

# *article XI*

## *Flood Hazard District*

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### **SECTION 1100 STATEMENT OF INTENT**

The purpose of the Flood Hazard District is to achieve the following:

- A. Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future.
- B. Minimize danger to public health by protecting water supply and natural drainage.
- C. Reduce financial burdens imposed on the community, its governmental units, and its residents, by preventing excessive development in areas subject to flooding.
- D. To regulate uses which may be dangerous to public health, safety, or welfare in times of flood.
- E. To comply with the provisions of the National Flood Insurance Program and the Pennsylvania Flood Plain Management Act (1978-166).

### **SECTION 1101 GENERAL PROVISIONS**

#### **A. Compliance**

No new structure shall be located or existing structure extended, converted, or structurally altered in any Flood Hazard District without full compliance with the terms of this Article and other applicable regulations, except those structures, land uses, and water uses existing prior to adoption of this Ordinance shall not be made to comply with this Article unless compliance is essential to correct a serious and substantial threat to public health, safety, or property.

#### **B. Disclaimer of Liability**

The degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study. Larger floods may occur on rare occasions or the flood height may be increased by man-made or natural causes. In such events, areas outside the Flood Hazard District or land uses permitted within such areas may be subject to flooding or flood damage. The adoption of this specific Article and Ordinance shall not create liability on the part of the Borough of Spring City or any employee thereof for flood damages that result from reliance on this Ordinance or any administrative decision lawfully made pursuant to its provisions.

**C. Abrogation and Greater Restrictions**

This Ordinance supersedes any other conflicting provisions which may be in effect as identified floodplain areas. However, any other ordinance provisions shall remain in full force and effect to the extent that those provisions are more restrictive.

**D. Applicability**

The provisions of this Article shall apply to all lands within the jurisdiction of the Borough of Spring City and are shown as being located within the boundaries of the Flood Hazard District which is considered as a part of the official zoning map.

***SECTION 1102 IDENTIFICATION OF THE FLOOD HAZARD DISTRICT***

**A. Identification**

For the purposes of this Ordinance, the Flood Hazard District shall be those areas of the Borough identified as being subject to the one-hundred (100) year flood in the Flood Insurance Study dated September 16, 1980 and accompanying maps dated March 16, 1981 prepared for the Borough by the Federal Emergency Management Agency, or the most recent revision thereof.

1. Floodway--The area identified, and specifically designated, as "Floodway" in the Flood Insurance Study prepared by the Federal Emergency Management Agency (FEMA).
2. Flood Fringe--That portion of the floodplain that is outside the floodway. The basis for the outermost boundary of the flood fringe shall be the One-Hundred (100) Year Flood elevations.
3. One-Hundred (100) Year Flood Elevation--For the purposes of this article, the One-Hundred (100) Year Flood elevation shall be used as the basis for regulation.

**B. Changes in Identification of District**

The identified Flood Hazard District may be revised or modified by the Borough Council where natural or man-made changes have occurred and/or more detailed studies conducted or undertaken by the U.S. Army Corps of Engineers, River Basin Commission, or other qualified agency or individual that documents such changes. However, prior to any such change, approval shall be obtained from the Federal Insurance Administration (FIA).

**C. Boundary Disputes**

Should a dispute concerning any identified floodplain boundary arise, an initial interpretation of the boundaries of the Flood Hazard District shall be made by the Borough Planning Commission or any other duly appointed agent or representative. Any party aggrieved by this decision may appeal to the Zoning Hearing Board. The burden of proof shall be on the applicant or appellant. Should the Flood Hazard District be declared inapplicable to any property by reason of amendment by the Borough Council, or interpretation of the Planning Commission or Zoning Hearing Board, or court of competent jurisdiction, the zoning and regulations applicable to such property shall be deemed to be the district in which it is located without consideration of this Article.

***SECTION 1103 DISTRICT OVERLAY***

The Flood Hazard District based on the delineations cited in Section 1102, above, shall be deemed an overlay to the otherwise applicable zoning districts as delineated on the Spring City Borough Zoning Map. Should the Flood Hazard District be determined as inapplicable to any tract by reason of amendment by Borough Council, interpretation by the Zoning Hearing Board, or the decision of a court of competent jurisdiction, the underlying zoning provisions shall be deemed applicable.

***SECTION 1104 FLOODWAY USE REGULATIONS***

In floodway areas, new construction, development, use, activity, or encroachment that would cause any increase in flood heights shall be prohibited.

**A. Uses Permitted By Right**

In the floodway the following uses are permitted by right, and no others, provided that the uses are in compliance with the provisions of the underlying zoning district and are not prohibited by any other ordinance, and provided that the uses do not require structures, fill, or storage of materials and equipment.

1. Agricultural 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, boat launches 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, pervious airport landing strips, etc.

**B. Uses Permitted By Special Exception**

In the floodway areas, the following uses are permitted by Special Exception provided that the uses are in compliance with the provisions of the underlying zoning district, in conformance with this Section, and are not prohibited by any other Ordinance:

1. Uses and activities accessory to the uses and activities Permitted By Right in the floodway, not specified in Sections 1104.A.3 and Section 1104.A.4.
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. 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 materials and equipment are firmly anchored to prevent flotation or movement. Storage of materials and equipment listed in Section 1106.P, Development Which May Endanger Human Life, shall be prohibited in the floodway and the flood fringe.
6. All uses, activities, and structural developments, shall be undertaken in strict compliance with the flood-proofing provisions contained in this Ordinance and all other applicable codes and Ordinances.

***SECTION 1105 FLOOD FRINGE USE REGULATIONS***

In the Flood Fringe areas, the development and/or use of land shall be permitted in accordance with the regulations of the underlying zoning district provided that all such uses, activities and/or development shall be undertaken in strict compliance with the filling, flood-proofing, and related provisions contained in this Ordinance and all other applicable codes and Ordinances.

**A. Residential Structures**

Within any Flood Fringe area, the elevation of the lowest floor (including basement) of any new or substantially improved residential structure shall be one and one half (1 1/2) feet or more above the One-Hundred (100) Year Flood Elevation.

**B. Non-Residential Structures**

1. Within any Flood Fringe area, the elevation of the lowest floor (including basement) of any new or substantially improved nonresidential structure shall be one and one half (1 1/2) feet or more above the One-Hundred (100) Year Flood Elevation or be flood-proofed up to that height.
2. Any non-residential structure, or part thereof, having a lowest floor which is not elevated to at least one and one-half (1 1/2) feet above the one-hundred (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 "Flood-Proofing 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.

**C. Recreational Vehicles**

Any recreational vehicle placed within the Flood Hazard District for one-hundred-eighty (180) days or more become permanent structures and are subject to the requirements stated herein.

***SECTION 1106 FLOOD HAZARD DISTRICT GENERAL REGULATIONS***

The following minimum standards shall apply for all construction and development proposed to be undertaken within any Flood Hazard District.

**A. 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 not steeper than one (1) vertical to two (2) horizontal, unless substantial data, justifying steeper slopes are submitted to, and approved by the Zoning Hearing Board.
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 stormwater 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 be designed to prevent the discharge of excess runoff onto adjacent properties.

**C. Water and Sanitary Sewer Facilities and Systems**

1. All new replacement water and sanitary sewer facilities and systems shall be located, designed and constructed to minimize or eliminate flood damage 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 on-site sewage system shall be located within any identified floodplain area except in strict compliance with all State and local regulations of 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 (1) foot below the One- Hundred (100) Year 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 Section 1106.P, Development Which May Endanger Human Life, shall be stored at least one and one-half (1 1/2) feet above the One-Hundred (100) Year Flood Elevation.

**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 One-Hundred (100) Year Flood Elevation shall be securely anchored or affixed to prevent flotation.

**I. Floors, Walls, and Ceilings**

1. Wood flooring used at or below a point one and one half (1 1/2) feet above the One-Hundred (100) Year 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 a point one and one half (1 1/2) feet above the One-Hundred Year (100) Flood Elevation shall be of a "marine" or "water resistant" variety.
3. Walls and ceilings at or below a point one and one half (1 1/2) feet above the One- Hundred (100) Year 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 a point one and one half (1 1/2) feet above the One-Hundred (100) Year Flood Elevation shall be made of metal or other water-resistant material.

**J. Enclosed Space Below the Lowest Floor**

1. Enclosed space below the lowest floor (including basement) which will be used solely for the parking of a vehicle, building access, or incidental storage in an area other than a basement, shall be designed and constructed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.
2. Designs for meeting this requirement shall either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
  - a. A minimum of two (2) openings having a net total area of not less than one (1) square inch for every square floor of enclosed space.
  - b. The bottom of all openings shall be no higher than one (1) foot above grade.
  - c. Openings may be equipped with screens, louvers, etc. or other coverings or devices that permit the automatic entry and exit of floodwaters.

**K. Paints and Adhesives**

1. Paints or other finishes used at or below a point one and one half (1 1/2) feet above the One-Hundred Year (100) Flood Elevation shall be of "marine" or "water-resistant" quality.
2. Adhesives used at or below a point one and one half (1 1/2) feet above the One-Hundred Year (100) Flood Elevation shall be of a "marine" or "water resistant" quality.
3. All wooden components (doors, trim cabinets, etc.) shall be finished with a "marine" or "water-resistant" paint or other finishing material.

**L. Electrical Components**

1. Electrical distribution panels shall be at least three (3) feet above the One-Hundred (100) Year Flood Elevation.
2. Separate electrical circuits shall serve lower levels and shall be dropped from above.

**M. Heating, Ventilation, and Air Conditioning (HVAC) Equipment**

Water heaters, furnaces, air conditioning and ventilating units and other mechanical or utility equipment or apparatus shall not be located below a point one and one half (1 1/2) feet above the One-Hundred (100) Year Flood Elevation.



**N. 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 in flood waters. Additional provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

**O. Manufactured Homes**

Where permitted, 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 is one and one-half (1 1/2) feet or more above the elevation of the One-Hundred (100) Year Flood Elevation.
3. anchored to resist flotation, collapse, or lateral movement.

**P. Development Which May Endanger Human Life**

In accordance with the Pennsylvania Floodplain Management Act, and the regulations adopted by the Department of Community Affairs as required by the Act, 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 five-hundred-fifty (550) gallons or other comparable volume or any amount of radioactive substances) of any of the following dangerous materials or substances on the premises, shall not be permitted within the limits of the identified Flood Hazard District:

1. Acetone
2. Ammonia
3. Benzene
4. Calcium carbide
5. Carbon disulfide
6. Celluloid
7. Chlorine
8. Hydrochloric acid
9. Hydrocyanic acid
10. Magnesium
11. Nitric acid and oxides of nitrogen
12. Petroleum products (gasoline, fuel oil, etc.)
13. Phosphorus
14. Potassium
15. Sodium

16. Sulphur and sulphur products
17. Pesticides (including insecticides, fungicides, and rodenticides)
18. Radioactive substances, insofar as such substances are not otherwise regulated.
19. Other substances as may be defined as hazardous by the Pennsylvania Department of Community Affairs or Department of Environmental Resources

***SECTION 1107 PROHIBITED USES***

Any construction, enlargement, or expansion of any structure used, or intended to be used, for any of the following activities shall be prohibited within an identified Flood Hazard District:

- A. Hospitals (public or private)
- B. Nursing Homes (public or private)
- C. Jails or Prisons
- D. Manufactured Home Parks and Manufactured Home Subdivisions

***SECTION 1108 EXISTING STRUCTURES LOCATED WITHIN THE FLOOD HAZARD DISTRICT***

Structures existing in any identified Flood Hazard District prior to the enactment of this Article, but that are not in conformity with these provisions, may be continued subject to the following provisions:

- A. No expansion or enlargement of an existing structure shall be permitted within any identified Floodway that would cause any increase in flood heights.
- B. 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 constitute a substantial improvement and shall be undertaken only in full compliance with the provisions of this Article.
- C. 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 flood-proofed to the greatest extent possible.

***SECTION 1109 VARIANCES***

- A. If compliance with any of the requirements of this Ordinance would result in an exceptional hardship to a prospective builder, developer, or landowner, the Zoning Hearing Board may, upon request, grant relief from the strict application of the requirements.
- B. Requests for variances shall be considered by the Zoning Hearing Board in accordance with the procedures contained in Article XVIII, Zoning Hearing Board, and the following:

1. No variance shall be granted for any construction, development, use or activity within any floodway area that would cause any increase in the One-Hundred (100) Year Flood Elevation.
  2. No variance shall be granted that would allow any of the development specifically prohibited by subsection 1106.P, Development Which May Endanger Human Life, and Section 1107, Prohibited Uses.
  3. If granted, a variance shall involve only the least modification necessary to provide relief.
  4. 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 Ordinance.
  5. Whenever a variance is granted, the Zoning Hearing Board 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.
  6. In reviewing any request for a variance, the Zoning Hearing Board shall consider, at a minimum 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 neither result in an unacceptable or prohibited increase in flood heights, additional threats to public safety or extraordinary public expense; nor create nuisances, cause fraud on, or victimize the public or conflict with any other applicable state or local ordinances and regulations.
  7. A complete record of all variance requests and related actions shall be maintained by the Borough. 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 One-Hundred (100) Year Flood.

**SECTION 1110 FLOOD HAZARD DISTRICT ADMINISTRATION**

**A. Building Permits Required**

Building Permits shall be required before any construction or development is undertaken within any area of the Borough.

**B. Issuance of Building Permit**

1. The Building Permit Officer or representing agent shall issue a Building 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.
2. Prior to the issuance of any building permit the Code Enforcement Officer or representing agent 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 U.S. Clean Water Act, Section 404, 33, U.S.C. 1334. No permit shall be issued until this determination has been made.
3. No encroachment, alteration, or improvement of any kind shall be made to any watercourse until all adjacent municipalities which may be affected by such action have been notified by the Borough and until all required permits or approvals have been first obtained from the Department of Environmental Resources, Bureau of Dams and Waterway Management.

**C. Application Procedures and Requirements**

1. Application for such a building permit shall be made, in writing, to the Building Permit Officer or representing agent on forms supplied by the Borough. Such application shall contain the following:
  - a. Name and address of applicant;
  - b. Name and address of owner of land on which proposed construction is to occur;
  - c. Name and address of contractor;
  - d. Site location;
  - e. Listing of other permits required;
  - f. Brief description of proposed work and estimated cost; and

- g. A plan of the site showing the exact size and location of the proposed construction as well as any existing buildings or structures.
2. If any proposed construction or development is located entirely or partially within any identified Flood Hazard District, applicants for Building Permits shall provide all the necessary information in sufficient detail and clarity to enable the Building Permit Officer or representing agent to determine that:
- a. 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;
  - b. All utilities and facilities, such as sewer, gas, electrical and water system are located and constructed to minimize or eliminate flood damage; and
  - c. Adequate drainage is provided so as to reduce exposure to flood hazards.
3. Applicants shall file the following minimum information plus any other pertinent information as may be required by the Building Permit Officer or representing agent of the Borough to make the above determination:
- a. A completed Building Permit Application Form.
  - b. A plan of the entire site, clearly and legibly drawn at a scale of one (1) inch being equal to one-hundred (100) feet or less, showing the following:
    - 1. North arrow, scale, and date;
    - 2. Topographic contour lines;
    - 3. All property and lot lines including dimensions, and the size of the site expressed in acres or square feet;
    - 4. The location of all existing and proposed buildings, structures, and other improvements, including the location of any existing or proposed subdivision and land development;
    - 5. The location of all existing streets, drives, and other accessways; and
    - 6. 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 One-Hundred (100) Year Flood Elevation;
  - 3. If available, information concerning flood depths, pressures, velocities, intact and uplift forces and other factors associated with One-Hundred (100) Year Flood; and
  - 4. Detailed information concerning any proposed flood-proofing measures.
- d. 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 One-Hundred (100) Year Flood Elevations, pressures, velocities, impact and uplift forces associated with the One-Hundred (100) Year Flood.
- e. Such statement shall include a description of the type and extent of flood-proofing measures which have been incorporated into the design of the structure and/or the development.
- f. Detailed information needed to determine compliance with Section 1106.F, Storage, and Section 1106.P, Development Which May Endanger Human Life, including:
  - 1. The amount, location and purpose of any materials or substances referred to in Sections 1106.F and 1106.P which are intended to be used, produced, stored or otherwise maintained on site.
  - 2. A description of the safeguards incorporated into the design of the proposed structure to prevent leaks or spills of the dangerous materials or substances listed in Section 1106.P during a One-Hundred (100) Year Flood.
- g. The appropriate component of the Department of Environmental Resources "Planning Module for Land Development."
- h. Where any excavation or grading is proposed, a plan meeting the requirements of the Department of Environmental Resources, to implement and maintain erosion and sedimentation control.