - b. Elevations of floodproofed buildings,
 - c. The number of permits and variances issued in flood hazard areas,
 - d. The number of other permits issued for filling, dredging or other changes to the 100-year floodplain, and
 - e. Prepared to produce these records upon request?
7. Inspecting community developments to verify "as-built" elevations?
8. Performing periodic inspections in the community to determine if structures have been altered or substantially improved?
9. Requiring a No Rise Certificate for any encroachments in the floodway in your community?

If you answered **NO** to any of these items, your community would probably receive an unsatisfactory report as a result of a CAV. This could lead to suspension of the community from the National Flood Insurance Program (NFIP). Failure to enforce floodplain management regulations could also make your community liable for future flood damages. Don't wait until it's too late. Get your program and record keeping in order **TODAY!**

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WHY FLOOD INSURANCE?

(A brochure offered by TNRCC)

What makes a flood a disaster? Man's insistence on occupying the floodplain. The floodplain is defined as land that may be submerged by an overflowing river or stream.

The economic and aesthetic attractiveness of the normally dry floodplain has encouraged development of flood-prone areas despite their potential for a most disastrous situation. As these lands have been developed, the public demand for protection from economic losses, CAUSED BY THE INEVITABLE FLOODS, has grown.

For many years, the Federal response to flood disasters was generally limited to building flood control works (e.g., dams, levees, seawall, etc.) and providing disaster relief to flood victims. To compound the problem, very little flood insurance was available from

insurance companies because of the high risk potential. Besides, construction techniques to reduce flood damage to new or remodeled buildings were often ignored or overlooked. In the face of ever increasing flood losses, Congress established the National Flood Insurance Program by enacting the National Flood Insurance Act of 1968. This is a federal program administered by the Federal Insurance Administration (FIA) within the Federal Emergency Management Agency (FEMA). The program enables property owners in participating communities to buy flood insurance at reasonable rates. **To participate, a community must make an effort to reduce flood losses through more comprehensive floodplain management and require new buildings to be elevated or floodproofed up to or above the 100-year flood level.**

The Flood Insurance Premium for a 1500 square foot, one-story, no basement house built three feet **below** the Base Flood Elevation Level in Zone A15, which appears on a community's Flood Insurance Rate Map (FIRM), **would more than triple the premium cost of a structure built at the Base Flood Elevation Level.** The Flood Insurance Premium for the same structure built two feet **above** the Base Flood Elevation Level **would be half the premium cost** of a structure built at the Base Flood Elevation Level.

This clearly demonstrates what "floodplain management" means in the operation of an overall community program of corrective and preventive measures for reducing flood damage. Community leaders should establish and enforce specific local codes and ordinances/court orders which provide standards for the location and design of new development within flood-prone areas. Proper planning also considers zoning, building codes, subdivision development, and special purpose floodplain ordinances.

These procedures and regulations will save lives and reduce property loss. When a community makes proper use of its floodplains, the amount of potential damage from future flooding will be reduced, while the overall value of the community (tax base) will be enhanced.

To obtain assistance for your community to qualify for the National Flood Insurance Program, please contact:

Texas Natural Resource
Conservation Commission
Flood Management &
Groundwater Programs
P.O. Box 13087,
Austin, Texas 78711-3087
(512) 463-8193

As the State Coordinating Agency for the program, staff of the Commission will provide technical assistance in program application or floodplain management.

OPENINGS IN FOUNDATION WALLS

FEMA User's Guide To Technical
Bulletin (FIA-TB-1)4/93

The Texas Natural Resource Conservation Commission (TNRCC) has performed Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs) to provide assistance, guidance and point out remedial methods to correct possible floodplain management deficiencies and/or violations.

TNRCC has found that Floodplain Administrators' have had problems or little knowledge regarding the requirements for openings in the foundation walls that apply to all new and substantially improved buildings in A zones (zones A, AE, A1-30, AR, AO, and AH).

Therefore, it's important that the Floodplain Administrator protect buildings constructed in floodplains from structure damage caused by flood forces. The Floodplain Administrator needs to refer to the National Flood Insurance Program (NFIP) regulations on building design criteria that apply to new construction and substantial improvements of existing building in Special Flood Hazard Areas (SFHAs).

Residential buildings constructed in A zones must have their lowest floors at or above the Base Flood Elevation (BFE). Non-residential buildings

constructed in A zones must either have their lowest floors at or above the BFE or be dry floodproofed (made water tight) to or above the BFE. Residential and non-residential building whose lowest floors have been constructed at or above the BFE usually are elevated on piers, columns, piles, extended foundation walls, or fill. While the main portion of such a building is protected from the 100-year and lesser-magnitude floods, the foundation and any enclosures below the BFE used for parking, building access, or limited storage will be exposed to flood forces.

For buildings constructed on extended foundation walls or that have other enclosures below the BFE, these flood forces include the hydrostatic pressure of floodwaters against the foundation or enclosure walls. If the walls are not designed to withstand hydrostatic pressure, they can be weakened or can fail and the building damaged. Therefore, the NFIP regulations require that foundation and enclosure walls subject to the 100-year flood contain openings permitting the automatic entry and exit of floodwaters. These opening allow floodwaters to reach equal levels on both sides of the walls and thereby lessen the potential for damage from hydrostatic pressure. The requirement for openings applies to all new and substantially improved buildings in A zones. The "User's Guide to Technical Bulletin (FIA-TB-1)

4/93", explains the requirement for openings and provides guidance for designing and constructing foundation and enclosure walls that include the required openings.

Extended foundation and enclosure walls below the BFE may be threatened by hydrodynamic forces resulting from velocity flows and debris impact. The requirement for openings is intended to reduce flood damage associated with hydrostatic not hydrodynamic forces. These forces are described with the bulletin (FIA-TB-O), and additional design guidance is given for buildings in areas subject to velocity flood flows, which may include debris.

For buildings in V zones (zones V, VE, and V1-V30), more stringent design and construction requirements have been established for these buildings. For information on V-zone design and construction requirements, refer to the NFIP regulations, the Technical Bulletin series, and FEMA's "Coastal Construction Manual."



THE CORPS OF ENGINEERS REGULATORY PROGRAM

New regulations have been issued by the U.S. Army Corps of Engineers that apply to activities in waters of the United States. These new regulations include a revised definition of "discharge of dredged material" and clarify that prior converted croplands are not waters of the United States. The primary potential effect of these regulation changes on the activities of city, county, and other local governments is that excavation in waters of the United States, for any reason, is now regulated under Section 404 of the Clean Water Act, where in many cases it was not in the past.

Waters of the United States encompass a wide range of areas including any part of the surface water tributary system down to the smallest of streams, as well as any lake, pond or other water body on those streams. Also covered are isolated water bodies such as playa lakes, prairie potholes, old river scars, cutoff sloughs and abandoned construction and mining pits.

Waters of the United States also includes wetlands, which have been identified as being of particular concern because of their value in providing flood water storage, sediment trapping, nutrient removal, chemical detoxification, shoreline stabilization, aquatic food chain support, fish and wildlife habitat, and ground water recharge. Wetlands are found in many different forms, such as bottomland hardwood lowlands, wooded swamps, marshes, wet meadows and bogs. Wetlands, as well as other waters may also be man-made or man-induced. Each of these ecosystems performs valuable functions in restoring and maintaining the quality of the nation's waters. So important are our remaining wetlands that President Clinton has stated that we will protect and preserve them and follow a national policy of no net loss of wetlands.

Wetland delineations are made by the Corps of Engineers using the 1987 Corp of Engineers' Wetlands Delineation Manual. Other federal agencies responsible for wetland delineations, who are currently, or will soon be using the Corps' manual, include the Environmental Protection Agency, Soil Conservation Service, and Fish and Wildlife Service. The National Academy of Sciences is currently directing a study on wetland delineation that is scheduled to be completed in late 1994. The Corps, along with the other responsible federal agencies, will evaluate the results of that study and determine, with full opportunity for public comment, if the Corps of Engineers' Wetland Delineation Manual should be revised.

Prime examples of the potential impacts from the loss of wetlands are the 1993 Mississippi River flood and Florida's Hurricane Andrew. In areas where wetlands were still present, tremendous benefits were realized including flood protection, erosion prevention, and storm surge buffering. Where wetlands had been eliminated, or reduced in extent, damages were more extensive.

The primary wetland regulatory authority is Section 404 of the Clean Water Act, which requires a permit from the Corps of Engineers for any activity involving the discharge of dredged or fill material into waters of the United States. Permit authorizations may be in the form of general permits for similar activities that have minor individual and cumulative impacts on the aquatic system, or individual permits for those activities that may have more serious consequences. In any case, permits are designed to reduce the potential impact of construction projects on our important aquatic resources. Certain activities are exempted by law, including certain farming, ranching, and forestry activities. However, these are applied carefully and are not intended to exempt activities with more than minor adverse impacts to the aquatic ecosystem.

Numerous other environmental laws must be addressed in the evaluation of permit applications, including the National Environmental Policy Act, Endangered Species Act and the National Historic Preservation Act. While the final decision regarding Section 404 permit applications rests solely with

the Corps, federal and state resource agencies have an important role in the regulatory program. In addition, no permit can be issued under Section 404 without water quality certification from the Texas Natural Resource Conservation Commission.

Many times impacts to wetlands are avoided or minimized through the application of the Corps of Engineers' public interest review and the Environmental Protection Agency's 404(b)(1) environmental guidelines. In cases where alternatives are not available, applicants may be required to restore, enhance or create wetlands to compensate for the loss of those unavoidably impacted.

Regulatory Branches within each District office of the Corps of Engineers manage the Section 404 program and also implement Section 10 of the Rivers and Harbors Act of 1899. Under this act, the Corps is directed by Congress to regulate all work or structures in or affecting the course, condition, or capacity of navigable waters of the United States. Examples of activities that require authorization under this statute include dredging, filling, excavation, weirs, power lines, tunnels, piers, wharfs, dolphins, breakwaters, booms, bulkheads, revetments, riprap, jetties, permanent mooring structures, aids to navigation, permanently moored floating facilities and pilings. Navigable waters in the State of Texas are included.

Currently, 36 nation-wide general permits, which address Section 404 and Section 10 activities, are in effect. These permits may be used to authorize specified activities as long as the impact of the work on the aquatic ecosystem is minor and the person or group responsible for the work meets certain conditions and best management practices.

In addition to the nation-wide general permits, regional general permits may be in effect for certain types of projects and geographic areas. These regional general permits cover a variety of activities including: utility lines and intake and outfall structures; aerial electric power transmission and communication lines and cable crossings; boat ramps and minor facilities; and oil, gas, and water exploration and production wells.

The Corps and EPA share enforcement authority under Section 404. Unauthorized activities may be discovered by a number of methods, including reporting by other agencies and the public. This partnering effort in identifying potential violations is very important in the implementation of the regulatory program. When unauthorized activities are discovered, the Corps works to ensure compliance through various means, including voluntary restoration, other remedial measures, and after-the-fact permitting. Penalties and fines may be used to deter further violations. The Corps also monitors the requirements of issued permits to confirm that impacts to the aquatic system are not greater than expected and that any mitigation work is accomplished successfully.

The Corps of Engineers is committed to the Regulatory Program and the protection of wetlands and other waters of the United States. This commitment is a partnership in water; between Federal, State and local agencies, and the general public.

For more information about the Regulatory Program for activities in the State of Texas, contact the appropriate Corps of Engineers Regulatory Office

Fort Worth District	817-334-2681
Galveston District	409-766-3930
Tulsa District	918-669-7400
Albuquerque-El Paso Office	915-598-1359

NOAA Weather Radio is a Service...

...of the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce. As the "Voice of the National Weather Service", it provides continuous broadcasts of the latest weather information directly from the National Weather Service offices. Taped weather messages are repeated every four to six minutes and are routinely revised every one to three hours, or more frequently if needed. Most of the stations operate 24 hours daily.

During severe weather, National Weather Service forecasters can interrupt the routine weather broadcasts and substitute special warning messages. The forecasters can also activate specially designed warning receivers. Such receivers either sound an alarm indicating that an emergency exists, alerting the listener to turn the receiver up to an audible volume; or, when operated in a muted mode, are automatically turned on so that the warning message is heard. "Warning alarm" receivers are especially valuable for schools, hospitals, public-safety agencies, and news media offices.

Under a January 1975 White House policy statement, NOAA Weather Radio was designated the sole Government-operated radio system to provide direct warnings into private homes for both natural disasters and nuclear attack. This capability is to supplement warnings by sirens and commercial radio and TV.

The broadcasts are tailored to weather information needs of people within the receiving area. For example, stations along the east coast and Great Lakes provide weather information for boaters, fishermen, and others engaged in marine activities, as well as, general weather information.

NOAA Weather Radio broadcasts are made on one of seven high-band FM frequencies ranging from 162.40 to 162.55 megahertz (Mhz). These frequencies are not found on the average home radio now in use. However, a number of radio manufacturers offer special weather radios to operate on these frequencies, with or without the emergency warning alarm. Now, there are many radios on the market which offer standard AM/FM frequencies plus the "weather band" as an added feature.

NOAA Weather Radio broadcasts can usually be heard for 40 miles from the antenna site, sometimes more. The effective range depends on many factors, particularly the height of the broadcasting antenna, terrain, quality of the receiver, and type of receiving antenna. As a general rule, listeners close to or perhaps beyond the 40-mile range should have a good quality receiver system if they expect reliable reception. Also, an outside antenna may be required in these fringe areas. If practical, a receiver should be tried at its place of intended use before making a final purchase.

The National Weather Service operates about 380 stations. Approximately, 90 percent of the Nation's population is within listening range of a NOAA Weather Radio broadcast.

If you have a question concerning NOAA Weather Radio or wish to receive a listing of NOAA Weather Radio receiver manufacturers, please contact your nearest National Weather Service Office, or write.

National Weather Service
(Attn: W/OM11)
National Oceanic and
Atmospheric Administration
Silver Spring, MD 20910

NATURE OF VARIANCES

The National Flood Insurance Program (NFIP) variance criteria are based on the general principal that variances pertain to a piece of property and **are not personal** in nature. Though standards vary from State to State, a properly issued variance is granted for a parcel of property with physical characteristics, so unusual, that complying with the ordinance would create an exceptional hardship to the applicant or surrounding property owners. Those characteristics must be unique to that property and not shared by adjacent parcels. The unique characteristics must pertain to the land itself, not to the structure, its inhabitants, or the property owners. The granting of variance by a community is to be based only on a structure by structure review. Variances should never be granted for multiple lots, phases of subdivisions, or entire subdivisions.

The following are **INSUFFICIENT REASONS** to grant a variance:

- ▶ Less than a drastic depreciation of property
- ▶ Convenience of property owner
- ▶ Circumstances of owner, not the land
- ▶ To obtain better financial return
- ▶ Property similar to others in neighborhood
- ▶ Hardship created by owner's own actions

The following are **UNNECESSARY HARDSHIPS** that an applicant may prove to obtain a variance. The proof must be compelling, and reasons for granting the variance substantial.

- ▶ Losing all beneficial or productive use for property
- ▶ Depriving a reasonable return on property
- ▶ Depriving all or any reasonable use(s)
- ▶ Rendering property valueless
- ▶ Inability to develop property in compliance with the regulations
- ▶ Reasonable use cannot be made consistent with regulations

Because the duty and need of local governments to help protect their citizens from flooding is compelling, and the implications of the cost of insuring a structure built below flood level are very serious, variances from the flood elevation or from other requirements in the flood ordinance should be quite rare. This is why the NFIP guidelines in Section 60.6 are so detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives, other than a variance, are more appropriate. It is not surprising that when these guidelines are followed, very few situations qualify for a variance.

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This newsletter is published through assistance provided by FEMA under the Community Assistance Program-State Services Support Element Grant of the National Flood Insurance Program (NFIP CAP-SSSE).

The contents do not necessarily reflect the views and policies of the Federal Government or the Texas Natural Resource Conservation Commission.

REMEMBER

Your community receives one copy of this Newsletter. Please circulate to all key personnel with responsibilities in Floodplain Management or Emergency Management.

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