

ORDINANCE NO. 21 - 1980

FLOOD PLAIN MANAGEMENT ORDINANCE

AN ORDINANCE OF THE TOWNSHIP OF CENTRE, BERKS COUNTY, PENNSYLVANIA, ADOPTING A TOTAL FLOOD PLAIN MANAGEMENT PROGRAM, CERTAIN LAND USE AND CONTROL MEASURES, AFFECTING AND AMENDING EXISTING ZONING, SUBDIVISION REGULATIONS AND BUILDING ORDINANCE IN ACCORDANCE WITH THE CRITERIA AND REQUIREMENTS OF THE NATIONAL FLOOD INSURANCE PROGRAM AND IN PARTICULAR SECTION 60.3(d) (FORMERLY 1910.3(d))

CHAPTER I

ARTICLE I GENERAL PROVISIONS

Section 1.1 - Purpose

The purpose of these provisions is to prevent the loss of property and life, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base by:

- A. regulating uses, activities, and development which, acting along or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities and frequencies.
- B. restricting or prohibiting certain uses, activities, and development from locating within areas subject to flooding,
- C. requiring all those uses, activities, and developments that do occur in flood-prone areas to be protected and/or flood-proofed against flooding and flood damage,
- D. protecting individuals from buying lands and structures which are unsuited for intended purposes because of flood hazards.

Section 1.2 - Applicability

These provisions shall apply to all lands within the Township of Centre and shown as being located within the boundaries of the designated flood plain districts which are considered as a part of the Official Zoning Map.

Section 1.3 - Compliance

No structure or land shall hereafter be used and no structure shall be located, relocated, constructed, reconstructed, enlarged, or structurally altered except in full compliance with the terms and provisions of this ordinance and any other applicable ordinances and regulations which apply to uses within the jurisdiction of this ordinance.

Section 1.4 - Warning and Disclaimer of Liability

The degree of flood protection sought by the provisions of this ordinance is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This ordinance does not imply that areas outside the flood plain districts or that land uses permitted within such districts will be free from flooding or flood damages.

This ordinance shall not create liability on the part of the Township or any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

Section 1.5 - Definitions

1. Development - any man-made change to improved or unimproved real estate including but not limited to buildings or other structures, the placement of mobile homes, streets, and other paving, utilities, filling, grading, excavation, mining, dredging, or drilling operations and the subdivision of land.
2. Flood - a temporary inundation of normally dry land areas.
3. Flood Plain - (1) a relatively flat or low land area adjoining a river, stream, or watercourse which is subject to partial or complete inundation; (2) an area subject to the unusual and rapid accumulation or runoff of surface waters from any source.
4. Flood Plain Districts - those flood plain districts specifically designated in the Township Zoning Ordinance as being inundated primarily by the one hundred (100) year flood. Included would be areas identified as Floodway District (FW), Flood-Fringe District (FF), and General Flood Plain District (FA).
5. One Hundred Year Flood - a flood that, on the average, is likely to occur once every 100 years (i.e. that has a one (1) percent chance of occurring each year, although the flood may occur in any year).

Section 2.1 - Description of DistrictsA. Basis of Districts

The various flood plain districts shall include areas subject to inundation by waters of the one hundred (100) year flood. The basis for the delineation of these districts shall be the Flood Insurance Study for Centre Township prepared by the Federal Insurance Administration and as duly published in the Reading Eagle Times in February 27, 1980.

1. The Floodway District (FW) is delineated for purposes of this Ordinance using the criteria that a certain area within the flood plain must be capable of carrying the waters of the one hundred (100) year flood without increasing the water surface elevation of that flood more than one (1) foot at any point. The areas included in this District are specifically defined in the Floodway Data Table of the above referenced Flood Insurance Study and shown on the accompanying Flood Boundary and Floodway Map.
2. The Flood-Fringe District (FF) shall be that area of the 100 year flood plain not included in the Floodway District. The basis for the outermost boundary of this District shall be the one hundred (100) year flood elevations contained in the flood profiles of the above referenced Flood Insurance Study (FIS) and as shown on the accompanying Flood Boundary and Floodway Map.
3. The General Flood Plain District (FA) shall be that flood plain area for which no detailed flood profiles or elevations have been provided. They are shown on the Maps accompanying the FIS prepared by FIA. Where the specific 100 year flood elevation cannot be determined for this area using other sources of data such as the U.S. Army Corps or Engineers, Flood Plain Information Reports, U.S. Geological Survey - Flood Prone Quadrangles, etc. then the applicant for the proposed use, development and/or activity shall determine this elevation in accordance with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the Township of Centre.

B. Overlay Concept

1. The Flood Plain Districts described above shall be overlaid to the existing underlying districts as shown on the Official Zoning Ordinance Map, and as such, the provisions for the Flood Plain Districts shall serve as a supplement to the underlying district provisions.
2. Where there happens to be any conflict between the provisions or requirements of any of the Flood Plain Districts and those of any underlying district the more restrictive provisions and/or those pertaining to the Flood Plain Districts shall apply.
3. In the event any provision concerning a Flood Plain District is declared inapplicable as a result of any legislative or administrative actions or judicial discretion, the basic underlying district provision shall remain applicable.

Section 2.2 - Zoning Map

The boundaries of the Flood Plain Districts are established as part of the Official Zoning Map of the Township of Centre which is declared to be a part of this Ordinance and which shall be kept on file at the Centre Township offices.

Section 2.3 - District Boundary Changes

The delineation of any of the flood plain districts may be revised by the governing body where natural or man-made changes have occurred and/or more detailed studies conducted or undertaken by the U.S. Army Corps of Engineers, a River Basin Commission or other qualified agency or individual documents the notification for such change. However, prior to any such change, approval must be obtained from the Federal Insurance Administration (FIA).

Section 2.4 - Interpretation of District Boundaries

Initial interpretations of the boundaries of the Flood Plain Districts shall be made by the Zoning Officer. Should a dispute arise concerning the boundaries of any of the Districts, the Zoning Hearing Board shall make the necessary determination. The person questioning or contesting the location of the district boundary shall be given a reasonable opportunity to present his case to the Board and to submit his own technical evidence if he so desires.

ARTICLE III

DISTRICT PROVISIONS

All uses, activities, and development occurring within any flood plain district shall be undertaken, only, in strict compliance with the provisions of this Ordinance and with all other applicable codes and ordinances such as the Centre Township Building Ordinance and Subdivision Ordinance. In addition, all such uses, activities, and development shall be undertaken only in compliance with Federal or State Law including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

Under no circumstances shall any use, activity and/or development adversely affect the capacity of the channels or floodways of any watercourse, drainage ditch, or any other drainage facility or system.

Prior to any proposed alteration or relocation of any stream, watercourse, etc. within the municipality, a permit shall be obtained from the Department of Environmental Resources, Dams and Encroachment Division. Further, notification of the proposal by the Township shall be given to all affected adjacent municipalities. Copies of such notifications shall be forwarded to both the Federal Insurance Administration and the Department of Community Affairs.

Section 3.1 - Floodway District (FW)

In the Floodway District no development shall be permitted except where any rise in flood heights caused by the proposed development will be fully offset by accompanying improvements which have been approved by all appropriate local and/or State authorities as required above.

A. Permitted Uses

In the Floodway District the following uses and activities are permitted provided that they are in compliance with the provisions of the underlying district and are not prohibited by any other ordinance and provided that they do not require structures, fill, or storage of materials and equipment:

1. Agriculture uses such as general farming, pasture, grazing, outdoor plant nurseries, horticulture, truck farming, forestry, sod farming, and wild crop harvesting.
2. Public and private recreational uses and activities such as parks, day camps, picnic grounds, golf courses, boatlaunching and swimming areas, hiking, and horseback riding trails, wildlife and nature preserves, game farms, fish hatcheries, trap and skeet game ranges, and hunting and fishing areas.
3. Accessory residential uses such as yard areas, gardens, play areas, and pervious parking areas.
4. Accessory industrial and commercial uses such as yard areas, pervious parking and loading areas, airport landing strips, etc.

B. Uses Permitted by Special Exception

The following uses and activities may be permitted by Special Exception provided that they are in compliance with the provisions of the underlying district and are not prohibited by any other Ordinance:

1. Structures except for mobile homes accessory to the uses and activities in Section A above.
2. Utilities and public facilities and improvements such as railroads, streets, bridges, transmission lines, pipe lines, water and sewage treatment plants, and other similar or related uses.
3. Water-related uses and activities such as marinas, docks, wharves, piers, etc.
4. Extraction of sand, gravel, and other materials.
5. Temporary uses such as circuses, carnivals, and similar activities
6. Storage of materials and equipment provided that they are not buoyant, flammable or explosive, and are not subject to major damage by flooding, or provided that such material and equipment is firmly anchored to prevent flotation or movement, and/or can be readily removed from the area within the time available after flood warning.

7. Other similar uses and activities provided they cause no increase in flood heights and/or velocities. All uses, activities, and structural developments, shall be undertaken in strict compliance with the floodproofing provisions contained in all other applicable codes and ordinances.

Section 3.2 - Flood-Fringe District (FF)

In the Flood-Fringe District the development and/or use of land shall be permitted in accordance with the regulations of the underlying district provided that all such uses, activities, and/or development shall be undertaken in strict compliance with the floodproofing and related provisions contained in all other applicable codes and ordinances.

Section 3.3 - General Flood Plain District (FA)

In the General Flood Plain Conservation District the development and/or use of land shall be permitted in accordance with the regulations of the underlying district provided that all such uses, activities, and/or development shall be undertaken in strict compliance with the floodproofing and related provisions contained in all other applicable codes and ordinances.

ARTICLE IV SPECIAL EXCEPTIONS AND VARIANCES - Additional Factors To Be Considered

In passing upon applications for Special Exceptions and Variances the Zoning Hearing Board shall consider all relevant factors and procedures specified in other sections of the Zoning Ordinance and the following:

1. The danger to life and property due to increased flood heights or velocities caused by encroachments. No special exception or variance shall be granted for any proposed use, development, or activity that will cause any increase in flood levels in the Floodway District.
2. The danger that materials may be swept on to other lands or downstream to the injury of others.
3. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions.
4. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners.

5. The importance of the services provided by the proposed facility to the community.
6. The requirements of the facility for a waterfront location.
7. The availability of alternative locations not subject to flooding for the proposed use.
8. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
9. The relationship of the proposed use to the comprehensive plan and flood plain management program for the area.
10. The safety of access to the property in times of flood or ordinary and emergency vehicles.
11. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site.

The Zoning Hearing Board may refer any application and accompanying documentation pertaining to any request for a special exception or variance to any engineer or other qualified person or agency for technical assistance in evaluating the proposed project in relation to flood heights and velocities, and the adequacy of the plans for protection and other related matters.

Special exceptions and/or variances shall only be issued after the Zoning Hearing Board has determined that the granting of such will not result in (a) unacceptable or prohibited increases in flood heights, (b) additional threats to public safety, (c) extraordinary public expense, (d) create nuisances, (e) cause fraud or victimization of the public, or (f) conflict with local laws or ordinances.

ARTICLE V

ADMINISTRATION

A zoning permit shall be required for all construction and development which includes but is not limited to paving, filling, grading, excavation, mining, dredging or drilling operations, etc.

CHAPTER II

ARTICLE 1

GENERAL PROVISIONS

Section 1.0 Purpose

The specific purpose of these provisions is:

- A. to regulate the subdivision and/or development of land within any designated flood plain district in order to promote the general health, welfare, and safety of the community;
- B. to require that each subdivision lot in flood-prone areas be provided with a safe building site with adequate access; and that public facilities which serve such uses be designed and installed to preclude flood at the time of initial construction;
- C. to protect individuals from buying lands which are unsuitable for use because of flood by prohibiting the improper subdivision and/or development of unprotected lands within the designated flood plain districts.

Section 1.1 Abrogation and Greater Restrictions

This Ordinance supersedes any ordinances currently in effect in flood areas and is in supplement to the County Subdivision Plan which has been and is now again adopted by reference to the extent applicable to Centre Township. However, any other applicable ordinances shall remain in full force and effect to the extent that those provisions are more restrictive.

Section 1.2 Municipal Liability

The grant of a permit or approval of a plan for any proposed subdivision and/or land development to be located within any designated flood plain district shall not constitute a representation, guarantee, or warranty of any kind by the municipality or by any official or employee thereof of the practicability or safety of the proposed use, and shall create no liability upon the municipality, its official or employees.

ARTICLE II

APPLICATION PROCEDURES and REQUIREMENTS

Section 2.0 Pre-Application Procedures

- A. Prior to the preparation of any plans, it is suggested that prospective developers consult with the Pennsylvania Department of Environmental Resources concerning soil suitability when on-site sewage disposal facilities are proposed.

- B. Prospective developers shall consult the County Conservation District representative concerning erosion and sediment control and the effect of geologic conditions on the proposed development. At the same time a determination should be made as to whether or not any flood hazards either exist or will be created as a result of the subdivision or development.

Section 2.1 Preliminary Plan Requirements

The following information shall be required as part of the Preliminary Plan and shall be prepared by a registered engineer or surveyor:

- A. Name of engineer, surveyor, or other qualified person responsible for providing the information required in this section.
- B. A map showing the location of the proposed subdivision and/or land development with respect to any designated flood plain district including information on the one hundred (100) year flood elevations.
- C. Where the subdivision and/or land development lies partially or completely within any designated flood plain districts or where such activities border on any designated flood plain district, the preliminary plan map shall include the following information:
 - 1. the location and elevation of proposed roads, utilities, and building sites, fills, flood or erosion protection facilities
 - 2. the one hundred (100) year flood elevations
 - 3. areas subject to special deed restrictions.

All such maps shall show contours at intervals of two (2) or five (5) feet depending upon the slope of the land and identify accurately the boundaries of the designated flood plain districts.

Section 2.2 Final Plan Requirements

The following information shall be required as part of the Final Plan and shall be prepared by a registered engineer or surveyor:

- A. All information required for the submission of the Preliminary Plan incorporating any changes requested by the Supervisors.
- B. A map showing the exact location and elevation of all proposed buildings, structures, roads, and public utilities to be constructed within any designated flood plain district. All such maps shall show contours at intervals of two (2) feet and identify accurately the boundaries of the flood-prone areas.

Submission of the Final Plan shall also be accompanied by all required permits and related documentation from the Department of Environmental Resources, and any other Commonwealth agency, or local municipality where any alteration or relocation of a stream or watercourse is proposed. In addition, documentation shall be submitted indicating that all affected adjacent municipalities have been notified of the proposed alteration or relocation. The Department of Community Affairs, and the Federal Insurance Administrator shall also be notified whenever any such activity is proposed.

ARTICLE III DESIGN STANDARDS AND IMPROVEMENT IN DESIGNATED FLOOD PLAIN DISTRICTS

Section 3.0 General

- A. Where not prohibited by this or any other laws or ordinances, land located in any designated flood plain district may be platted for development with the provision that the developer construct all buildings and structures to preclude flood damage in accordance with this and any other laws and ordinances regulating such development.

- B. Building sites for residences or any other type of dwelling or accommodation shall not be permitted in any designated floodway district. Sites for these uses may be permitted outside the floodway district if the sites or dwelling units are elevated up to the Regulatory Flood Elevation. If fill is used to raise the elevation of a site, the fill area shall extend out laterally for a distance of at least fifteen (15) feet beyond the limits of the proposed structures.
- C. Building sites for structures or buildings other than for residential uses shall also not be permitted in any designated floodway district. Also, such sites for structures or buildings outside the floodway shall be protected as provided for in "B" above. However, the governing body may allow the subdivision and/or development of areas or sites for commercial and industrial uses at an elevation below the Regulatory Flood Elevation if the developer otherwise protects the area to that height or assures that the buildings or structures will be floodproofed at least up to that height.
- D. If the Supervisors determine that only a part of a proposed plat can be safely developed, it shall limit development to that part and shall require that development proceed consistent with this determination.
- E. When a developer does not intend to develop the plat himself and the Supervisors determines that additional controls are required to insure safe development, it may require the developer to impose appropriate deed restrictions on the land. Such deed restrictions shall be inserted in every deed and noted on every recorded plat.

Section 3.1 Excavation and Grading

Where any excavation or grading is proposed or where any existing trees, shrubs or other vegetative cover will be removed, the developer shall consult the County Conservation District representative concerning plans for erosion and sediment control and to also obtain a report on the soil characteristics of the site so that a determination can be made as to the type and degree of development the site may accommodate. Before undertaking any excavation or grading, the developer shall obtain a Grading and Excavation Permit if such is required by the municipality.

Section 3.2 Drainage Facilities

Storm drainage facilities shall be designed to convey the flow of storm water runoff in a safe and efficient manner. The system shall insure drainage at all points along streets, and provide

positive drainage away from buildings and onsite waste disposal sites.

Plans shall be subject to the approval of the Supervisors. The Supervisors may require a primarily underground system to accommodate frequent floods and a secondary surface system to accommodate larger, less frequent floods. Drainage plans shall be consistent with local and regional drainage plans. The facilities shall be designed to prevent the discharge of excess runoff onto adjacent properties.

Section 3.3 Streets

The finished elevation of proposed streets shall not be more than the one (1) foot below the Regulatory Flood Elevation. The Supervisors may require, where necessary, profiles and elevations of streets to determine compliance with the requirements. Drainage openings shall be sufficient to discharge flood flows without unduly increasing flood heights.

Section 3.4 Sewer Facilities

All sanitary sewer systems located in any designated flood plain district, whether public or private, shall be floodproofed up to the Regulatory Flood Elevation.

- A. The Supervisors shall prohibit installation of sewage disposal facilities requiring soil absorption systems where such systems will not function due to high ground water, flooding, or unsuitable soil characteristics or are proposed for location in designated flood plain districts. The Supervisor may require that the developer note on the face of the plat and in any deed of conveyance that soil absorption fields are prohibited in designated areas.
- B. The Supervisors may prescribe adequate methods for waste disposal. If a sanitary sewer system is located on or near the proposed subdivision and/or land development, the Supervisors shall require the developer to provide sewage facilities to connect to this system where practical, and shall prescribe the procedures to be followed by the developer in connecting to the system.

Section 3.5 Water Facilities

All water systems located in any designated flood plain districts, whether public or private, shall be floodproofed up to the Regulatory Flood Elevation. If there is an existing public water supply system on or near the subdivision, the Supervisors shall require the developer to connect to this system where practical

and shall prescribe the procedures to be followed by the developer in connecting to the system.

Section 3.6 Other Utilities and Facilities

All other public and private utilities and facilities including gas and electric shall be elevated or floodproofed up to the Regulatory Flood Elevation.

ARTICLE IV

DEFINITIONS

1. Building - a combination of materials to form a permanent structure having walls and a roof. Included shall be all mobile homes and trailers used for human habitation.
2. Designated flood plain districts - those flood plain districts specifically designated in the Township, Borough, etc. Zoning Ordinance as being inundated primarily by the one hundred (100) year flood. Included would be areas identified as the Floodway District (FW), the Flood-Fringe District (FF), and the General Flood Plain District (FA).
3. Developer - any landowner, agent of such landowner or tenant with the permission of such landowner, who makes or causes to be made a subdivision of land or a land development and the subdivision of land.
4. Development - any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures the placement of mobile homes, streets and other paving, utilities mining, dredging, filling, grading, excavation, or drilling operations and the subdivision of land.
5. Dwelling - a building designed and constructed for residential purposes in which people live.
6. One hundred (100) year flood - a flood that, on the average, is likely to occur once every one hundred (100) years, (i.e. that has a one (1) percent chance of occurring each year, although the flood may occur in any year).
7. Regulatory flood elevation - the 100 year flood elevation plus a freeboard safety factor of one and one-half (1½) feet.
8. Structure - anything constructed or erected on the ground or attached to the ground, including but not limited to, buildings, factories, sheds, cabins, mobile homes, and other similar items.
9. Subdivision - the division or redivision of a lot, tract or parcel of land by any means into two or more lots, tracts, parcels, or other division of land including changed in existing lot lines for the purpose, whether immediate or future, of lease, transfer of ownership or building or lot development: Provided, however, that the division of land for agricultural purposes into parcels of more than ten (10) acres, not involving any new street or easement of access, shall be exempted.

CHAPTER III

ARTICLE I

SPECIAL PROVISIONS APPLYING IN DESIGNATED FLOOD PLAIN DISTRICTS

In order to prevent excessive damage to buildings and structures due to flooding conditions, the following provisions shall apply to all proposed construction or development occurring in any of the flood plain districts designated in the Township, Borough, etc. Zoning Ordinance as amended:

Section 1.1 General

A. Residential Structures

Within any designated Floodway (FW), Flood-Fringe (FF) or General Flood Plain (FA) District, the lowest floor (including basement) of any new or improved residential structure shall be at least one and one-half (1½) feet above the one hundred (100) year flood elevation.

B. Non-Residential Structures

1. Within any designated Floodway (FW), Flood-Fringe (FF) or General Flood Plain (FA) District, the lowest floor (including basement) of any new or improved non-residential structure shall be at least one and one-half (1½) feet above the one hundred (100) year flood elevation or be designed and constructed so that the space enclosed by such structure shall remain either completely or essentially dry during any flood up to that height.
2. Any structure, or part thereof, which will not be completely or adequately elevated, shall be designed and constructed to be completely or essentially dry in accordance with the standards contained in the publication entitled "Floodproofing Regulations" (U.S. Army Corps of Engineers, June 1972) or some other equivalent standard, for that type of construction.

Section 1.2 Design and Construction Standards

A. Drainage Facilities

Storm drainage facilities shall be designed to convey the flow of storm water runoff in a safe and efficient manner. The system shall insure drainage at all points along streets, and provide positive drainage away from buildings. The system shall also be designed to prevent the discharge of excess runoff onto adjacent properties.

B. Sanitary Sewer Facilities

All new or replacement sanitary sewer facilities, and private package sewage treatment plants (including all pumping stations and collector systems) shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into the flood waters. In addition, they should be located and constructed to minimize or eliminate flood damage and impairment.

C. Water Facilities

All new or replacement water facilities shall be designed to minimize or eliminate infiltration of flood waters into the system, and be located and constructed to minimize or eliminate flood damages.

D. Streets

The finished elevation of proposed new streets shall be no more than one (1) foot below the Regulatory Flood Elevation.

E. Utilities

All utilities such as gas lines, electrical and telephone systems being placed in flood-prone areas should be located, elevated (where possible) and constructed to minimize the chance of impairment during a flood.

F. Fill

If fill is used, it shall:

1. extend laterally at least fifteen (15) feet beyond the building line from all points,
2. consist of soil or small rock materials only; sanitary landfills shall not be permitted.
3. be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling,
4. be no steeper than one (1) vertical to two (2) horizontal, unless substantiated data, justifying steeper slopes are submitted to, and approved by the Building Official,
5. be used to the extent to which it does not adversely affect adjacent properties.

G. Placement of Buildings and Structures

All buildings and structures shall be constructed and placed on the lot so as to offer the minimum obstruction to the flow of water. In so doing, consideration shall be given to their effect upon the flow and height of flood waters.

H. Anchoring

1. All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse or other movement thus reducing the threat to life and property and decreasing the possibility of the blockage of bridge openings and other restricted sections of the watercourse.
2. All air ducts, large pipes and storage tanks located at or below the Regulatory Flood elevation shall be firmly anchored in accordance with accepted engineering practices to prevent flotation.

I. Floor, Walls and Ceilings

Where located at or below the Regulatory Flood elevation:

1. Wood flooring shall be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain, without incurring structural damage to the building.
2. Plywood shall be of any "exterior or "marine" grade and of a water-resistant or waterproof variety.
3. Walls and ceilings in non-residential structures shall have sufficient wet strength and be so installed as to survive inundation.
4. Window frames, door frames, door jambs, and other components shall be made of metal or other water-resistant material.

J. Electrical Systems

1. All electric water heaters, electric furnaces, electric air conditioning and ventilating systems, and other electrical equipment or apparatus shall be permitted only at elevations above the Regulatory Flood Elevation.
2. No electrical distribution panels shall be allowed at an elevation less than three (3) feet above the level of the one hundred (100) year flood elevation.
3. Separate electrical circuits shall serve lower levels and shall be dropped from above.

K. Plumbing

1. Water heaters, furnaces and other mechanical equipment or apparatus shall be permitted only at elevations above the Regulatory flood.
2. No part of any on-site sewage disposal system shall be constructed within any designated flood plain districts.
3. Water supply systems and sanitary sewage systems shall be designed to preclude infiltration of flood waters into the systems and discharges from the system into flood waters.
4. All gas and oil supply systems shall be designed to preclude the infiltration of flood waters into the systems and discharges from the systems into flood waters. Additional provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

L. Paints and Adhesives

Where located at or below the Regulatory Flood elevation:

1. Adhesives shall have a bonding strength that is unaffected by inundation (i.e. "marine" or water-resistant quality).
2. All wooden components (doors, trim, cabinets, etc.) shall be sealed with a "marine" or water-resistant quality or similar product.
3. Paints or other finishes shall be capable of surviving inundation (i.e. "marine" or water-resistant quality).

M. Storage

1. No materials that are buoyant, flammable, explosive, or in time of flooding, could be injurious to human, animal or plant life, shall be stored below the Regulatory Flood.

Section 1.3 Special Flood Damage Control Provisions for Mobile Homes and Mobile Home Parks in the Designated Flood Plain Districts

- A. All mobile homes and any additions thereto shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors in accordance with the American National Standards Institute and National Fire Protection Association Standards as specified in the Standard for the Installation of Mobile Homes Including Mobile Home Park Requirements (NFPA No. 501A-1974 (ANSI A119.3-1975) as amended for Mobile Homes in Hurricane Zones or other Appropriate Standards such as the following:

1. over-the-top ties shall be provided at each of the four (4) corners of the mobile home, with two (2) additional ties per side at intermediate locations for units fifty (50) feet or more in length, and one (1) additional tie per side for units less than fifty (50) feet in length.
 2. frame ties shall be provided at each corner of the mobile home, with five (5) additional ties per side at intermediate locations for units fifty (50) feet or more in length, and four (4) additional ties per side for units less than fifty (50) feet in length.
 3. all components of the anchoring system shall be capable of carrying a force of four thousand eight hundred (4800) pounds per square inch.
- B. All mobile homes and any additions thereto shall also be elevated in accordance with the following requirements:
1. the stands or lots shall be elevated on compacted fill, or on pilings so that the lowest floor of the mobile home will be at or above the elevation of the Regulatory Flood.
 2. adequate surface drainage is provided
 3. adequate access for a hauler is provided
 4. where pilings are used for elevation, the lots shall be large enough to permit steps; piling foundations shall be placed in stable soil no more than ten (10) feet apart; reinforcement shall be provided for pilings that will extend for six (6) feet or more above the ground level.
- C. An evacuation plan indicating alternate vehicular access and escape routes shall be filed with the appropriate Township officials for mobile home parks and mobile home subdivisions where appropriate.
- D. No mobile homes shall be placed in any designated Floodway District or area.

Section 1.4 Existing Structures in Designated Flood Plain Districts

Structures existing in any designated flood plain districts prior to the enactment of this Ordinance, but which are not in compliance with these provisions, may continue to remain subject to the following:

- A. Existing structures located in a designated Floodway District or area shall not be expanded or enlarged, unless the effect of the proposed expansion or enlargement on flood heights is fully offset by accompanying improvements.
- B. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure, to an extent or amount of less than fifty (50) percent of its market value, shall be elevated and/or floodproofed to the greatest extent possible.
- C. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure, to an extent or amount of fifty (50) percent or more of its market value, shall be undertaken only in full compliance with the provisions of this Ordinance.

Section 1.5 Variances

- A. If compliance with the elevation or floodproofing requirements stated above would result in an exceptional hardship for a prospective builder, developer, or landowner, the Township in accordance with the following procedures and criteria may grant an appropriate variance:
 - 1. No variances shall be granted for any construction, development, use or activity within any designated Floodway (FW) District that would cause any increase in the one hundred (100) year elevation.
 - 2. If granted, a variance shall involve only the least modification necessary to provide relief.
 - 3. In granting any variance, the Township may attach whatever reasonable conditions and safeguards it considers necessary in order to protect the public health, safety, and welfare, and to achieve the objectives of this Ordinance.
 - 4. Whenever a variance is granted, the Township shall notify the applicant in writing that:
 - a. the granting of the variance may result in increased premium rates for flood insurance.
 - b. such variances may increase the risks to life and property.
 - 5. In reviewing any request for a variance, the Township shall consider, but not be limited to, the following:
 - a. that there is good and sufficient cause.

- b. that failure to grant the variance would result in exceptional hardship to the applicant.
 - c. that the granting of the variance will not result in any unacceptable or prohibited increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on, or victimization of the public, or conflict with any other applicable local or State ordinances and regulations.
6. A complete record of all variance requests and related actions shall be maintained by the Township. In addition, a report of all variances granted during the year shall be included in the annual report to the Federal Insurance Administration.
- C. Notwithstanding any of the above, however, all structures shall be designed and constructed so as to have the capability of resisting the hydrostatic and hydrodynamic loads and pressures, and effects of buoyancy of the One Hundred (100) Year Flood.

ARTICLE II SUPPLEMENTARY ADMINISTRATIVE PROVISIONS FOR
ACTIVITIES IN DESIGNATED FLOOD PLAIN DISTRICTS

Section 2.1 Plan Requirements

In addition to the permit application requirements normally required under the Township Building Ordinance, as amended, the Township Building Inspector shall require the following specific information to be included as part of the application for a building permit:

- A. A plan which details the:
1. existing and proposed contours and/or elevation (in relation to mean sea level, i.e. the National Geodetic Vertical Datum of 1929) of the ground and the lowest floor of proposed construction.
 2. one hundred (100) year flood elevations
 3. other associated factors such as pressures and impact forces etc.
 4. storage elevations
 5. size of the structures
 6. location and elevations of streets, water supply, sanitary facilities
 7. soil types
 8. floodproofing measures including specific reference to the level of the floodproofing in relation to the one hundred (100) year flood.
- B. A document, certified by a registered professional engineer or architect, which states that the proposed construction has been adequately designed to withstand the flood depths, pressures, velocities, impact and uplift forces and other hydrostatic, hydrodynamic and buoyancy factors associated with the one hundred (100) year flood.

Such statement shall include a description of the type and extent of floodproofing measures which have been incorporated into the design of the structure.

Section 2.2 Review by County Conservation District

A copy of all applications and plans for construction or development in any designated flood plain district to be considered for approval shall be submitted by the Township Building Inspector to the County Conservation District for review and comment prior to the issuance of a building permit. The recommendations of the Conservation District shall be considered by the Township Building Official for possible incorporation into the proposed plan.

Section 2.3 Other Permit Issuance Requirements

Prior to the issuance of any building permit the Township Building Inspector shall review the application for permit to determine if all other necessary governmental permits such as those required by State and Federal laws have been obtained including those required by Act 537, the Pennsylvania Sewage Facilities Act, the Pa. Water Obstructions Act of 1913, and the Federal Water Pollution Control Act Amendments of 1972, Section 404, 33, U.S.C. 1334. No permit shall be issued until this determination has been made.

Section 2.4 Start of Construction

For purposes of implementation of these provisions construction shall be considered to have started with the first placement of permanent construction of the site, such as the pouring of slabs or footings or any work beyond the stage of excavation. For a structure 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 pilings or foundation, or the affixing of any prefabricated structures or mobile home to its permanent site. Permanent construction does not include land preparation, land clearing, grading, filling, excavation for basement, footings, piers, or foundations, erection of temporary forms, the installation of piling under proposed subsurface footings, or the installation of sewer, gas and water pipes, or electric or other service lines from the street.

ARTICLE III SUPPLEMENTARY DEFINITIONS FOR DESIGNATED
FLOOD PLAIN DISTRICT PROVISIONS

The following are special definitions which shall be used in making reasonable interpretations of the provisions contained in Articles I and II:

- A. Completely dry space - a space which will remain totally dry during flooding; the structure is designed and constructed to prevent the passage of water and water vapor.
- B. Construction - the construction, reconstruction, renovation, repair, extension, expansion, alteration, or relocation of a building, structure including the placement of mobile homes.
- C. Designated flood plain districts - those flood plain districts specifically designated in the Township Zoning Ordinance as being inundated primarily by the one hundred (100) year flood. Included would be areas identified as Floodway District (FW), Flood-Fringe District (FF), and General Flood Plain District (FA).
- D. Designated Floodway District or area - the channel of a river or other watercourse and the adjacent land areas required to carry and discharge a flood of the one hundred (100) year magnitude as specifically defined in the Township Zoning Ordinance.
- E. Development - any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, the placement of mobile homes, streets and other paving, utilities, mining, dredging, filling, grading, excavation, or drilling operations and the subdivision of land.
- F. Essentially dry space - a space which will remain dry during flooding, except for the passage of some water vapor or minor seepage; the structure is substantially impermeable to the passage of water.
- G. Floodproofing - 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.
- H. Mobile home - means a transportable, single family dwelling intended for permanent occupancy, office, or place of assembly, contained in one or more sections, built on a permanent chassis, which arrives at a site complete and ready for occupancy except for minor and incidental unpacking and assembly operations, and constructed so that it may be used with or without a permanent foundation. The term does not include recreational vehicles or travel trailers.

- I. Mobile home park - a parcel of land under simple ownership which has been planned and improved for the placement of two or more mobile homes for non-transient use.
- J. Mobile home park - a parcel of land under single ownership which has been planned and improved for the placement of two or more mobile homes for non-transient use.
- K. Obstructions - any wall, dam, wharf, embankment, levee, dike, pile abutment, projection, excavation, channel, rectification, culvert, building, fence, stockpile, refuse, fill, structure, or matter in, along, across, or projecting into any channel, watercourse, or designated flood plain district, which may impede, retard, or change the direction of the flow of water either in itself or by catching or collecting debris carried by such water or is placed where the flow of the water might carry the same downstream to the damage of life and property.
- L. One hundred year flood - a flood that, on the average, is likely to occur once every one hundred (100) years (i.e. that has a one (1) percent chance of occurring each year, although the flood may occur in any year). This is more precisely defined/delineated in the Township Zoning Ordinance.
- M. Regulatory flood elevation - the one hundred (100) year flood elevation plus a freeboard safety factor of one and one-half (1½) feet.

CHAPTER IV

Section 1 Repeals

All ordinances, regulations or portions thereof inconsistent with the provisions of this Ordinance are hereby repealed insofar as they are inconsistent herewith.

Section 2 Effective Date

This Ordinance shall become effective November 12, 1980 .

ENACTED and ORDAINED as an Ordinance this 12th day of November , 1980.

Attest:

George C. Seifert
Secretary

Wilmer H. Phillips
Chairman

Charles B. Borker
Member

Howard M. Miller
Member

Supervisors of Township of Centre,
Berks County, Pennsylvania