

119
Upper Bern Township Ordinance Number - 2012

An Ordinance of Upper Bern Township, Berks County, Pennsylvania, which is intended to provide certain provisions and regulation relative to the Floodplain Overlay District, as may be further specified and regulated by the Upper Bern Township Zoning Ordinance of 2008, as amended.

Whereas, the Commonwealth of Pennsylvania has by the passage of the Pennsylvania Flood Plain Management Act of 1978, delegated the responsibility to local governmental units to adopt floodplain management regulations in order to promote public health, safety, and the general welfare of its citizenry.

Whereas, the Upper Bern Township Board of Supervisors after conducting a public hearing has determined that the health, safety and general welfare of the residents and landowners of Upper Bern Township by providing provisions and regulations for the Upper Bern Township Floodplain Overlay District.

Now, therefore, be it ordained and enacted that the Upper Bern Township Floodplain Ordinance shall be hereby adopted by the Upper Bern Township Board of Supervisors as follows:

Section 1: Upper Bern Township Floodplain Ordinance

- (A) Purpose: The Floodplain Overlay District is hereby established to meet the following objectives
- (1) To promote the general health, welfare and/or safety of the community.
 - (2) To encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future.
 - (3) To minimize danger to public health by protecting water supply and natural drainage.
 - (4) To reduce the financial burdens imposed on the community, governmental or municipal units, and its resident, by preventing excessive development in areas subject to flooding.
 - (5) To require 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.
 - (6) To comply with federal and state floodplain management requirements.
 - (7) To implement the recommendations concerning natural features, conservation management and land use, as outlined within the Comprehensive Plan, Zoning Ordinance and the Floodplain Ordinance.
- (B) Abrogation of Greater Restrictions: This Floodplain Ordinance supersedes any other conflicting provisions which may be in effect in identified floodplain areas. However, any other ordinance provisions shall remain in full force and effect to the extent that those provisions are more restrictive. If there is any conflict between any of the provisions of this Floodplain Ordinance, the more restrictive shall apply.
- (C) Terminology: The Floodplain Overlay District shall include the land or water areas of Upper Bern Township, which are inundated or contained within such flood-prone features including the floodway, the floodway fringe, the 100-year floodplain, special flood hazard area, and other flood-prone features defined by the Federal Emergency Management Agency (FEMA). These flood hazard areas are subject to periodic inundation of flood waters, which could result, or has resulted, in loss of property, damage to structures, loss of soils and other detrimental effects of erosion and may result in loss of life, injury to people, disruption of public and private activities and services, burdensome public expenditures for flood protection and impairment of the tax base, all of which do or may adversely affect the public health, safety and general welfare. The flood losses are or will be caused by the cumulative effect of obstructions in flood hazard areas causing increases in flood heights and velocities and the occupancy of flood hazard areas by uses vulnerable to floods. The following subordinate definitions that are relative to the Floodplain Overlay District are hereby specified and defined:

- (1) Accessory Use or Structure: A use or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.
- (2) Base Flood: A flood which has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood" or one-percent (1%) annual chance flood).
- (3) Base Flood Discharge: The volume of water resulting from a Base Flood as it passes a given location within a given time, usually expressed in cubic feet per second (cfs).
- (4) Base Flood Elevation (BFE): The elevation shown on the Flood Insurance Rate Map (FIRM) for Zones AE, AH, A1-30 that indicates the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.
- (5) Basement: Any area of the building having its floor below ground level on all sides.
- (6) Building: A combination of materials to form a permanent structure having walls and a roof. Included shall be all manufactured homes and trailers to be used for human habitation.
- (7) Channel: A natural or artificial watercourse with a definite bed and banks which confine and conduct continuously or periodically flowing water.
- (8) Channel Flow: That water which is flowing within the limits of a defined channel.
- (9) 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.
- (10) Conservation Plan: A plan including a map(s) and narrative that, at the very least, outlines an erosion and sedimentation control plan for an identified parcel of land.
- (11) Development. Any manmade change to improved or unimproved real estate, including but not limited to the construction, reconstruction, renovation, repair, expansion, or alteration of buildings or other structures; the placement of manufactured homes; streets, and other paving; utilities; filling, grading and excavation; mining; dredging; drilling operations; storage of equipment or materials; and the subdivision of land.
- (12) Driveway: A privately owned and constructed access drive, providing vehicular access between a public road or an approved private lane into the lot or parcel having frontage on the road.
- (13) 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.
- (14) Existing Manufactured Home Park or Subdivision: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community:
- (15) Expansion to an Existing Manufactured Home Park or Subdivision: The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
- (16) Fill: Material placed or deposited so as to form an embankment or raise the surface elevation of the land, including but not limited to levees, bulkheads, dikes, jetties, embankments, and causeways.

- (17) Flood: A temporary inundation of normally dry land areas. The definition of “flood” shall also apply to “flooded” and “flooding”.
- (18) Flood Insurance Rate Map (FIRM): The official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
- (19) Flood Insurance Study (FIS): The official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Insurance Rate Map, the Flood Boundary and Floodway Map, and the water surface elevation of the base flood.
- (20) Flood of Record: The flood which has reached the highest flood elevation above mean sea level at a particular location.
- (21) Floodplain: A relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby stream, river or watercourse; and/or any area subject to the unusual and rapid accumulation of surface waters from any source. The definition of “floodplain” shall also apply to “floodplain area”.
- (22) Flood-Proofing: Any combination of structural and nonstructural 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. The definition of “flood proofing” shall also apply to “flood proof” and “flood proofed”.
- (23) Floodway: The channel of a stream or other watercourse plus any adjacent floodplain areas that must be kept free of encroachment so that the base flood can be carried without substantial increase in flood height.
- (24) Highest Adjacent Grade: The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
- (25) Historic Structure: Any structure that is:
- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
 - (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states without approved programs.
 - (e) As defined or identified as a “Historic Resource” or “Historic Site” by the Comprehensive Plan and/or by the Zoning Ordinance.
- (26) Identified Floodplain Area: The floodplain area specifically identified in this Floodplain Ordinance as being inundated by the one hundred (100) year flood.

- (27) Lowest Floor: The lowest floor of the lowest fully enclosed area (including basement). An unfinished, flood resistant partially enclosed area, used solely for parking of vehicles, building access, and incidental storage, in an area other than a basement area is not considered the lowest floor of a building, provided that such space is not designed and built so that the structure is in violation of the applicable non-elevation design requirements of this Floodplain Ordinance.
- (28) 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 attached to the required utilities. The term excludes park trailers, travel trailers, recreational and other similar vehicles which are placed on a site for more than 180 consecutive days. The terms and specifications for Manufactured Homes in the UCC shall also apply.
- (29) Manufactured Home Park: A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale. Also refer to the principal definition of "Mobile Home Park" contained within the Zoning Ordinance.
- (30) Maximum Flood Elevation: The water surface elevations of a flood which would completely fill the floodplain to the boundaries of the Floodplain Overlay District.
- (31) Mean Sea Level: The average height of the sea for all stages of the tide, using the National Geodetic Vertical Datum of 1988.
- (32) 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 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, oil, waste, vent, or piping, electric wiring or mechanical or other work affecting the public health or general safety.
- (33) New Construction: Structures for which the start of construction commenced on or after July 3, 2012, and includes any subsequent improvements to such structures. Any construction started after November 5, 1982 and before July 3, 2012 is subject to the ordinance in effect at the time the permit was issued, provided that the start of construction was within 180 days of permit issuance.
- (34) New Manufactured Home Park or Subdivision: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) has been completed on or after November 5, 1982.
- (35) Obstruction: Any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel rectification, bridge, conduit, culvert, building, wire, rock, gravel, refuse, fill, structure, or other matter in, along, across or projecting into any channel, watercourse, or floodplain, 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 that is placed where the flow of water might carry the same downstream to cause damage to life or property.
- (36) 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 given year). This term may also be referred to as "Special Flood Hazard Area", which is further defined and regulated within the Upper Bern Township Floodplain Ordinance.
- (37) 100-Year Flood Boundary: The outer boundary of an area of land that is likely to be flooded once every 100 years (i.e. that has a one percent chance of being flooded each year). A study by the Federal Insurance Administration, the United States Army Corps of Engineers, the United States Department of Agriculture's Soil Conservation Service, the United States Geological Survey, the Delaware River Basin Commission, or a licensed professional engineer registered by the Commonwealth of Pennsylvania is necessary to define this boundary.

- (38) 100-Year Flood Elevation: The water surface elevations of the 100-year flood.
- (39) Person: An individual, partnership, public or private association or corporation, firm, trust, estate, municipality, governmental unit, public utility or any other legal entity whatsoever, which is recognized by law as the subject of rights and duties.
- (40) Pesticide: Any substance or mixture of substances intended for use in preventing, destroying, repelling, sterilizing, or mitigating any insects, rodents, nematodes, predatory animals, fungi, weeds, or other forms of plant or animal life.
- (41) Petroleum Product: Oil or petroleum of any kind and in any form, including crude oil and derivatives of crude oil. It may be alone, as a sludge, as oil refuse, or mixed with other wastes.
- (42) Post-FIRM Structure: A structure for which construction or a substantial improvement occurred after November 5, 1982 or on or after the initial Flood Insurance Rate Map (FIRM) for Upper Bern Township, whichever is later, and as such, would be required to be compliant with the regulations of the National Flood Insurance Program.
- (43) Pre-FIRM Structure: A structure for which construction or a substantial improvement occurred on or before November 5, 1982 or before the initial Flood Insurance Rate Map (FIRM) for Upper Bern Township, and as such, would not be required to be compliant with the regulations of the National Flood Insurance Program.
- (44) Radioactive Material: Any natural or artificially produced substance which emits radiation spontaneously.
- (45) Recreational Vehicle. A vehicle which is: (1) built on a chassis; (2) not more than four hundred (400) square feet, measured at the largest horizontal projections; (3) designed to be self-propelled or permanently towable by a light-duty truck; (4) not designed for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
- (46) Regulatory Flood Elevation: The base flood elevation (BFE) or estimated flood height as determined using simplified methods plus a freeboard safety factor of one and one-half (1 ½) feet.
- (47) Repetitive Loss: Flood related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.
- (48) Solid Waste: Garbage, sludge, refuse, trash, rubbish, debris, and other discarded materials, including but not limited to solid and liquid waste materials, resulting from industrial, commercial, agricultural, residential, and community activities.
- (49) Special Flood Hazard Area (SFHA): An area in the floodplain subject to a one (1) percent or greater chance of flooding in any given year. The SFHA is shown on the Flood Insurance Rate Map (FIRM) as Zone A, AO, A1-A30, AE, A99, or, AH.
- (50) Special Permit: A special approval which is required for hospitals, nursing homes, jails, and new manufactured home parks and subdivisions and substantial improvements to such existing parks, when such development is located in all, or a designated portion of a floodplain.
- (51) Start of Construction: Includes substantial improvement and other proposed new development and means the date the Permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within twelve (12) months from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or

the placement of a manufacture home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building

- (52) Structure: A walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.
- (53) Subdivision: The division or re-division of a lot, tract or parcel of land by any means into two (2) 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, partition by the court for distribution to heirs or devisees, transfer of ownership or building or lot development. The lease of land for agricultural purposes into parcels of more than ten (10) acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.
- (54) Substantial Damage: Damage from any cause sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50%) percent or more of the market value of the structure before the damage occurred.
- (55) Substantial Improvement. Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which exceeds fifty (50) percent of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred substantial damage or repetitive loss regardless of the actual repair work performed. This term does not, however, include either:
 - (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code official and which are the minimum necessary to assure safe living conditions, or;
 - (b) Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined in this ordinance, must comply with all ordinance requirements that do not preclude the structure's continued designation as a historic structure. Documentation that a specific ordinance requirement will cause removal of the structure from the National Register of Historic Places or the State Inventory of Historic places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.
- (56) Uniform Construction Code (UCC): The statewide building code adopted by The Pennsylvania General Assembly in 1999 applicable to new construction in all municipalities whether administered by the municipality, a third party or the Department of Labor of Industry. Applicable to residential and commercial buildings, The Code adopted The International Residential Code (IRC) and the International Building Code (IBC), by reference, as the construction standard applicable with the Commonwealth of Pennsylvania floodplain construction. For coordination purposes, references to the above are made specifically to various sections of the IRC and the IBC.
- (57) Violation: The failure of a structure or other development to be fully compliant with the floodplain management regulations of Upper Bern Township. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required under 44 CFR Sections 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

- (D) Application of Provisions: The provisions of the Floodplain Ordinance are intended to:
- (1) Establish an overlay zone which is applicable to floodplains and surface water features within all zoning districts established by the Upper Bern Township Floodplain Ordinance and the Zoning Ordinance.
 - (2) To the extent of the provisions of the Floodplain Ordinance are more restrictive, they shall supersede conflicting provisions within all other ordinances of Upper Bern Township. However, all other provisions of all other ordinances adopted by Upper Bern Township shall remain in full force and effect to the extent that those provisions are more restrictive. If there is any conflict between any of the provisions of this ordinance, the more restrictive shall apply.
- (E) Regulatory Officer: The Upper Bern Township Zoning Officer shall be designated as the Floodplain Administrator for Upper Bern Township. The Zoning Officer shall be responsible for the following floodplain management duties:
- (1) It shall be unlawful for any person, partnership, business or corporation to undertake, or cause to be undertaken, any construction or development anywhere within Upper Bern Township unless a permit has been obtained from the Zoning Officer.
 - (2) 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 Floodplain Ordinance and all other applicable codes and ordinances.
 - (3) Prior to the issuance of a permit, the Zoning Officer shall review the application for the permit to determine if all other necessary required by state and federal laws have been obtained, such as those required by the Pennsylvania Sewage Facilities Act, the Pennsylvania Dam Safety and Encroachments Act, the Pennsylvania Clean Streams Act, and the U.S. Clean Water Act, and other relative laws. No permit shall be issued until this determination has been made.
 - (4) During the construction period, the Zoning Officer or other municipal official authorized by Upper Bern Township shall inspect the premises to determine that the work is progressing in compliance with the information provided on the permit application and with all applicable municipal laws and ordinances. The Zoning Officer shall make as many inspections during and upon completion of the work as are necessary.
 - (5) The Zoning Officer shall have the authority to enter any building, structure, premises or development in the identified floodplain area, upon presentation of proper credentials, at any reasonable hour to enforce the provisions of this Floodplain Ordinance and the Zoning Ordinance.
 - (6) In the event the Zoning Officer discovers that the work does not comply with the permit application or any applicable laws and ordinances, or that there has been a false statement or misrepresentation by any applicant, the Zoning Officer shall revoke the permit and report such fact to the Upper Bern Township Board of Supervisors for whatever action it considers necessary.
 - (7) The Zoning Officer shall maintain all records associated with the requirements of this ordinance including, but not limited to, permitting, inspection and enforcement.
 - (8) The Upper Bern Township Engineer or Planning Consultant may provide technical assistance with the review of any application and/or site improvements within the Floodplain Overlay District.
- (F) Lands in Districts Defined: The Floodplain Overlay District is hereby defined to include all the following lands within Upper Bern Township:
- (1) The identified floodplain area shall be those areas of the Upper Bern Township, which are subject to the one hundred (100) year flood, as identified in the Flood Insurance Study (FIS) and Flood

Insurance Rate Maps (FIRM) prepared for Berks County by the Federal Emergency Management Agency (FEMA), as dated July 3, 2012 or the most recent revision thereof. The above referenced FIS and FIRM, and any subsequent revisions and amendments are hereby adopted by Upper Bern Township and declared to be part of this Floodplain Ordinance.

- (2) All land within the 100-year flood boundaries of all watercourses, including but not limited to all land which is so identified by the United States Geological Survey or the United States Army Corps of Engineers.
 - (3) All land which has been flooded by floods of record.
 - (4) The "A Area or District" shall be those areas identified as an "A Zone" on the FIRM included in the FIS prepared by FEMA and for which no one (1) percent annual chance 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
 - (5) Where the complete and definitive information necessary to delineate the boundary of the Floodplain Overlay District is not available to the Zoning Officer as part of the review and consideration of a permit, the Zoning Officer may require such on-site studies and/or surveys to be made as are necessary to fix the precise boundaries of the Floodplain Overlay District, as defined by this Floodplain Ordinance. Such studies and surveys shall be signed, sealed, and certified by a licensed professional engineer registered by the Commonwealth of Pennsylvania to perform such studies and surveys. Such certification shall acknowledge the accuracy of the study or survey and the qualifications of the individual to perform such study or survey. Copies of such studies and surveys shall be submitted by the Upper Bern Township Zoning Officer, Engineer and the United States Department of Agriculture's Soil Conservation Service, who shall have thirty (30) days to comment. Any property owner whose property is so studied and/or surveyed to justify an application for a permit shall pay all costs of these studies and surveys, except for work done under retainer to or on behalf of Upper Bern Township.
- (G) **Boundary Disputes:** The following provisions shall apply to boundary disputes within the Floodplain Overlay District:
- (1) Should any person dispute the initial boundary determination of the Floodplain Overlay District made by the Zoning Officer, an appeal shall be submitted to the Zoning Hearing Board in accordance with the provisions specified by this Floodplain Ordinance and the Zoning Ordinance. The burden of proof in such an appeal shall be on the property owner. The property owner shall pay all costs associated with the hearing before the Zoning Hearing Board, including all costs and fees for: advertising the public notice; the Zoning Hearing Board members; the Zoning Officer; the municipal solicitor; and for all stenographic records including the attendance of a stenographer and, when necessary, the transcription of the record.
 - (2) All changes to the boundaries of the Floodplain Overlay District which affect areas identified under this Floodplain Ordinance or the Zoning Ordinance are subject to the review and approval of the Federal Insurance Administrator for compliance with the Rules and Regulations of the National Flood Insurance Program.
- (H) **Uses Permitted by Right:** The following uses, when permitted in the underlying zoning district, and no others, are permitted in the Floodplain Overlay District and they are permitted only if done under and in accordance with the provisions of the Clean Streams Law of Pennsylvania, Act 394 of 1937, as amended, the rules and regulations of the Pennsylvania Department of Environmental Protection (DEP), and all other provisions of this Floodplain Ordinance and the Zoning Ordinance:

- (1) Agricultural operation, subject to the provisions of the Zoning Ordinance, excluding any fill or structures and excluding any grading or filling which would cause any increase in flood heights or frequency.
- (2) Erosion and sedimentation control measures, facilities, and structures, provided no unhealthful ponding or other unsanitary conditions shall occur.
- (3) Recreation uses that are defined as a municipal recreation uses, private recreation uses, restricted recreation uses and/or commercial recreation uses, subject to the provisions of the Zoning Ordinance. Such recreation uses may include parks, playgrounds, picnic areas, swimming areas (excluding swimming pools), play areas, day camps, campgrounds (excluding campsites), lawns, gardens, golf courses, golf driving ranges, archery ranges, game farms, areas or clubs for hunting, fishing, and/or boating (including marker or anchor buoys), paved bicycle paths, and hiking and horseback riding trails, all excluding any fill or structures and excluding any grading or filling which would cause any increase in flood heights or frequency.
- (4) Harvesting of any wild crop, such as marsh hay, ferns, moss, berries, tree fruits and seeds, or wild rice.
- (5) Activities related to the preservation of natural amenities, including wildlife sanctuaries, nature preserves, woodland preserves, botanical gardens, or arboretums, excluding any fill or structures and excluding any grading or filling which would cause any increase in flood heights or frequency.
- (6) Open space and front, side, or rear yard required by other provisions of this Floodplain Ordinance and the Zoning Ordinance. Floodplain land may be used to meet minimum open space, yard and lot area requirements, provided that the purpose and intent of this Floodplain Ordinance and the Zoning Ordinance.
- (7) Stream improvements whose sole purpose is to improve aquatic life habitat, and which are reviewed and approved by the Pennsylvania Fish Commission, the Pennsylvania department of Environmental Protection, and other agencies with jurisdiction.
- (8) One or two strand fences.
- (9) Picnic tables, park benches, fireplaces and grills, and playground equipment, all if anchored to prevent flotation.
- (10) Blinds for the shooting or observation of wildlife, provided that such blinds may only be placed, erected, and maintained during the open season established by the Pennsylvania Game Commission for the taking of migratory waterfowl and the three (3) weeks immediately preceding and the three weeks immediately following that open season. Blinds must be removed during all other times of the year.
- (11) Farm ponds which are constructed in accordance with a Conservation Plan, which has been reviewed and approved by the Pennsylvania Department of Environmental Protection and which do not create any increase in flooding, and subject to the provisions of this Floodplain Ordinance and the Zoning Ordinance.
- (12) Flood-proofing and flood hazard reduction structures to protect only lawfully existing non-conforming structures and lawfully existing non-conforming uses within structures.
- (13) Public utility facilities (except buildings) under the exclusive jurisdiction of the Pennsylvania Public Utility Commission and specifically exempted from control by municipal zoning ordinances, subject to the provisions of this Floodplain Ordinance and the Zoning Ordinance.
- (14) Marker buoys.

- (I) Uses Permitted by Special Exception: The following uses are permitted within the Floodplain Overlay District only when a special exception has been granted by the Zoning Hearing Board in accordance with this Floodplain Ordinance and the Zoning Ordinance, and when done under and in accordance with the provisions of the Clean Streams Law of Pennsylvania and the rules and regulations of the Pennsylvania Department of Environmental Protection (DEP):
- (1) One-story tool or utility sheds, not exceeding eight hundred (800) square feet in size provided that the same are anchored to a permanent foundation, that the shed, together with attendant utility and sanitary facilities, are flood-proofed to the elevation of the 100-year flood elevation, and provided that no such sheds are permitted in the floodway.
 - (2) Parking lots, loading areas, driveways, and aircraft landing strips and taxiways, if they are water-permeably surfaced, and if they are consistent with the provisions of this Floodplain Ordinance and the Zoning Ordinance.
 - (3) Water oriented uses such as docks, piers, wharves, marinas, boat liveries, and boat launching ramps.
 - (4) Subdivision proposals and development proposals containing at least fifty (50) lots or site improvements on at least five (5) acres, whichever is the lesser, in flood hazard areas where base flood elevation data are not available. All such applications shall be supported by hydrologic and hydraulic engineering analyses that determine base flood elevations and floodway information. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.
 - (5) Public utility facilities not under the exclusive jurisdiction of the Pennsylvania Public Utility Commission, subject to the following conditions:
 - (a) Facilities such as pipelines, gas lines, storm sewers, sanitary sewers, water lines, outlet installations for sewage treatment plants, sealed public and private water supply wells, pumping stations, and underground communications facilities, shall, together with associated structures, but excepting necessary vents, be designed and installed underground so as to be at or below the existing natural surface grade within the floodplain, and in such a manner as will prevent flotation, minimize or eliminate flood damage, and not alter the cross-sectional area of the floodplain. All new or replacement water supply facilities and/or sanitary sewage facilities shall be designed to minimize or eliminate infiltration of floodwaters into the facilities and discharges from the facilities into floodwaters. All gas lines shall have a system of shut-off valves for service to the Floodplain Overlay District to allow positive control during flood emergencies.
 - (b) Electrical transmission lines and supporting structures shall be installed so as to minimize or eliminate flood damage and all lines of less than 15 kilovolts shall be installed underground, below the existing natural surface grade within the floodplain. Above ground electrical transmission lines of 15 kilovolts or more may be allowed above ground as a special exception, provided they are certified by a licensed professional engineer registered by the Commonwealth of Pennsylvania.
 - (6) Fish hatcheries, including uncovered ponds and raceways, which are approved by the Pennsylvania Fish Commission, but excluding other structures.
 - (7) Water monitoring devices.
 - (8) Streets, provided that the finished elevation is no more than one (1) foot below the regulatory flood elevation.

- (9) Culverts, bridges, and approaches to public and private culverts and bridges provided the same meet all the following conditions:
 - (a) Review and/or approval by the Berks County Planning Commission, if required.
 - (b) Approval by the Delaware River Basin Commission, if required.
 - (c) Approval by the Pennsylvania Department of Environmental Protection, if required.
 - (d) Approval by the Pennsylvania Department of Transportation (PennDOT), if required.
 - (e) If approval by PennDOT is not required, the proposed use must still meet all of the appropriate minimum design standards of PennDOT.
 - (f) Approval by the United States Army Corps of Engineers, if required.
 - (g) The proposed structure must be designed in such a way as to have the capacity to allow the unrestricted passage of waters of maximum flood elevation below and through it without any upstream or downstream increase in water surface elevation.
- (10) Other uses similar to the above, provided the use will not reduce the cross-sectional area of the floodplain.
- (J) Standards and Criteria for Special Exceptions: In addition to the provisions specified within this Floodplain Ordinance and the Zoning Ordinance, the Zoning Hearing Board shall also determine that the following standards and criteria have been complied with:
 - (1) That danger to life and property due to increased flood heights, velocities, or frequencies caused by encroachments, is minimized.
 - (2) That no or a minimum of floodwaters or materials will be swept onto other lands or downstream to cause injury to others.
 - (3) That the possibility of disease, contamination, and unsanitary conditions is minimized.
 - (4) The proposed facility needs a waterfront or floodplain location.
 - (5) That available alternative locations not subject to flooding for the proposed use do not exist.
 - (6) That the proposed use is compatible with existing and anticipated development.
 - (7) That the proposed use is consistent with the Comprehensive Plan and any floodplain management program for the area.
 - (8) The safety of access to the property in times of flood for ordinary and emergency vehicles will be assured.
 - (9) That the expected area, height, depth, velocity, pressure, frequency, duration, rate of rise, seasonality, and sediment debris, and pollutant load of floodwaters expected at the site is not inconsistent with the proposed use.
 - (10) That the proposed activity will not unduly alter natural water flow or water temperature.
 - (11) That archaeological or historic sites and structures, endangered or threatened species of animals or plants, high quality wildlife habitats, scarce vegetation types, and other irreplaceable land uses will not be degraded or destroyed.

- (12) That the natural, scenic, and aesthetic values at the proposed site will be conserved.
- (13) That a minimal amount of danger, damage, and injury to all adjoining properties on both sides of any watercourse, regardless of municipality, will occur. In this regard, any proposal affecting an adjacent municipality shall be submitted to that municipality's planning commission and governing body for review and comment.
- (14) That the grant of the special exception shall not cause:
 - (a) Increase in flood heights.
 - (b) Additional threats to public safety.
 - (c) Extraordinary public expense.
 - (d) Creation of nuisances.
 - (e) Conflict with local laws or ordinances.
- (15) Upon deciding if a special exception should be granted or denied under the provisions of this Floodplain Ordinance and the Zoning Ordinance, the burden of proof shall be on the applicant. The Zoning Hearing Board may require the applicant to submit such plans, specifications, and other information as it may deem necessary to assist it in arriving at a fair and impartial determination. Such required information may include, but is not limited to, the following:
 - (a) Plans drawn to scale showing the nature, location, dimensions, and elevation of the lot, existing or proposed structures, fill, storage of materials, flood-proofing measures, and the relationship of the above to the location of the channel.
 - (b) A typical valley cross-section showing the channel of the watercourse, elevation of land areas adjoining each side of the channel, cross-sectional areas to be occupied by the proposed development, and high water information.
 - (c) A plan (surface view) showing elevations or contours of the ground; pertinent structure, fill, or storage elevations; size, location, and spatial arrangement of all proposed and existing structures on the site; location and elevations of streets, water supply facilities, and sanitary facilities; photographs showing existing land uses and vegetation upstream and downstream; soil types; and other pertinent information.
 - (d) A profile showing the slope of the bottom of channel or flow line of the watercourse.
 - (e) Specifications for building construction and materials, flood-proofing, filling, dredging, grading, channel improvement, storage of materials, water supply facilities and sanitary facilities.
- (16) Upon deciding if a special exception should be granted or denied under the provisions of this Floodplain Ordinance and the Zoning Ordinance, the Zoning Hearing Board may call upon experts or authorities it may deem necessary to assist it in arriving at a fair and impartial determination.
- (17) In granting any special exception, the Zoning Hearing Board may attach such reasonable conditions and safeguards, in addition to those expressed in this Floodplain Ordinance and the Zoning Ordinance, as it may deem necessary to implement the purpose of this Floodplain Ordinance and the Zoning Ordinance.
- (18) Any fees assessed an applicant for a special exception, whether for a hearing or any other purpose, shall not exceed those costs directly associated with the particular application.

- (K) Variances: Variances from the provisions of this Floodplain Ordinance and the Zoning Ordinance should be discouraged. However, if a variance is essential, the following requirements of the National Flood Insurance Program must be complied with in addition to all other variance provisions specified by this Floodplain Ordinance, the Zoning Ordinance and the Pennsylvania Municipalities Planning Code:
- (1) In all variance proceedings the burden of proof shall be on the applicant.
 - (2) No variance shall be granted for any development, structure, use, or activity within the Floodplain Overlay District which would cause any increase in flood levels during the 100-year flood as defined by this Floodplain Ordinance and the Zoning Ordinance.
 - (3) Variances shall only be granted upon:
 - (a) A showing of good and sufficient cause;
 - (b) A determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - (c) A determination that the granting of a variance will not result in 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 laws, ordinances, or regulations.
 - (d) That the grant of a variance will not jeopardize the flood insurance program of Upper Bern Township
 - (4) Variances shall only be granted upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (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 variance may increase the risks to life and property.
 - (6) A complete record of all variance requests and actions, including justifications for granted variances, shall be maintained by Upper Bern Township.
- (L) Prohibited Uses: The following uses are prohibited within the Floodplain Overlay District:
- (1) All uses prohibited either expressly or implicitly in the underlying zoning district for the land in question.
 - (2) All structures, with the exception of those specifically allowed by this Floodplain Ordinance and the Zoning Ordinance.
 - (3) Sanitary landfills, dumps, junk and salvage yards, and outdoor storage of vehicles and/or materials.
 - (4) Placing, depositing and dumping any spoil, fill, or solid waste except such grading, filling or depositing necessary to accomplish and carry out the permitted uses and uses by special exception specified this Floodplain Ordinance and the Zoning Ordinance; provided, however, that no grading or filling is permitted which would cause any increase in flood heights or frequency.

- (5) Removal of topsoil, excluding sod production and nursery activities as allowed by this Floodplain Ordinance and the Zoning Ordinance, unless the removal of topsoil is necessary to accomplish the site improvement for the permitted uses specified by this Floodplain Ordinance and the Zoning Ordinance.
- (6) Grading, filing and/or earth disturbance activities that would cause any increase in flood heights or frequency.
- (7) Damming or relocation of any watercourse, except as permitted by this Floodplain Ordinance.
- (8) Any parts of any on-site sewage disposal systems.
- (9) Swimming pools.
- (10) Stockpiling, storage, or disposal of buoyant materials, logging slash, herbicides, pesticides, domestic or industrial waste, radioactive materials, petroleum or other flammable materials, explosives, poisonous materials, hazardous materials, or other materials which, if flooded, would pollute the watercourse or be injurious to human, animal, or plant life.
- (11) Cemeteries for humans or animals.
- (12) Zoo, menagerie, wild animal farm, domestic animal enclosures, farm animal enclosures, which will not allow all animals to escape floodwaters of maximum flood elevation without human intervention while remaining safely confined.
- (13) Hospitals, nursing homes, convalescent homes and assisted living care facilities.
- (14) Jails, prisons and incarceration facilities.
- (15) Any development, structure, or use which may, whether alone or in combination with others:
 - (a) Endanger human life;
 - (b) Obstruct, impede, retard, change, or increase the velocity, direction, or flow of floodwaters;
 - (c) Increase the surface elevation of floods, or the frequency of floods;
 - (d) Catch or collect debris carried by floodwaters;
 - (e) Be placed where the natural flow of the stream or floodwaters would carry it downstream to the damage or detriment of property within or adjacent to the Floodplain Overlay District;
 - (f) Degrade the water carrying capacity of any watercourse, channel, or floodplain;
 - (g) Degrade the quality of surface water or the quality or quantity of ground water;
 - (h) Be susceptible to flotation and subsequent movement which would cause damage to other property;
 - (i) Not be in harmony with the intent and purpose of the Floodplain Overlay District as set forth by this Floodplain Ordinance and the Zoning Ordinance.
- (16) Feedlots.
- (17) Manufactured homes and manufactured parks.
- (18) Recreation vehicles and campsites.

- (19) Any new or substantially improved structure that will involve the production, storage, or use of radioactive substances or will be used for the production or storage of any of the following substances: acetone; ammonia; benzene; calcium carbide; carbon disulfide; celluloid; chlorine; hydrochloric acid; hydrocyanic acid; magnesium; nitric acid; oxides of nitrogen; petroleum products (gasoline, fuel oil, and similar products); phosphorus; potassium; sodium; sulphur and sulphur products; pesticides (including insecticides, fungicides and rodenticides); and/or radioactive substances.
- (M) Non-Conforming Uses and Structures: The following provisions shall apply to uses and structures within the Floodplain Overlay District:
- (1) Continuation: All uses or structures in the Floodplain Overlay District lawfully existing on the effective date of this Floodplain Ordinance, which are not in conformity with the provisions of this Floodplain Ordinance and the Zoning Ordinance shall be deemed non-conforming uses or structures. Such non-conforming uses or structures may be continued, maintained, repaired, and flood-proofed. However, such non-conforming uses or structures may at any time be improved to comply with existing health, sanitary, or safety code specifications, which are solely necessary to assure safe living conditions.
 - (2) Abandonment: Non-conforming uses or structures which have been discontinued or vacated for twelve (12) consecutive months shall be considered abandoned. Vacation of land or structures or the non-operative status of the use normally carried on by the property shall be evidence of discontinuance. No abandoned use or structure may be re-established, repaired, or re-occupied. The Board of Supervisors may require the removal of any abandoned non-conforming use or structure upon proper notice to the owner of the property on which an abandoned non-conforming use or structure exists. If the owner has not completely removed the abandoned use or structure within a reasonable amount of time, not to exceed twelve (12) months, the Board of Supervisors shall have the authority to itself cause the removal to be accomplished, the costs of such removal to be paid by the property owner.
 - (3) Expansion and Modification: A non-conforming use or structure may not be expanded or modified in any manner which would increase or aggravate flooding or flood hazards. Nothing shall be done which would otherwise violate any of the provisions of this Floodplain Ordinance and the Zoning Ordinance. No non-conforming use or structure shall be expanded, enlarged, or altered in any way which increase its nonconformity with respect to height, area, yard, and other requirements established in other provisions of this Floodplain Ordinance and the Zoning Ordinance, nor in any way which causes it to occupy more space within the Floodplain Overlay District than was occupied by it on the effective date of these provisions for the Floodplain Overlay District.
 - (4) Replacement and Rebuilding: A non-conforming use or structure may be replaced, repaired, or rebuilt if it is damaged or destroyed by any means, including floods, to the extent of less than fifty (50) percent of its fair market value at the time of its damage or destruction. In such a case, however, the nonconformity of the new use or structure with respect to requirements as expressed in provisions of this Floodplain Ordinance and the Zoning Ordinance shall not exceed that of the original use or structure which was damaged or destroyed. Nothing shall be done which would otherwise violate any of the provisions of the Floodplain Overlay District.
 - (5) A non-conforming use or structure which has been damaged or destroyed by any means, including floods, to the extent of fifty (50) percent or more of its fair market value at the time of its damage or destruction may not be replaced, restored, repaired, reconstructed, improved, or rebuilt in any way other than in complete conformity and full compliance with the provisions of this Floodplain Ordinance, the Zoning Ordinance and all other ordinances of Upper Bern Township. The Zoning Hearing Board may waive, as a special exception, the requirements of this paragraph where it is shown that such requirements could not be met on land owned by the appellant or where such requirements would impose undue hardship to appellant in the efficient

operation of the premises. In such case, the Zoning Hearing Board shall be authorized to grant only the minimum relief necessary, and the least modification possible of the provisions of this Floodplain Ordinance and the Zoning Ordinance.

- (6) Any modification, alteration, reconstruction, or improvement of any kind that meets the definition of "repetitive loss" shall be undertaken only in full compliance with the provisions of this Floodplain Ordinance and the Zoning Ordinance.
- (7) The Zoning Officer shall have the initial responsibility of determining the percent of damage or destruction and the fair market value of the damaged or destroyed use or structure at the time of its damage or destruction, and may call on any experts or authorities he may deem necessary to assist him in arriving at a fair and impartial determination. Appeals of the decision of the Zoning Officer may be made to the Zoning Hearing Board.
- (8) Historic Structures: The Zoning Hearing Board shall have the right to waive, as a special exception, any of the requirements of this Floodplain Ordinance and the Zoning Ordinance for any structure listed on the National Register of Historic Places or the Pennsylvania Register of Historic Sites and Landmarks, and all other provisions of the Floodplain Overlay District shall be applied in such case.

(N) Elevation and Flood-Proofing Requirements

(1) Residential Structures

- (a) In AE, A1-30, and AH Zones, any new construction or substantial improvement shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation.
- (b) In A Zones, where there are no Base Flood Elevations specified on the FIRM, any new construction or substantial improvement shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation determined in accordance with this Floodplain Ordinance.
- (c) In AO Zones, any new construction or substantial improvement shall have the lowest floor (including basement) at or above the highest adjacent grade at least as high as the depth number specified on the FIRM.
- (d) The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 International Residential Code (IRC) or the most recent revisions thereof and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized.

(2) Non-Residential Structures

- (a) In AE, A1-30 and AH Zones, any new construction or substantial improvement of a non-residential structure shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation, or be designed and constructed so that the space enclosed below the regulatory flood elevation: is flood-proofed so that the structure is watertight with walls substantially impermeable to the passage of water and has structural components with the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy:
- (b) In A Zones, where there no Base Flood Elevations are specified on the FIRM, any new construction or substantial improvement shall have the lowest floor (including basement) elevated or completely flood-proofed up to, or above, the regulatory flood elevation determined in accordance with this Floodplain Ordinance.

- (c) In AO Zones, any new construction or substantial improvement shall have their lowest floor elevated or completely flood-proofed above the highest adjacent grade to at least as high as the depth number specified on the FIRM.
 - (d) Any non-residential structure, or part thereof, made watertight below the regulatory flood elevation shall be flood-proofed in accordance with the WI or W2 space classification standards contained in the publication entitled "Flood-Proofing Regulations" published by the U.S. Army Corps of Engineers (June 1972, as amended March 1992) or with some other equivalent standard. All plans and specifications for such flood-proofing 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.
 - (e) The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 International Residential Code (IRC) or the most recent revisions thereof and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized.
- (3) Space Below Lowest Floor
- (a) Fully enclosed space below the lowest floor (excluding basements) 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 allow for the automatic entry and exit of flood waters for the purpose of equalizing hydrostatic forces on exterior walls. The term "fully enclosed space" also includes crawl spaces.
 - (b) Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
 1. A minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.
 2. The bottom of all openings shall be no higher than one (1) foot above grade.
 3. Openings may be equipped with screens, louvers, etc. or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- (4) Historic Structures: Refer to the definition of "Substantial Improvement" contained under "Floodplain Overlay District" as referenced within this Floodplain Ordinance.

(O) Design and Performance Standards:

- (1) Applicability: Unless otherwise specified by the provisions contained within this Floodplain Ordinance, the standards and criteria included in the Floodplain Overlay District are to be used, together with the provisions of the Zoning Ordinance and all other ordinances in force within Upper Bern Township by the Zoning Officer in the administration of the provisions of the Floodplain Overlay District.
- (2) Regulations and Reviews by Other Agencies:
 - (a) Where applicable and where possible, all necessary permits or other written approvals must be obtained from all other agencies before any approvals of plans, special exceptions, variances, or permits may be granted by Upper Bern Township or its agencies, officials or employees.
 - (b) Where necessary permits or written approvals from other agencies cannot be obtained prior to action by Upper Bern Township. Any approval of plans, special exceptions, variances,

or permits by Upper Bern Township or its agencies, officials, or employees shall be conditioned upon receiving such other agencies' permits or written approval.

- (c) No regulations of the Commonwealth of Pennsylvania governing watercourses are amended or repealed by this Floodplain Ordinance. Prior to any proposed alteration or relocation of any watercourse a permit shall be obtained from the Pennsylvania Department of Environmental Protection, and notification of any such proposal shall be given to all affected adjacent municipalities. Copies of such permit, application and municipal notifications shall be forwarded to the Federal Insurance Administration and to the Pennsylvania Department of Community and Economic Development.

(3) Placement and Construction of Authorized Uses, Buildings and Structures:

- (a) All uses and structures shall be designed, constructed, and placed so as to offer the minimum obstruction possible to the flow of water, and shall be designed to have a minimum effect upon the flow, velocity, or height of floodwaters. Whenever possible, structures shall be constructed with the longitudinal axis parallel to the direction of flood flow, and, so far as is practicable, structures shall be placed approximately on the same flood flow lines as those of nearby structures.
- (b) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage, and shall be constructed by methods and practices that minimize flood damage.
- (c) All new or replacement drains, water supply facilities, or sanitary sewage facilities shall be designed to preclude infiltration or back-up of sewage or floodwaters into the facilities or structures and discharges from the facilities into floodwaters.
- (d) All new on-lot sanitary sewage treatment and disposal facilities shall be prohibited within the Floodplain Overlay District.
- (e) All new construction and substantial improvements of permanent non-residential structures shall either:
 - 1. Have the lowest floor (including basement) elevated to one (1) foot above the 100-year flood elevation as defined by this Floodplain Ordinance; or
 - 2. Together with attendant utility and sanitary facilities, be flood-proofed so that below one (1) foot above the 100-year flood elevation as defined by this Floodplain Ordinance the structure is watertight, with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- (f) All authorized improvements or additions to existing residential structures shall, to the greatest extent possible, be elevated. Any portion of the structure not elevated to one (1) foot above the 100-year flood elevation as defined by this Floodplain Ordinance shall be flood-proofed.
- (g) All new construction and substantial improvements that are fully enclosed below the lowest floor are useable solely for parking of vehicles, the building access or storage shall have permanent openings designed to allow the entry and exit of flood waters in accordance with the provisions of this Floodplain Ordinance and Federal Emergency Management Agency.
- (h) All authorized new residential structures shall have the lowest floor (including basement) elevated to one foot above the 100-year flood elevation as defined by this Floodplain Ordinance.

- (i) The development of a new manufactured home park or subdivision or the expansion of an existing manufactured home park or subdivision shall not be permitted within the Floodplain Overlay District of Upper Bern Township.
- (4) Flood-Proofing: Where flood-proofing is authorized by this Floodplain Ordinance it shall be done according to the standards and provisions for flood-proofing, as contained in "Flood-Proofing Regulations" published by the United States Army Corps of Engineers, (June 1972 and as subsequently amended) where such standards and provisions do not conflict with other provisions of this Floodplain Ordinance. Where reference is made in Flood-Proofing Regulations to the "RFD" (Regulator Flood Datum) it shall be interpreted to mean the 100-year flood elevation as defined by this Floodplain Ordinance. The flood-proofing of new residential structures shall be prohibited.
- (5) Fill: If fill is to be utilized as part of the construction activities or site improvements, it shall:
 - (a) extend laterally at least fifteen (15) feet beyond the building line from all points;
 - (b) consist of soil or small rock materials only;
 - (c) be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling;
 - (d) be no steeper than one (1) vertical to two (2) horizontal, feet unless substantiated data justifying steeper slopes are submitted to, and approved by Upper Bern Township; and
 - (e) be used to the extent to which it does not adversely affect adjacent properties.
- (6) 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 also be designed to prevent the discharge of excess runoff onto adjacent properties.
- (7) Water and Sanitary Sewer Systems:
 - (a) All new or replacement water supply and sanitary sewer facilities and systems shall be located, designed and constructed to minimize or eliminate flood damages and the infiltration of flood waters.
 - (b) Sanitary sewer facilities and systems shall be designed to prevent the discharge of untreated sewage into flood waters.
 - (c) All new on-lot sanitary sewage treatment and disposal facilities shall be prohibited within the Floodplain Overlay District.
 - (d) Repairs to existing on-lot sanitary sewer systems shall not be located within any identified floodplain area except in strict compliance with all local and state 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.
 - (e) The design and construction provisions of the UCC and FEMA #348, Protecting Building Utilities From Flood Damages and The International Private Sewage Disposal Code shall be utilized.
- (8) 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. In addition, the provisions specified under this Floodplain Ordinance and the Zoning Ordinance shall apply.

- (9) Streets: The finished elevation of all new streets shall be no more than one (1) foot below the regulatory flood elevation.
- (10) Storage: All materials that are buoyant, flammable, explosive, or in times of flooding, could be injurious to human, animal, or plant life, and not specifically prohibited as referenced within this Floodplain Ordinance shall be stored at or above the regulatory flood elevation or flood proofed to the maximum extent possible.
- (11) Anchoring:
 - (a) All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.
 - (b) All air ducts, pipes, storage tanks, and other similar objects or components located below the regulatory flood elevation shall be securely anchored or affixed to prevent flotation.
- (12) Floors, Walls and Ceilings:
 - (a) 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.
 - (b) Plywood used at or below the regulatory flood elevation shall be of a "marine" or "water-resistant".
 - (c) 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.
 - (d) Windows, doors, and other components at or below the regulatory flood elevation shall be made of metal or other "water-resistant" material.
- (13) Paints and Adhesives:
 - (a) Paints and other finishes used at or below the regulatory flood elevation shall be of "marine" or "water-resistant" quality.
 - (b) Adhesives used at or below the regulatory flood elevation shall be of a "marine" or "water-resistant" variety.
 - (c) All wooden components (doors, trim, cabinets, etc.) used at or below the regulatory flood elevation shall be finished with a "marine" or "water-resistant" paint or other finishing material.
- (14) Electrical Components, Mechanical Equipment and Fuel Supply Systems:
 - (a) Electrical distribution panels shall be at least three (3) feet above the base flood elevation.
 - (b) Separate electrical circuits shall serve lower levels and shall be dropped from above.
 - (c) Water heaters, furnaces, air conditioning and ventilating units, and other electrical, mechanical or utility equipment or apparatus shall not be located below the regulatory flood elevation.
 - (d) 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. Provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

(15) Agricultural Standards:

- (a) A filter strip is required between any watercourse and any tilled land. Such strip shall be a minimum of fifteen (15) feet in width measured from the bank of the watercourse channel. The filter strip shall be planted and maintained in grass.
- (b) Within the Floodplain Overlay District, a cover crop, such as annual ryegrass, is required whenever the land is not being tilled for major crops.
- (c) Livestock shall not be confined in pastures or other enclosures located entirely within the Floodplain Overlay District.
- (d) Within the Floodplain Overlay District, feedlots are prohibited.

(16) Uniform Construction Code Coordination: The Standards and Specifications contained 34 PA Code (Chapters 401-405), as amended and not limited to the following provisions shall apply to the provisions of this Floodplain Ordinance, to the extent that they are more restrictive and/or supplement the requirements of this Floodplain Ordinance and the Zoning Ordinance.

- (a) International Building Code (IBC) 2003 or the latest edition thereof: Sections 801, 1202, 1403, 1603, 1605, 1612, 3402, and Appendix G.
- (b) International Residential Building Code (IRC) 2003 or the latest edition thereof: Sections R104, R105, R109, R323, Appendix AE101, Appendix E and Appendix J.

(P) Building Permits:

- (1) Within the Floodplain Overlay District, building permits shall be required for all proposed development, construction, reconstruction, placement, replacement, expansion, renovation, extension, repair, maintenance or other site improvements, regardless of value, including the placement of mobile homes and activities such as mining, dredging, filling, grading, logging, paving, excavation, or drilling operations.
- (2) Every building permit application for work or uses within the Floodplain Overlay District shall include or be accompanied by all information necessary for the Zoning Officer to determine that the proposal meets all the provisions of this Floodplain Ordinance and the Zoning Ordinance.
- (3) The following information is specifically required to accompany all permit applications involving site improvements and structures within the Floodplain Overlay District:
 - (a) Name and address of applicant.
 - (b) Site location including street address and location map.
 - (c) Name and address of landowner on which proposed construction is to occur.
 - (d) Name and address of contractor.
 - (e) The elevation (in relation to mean sea level) of the lowest floor (including basement).
 - (f) Whether or not the structure includes a basement.
 - (g) If the structure has been flood-proofed, the elevation (in relation to the mean sea level) to which the structure was flood-proofed.
 - (h) Brief description of proposed work and estimated cost, including a breakout of flood-

related cost and the market value of the building before the flood damage occurred.

- (i) Listing of other permits required.
 - (j) A plan of the site showing the exact size and location of the proposed construction as well as any existing buildings or structures.
 - (k) Other pertinent information or documentation requested by the Zoning Officer.
- (4) If any proposed construction or development activity is located entirely or partially within any identified floodplain area, the applicant shall provide all the necessary information in sufficient detail and clarity to enable the Zoning Officer 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 systems are located and constructed to minimize or eliminate flood damage; and
 - (c) Adequate drainage is provided so as to reduce exposure to flood hazards.
 - (d) Structures will be anchored to prevent floatation, collapse, or lateral movement.
 - (e) Building materials are flood-resistant.
 - (f) Appropriate practices that minimize flood damage have been used.
 - (g) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities have been designed and located to prevent water entry or accumulation.
- (5) The applicant shall file the following information plus any other pertinent information required by the Zoning Officer in order to verify compliance with the Floodplain Overlay District:
- (a) A completed permit application.
 - (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. The location of all existing and proposed buildings, structures, and other improvements, including any existing or proposed subdivision and development;
 - 4. The location of all existing streets, drives, and other access ways; and
 - 5. The location of any existing bodies of water or watercourses, identified floodplain areas, and 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 North American Vertical Datum of 1988.

2. The elevation of the base flood.
 3. Supplemental information as may be necessary under the Uniform Construction Code and/or International Building Code.
- (d) If required by the Zoning Officer, the following data and documentation shall be submitted with the permit application:
1. Information concerning flood depths, pressures, velocities, impact and uplift forces and other factors associated with a base flood; and
 2. Detailed information concerning any proposed flood-proofing measures and corresponding elevations.
 3. Documentation certified by a registered professional engineer or architect, to show that the cumulative effect of any proposed development or site improvements will not increase the base flood elevation more than one (1) foot at any point.
 4. Documentation certified by a registered professional engineer or architect, which states that the proposed construction or development has been adequately designed to withstand the pressures, velocities, impact and uplift forces associated with the base flood.
 5. A statement, certified by a registered professional engineer, architect, landscape architect, or other qualified person which contains a complete and accurate description of the nature and extent of pollution that might possibly occur from the development during the course of a base flood, including a statement concerning the effects such pollution may have on human.
 6. Detailed information needed to determine compliance with storage and development that may endanger human life.
 7. The appropriate component of the Department of Environmental Protection's "Planning Module for Land Development."
 8. An evacuation plan which fully explains the manner in which the site will be safely evacuated before or during the course of a base flood
 9. Where any excavation or grading is proposed, an erosion and sedimentation control plan shall be prepared to comply with the requirements of Upper Bern Township and the Pennsylvania Department of Environmental Protection.
- (e) Where flood-proofing is proposed to be utilized for a particular structure, the building permit application shall be accompanied by a document certified by a licensed professional engineer registered by the Commonwealth of Pennsylvania or a licensed professional architect registered by the Commonwealth of Pennsylvania certifying that the flood-proofing methods used meet the provisions of specified by this Floodplain Ordinance and the Uniform Construction Code, which shall be adequate to withstand the flood depths, pressures, velocities, impact, and uplift forces, and other factors associated with the 100-year flood as defined by this Floodplain Ordinance and the Uniform Construction Code, and indicating the specific elevation (in relation to mean sea level) to which such structure is flood-proofed.
- (6) A copy of all plans and applications for proposed construction or other improvements within the Floodplain Overlay District to be considered for approval may be submitted by the Zoning Officer to any other professional consultants and/or agency for review and comment.

- (7) Permits shall be accompanied by an application fee made payable to Upper Bern Township.
 - (8) Permits shall be reviewed and issued in accordance with the provisions of Upper Bern Township.
- (Q) Technical Requirements:
- (1) No application for a permit shall be approved unless it can be determined that the structure or activity will be located, constructed and maintained in a manner which will:
 - (a) Fully protect the health and safety of the general public and any occupants of the structure. At a minimum, all new structures shall be designed, located, and constructed so that:
 - 1. the structure will survive inundation by waters of the base flood without any lateral movement or damage to either the structure itself, or to any of its equipment or contents below the BFE.
 - 2. the lowest floor (including the basement) will be elevated to at least one and one half (1 ½) feet above the Base Flood Elevation.
 - 3. the occupants of the structure can remain inside for an indefinite period of time and be safely evacuated at any time during the base flood.
 - (b) Prevent any significant possibility of pollution, increased flood levels or flows, or debris endangering life and property.
 - (2) Alteration or Relocation of Watercourse:
 - (a) 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 municipality, and until all required permits or approvals have been first obtained from the Pennsylvania Department of Environmental Protection.
 - (b) No encroachment, alteration, or improvement of any kind shall be made to any watercourse unless it can be shown that the activity will not reduce or impede the flood carrying capacity of the watercourse in any way.
 - (c) In addition, the Federal Emergency Management Agency, Pennsylvania Emergency Management Agency and Pennsylvania Department of Community and Economic Development, shall be notified prior to any alteration or relocation of any watercourse.
 - (3) Technical or scientific data shall be submitted to Upper Bern Township and the Federal Emergency Management Agency for a Letter of Map Revision at least six (6) months prior to start of any new construction, development, or other activity resulting in changes in the base flood elevation. The situations when a Letter of Map Revision or a Conditional Letter of Map Revision are required are:
 - (a) Any development that causes a rise in the base flood elevations within the floodway; or
 - (b) Alteration or relocation of a stream (including but not limited to installing culverts and bridges).
 - (4) Any new construction, development, uses or activities allowed within any identified floodplain area shall be undertaken in strict compliance with the provisions contained in this Floodplain Ordinance and any other applicable codes, ordinances and regulations.
 - (5) All 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 Upper Bern Township and the Pennsylvania Department of Community and Economic Development

(R) Boundary Changes:

- (1) Floodplain Boundary: The identified floodplain area may be revised or modified by the Board of Supervisors where studies or information provided by a qualified agency or professional documents the need for such revision. However, prior to any such change, approval must be obtained from the Federal Emergency Management Agency (FEMA).
- (2) Jurisdictional Boundary: Prior to development occurring in areas where annexation or other corporate boundary changes are proposed or have occurred, Upper Bern Township shall review flood hazard data affecting the lands subject to boundary changes. Upper Bern Township shall adopt and enforce floodplain regulations in areas subject to annexation or corporate boundary changes as per state and feral requirements.

(S) Municipal Liability

- (1) The lawful granting of a permit or the making of any other administrative decision under the provisions of this Floodplain Ordinance shall not constitute a representation, guarantee, or warranty of any kind by Upper Bern Township, or by any official, agent, or employee thereof, of the practicability or safety of any structure, use, or other plan proposed with respect to damage from flood or otherwise, and shall create no liability upon, or a cause of action against, such public body, official, agent or employee for any flood damage that may result pursuant thereto or as a result of reliance of this Floodplain Ordinance.
- (2) There area no assurances that lands not included in the Floodplain Overlay District are now or ever will be free from floodplain or damage control.
- (3) The degree of flood protection sought by the provisions of this Floodplain Ordinance is considered reasonable for regulatory purposes and is based on accepted engineering methods of study. Larger floods may occur or flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Floodplain Ordinance does not imply that areas outside any identified floodplain areas, or that land uses permitted within such areas will be free from flooding or flood damages.
- (4) This Floodplain Ordinance shall not create liability on the part of Upper Bern Township or any officer or employee thereof for any flood damages that result from reliance on this Floodplain Ordinance or any administrative decision lawfully made in accordance with this Floodplain Ordinance or the Zoning Ordinance.

(T) Enforcement, Appeals and Penalties:

- (1) Upper Bern Township shall enforce the provisions specified by the Floodplain Overlay District in accordance with the provisions of this Floodplain Ordinance and the Zoning Ordinance. The provisions for enforcement are further specified by the Zoning Ordinance.
- (2) All appeals shall be considered in accordance with the provisions specified under Section 1312 of the Zoning Ordinance.
- (3) All penalties shall be considered in accordance with the provisions that are specified under Section 1314 of the Zoning Ordinance.

Section 2: Severability: Should any section or provision of this zoning amendment be declared illegal, invalid or unconstitutional by any court of competent jurisdiction, such decision or declaration shall not affect the validity or enforcement of this Floodplain Ordinance and the Zoning Ordinance.

Section 3: Repealer: Any provision of any ordinance inconsistent with the provisions of this zoning amendment is repealed to the extent of the inconsistency. All other provisions of the Upper Bern Township Floodplain Ordinance and the Zoning Ordinance shall remain in full force and effect.

Section 4: Effective Date: This Ordinance shall become effective within five (5) days after adoption.

Section 5: Municipal Enactment

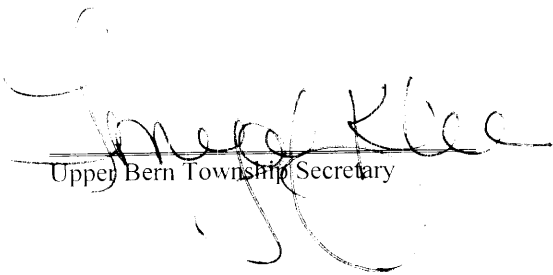
Ordained and enacted this 25th day of June, 2012, by a vote of 3 Yes 0 No
Abstained _____ Absent _____

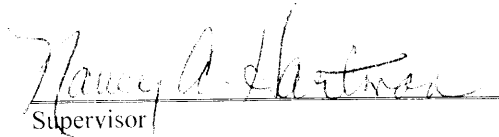
Upper Bern Township Board of Supervisors
Berks County, Pennsylvania

ATTEST:


Chairman


Vice-Chairman


Upper Bern Township Secretary


Supervisor