MAINTAINING COMPLIANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM

CIRCULAR 8

Prepared for the Federal Emergency Management Agency
Cooperative Agreement EMA-K-0079

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
GEORGIA GEOLOGIC SURVEY

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Donna M. Mack

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This circular briefly outlines floodplain management objectives and methods of flood damage reduction. A full listing of the National Flood Insurance Program (NFIP) regulations are contained in Part 60 of Federal Register 44 FR 31177 (May 1979). To obtain copies of the Federal Register and any other floodplain information, write to:

Floodplain Management Unit
Georgia Geologic Survey
19 Martin L. King, Jr. Dr. S.W.
Atlanta, Georgia 30334

or call (404) 656-3214

Maps delineating flood-prone areas may be obtained free of charge by calling the NFIP service contractor at (800) 638-6620 or writing to:

The National Flood Insurance Program
P.O. Box 499
Lanham, Maryland 20706

Questions about National Flood Insurance policy matters should be directed to:

Federal Emergency Management Agency
Natural and Technological Hazards Div.
1375 Peachtree Street, Suite 778
Atlanta, Georgia 30309

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This document was prepared as part of a cooperative agreement with the Federal Emergency Management Agency (FEMA) and has been reviewed by FEMA. The document was prepared for information purposes only; and while it is believed that the information presented is correct, any person, organization, or government agency concerned about flooding or floodplain management should contact FEMA.

INTRODUCTION

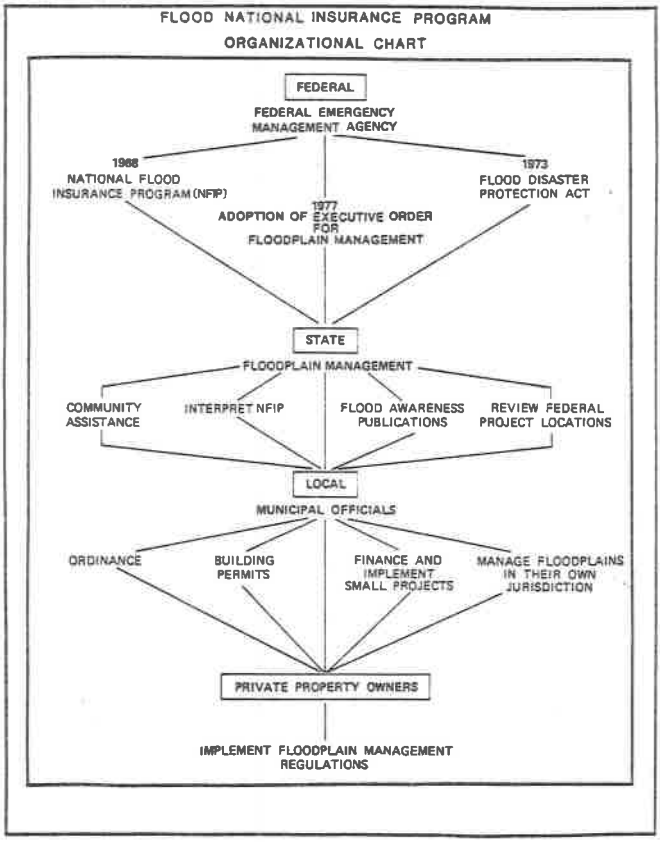
Floods are the most destructive of all natural hazards on a nationwide basis. They constitute serious hazards that many cities and towns have to face. Flood prevention and flood control, therefore, must be an integral part of long-term land use planning. Such land use planning will help to save lives and money. Floodplains are flat and adjacent to rivers, and therefore, apparently ideal for development. However, the subsurface of floodplains usually consists of low-strength soils with a high water- table, making design and construction of foundations difficult.

During the late 1960's, the federal government discovered that the millions of dollars being spent on dams, levees, channel improvements, and so forth, would not alleviate all flood problems. Flood damage costs continued to increase and lives were still being threatened. Therefore, a new federal emphasis was placed on non-structural methods to minimize flooding hazards.

In 1968 the National Flood Insurance Program (NFIP) was initiated to guide a nationwide approach to the problems of flooding by encouraging wise use of floodplains, and increasing public awareness of flood hazards. The program also allows purchase of federal flood insurance in communities that have adopted NFIP regulations.

Communities and municipalities participating in the NFIP must adopt and enforce a flood ordinance. Such a local ordinance should govern all new development as well as provide a mechanism for substantially improved structures within the 100-year floodplain. Also communities and municipalities participating in the NFIP are provided with maps delineating flood-prone areas thereby enabling them to identify specific hazard areas.

With the inception of the NFIP, new responsibilities developed for federal, state and local governments. Sound floodplain management requires a cooperative approach between each level of government. The role of each level of government as well as the interrelationships between each level of government is described in following sections of this circular.



FEDERAL ROLE

The role of the federal government in floodplain management is coordinated by the Federal Emergency Management Agency (FEMA). Federal involvement emphasizes support for development of programs, while leaving the actual implementation to state and local interests. Federal funds provide for a wide range of activities such as flood warning, technical assistance, flood study financing, insurance underwriting, and so forth. The federal government provides these services to encourage participation in the NFIP. As long as the federal government is contributing benefits (monies, insurance, disaster relief, etc.) communities and municipalities must, in turn, take reasonable actions to reduce their own flood damages.

The legitimacy of federal involvement in flood problems has not gone untested. A Texas lawsuit challenged the constitutional rights of the flood program. The court ruled in favor of the federal government, i.e., if a community is receiving federal funds, it must obey the regulations of the NFIP.

STATE ROLE

In Georgia, the State acts as an intermediary and coordinates federal and local interests. State activities include presentation of public awareness of local projects involving federal funds. Since local governments in Georgia can control land use by zoning or by ordinances (i.e. enabling authority), the State's role, therefore, is limited to assisting local governments in implementing zoning guidelines or ordinances.

The following publications are available from the Floodplain Management Office (see mailing address, page ii). Each publication deals specifically with Georgia flood information and provides guidance to communities and municipalities so that they may effectively manage floodplains in their areas of jurisdiction.

1. Detailed Flood Studies in Georgia: Index Map, 1982.
2. Flood Hazard Literature: Annotated Selections for Georgia, 1982.
3. Flood Hazard Workshop Handbook, 1981.
4. Guidance Manual for Flood Elevation Determination in Georgia and Comparison of Programs and Methods, 1983.
5. Introduction to Urban Storm Water Management in Georgia, 1983.
6. Maintaining Compliance with the National Flood Insurance Program, 1983.
7. Priority Listing - Flood Hazard Priority Scores for Communities with Flood Plain Areas, 1983.
8. Sources of Flood Data for Georgia Counties, 1983.

LOCAL ROLE

Local governments have the key role in floodplain management, particularly along smaller streams where structural flood control works such as dams or levees, are not common. Throughout the network of local responsibility, the duties of city/county governments, developers, private property owners, and lenders are all important.

A. CITY/COUNTY GOVERNMENTS

Local governments are best suited for minimizing day-to-day flood problems. Zoning and land use laws should be partially designed for the purposes of securing safety from fire, flood, erosion and other dangers.

In order to comply with the NFIP, certain development standards must be met. The following briefly describes the requirements to participate in the National Flood Insurance Program (Emergency and Regular Programs, see definitions).

Section 60.3(b) - Emergency Program Community with a Flood Hazard Boundary Map.

1. Require permits for all proposed development in any area of flood hazard.
2. Review permits to assure that all other necessary permits have been received from agencies where approval is required by federal or state law.
3. Review permits to determine whether the proposed building will be reasonably safe from flooding. Require that new construction (including prefabricated and mobile homes) be anchored to prevent flotation and lateral movement, and be constructed with flood resistant materials and methods.

60.3(b) (cont.)

4. Assure that subdivision proposals and proposals for other development, including their utilities and drainage, are located and designed to minimize flood damages.
5. Require that all developments greater than 50 lots or 5 acres include base flood data.
6. Require new water and sewer systems (including on-site systems) to be located and designed to avoid contamination and impairments under flood conditions.
7. Obtain and maintain records of elevation and floodproofing levels for all new or substantially improved structures.
8. In riverine situations, notify adjacent communities and the Department of Natural Resources prior to any alteration of a watercourse. Within the altered portion of the watercourse, assure that the flood carrying capacity is maintained.
9. Obtain, review and reasonably utilize any base flood elevation data to require that all new residential structures and substantial improvements have their lowest floor (including basement) elevated to or above the 100-year flood level. Nonresidential structures may be floodproofed to this level.

Section 60.3(c) - Regular Program Community with Base Flood Elevations, No Floodways Identified.

All the aforementioned 60.3(b) requirements are effective, with the following additional requirements:

1. Residential construction, including mobile homes, must have the lowest floor (including basement) elevated to or above the 100-year flood level. Nonresidential structures must

60.3(c) (cont.)

have the lowest floor elevated or floodproofed to or above the 100-year flood level. Where floodproofing is used, a registered professional engineer or architect must certify that the methods used are adequate to withstand the forces associated with the base flood and submit such certification to the community.

2. For new and substantially improved structures, expanded mobile home parks or for placement outside existing mobile home parks, the requirements are:

   a) stands or lots must be elevated to or above the 100-year flood level;

   b) adequate access and drainage must be provided;

   c) if pilings are used, lots must be large enough to provide steps; foundations must be placed in stable soil no more than 10 ft. apart; and reinforcement must be provided for piers more than six feet above ground level.

3. Until a regulatory floodway is determined, require that no new development shall raise the base flood level more than one foot at any one point.

Section 60.3(d) - Regular Program Community, Base Flood Elevations Provided, Regulatory Floodway Identified.

All the aforementioned 60.3(b) and (c) requirements are effective, with the following additional requirements:

1. Adopt a regulatory floodway and assure that it is designed to carry the waters of the 100-year flood without increasing the elevations more than one foot at any point.

2. In the floodway, prohibit encroachment, including fill, that would result in any increase in flood levels during the discharge of the base flood.

3. Prohibit the placement of mobile homes, except in an existing mobile home park, within the regulatory floodway.

Section 60.3(e) - Regular Program Community, Base Flood Elevations Provided, Coastal High Hazard Area (Velocity Zone) Identified.

All the aforementioned 60.3(b) and (c) requirements are effective, with the following additional requirements:

1. Provide that all new construction is located landward of the mean high tide.

2. Provide that all new construction and substantial improvements in the velocity zone are elevated on adequately anchored pilings and securely anchored to such pilings. The lowest structural member of the lowest floor must be elevated to or above the flood elevation and these requirements must be certified by a registered engineer or architect.

3. Require that the space below the lowest floor be free of obstructions.

4. Prohibit the use of fill for structural support in velocity zones; prohibit the alteration of sand dunes or mangrove stands in a manner that would increase flood potential.

5. Prohibit the placement of mobile homes within velocity zones, except in existing mobile home parks.

Note: Some coastal communities may have both floodways and velocity zones designated on the flood maps. In this case, the requirements on both 60.3(c) and 60.3 (d) would apply.

Finally, a good rule to follow in any community is to maintain the natural runoff conditions as much as possible in order to reduce the potential danger to life and property. Section 60.6 of the NFIP regulations provide for the granting of variances under certain circumstances. These variances may be granted when the local government determines that compliance will result in an exceptional hardship. Granting of variances is generally limited to a lot size less than one-half acre (a small lot is not, in itself, sufficient justification for consideration). All requests must be considered separately (never on a subdivision basis) and should be judged carefully. Granting of excessive variances can result in suspension from the NFIP. It should be noted that a variance does not change the insurance rating and thus rates could be as high as $25 per $100 of coverage.

B. DEVELOPERS

Developers have a key role in the success of the NFIP. Without the cooperation of those providing the building sites, many floodplain management regulations would be ineffective. A few of the practices developers should avoid in planning new construction are:

1. Changing former agricultural land to impervious surfaces (homes, sidewalks, streets, etc.) without suitable retention;
2. Placing fill material into any navigable water-way or wetland without a Corps of Engineer's 404 permit;

3. Constructing insufficient drainage systems for new development.

In addition, developers should be aware of all floodplain management regulations and design developments in compliance with these regulations.

C. PRIVATE PROPERTY OWNERS

In addition to full compliance with local regulations, there are a number of common sense approaches to avoid problems with adjacent landowners and the NFIP. If at all possible, property owners should avoid increasing flood flow by not filling floodplains. If this is not practicable, the following measures will reduce damages for floodplain construction.

1. Consider the use of posts or piles to elevate a building above the flood level, rather than fill. This will retain the storage capacity of the floodplain.
2. Anchor all property which may be damaged by flood waters. Combustible fuel in any form should be placed above the reach of floodwaters.
3. Use water resistant cabinetry, wall materials, floors and carpeting in flood prone areas. Avoid the use of material such as gypsum board which expands when saturated.
4. Relocate damageable property (furnaces, water heaters, air conditioners, washers, dryers, etc.) to higher floors. Elevate the main electrical box and electrical outlets above the flood level.

D. LENDERS

Lenders have a critical position in reducing the destruction

caused by flooding. Also, it is in their best interest to identify buildings in flood hazard areas to reduce the risk of flood loss to their lending institution. There are four principal legislative statutes which relate to lenders.

1. National Flood Insurance Act (1968) - provided flood insurance for the first time to cover losses due to flooding.
2. Flood Disaster Protection Act (1973) - for the first time directed federally insured (FSLIC etc.) lenders to require flood insurance for flood-prone structures when making, renewing or extending a loan.
3. Housing and Community Development Act (1974) - required lenders to provide notification to borrowers in advance if property is in a flood hazard area.
4. Housing and Community Development Act (1977) - removed the flood insurance purchase requirement for conventional loans (non-VA, FHA, etc.) in non-participating communities only. Participating communities must still comply.

Guidelines for lending institutions to follow in obeying the above statutes area as follows.

1. No lending institution shall make or renew any loan in a participating community where flood insurance is available, unless the improved real estate or mobile home securing such a loan is covered for the entire term of the loan by flood insurance (when flood-prone).
2. A lender is required to notify the borrower in participating and nonparticipating communities whether or not the property in question is located in a flood hazard area.
3. Require that the borrower acknowledge this hazard area prior to closing of the loan.

COMMON NFIP QUESTIONS

QUESTION 1: WHAT IS A 100-YEAR FLOODPLAIN?

A 100-year flood is a flood having a one percent chance of being equalled or exceeded in any given year. A regulatory floodplain is generally defined to include all land occupied with water during the 100-year flood. If a map showing the 100-year floodplain is not available, communities may choose to regulate areas which have flooded in past years or as identified on flood-prone area quadrangles published by the U.S. Geological Survey. Soil maps provided by the U.S. Soil Conservation Service show approximate alluvial (river deposited) soil boundaries.

QUESTION:2: HOW CAN INACCURATE MAPS BE CHANGED?

At some point, it may become necessary to revise maps because of new data or because of an error in the original map. To correct a flood map, a "Letter of Map Amendment" is issued. The letter must be based on such information as better ground elevation data, changes in the configuration of the floodplain, better flood data/techniques, or new flood control works. In order to amend a map, the following information is needed:

1. An actual copy of the recorded plat, indicating official record(s) and proper citation from the deed or plat book.

2. A topographical map that shows the ground elevation contours, the total area of the property in question, the location of existing or proposed structures, the elevation of the lowest grade adjacent to the structure and an indication of the curvilinear line which represents the area subject to inundation by a 100-year flood. This curvilinear line should be based on information from a FEMA flood study, a U.S. Army Corps of Engineers/Tennessee Valley Authority/Soil Conservation Service flood

study, the city or county engineer, or a determination by a licensed professional engineer.

3. A copy of the official FEMA flood map on which the property in question is located.

The above materials should be submitted to:

Federal Emergency Management Agency
State and Local Programs
Natural Hazards Division and Support
Engineering Branch
Washington, D.C. 20472

The results of the request for map amendment, if approved, will be published in "The Federal Register" and a copy of the "Letter of Map Amendment" will be mailed to each person who has ordered a copy of the map containing the property in question. If flood insurance was required on the basis of an inaccurate map, a refund will be given.

QUESTION 3: WHAT IS THE FLEXIBILITY OF INTERPRETATION FOR FLOODPLAIN ELEVATIONS OR BOUNDARIES?

In general, a flood ordinance gives the local officials the power to interpret the exact location of flood boundaries when there appears to be a conflict between a mapped boundary and actual field conditions. When there is a valid difference of opinion, courts will generally favor the action of the State or local community, as long as they are not "arbitrary, capricious and unreasonable."

QUESTION 4: WHAT ARE THE CONSTITUTIONAL RIGHTS OF PRIVATE OWNERS?

The following three clauses are the constitutional rights of private owners.

Due Process Clause - the adoption of any public regulation should include conditions for public notice and hearings.

Equal Protection Clause - states that no person shall be denied equal protection of the law. This means that all persons and property under the same circumstances must be treated the same.

Taking Clause - the constitution prohibits the "taking of private property for public use without just compensation." A more difficult situation arises when the public limits an owner's use of his land through land use regulations. In some cases a property owner is allowed to make some economic use of his property even though the most profitable use may be prohibited.

QUESTION 5: HOW ARE FLOOD AREAS AND LEVELS DETERMINED?

Flood areas are determined on the basis of topography, soil type and climatic conditions. Flood levels are determined on the basis of frequency of rainfall, information obtained from the community hydrologic and hydraulic analysis. A flood study for a county/city shows potential 100-year flood inundation from rivers, streams, tributaries, and so forth.

QUESTION 6: WHAT INPUT DOES THE COMMUNITY HAVE TO THE FLOOD HAZARD ASSESSMENT?

Before the flood hazard assessment is initiated, FEMA considers all existing information for use in the study. A NFIP specialist from the FEMA Regional Office is appointed to represent the program during the consultation process. Public meetings may be conducted at which interested parties may present relevant facts to help ensure accurate results. FEMA also works closely with each community's officials prior to and during the

study to describe the technical procedures and to obtain community input before publication of the Flood Insurance Study and the Flood Insurance Rate Map.

QUESTION 7: WHAT IS THE DIFFERENCE BETWEEN A FLOOD HAZARD BOUNDARY MAP AND A FLOOD INSURANCE RATE MAP?

A Flood Hazard Boundary Map (FHBM) is based on best available data and identifies the general flood hazard area within a community. It is used in the emergency phase of the NFIP for floodplain management and insurance purposes. A Flood Insurance Rate Map (FIRM) is issued following the Flood Insurance Study and reflects the 100 and 500-year flood boundaries, elevations, and insurance zones. The FIRM is used in the regular phase of the NFIP.

QUESTION 8: WHAT LAWS ARE THERE CONCERNING FLOOD PROBLEMS?

Flooding laws are divided into two categories, surface water laws and watercourse laws. The following are simplified descriptions of these laws.

SURFACE WATER LAWS There are a number of surface water laws, most of which generally can be broken down into three rules or parts, namely:

Modern Common Enemy Rule - holds that both the upper and lower property owners can protect themselves from flooding when such actions are incidental to the ordinary use, improvement or protection of their land and are done without negligence.[4]

Civil Law Rule - says that the upper landowner has a drainage easement over the lower property owner and that the lower property must take such drainage. This, however, applies only to natural drainage (those waters which flowed from the land before alteration or development).[4]

Reasonable Use Rule - states that you must use your property in a manner that does not injure the property of another.[4]

WATERCOURSE LAW - is based on the rights and duties established between riparian property owners. Regarding flood flows, an owner has the right to protect his land from ordinary flood waters, but only if he does not unnecessarily injure the property of others. The principle is that landowners bordering a watercourse are entitled to have the water flow in its accustomed path and no one has the right to interfere with its flow to result in damage to another.

QUESTION 9: DO FEDERAL REQUIREMENTS TAKE PRECEDENCE OVER STATE REQUIREMENTS?

Not necessarily. The standards set forth by FEMA are the minimum measures acceptable for NFIP participation. More stringent requirements adopted by the local community or the State would take precedence over the minimum requirements established for flood insurance availability.

QUESTION 10: WHAT TYPES OF REGULATORY CODES ARE USED BY COMMUNITIES IN DEALING WITH FLOODPLAINS?

The following are three types of measures that local and state programs may utilize:

Flood Zoning - allows for restriction of location, usage, density of use, fill and structures. Development may be restricted or carefully controlled in floodplain areas.

Building Codes - regulates the design, elevation and construction materials of new structures. To protect structures, they must generally be elevated above the 100-year flood elevation.

Subdivision Regulations - controls the process of subdividing a large parcel of land into smaller house lots. As a condition to subdivision proposals, the community may require a developer to refrain from building in a particularly hazardous area and to install drainage facilities.

CONCLUSION

Equipped with a better understanding of community compliance and accurate flood maps, state and local governments will be able to regulate floodplain areas with greater confidence. There is little doubt that floodplain regulations are rapidly becoming an established concept of the law. As a result, communities and states must carefully prepare and implement these regulations in order to maintain compliance with the National Flood Insurance Program.

REFERENCES

1. Kusler, Jon S., 1982, Floodplain regulations and the courts: Special Pub. 5, Univ. of Colo., Natural Hazards Information Center, Boulder, Colo., 51 p.

2. _____, and Platt, Rutherford H., 1982, Common legal questions pertaining to the use of wetlands and floodplains, 1982, Amer. Bar Assoc. Conf., Atlanta, Ga., Proceedings: Avoiding legal problems in floodplain and wetlands law, 12 p.

3. Owen, James H., and Wall, Glenn R., 1981, Floodplain management handbook: U.S. Water Resources Council, Wash., D.C. 69 p.

4. Federal Emergency Management Agency, 1983, Questions and answers on the National Flood Insurance Program: FIA-2 Wash. D.C., 26 p.

5. Shaeffer, John R., and Wright, Kenneth R., 1981, Urban storm drainage management: Marcel Dekker, New York, N.Y., 266 p.

6. Sokolove, Robert D., 1982, Subrogation - a federal regulatory tool to enforce floodplain management: Amer. Soc. of Civil Eng. Conf., Las Vegas, Nev., Proceedings, 14 p.

7. Stokes, James H., and Orahood, Jane R., 1982, Liability of developers, lenders, and municipalities for floodplain and wetland mismanagement, Amer. Bar Assoc. Conf., Atlanta, Ga., Proceedings: Avoiding legal problems in floodplain and wetland law, 15 p.

DEFINITIONS

BASE FLOOD	the frequency flood having a one percent chance of being equalled or exceeded in any given year. Also known as the "100-year" flood.[1]
EMERGENCY FLOOD INSURANCE PROGRAM	the initial phase of the NFIP, when a community has an approximate map of the flood plain and subsidized insurance.[1]
ENABLING AUTHORITY	a conclusive statement or set of statements giving legal power to the administrator of the local government.[2]
FLOOD OR FLOODING	a general and temporary condition of partial or complete inundation of normally dry land from: 1. overflow of inland or tidal waters, and/or 2. unusual and rapid accumulation of runoff of surface waters from any source.[1]
FLOODPLAIN	that portion of a stream or river valley, adjacent to the river channel, which is composed of sediments during the present regimen of the stream or river and which is covered with water when the stream or river overflows its banks at flood stages.[4]
FLOODPLAIN MANAGEMENT REGULATIONS	zoning ordinances, subdivision regulations, building codes, health regulations, or special purpose ordinances which provide standards for the purpose of flood damage reduction.[1]
FLOODWAY (REGULATORY)	the channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.[1]
REGULAR FLOOD INSURANCE PROGRAM	advanced phase of the NFIP, when elevation of buildings is based on a detailed flood study and insurance is sold on an actuarial basis.[1]
RIPARIAN	property pertaining to or situated on the bank of a river or lake.[3]

RIVERINE	situated or living along the banks of a river.
STATE COORDINATION AGENCY	the agency of State government designated by the governor to assist in the implementation of the NFIP. The Department of Natural Resources is designated for Georgia.[1]
STRUCTURE	a walled or roofed building, including liquid or gas storage tank, that is principally above ground, including a mobile home.[1]
SUBSTANTIAL IMPROVEMENT	any repair, reconstruction or improvement of a structure, where the cost equals or exceeds 50% of the market value.[1]
SURFACE WATERS	waters which run off in a diffused manner, or in depressions or swales.[3]
VELOCITY ZONE	the area subject to high energy waters, including but not limited to hurricane wave wash.[1]
WATER COURSE	any body of water that has a channel with definite banks and stream bed.[3]
WETLANDS	those areas that are inundated or saturated either by surface water or ground water at a frequency and duration sufficient to support and that under normal circumstances, do support a prevalence of vegetation typically adopted for life in saturated soil conditions.[1]

Sources of Definitions

1. 44 CFR 31177, May 31, 1979, section 59, subpart A-general.

2. Webster's New Collegiate Dictionary, 1980.

3. Urban Storm Drainage Management, p. 8, see References, p. 18.

4. Dictionary of Geologic Terms, 1962.