

**CHAPTER 8**  
**FLOODPLAINS**

**PART 1**

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**PART 1**

**FLOODPLAIN DISTRICT REGULATIONS**

**§8-101. General Provisions.**

1. Purpose. The purpose of these provisions is to prevent the loss of property and life, 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 alone 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 development 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.
2. Applicability.
  - A. These provisions shall apply to all land within the jurisdiction of Sandy Township which are located within any floodplain district (FP) area.
  - B. It shall be unlawful for any person, partnership, business or corporation to under take, or cause to be undertaken, any construction or development anywhere within the floodplain district unless a building permit has been obtained from the Zoning Officer.
  - C. A permit shall not be required for minor repairs to existing buildings or structures.
3. Warning and Disclaimer of Liability. The degree of flood protection sought by the provisions of this Chapter 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 manmade or natural causes, such as ice jams or bridge openings restricted by debris. This Chapter does not imply that areas outside the identified floodplain districts, or that land uses permitted within such districts will be free from flooding or flood damages. This Chapter shall not create liability on the part of Sandy Township or any officer or

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employee thereof for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.

(Ord. 1986-3, 11/12/1986, Art. I)

### **§8-102. Definitions.**

1. General. Unless specifically defined below, words and phrases used in this Chapter shall be interpreted so as to give this Chapter its most reasonable application.
2. Specific Definitions.

**CONSTRUCTION** — the construction, reconstruction, renovation, repair, extension, expansion, alteration, or relocation of a building or structure, including the placement of manufactured homes. [Ord. 1989-4]

**DEVELOPMENT** — any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, the placement of manufactured homes, streets, and other paving, utilities, filling, grading, excavation, mining, dredging, or drilling operations and the subdivision of land. [Ord. 1989-4]

**FLOODPROOFING** — 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.

**MANUFACTURED HOME** — a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term includes park trailers, travel trailers, recreational, and other similar vehicles placed on a site for more than 180 consecutive days. [Ord. 1989-4]

**MANUFACTURED HOME PARK** — a parcel (or contiguous parcels) of land which has been planned and improved for the placement of two or more manufactured homes. [Ord. 1989-4]

**MINOR REPAIR** — the replacement of existing work with equivalent materials for the purpose of its routine maintenance and upkeep, but not including the cutting away of any wall, partition or portion thereof, the removal or cutting away of any structural beam or bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the exit way requirements, nor shall minor repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent, or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

**OBSTRUCTION** — 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 flood prone area, 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.

**ONE HUNDRED YEAR FLOOD** — a flood that, on the average, is likely to occur once every 100 years (i.e., that has a one percent chance of occurring each year, although the flood may occur in any year).

**REGULATORY FLOOD ELEVATION** — the 100 year flood elevation plus a freeboard safety factor of 1 1/2 feet.

**SPECIAL PERMIT** — a special approval which is required for hospitals, nursing homes, jails, and new manufactured home parks and substantial improvements to such existing parks, when such development is located in all, or a designated portion, of a floodplain. [Ord. 1989-4]

**STRUCTURE** — anything constructed or erected on the ground or attached to the ground including, but not limited to buildings, sheds, mobile homes, and other similar items.

**SUBDIVISION** — the division or resubdivision of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes 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 subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or residential dwellings shall be exempted.

**SUBSTANTIAL IMPROVEMENT** — any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either (1) before the improvement or repair is started, or (2) if the structure has been damaged, and is being restored, before the damage occurred.

(Ord. 1986-3, 11/12/1986, Art. II; as amended by Ord. 1989-4, 8/16/1989, §§I, II and III)

**§8-103. Establishment of Floodplain District.**

1. Identification. The identified floodplain area shall be those areas of Sandy Township which are subject to the 100 year flood as shown on the Flood Insurance Map (FIRM) which accompanies the Flood Insurance Study (FIS) prepared for the Township by the Federal Emergency Management Agency (FEMA), dated September 6, 1989, or the most recent revision thereof. [Ord. 1989-4]

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2. Description of Floodplain Districts. The following district shall consist of the following two specific areas:
  - A. The AE Area shall be those identified as an AE Zone on the FIRM included in the FIS prepared by FEMA and for which 100 year flood elevations have been provided in the FIS.
  - B. The A Area shall be those areas identified as an A Zone on the FIRM included in the FIS prepared by the FEMA and for which no 100 year flood elevations have been provided. For these areas, elevation and floodway information from other Federal, State, or other acceptable source shall be used when available. Where other acceptable information is not available, the elevation shall be determined by using the elevation of a point on the boundary of the identified floodplain area which is nearest the construction site.

In lieu of the above, the Township may require the applicant to determine the elevation 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 to sufficient detail to allow a thorough technical review by the Township.

[Ord. 1989-4]

3. Zoning Map. The boundaries of the floodplain district are established as shown on the Official Zoning Map of Sandy Township [see Chapter 27] and which shall be kept at the Township office.
4. Determination of the 100 Year Flood Elevation. For the purposes of this Chapter, the 100 year flood elevation shall be used as the basis for regulation. To determine the 100 year flood elevation, the elevation at a given point on the boundary of the floodplain district which is nearest the construction site in question will be used. In helping to make the necessary elevation determination, other sources of data, where available, shall be used such as:
  - A. Corps of Engineers. Floodplain information reports.
  - B. U.S. Geological Survey. Flood prone quadrangles.
  - C. U.S.D.A., Soil Conservation Service. County soil surveys (alluvial soils) or P.L. 566 Flood Information.
  - D. Pennsylvania Department of Environmental Protection. Flood control investigations. [A.O.]
  - E. Known highwater marks from past floods.

F. Other sources.

In lieu of the above, the Township may require the applicant to determine the elevation with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analysis 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, analysis, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the Township.

5. Changes in Identification of District. The floodplain district may be revised or modified by an amendment to the Official Zoning Map where studies or information provided by a qualified agency or person documents the need for such revision. However, prior to any such change, approval must be obtained from the Federal Insurance Administration (FIA).

(Ord. 1986-3, 11/12/1986, Art. III; as amended by Ord. 1989-4, 8/16/1989, §III; and by A.O.

**§8-104. Administration.**

1. Issuance of Building Permit.

- A. The Zoning Officer shall issue a permit only after it has been determined that the proposed work to be undertaken will be in conformance with the requirements of this and all other applicable codes and ordinances.
- B. Prior to the issuance of a permit, the Zoning Officer shall review the application for permit to determine if all other necessary government permits required by State and Federal laws have been obtained, such as those required by the Pennsylvania Sewage Facilities Act (Act 1966-537, as amended); the Pennsylvania Dam Safety and Encroachments Act (Act 1978-325, as amended); the Pennsylvania Clean Streams Act (Act 1937-394, as amended); the U.S. Clean Water Act, §404, 33 U.S.C. §1334. No permit shall be issued until this determination has been made.
- C. No encroachment, alteration, or improvement of any kind shall be made to any water course until all adjacent municipalities which may be affected by such action have been notified by the Township and until all required permits or approvals have been first obtained from the Department of Environmental Protection, Bureau of Dams and Waterway Management. [A.O.]
- D. In addition, the Federal Insurance Administrator and Pennsylvania Department of Community and Economic Development, Bureau of Community Planning, shall be notified by the Township prior to any alteration or relocation of any watercourse. [A.O.]

2. Application Procedures.

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- A. If any proposed construction or development is located entirely or partially within any floodplain district, applicants for permits shall provide all the necessary information in sufficient detail and clarity to enable the Zoning Officer to determine that:
- (1) All such proposals are consistent with the need to minimize flood damage and conform with the requirements of this and all other applicable codes and ordinances.
  - (2) All utilities and facilities, such as sewer, gas, electrical and water systems, are located and constructed to minimize or eliminate flood damage.
  - (3) Adequate drainage is provided so as to reduce exposure to flood hazards.
- B. Applicants shall file the following minimum information plus any other pertinent information as may be required by the Zoning Officer to make the above determination:
- (1) A completed permit application form.
  - (2) A plan of the entire site, clearly and legibly drawn at a scale of 1 inch equal to 100 feet or less, showing the following:
    - (a) North arrow, scale, and date.
    - (b) Topographic contour lines, if available.
    - (c) All property and lot lines including dimensions, and the size of the site expressed in acres or square feet.
    - (d) The location of all existing and proposed buildings, structures, and other improvements, including the location of any existing or proposed subdivision and land development.
    - (e) The location of all existing streets, drives, and other accessways.
    - (f) The location of any existing bodies of water or watercourses, identified floodplain areas, and, if available, information pertaining to the floodway, and the flow of water including direction and velocities.
- C. Plans of all proposed buildings, structures and other improvements, drawn at suitable scale showing the following:

- (1) The proposed lowest floor elevation of any proposed building based upon National Geodetic Vertical Datum of 1929.
- (2) The elevation of the 100 year flood.
- (3) If available, information concerning flood depths, pressures, velocities, impact and uplift forces and other factors associated with a 100 year flood.
- (4) Detailed information concerning any proposed floodproofing measures.

D. The following data and documentation:

- (1) A document, certified by a registered professional engineer or architect, which states that the proposed construction or development has been adequately designed to withstand the 100 year flood elevations, pressures, velocities, impact and uplift forces associated with the 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 and/or the development.
  - (2) The appropriate component of the Department of Environmental Protection "Planning Module for Land Development." [A.O.]
  - (3) Where any excavation or grading is proposed, a plan meeting the requirements of the Department of Environmental Protection to implement and maintain erosion and sedimentation control. [A.O.]
3. Review by County Conservation District. A copy of all applications and plans for any proposed construction or development in any floodplain district to be considered for approval shall be submitted by the Zoning Officer to the County Conservation District for review and comment prior to the issuance of a permit. The recommendations of the Conservation District shall be considered by the Zoning Officer for possible incorporation into the proposed plan.
  4. Review of Application by Others. A copy of all plans and applications for any proposed construction or development in any floodplain district to be considered for approval may be submitted by the Zoning Officer to any other appropriate agencies and/or individuals (e.g., Planning Commission, Township Engineer, etc.) for review and comment.

(Ord. 1986-3, 11/12/1986, Art. IV; as amended by A.O.)

**§8-105. General Technical Requirements.**

1. General.

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- A. Within any floodplain district, the development and/or use of any land shall be permitted provided that the development and/or use complies with the restrictions and requirements of this and all other applicable codes and ordinances in force in the Township.
  - B. Within any floodplain district, no new construction or development shall be located within the area measured 50 feet landward from the top-of-bank of any water course.
  - C. Within any floodplain district, the elevation of the lowest floor (including basement) of any new or substantially improved residential structure shall be 1 1/2 feet or more above the 100 year flood elevation.
  - D. Within any floodplain district, the elevation of the lowest floor (including basement) of any new or substantially improved nonresidential structure shall be 1 1/2 feet or more above the 100 year flood elevation or be floodproofed up to that height. Any nonresidential structure, or part thereof, having a lowest floor which is not elevated to at least 1 1/2 feet above the 100 year flood elevation, shall be floodproofed in a completely or essentially dry manner in accordance with the W1 or W2 space classification standards contained in the publication entitled "Floodproofing Regulations" published by the U.S. Army Corps of Engineers (June 1972), or with some other equivalent standard. All plans and specifications for such floodproofing shall be accompanied by a statement certified by a registered professional engineer or architect which states that the proposed design and methods of construction are in conformance with the above referenced standards. [Ord. 1989-4]
  - E. Enclosures below the lowest floor (including basement) are prohibited. [Ord. 1989-4]
  - F. Within any AE Area, no new construction or development shall be allowed unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the elevation of the 100 year flood more than one foot at any point. [Ord. 1989-4]
  - G. Within any floodway area, no new construction nor development shall be permitted that would cause any increase in the 100 year flood elevation. [Ord. 198-4]
2. Design and Construction Standards. The following minimum standards shall apply for all construction and development proposed within any floodplain district:
    - A. Fill. If the fill is used, it shall:
      - (1) Extend laterally at least 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 vertical to two horizontal, unless substantiated data justifying steeper slopes are submitted to, and approved by, the Zoning Officer.
  - (5) Be used to the extent to which it does not adversely affect adjacent properties.
- B. 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 proper drainage 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.
- C. Water and Sanitary Sewer Facilities and Systems.
- (1) All new or replacement water and sanitary sewer facilities and systems shall be located, designed and constructed to minimize or eliminate flood damages and the infiltration of flood waters.
  - (2) Sanitary sewer facilities and systems shall be designed to prevent the discharge of untreated sewage into flood waters.
  - (3) No part of any onsite sewage system shall be located within any floodplain district except in strict compliance with all State and local regulations for such systems. If any such system is permitted, it shall be located so as to avoid impairment to it, or contamination from it, during a flood.
- D. Other Utilities. All other utilities such as gas lines, electrical and telephone systems shall be located, elevated (where possible) and constructed to minimize the chance of impairment during a flood.
- E. Streets. The finished elevation of all new streets shall be no more than one foot below the regulatory flood elevation.
- F. Storage. All materials that are buoyant, flammable, explosive or, in times of flooding, could be injurious to human, animal or plant life, and not listed in §8-106, "Development Which May Endanger Human Life," shall be stored at or above the regulatory flood elevation and/or floodproofed to the maximum extent possible.

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- G. Placement of Buildings and Structures. All buildings and structures shall be designed, located and constructed so as to offer the minimum obstruction to the flow of water and shall be designed to have a minimum effect upon the flow and height of flood water.
- H. Anchoring.
- (1) All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse or lateral movement.
  - (2) All air ducts, large pipes, storage tanks and other similar objects or components located below the regulatory flood elevation shall be securely anchored or affixed to prevent flotation.
- I. Floors, Walls and Ceilings.
- (1) Wood flooring used at or below the regulatory flood elevation shall be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain, without causing structural damage to the building.
  - (2) Plywood used at or below the regulatory flood elevation shall be of a "marine" or "water-resistant" variety.
  - (3) Walls and ceilings at or below the regulatory flood elevation shall be designed and constructed of materials that are water-resistant and will withstand inundation.
  - (4) Windows, doors, and other components at or below the regulatory flood elevation shall be made of metal or other water-resistant material.
- J. Paints and Adhesives.
- (1) Paints and other finishes used at or below the regulatory flood elevation shall be of "marine" or water-resistant quality.
  - (2) Adhesives used at or below the regulatory flood elevation shall be of a marine or water-resistant variety.
  - (3) All wooden components (doors, trim, cabinets, etc.) shall be finished with a "marine" or water-resistant paint or other finishing material.
- K. Electrical Components.
- (1) Electrical distribution panels shall be at least three feet above the 100 year flood elevation.

(2) Separate electrical circuits shall serve lower levels and shall be dropped from above.

- L. Equipment. Water heaters, furnaces, air conditioning and ventilating units, and other mechanical or utility equipment or apparatus shall not be located below the regulatory flood elevation.
- M. Fuel Supply Systems. All gas and oil supply systems shall be designed to prevent the infiltration of flood waters into the system and discharges from the system into flood waters. Additional provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

(Ord. 1986-3, 11/12/1986, Art. V; as amended by Ord. 1989-4, 8/16/1989, §VII)

**§8-106. Special Provisions for Certain Kinds of Development Within Floodplain District.**

- 1. Development Which May Endanger Human Life. Within any floodplain district, any new or substantially improved structure which will be used for the production or storage of any of the following dangerous materials or substances or which will be used for any activity requiring the maintenance of a supply (more than 550 gallons or other comparable volume or any amount of radioactive substances) of any of the following dangerous materials or substances, shall be prohibited within any floodplain district:
  - A. Acetone.
  - B. Ammonia.
  - C. Benzene.
  - D. Calcium carbide.
  - E. Carbon disulfide.
  - F. Celluloid.
  - G. Chlorine.
  - H. Hydrochloric acid.
  - I. Magnesium.
  - J. Nitric acid and oxides of nitrogen.
  - K. Petroleum products (gasoline, fuel oil, etc.)

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- L. Phosphorus.
  - M. Potassium.
  - N. Sodium.
  - O. Sulphur and sulphur products.
  - P. Pesticides (including insecticides, fungicides, and rodenticides).
  - Q. Radioactive substances, insofar as such substances are not otherwise regulated.
2. Special Requirements for Manufactured Homes.
- A. Within any floodplain district, all manufactured homes and any additions thereto shall be prohibited within that area measured 50 feet landward from the top of bank of any watercourse.
  - B. Where permitted within the floodplain district, all manufactured homes and additions thereto shall be:
    - (1) Placed on a permanent foundation.
    - (2) Elevated so that the lowest floor of the manufactured home will be 1 1/2 feet or more above the elevation of the 100 year flood.
    - (3) Anchored to resist flotation collapse or lateral movement.

[Ord. 1989-4]

3. Activities Requiring Special Permits. The following obstructions and activities as set forth in the Pennsylvania Floodplain Management Act (Act 1978-166), are prohibited if located entirely or partially within a floodplain district.
- A. Hospitals (public or private).
  - B. Nursing homes (public or private).
  - C. Jails or prisons.
  - D. New manufactured home parks and manufactured home subdivisions, and substantial improvements to existing mobile home parks.

(Ord. 1986-3, 11/12/1986, Art. VI; as amended by Ord. 1989-4, 8/16/1989, §III, VIII)

**§8-107. Existing Structures in Floodplain Districts.**

Structures existing in any floodplain district prior to the enactment of this Chapter may continue to remain, provided that:

- A. Any modification, alteration, reconstruction or improvement of any kind to an existing structure, to an extent or amount of 50% or more of its market value, shall constitute a substantial improvement and shall be undertaken only in full compliance with the provisions of this Chapter.
- B. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure, to an extent or amount of less than 50% of its market value, will require the structure to be elevated and/or floodproofed to the greatest extent possible.

(Ord. 1986-3, 11/12/1986, Art. VII)

**§8-108. Variances Within Floodplain Districts.**

- 1. General. If compliance with any of the requirements of this Chapter would result in an exceptional hardship for a prospective builder, developer or landowner, the Zoning Hearing Board may, upon request, grant relief from the strict application of the requirements.
- 2. Variance Procedures and Requirements. Requests for variances shall be considered by the Zoning Hearing Board in accordance with the following:
  - A. No variance shall be granted for those activities prohibited in §8-106(1) and (3).
  - B. If granted, a variance shall involve only the least modification necessary to provide relief.
  - C. In granting any variance, the Zoning Hearing Board shall 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 Chapter.
  - D. Whenever a variance is granted, the Zoning Hearing Board shall notify the applicant in writing that:
    - (1) The granting of the variance may result in increased premium rates for flood insurance.
    - (2) Such variances may increase the risks to life and property.

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- E. In reviewing any request for a variance, the Zoning Hearing Board shall consider, but not be limited to, the following:
    - (1) That there is good and sufficient cause.
    - (2) That failure to grant the variance would result in exceptional hardship to the applicant.
    - (3) That the granting of the variance will not result in an unacceptable or prohibited increase in 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 ordinance and regulations.
  - F. A complete record of all variance requests and related actions shall be maintained by the Zoning Hearing Board. In addition, a report of all variances granted during the year shall be included in the annual report to the Federal Insurance Administration.
  - G. No variance shall be granted for any construction, development, use, or activity with any floodway area that would cause any increase in the 100 year flood. [Ord. 1989-4]
  - H. No variance shall be granted for any construction, development, use, or activity within any AE area that would, together with all other existing and anticipated development, increase the 100 year flood elevation more than one foot at any point. [Ord. 1989-4]
3. Notwithstanding any of the above, however, all structures shall be designed and constructed so as to have the capability of resisting the 100 year flood.

(Ord. 1986-3, 11/12/1986, Art. VIII; as amended by Ord. 1989-4, 8/16/1989, §IX)