

**An Ordinance
Establishing
Floodplain
Management
Regulations for
Special Flood Hazard
Areas in the Town of
Berlin, Connecticut**

Effective Date: August 23, 2008

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**AN ORDINANCE ESTABLISHING FLOODPLAIN
MANAGEMENT REGULATIONS FOR
SPECIAL FLOOD HAZARD AREAS
IN THE TOWN OF BERLIN, CONNECTICUT**

Statutory Authorization

In Section 7-148 (c) (7) of the General Statutes, the Legislature of the State of Connecticut delegates to local governmental units the responsibility of adopting regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the Town of Berlin, Connecticut does ordain as follows:

RESOLVED: That an ordinance entitled "An Ordinance Establishing Floodplain Management Regulations for Special Flood Hazard Areas" is hereby repealed and the following amended ordinance entitled "An Ordinance Establishing Floodplain Management Regulations for Special Flood Hazard Areas In The Town of Berlin, Connecticut" be accepted, adopted and legalized by printing:

Be it ordained by the Town of Berlin that the following ordinance be accepted, adopted and legalized by printing:

SECTION I - DEFINITIONS

Act: means the statutes authorizing the National Flood Insurance Program that are incorporated in 42 U.S.C. 4001-4128.

Base Flood: means the flood having a one percent change of being equaled or exceeded in any given year.

Base Flood Elevation (BFE): means the elevation of the crest of the base flood or 100-year flood. The height in relation to mean sea level expected to be reached by the waters of the base flood at pertinent points in the floodplains of coastal and riverine areas.

Basement: means the portion of a building having its floor subgrade (below ground level) on all sides.

Building: see Structure

Building Inspector: means the Building Inspector of the Town of Berlin or his/her authorized agent.

Cost: means, as related to substantial improvements, the cost of any reconstruction, rehabilitation, addition, alteration, repair or other improvement of a structure shall be established by a detailed written contractor's estimate. The estimate shall include, but not be limited to: the cost of materials (interior finishing components, structural

components, utility and service equipment); sales tax on materials; building equipment and fixtures, including heating and air conditioning and utility meters; labor; built-in appliances; demolition and site preparation; repairs made to damaged parts of the building worked on at the same time; contractor's overhead; contractor's profit; and grand total. Items to be excluded include: cost of plans and specifications; survey costs; permit fees; outside improvements such as septic systems, water supply wells, landscaping, sidewalks, fences, yard lights, irrigation systems, and detached structures such as garages, sheds, and gazebos.

Curvilinear Line: means the border on either a Flood Hazard Boundary Map or Flood Insurance Rate Map that delineates the special flood hazard areas and consists of a curved or contour line that follows the topography.

Development: means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, **the construction of additions or substantial improvements to buildings or other structures**, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials; **and the storage, deposition, or extraction of materials, public or private sewage disposal systems or water supply facilities.**

Erosion: means the process of the gradual wearing away of land masses. This peril is not per se covered under the Program.

Existing Construction: means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM. "Existing construction" may also be referred to as "existing structures".

Existing Manufactured Home Park or Manufactured Home Subdivision: means a manufactured home park or subdivision for which the construction of facilities servicing the lots on which the manufactured home are to be affixed (including, as a minimum, the installation of utilities, the construction of streets, and either final grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion To An Existing Manufactured Home Park Or Manufactured Home Subdivision: means 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, either final site grading or pouring of concrete pads, or the construction of streets).

Existing Structures: see Existing Construction

Federal Emergency Management Agency (FEMA): means the federal agency that administers the National Flood Insurance Program (NFIP).

Finished Living Space: means space that can include, but is not limited to, a space that is heated and/or cooled, contains finished floors (tile, linoleum, hardwood, etc.) had sheetrock walls that may or may not be painted or wallpapered, and other amenities such as furniture, appliances, bathroom, fireplaces and other items that are easily damaged by floodwaters and expensive to clean, repair or replace.

Flood or Flooding: means:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland or tidal waters.

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

Flood Elevation Study: means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

Flood Insurance: means the insurance coverage provided under the Program.

Flood Insurance Rate Map (FIRM): means an official map of the Town of Berlin on which the Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

Flood Insurance Study (FIS): means the official study of a community in which the Federal Emergency Management Agency (FEMA) has conducted a technical engineering evaluation and determination of local flood hazards, flood profiles and water surface elevations. The Flood Insurance Rate Maps (FIRM), which accompany the FIS, provide both flood insurance rate zones and base flood elevations, and may provide the regulatory floodway limits.

Floodplain or Flood-Prone Area: means any land area susceptible to being inundated by water from any source (see definition of "flooding").

Floodplain Management: means the operation of an overall program of corrective and preventive measures of reducing flood damage, including but not limited to emergency preparedness plans, flood control works and Floodplain management regulations.

Floodplain Management Regulations: means zoning regulations, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a Floodplain ordinance, wetlands regulations, grading ordinance and erosion control

ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodproofing: means 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. To be floodproofed, a structure must be water tight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

Floodway: see Regulatory Floodway

Freeboard: means a factor of safety usually expressed in feet above a flood level for purposes of Floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

Functionally Dependent Use or Facility: means a use or facility that cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities. The term does not include seafood processing facilities, long-term storage, manufacturing, sales or service facilities.

Health Director: means the Health Director of the Town of Berlin or his authorized agent.

Highest Adjacent Grade (HAG): means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic Structure: means 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 of individual listing on the National Register; (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historic 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 the Interior; or (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either: (1) By an approved state program as determined by the Secretary of the Interior or (2) Directly by the Secretary of the Interior in states without approved programs.

Inland Wetlands and Water Courses Commission: means Inland Wetlands and Water Courses Commission of Berlin.

Lowest Floor: means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area is not considered a building's lowest floor, provided that such an area meets the design requirements specified in Section IV,4,3 of this ordinance.

Market Value: means a market value of the structure shall be determined by the appraised value of the structure using the cost approach to value prior to the start of the initial repair or improvement, or in the case of damage, the value of the structure prior to the damage occurring.

Mean Sea Level: means for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations on the Flood Insurance Rate Map are referenced.

Manufactured Home: means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. **The term also includes park trailers, travel trailers, recreational vehicles and other similar vehicles or transportable structures placed on a site for one hundred and eighty (180) consecutive days or longer and intended to be improved property.**

Manufactured Home Park or Subdivision: means a parcel or contiguous parcels of land divided into two (2) or more manufactured home lots for rent or sale.

New Construction: means, for the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM and includes any subsequent improvements to such structures. For Floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of the initial Floodplain management ordinance and includes any subsequent improvements to such structures.

New Manufactured Home Park or Subdivision: means 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, either final site grading or the pouring of concrete pads, and the construction of streets) is completed on or after the effective date of Floodplain management regulations adopted by a community.

100 Year Flood: see Base Flood

Planning Commission: means the Planning Commission of Berlin.

Recreational Vehicle: Includes travel trailers and means a vehicle which is: (i) built on a single chassis; (ii) 400 square feet or less when measured at the longest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light-duty truck; and (iv) designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

Regulatory Floodway: means a channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot, or a designated height. For the purposes of these regulations, the term "Regulatory Floodway" is synonymous in meaning with the term "Floodway".

Riverine: means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Special Flood Hazard Area (SFHA): means the land in the floodplain within a community subject to a one (1) percent or greater chance of flooding in any given year. SFHA's are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for a community. BFEs provided on the Flood Insurance Rate Map (FIRM) are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. SFHAs include, but are not necessarily limited to, the land shown as Zones A, AE, AO, and AH. The SFHA is also called the Area of Special Flood Hazard.

Start of Construction: includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure (other than a Manufactured home) on a site, such as the pouring of slabs or footings or any work beyond the state of excavation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not as part of the main structure. For a structure (other than a Manufactured home) without a basement or poured footings, the "start of construction" includes the first permanent framing or assembly of the structure, or any part thereof on its piling or foundation. For Manufactured homes not within a Manufactured home park or Manufactured home subdivision, "start of construction" is the date on which the construction of facilities for servicing the site on which the Manufactured home is to be affixed (including, at a minimum, the construction of streets, either final site grading or the pouring of concrete pads, and installation of utilities) is completed. 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.

State: means the State of Connecticut.

State Coordinating Agency: means the Department of Environmental Protection, Water Management Bureau, Inland Water Resources Division. The State Coordinating Agency is to assist in the implementation of the National Flood Insurance Program in Connecticut.

Structure: means, for Floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground as well as a Manufactured home. "Structure" for insurance coverage purposes, means a walled and roofed building, other than a gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a Manufactured home on foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

Substantial Damage: means damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement: means any combination of repairs, reconstruction, alteration, or improvements to a structure taking place over a one year period, in which the cumulative cost equals or exceeds fifty percent (50%) of the market value of the structure. The market value of the structure should be (1) the appraised value of the structure using the cost approach to value, prior to the start of the initial repair or improvement, or (2) in the case of damage, the value of the structure prior to the damage occurring. For the purposes of this definition, "Substantial Improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include any improvement project required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions. **This term includes structures that have incurred "substantial damage", regardless of the actual repair work performed.**

Town: means the Town of Berlin.

Town Engineer: means the Town Engineer for the Town of Berlin or his/her authorized agent.

Variance: means a grant of relief from the requirements of this ordinance which permits development in a manner that would otherwise be prohibited by this ordinance.

Violation: means a failure of a structure or other development to be fully compliant with the community's floodplain management ordinance. A structure or other development without required permits, lowest floor elevation documentation, flood-proofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.

Water Control Commission: means the Water Control Commission of the Town of Berlin or its authorized agent.

Water Surface Elevation: means the projected heights in relation to **the National Geodetic Vertical Datum (NGVD) of 1929**, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

Zone A: means the area of special flood hazard without water surface elevations determined as identified on the Town of Berlin Flood Insurance Rate Map.

Zone AE: means the areas of special flood hazard with base flood elevations and flood hazard factors determined, as identified on the Town of Berlin Flood Insurance Rate Map.

SECTION II - PURPOSE

The Town of Berlin is a participating community in the National Flood Insurance Program as a regular program community. Certain areas of the Town of Berlin are subject to periodic flooding from streams, rivers, lakes, ponds, etc. causing serious damages to properties within these areas and hinders the health and welfare of the rest of the Town. These areas are designated as special flood hazard areas (unnumbered Zone A, Zones AE) by the **Federal Emergency Management Agency** and are illustrated on a Flood Insurance Rate Map (FIRM) issued to the Town of Berlin by **Federal Emergency Management Agency**. Being a participating community in the National Flood Insurance Program requires the Town to adopt Floodplain Regulations that meet the **Federal Emergency Management Agency's** criteria as specified in **44 CFR Parts 59, 60, 65, and 70** as amended. The purpose of this ordinance is to establish the aforementioned Floodplain Management Regulations in the Town of Berlin.

SECTION III - GENERAL PROVISIONS

1. This ordinance shall apply to all areas of special flood hazards within the jurisdiction of the Town of Berlin.
2. The Special Flood Hazard Areas (SFHA) identified by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study (FIS) for the Town of Berlin, dated September 26, 2008, and accompanying Flood Insurance Rate Maps (FIRM), dated September 26, 2008, and accompanying Flood Insurance

Rate Maps (FIRM), dated September 26, 2008, and other supporting data, and any subsequent revisions thereto, are adopted by reference and declared to be a part of this ordinance. Since mapping is legally adopted by reference into this ordinance it must take precedence when more restrictive until such time as a map amendment or map revision is obtained from FEMA.

The SFHA includes any area shown on the FIRM as Zones A and AE, including areas designated as a floodway on a FIRM. SFHAs are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for a community. BFEs provided on Flood Insurance Rate Map (FIRM) are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. Also included are areas of potential, demonstrable or historical flooding, including any area contiguous with but outside the SFHA identified by FEMA, and where the land surface elevation is lower than the base flood elevation (BFE) as shown in the FIS, and the area is not protected from flooding by a natural or man-made feature. The FIRM and FIS are on file at the office of the Town Engineer, Town Hall, Berlin.

3. A structure or development already in compliance with this ordinance shall not be made non-compliant by any alteration, modification, repair, reconstruction or improvement, and must also comply with other applicable local, state, and federal regulations. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations.
4. This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
5. The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Town of Berlin or any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.
6. If any section, subsection, paragraph, sentence, clause, or phrase of this ordinance should be declared invalid for any reason whatsoever, such decision shall not affect the remaining portions of this ordinance, which shall remain in full force and effect; and to this end the provisions of this ordinance are hereby declared to be severable.

**SECTION IV - FLOODPLAIN
MANAGEMENT REGULATIONS
FOR SPECIAL FLOOD HAZARD AREAS**

1. The Inland Wetlands and Water Courses Commission shall review applications and require permits on forms provided by the Town for all proposed construction or other development (see definition) including the placement of Manufactured homes, within Zone A and/or Zone AE on the Town's Flood Insurance Rate Map (FIRM).
2. The Inland Wetlands and Water Courses Commission shall review proposed development within Zone A and/or Zone AE on the FIRM to assure that all necessary permits have been received by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
3. The Building Inspector with the assistance of the Town Engineer shall review all building permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in Zone A and/or Zone AE on the FIRM, all new construction and substantial improvements (including the placement of prefabricated buildings and Manufactured homes) shall (1) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure, (2) be constructed with materials resistant to flood damage, (3) be constructed by methods and practices that minimize flood damage, and (4) be constructed with electrical, heating, ventilation, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
4. The Building Inspector with the assistance of the Town Engineer shall obtain, review, and reasonable utilize the information provided on the FIRM, and other base flood elevation data available from a Federal, State, or other source, as criteria for requiring that (1) all new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated to or above the base flood level and (2) all new construction and substantial improvements of nonresidential structures have the lowest floor (including basement) elevated or floodproofed to or above the base flood level. Where floodproofing is used in lieu of elevation, the structure, together with attendant utility and sanitary facilities, shall:
 - (1) be floodproofed so that to a height of one foot above the base flood level, the structure is watertight with walls substantially impermeable to the passage of water;
 - (2) have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(3) be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certification shall be maintained by the Building Inspector.

(3) All new construction, substantial improvements, or repair of substantial damage to residential or non-residential structures that include fully enclosed areas formed by a foundation and other exterior walls below the base flood elevation (BFE) of an elevated building, shall be designed to preclude finished living space and be designed to allow for the entry and exit of flood waters to automatically equalize hydrostatic flood forces on exterior walls (wet flood-proofing). Designs for complying with this requirement must either be certified by a Connecticut registered professional engineer or architect, or meet the following minimum criteria listed in Sections (a)-(g) below:

(a) Provide a minimum of two (2) openings (hydraulic flood vents) having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding. These hydraulic openings must be located on at least two different walls. Only the area (square footage) that lies below the BFE can be used in the calculation of net area of vents required. If the structure has more than one enclosed area, openings must be installed in the exterior walls of each enclosed area so that flood waters can enter directly from the outside;

(b) The bottom of all openings shall be no higher than one (1) foot above grade. At least one side of the structure's fully enclosed area must be at or above grade. Fill placed around the foundation walls must be graded so that the elevation inside the enclosed area is equal to, or higher than, the adjacent outside elevation on at least one side of the building. The finished floor of the enclosed area shall be no lower than the bottom of the foundation openings. The foundation slab of a residential structure, including the slab of a crawlspace, must be set equal to the outside finished grade on at least one side of the building;

(c) The openings may be equipped with screens, louvers, valves or other coverings or devices, provided they permit the automatic entry and exit of flood waters in both directions without any external influence or control such as human intervention, including the use of electrical and other non-automatic mechanical means. Other coverings may be designed and certified by an engineer, or approved by the Town Engineer;

(d) The area cannot be used as finished living space. Use of the enclosed area shall be the minimum necessary, and shall only be used for the parking of vehicles, building access or limited storage. Access to the enclosed area shall be the minimum necessary to allow for the parking of vehicles (garage door), or limited storage of maintenance equipment used in connection with the premises (standard exterior door), or entry to the living area (stairway or elevator). The enclosed area shall not be used for human habitation, or partitioned into separate rooms;

(e) All interior walls, floor, and ceiling materials located below the BFE shall be unfinished and resistant to flood damage;

(f) Electrical, plumbing, HVAC ductwork, machinery or other utility equipment and connections that service the structure (including, but not limited to: furnaces, oil or propane tanks, air conditioners, heat pumps, hot water heaters, ventilation,

washers, dryers, electrical junction boxes, circuit breaker boxes and food freezers) are prohibited in the fully enclosed area below the BFE. Utilities or service equipment located in this enclosed area, even if elevated above the BFE in the space, will subject the structure to increased flood insurance rates.

(g) A residential building with a structurally attached garage having the floor slab below the BFE is considered an enclosed area below the BFE, and must meet the standards of Sections IV,4,3,(a)-(f). A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters in both directions. Flood openings or vents are required in the exterior walls of the garage or in the garage doors. The human intervention necessary to open garage doors when flooding occurs is not an acceptable means of meeting the openings requirements. In addition to the automatic entry of floodwaters, the areas of the garage below BFE must be constructed with flood resistant materials. Garages attached to non-residential structures must also meet the aforementioned requirements, or be dry flood proofed as per the requirements of Section IV,2.

5. Within Zone A and/or Zone AE on the FIRM, the Building Inspector shall require (1) the as built elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures whether or not such structure contain a basement, (2) the as built elevation (in relation to mean sea level) to which the structure was floodproofed, and (3) maintain a record of all such information.

6. The Building Inspector shall require that all Manufactured homes be placed within Zone A and/or Zone AE on the FIRM shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors. Specific requirements shall be that (1) over-the-top ties be provided at each of the four corners of the Manufactured home with two additional ties per side at intermediate locations and Manufactured homes less than 50 feet long requiring one additional tie per side; (2) frame ties be provided at each corner of the home with five additional ties per side at intermediate points and Manufactured homes less than 50 feet long requiring four additional ties per side; (3) all components of the anchoring system be capable of carrying a force of 4,800 pounds; and (4) any additions to the Manufactured home be similarly anchored. For new Manufactured home parks and Manufactured home subdivisions; for expansions to existing Manufactured parks and Manufactured home subdivisions; for existing Manufactured home parks and Manufactured home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds 50 percent of value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced; and for Manufactured homes not placed in a Manufactured home park or Manufactured home subdivision:

(a) stands or lots shall be elevated on compacted fill or on pilings so that the lowest floor of the Manufactured home will be at or above the base flood level;

(b) adequate surface drainage and access for a hauler shall be provided; and,

(c) in the instance of elevation on pilings,

(1) lots shall be large enough to permit steps,

(2) piling foundations shall be placed in stable soil no more than ten feet apart, and

(3) reinforcement shall be provided for pilings more than six feet above the ground level.

(d) no Manufactured home shall be placed in a floodway.

7. Recreational vehicles placed on sites within Zones A, and/or Zone AE on the Flood Insurance Rate Map shall either:

(i) be on site for fewer than 180 consecutive days,

(ii) be fully licensed and ready for highway use, (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions) or,

(iii) meet the permit requirements of Section IV and the elevation and anchoring requirements for "manufactured homes" in paragraph 6 of this section.

8. The Building Inspector shall require that an excavation plan indicating alternate vehicular access and escape routes be filed with appropriate Disaster Preparedness Authorities for Manufacture home parks and Manufacture home subdivisions located within Zone A and/or Zone AE on the FIRM.

9. The Planning Commission shall review subdivision proposals to determine whether such proposals will be reasonably safe from flooding. If a subdivision proposal is in Zone A and/or Zone AE on the FIRM, the proposal shall be reviewed to assure that (1) the proposal is consistent with the need to minimize flood damage within Zone A and/or Zone AE on the FIRM, (2) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (3) adequate drainage is provided to reduce exposure to, and damage from, flood hazards.

10. The Planning Commission shall require all subdivision proposals greater than 50 lots or 5 acres, whichever is lesser, include within such proposals, base flood elevation data for those portions which lie within Zone A and/or Zone AE on the FIRM.

11. The Water Control Commission shall require new and replacement water supply systems within Zone A and/or Zone AE on the FIRM to be designed to minimize or eliminate infiltration of flood waters into the systems.

12. The Water Control Commission shall require new and replacement sanitary sewage systems within Zone A and/or Zone AE to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.

13. The Health Director shall require on-site waste disposal systems within Zone A and/or Zone AE on the FIRM to be located to avoid impairment to them or contamination from them during flooding.

14. The Inland Wetlands and Water Courses Commission shall notify, in riverine situations, adjacent communities if appropriate and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Administrator.

15. The Inland Wetlands and Water Courses Commission shall require that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

16. Located within areas of special flood hazards established in Section III, paragraph 2, are areas designated as floodways. **Floodways are identified on the Flood Insurance Rate Maps.** Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

(a) Encroachments, including fill, new construction, substantial improvements, and other development is prohibited unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any **(0.00)** increase in flood levels during the occurrence of the base flood discharge. Such certification shall be maintained by the Building Inspector.

(b) If Section IV 15(a) is satisfied, all new construction and substantial improvements shall comply with all provisions of Section IV.

(c) The placement of any Manufactured homes within the floodway is prohibited.

17. For watercourses without regulatory floodways designated, no new construction, substantial improvements, or other developments (including fill) shall be permitted within Zone AE on the FIRM unless it can be demonstrated that the cumulative effect of the proposed develop, when combined with all other existing and proposed development, will not increase the water surface elevation of the base flood more than one foot at any point along the watercourse.

18. The Town may request floodway data of an applicant for watercourses without FEMA-published floodways. When such data is provided by an applicant or whenever such data is available from any other source (in response to the Town's request or not), the Town shall adopt a regulatory floodway based on the principle that the floodway must be able to convey the waters of the base flood without increasing the water surface elevation more than one (1) foot at any point along the watercourse.

19. The Building Inspector, with the assistance of the Town Engineer, shall make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section V.

20. **Above-ground Storage Tanks** - Above-ground storage tanks (oil, propane, etc.) which are located outside or inside of the structure, must either be elevated above the base flood elevation (BFE) on a concrete pad, or be securely anchored with tie-down straps to prevent flotation or lateral movement, have the top of the fill pipe extended above the BFE, and have a screw fill cap that does not allow for the infiltration of flood water.

21. **Portion of Structure in Flood Zone** - If any portion of a structure lies within the Special Flood Hazard Area (SFHA), the entire structure is considered to be in the SFHA. The entire structure must meet the construction requirements of the flood zone. The structure includes any attached additions, garages, decks, sunrooms, or any other structure attached to the main structure. Decks or porches that extend into a more restrictive flood zone will require the entire structure to meet the standards of the more restrictive zone.

22. **Structures in Two Flood Zones** - If a structure lies within two or more flood zones, the construction standards of the most restrictive zone apply to the entire structure (i.e. V zone is more restrictive than A zone; structure must be built to the highest BFE). The structure includes any attached additions, garages, decks, sunrooms, or any other structure attached to the main structure. (Decks or porches that extend into a more restrictive zone will require the entire structure to meet the requirements of the more restrictive zone.)

23. **No Structures Entirely or Partially Over Water** - New construction, substantial improvements and repair to structures that have sustained substantial damage cannot be constructed or located entirely or partially over water.

24. **Compensatory Storage** - The water holding capacity of the floodplain, except those areas that are tidally influenced, shall not be reduced. Any reduction caused by filling, new construction, or substantial improvements involving an increase in footprint to the structure, shall be compensated for by deepening and/or widening of the floodplain. Storage shall be provided on-site, unless easements have been gained from

adjacent property owners; it shall be provided within the same hydraulic reach and a volume not previously used for flood storage; it shall be hydraulically comparable and incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Compensatory storage can be provided off-site if approved by the municipality.

25. Equal Conveyance - Within the floodplain, except those areas which are tidally influenced, as designated on the Flood Insurance Rate Map (FIRM) for the community, encroachments resulting from filling, new construction or substantial improvements involving an increase in footprint of the structure, are prohibited unless the applicant provides certification by a registered professional engineer demonstrating, with supporting hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that such encroachments shall not result in any **(0.00 feet)** increase in flood levels (base flood elevation). Work within the floodplain and the land adjacent to the floodplain, including work to provide compensatory storage shall not be constructed in such a way so as to cause an increase in flood stage or flood velocity.

SECTION V - APPEALS

1. The Inland Wetlands and Water Courses Commission, of the Town of Berlin, (Inland Wetlands Commission) shall hear and decide appeals and requests for variances from the requirements, decisions or determinations made by the Building Inspector in the enforcement or administration of this ordinance.

2. In passing upon such applications, the Inland Wetlands Commission shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and, as applicable, the following:

- (a) the danger that materials may be swept onto other lands to the injury of others;
- (b) the danger of life and property due to flooding or erosion damage;
- (c) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (d) the importance of the services provided by the proposed facility to the community;
- (e) the necessity to the facility of a waterfront location, where applicable;
- (f) the availability of alternative locations, for the proposed use which are not subject to flooding or erosion damage;
- (g) the compatibility of the proposed use with existing and anticipated development;

(h) the relationship of the proposed use to the comprehensive plan and Floodplain management program for that area;

(i) the safety of access to the property in times of flood for ordinary and emergency vehicles;

(j) the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,

(k) the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

3. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to, and surrounded by lots with existing structures constructed below the base flood level, providing items in Section V, paragraph 2, have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

4. Upon consideration of the factors of Section V, paragraph 2, and the purposes of this ordinance, the Inland Wetlands Commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

5. The Inland Wetlands Commission shall maintain the records of all appeal actions, and report any variances to the Federal Insurance Administration upon request.

6. Conditions for Variances:

(a) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.

(b) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(d) Variances shall only be issued upon:

(1) a showing of good and sufficient cause;

(2) a determination that failure to grant the variance would result in exceptional hardship to the applicant;

(3) thorough consideration of Section V, paragraph 2, and

(4) 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 existing local laws or ordinances.

7. Notice of decisions of the Inland Wetlands Commission shall be given as provided in Section 22a-42a(d) of the Connecticut General Statutes. Any applicant to whom a variance is granted shall be given, when applicable, written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

8. Those aggrieved by the decision of the Inland Wetlands Commission related to the provisions of this ordinance may, within 15 days of the publication of such decision, appeal to the Superior Court, as provided in Section 22a-42 of the Connecticut General Statutes.

SECTION VI - PENALTY. COURT ORDERS:

The provisions of Section 22A-44(a) and (b) of the Connecticut General Statutes apply.

SECTION VIII - EFFECTIVE DATE:

This Ordinance shall take effect fifteen (15) days after publication in accordance with the provisions of Section 7-157 of the Connecticut General Statutes, Revision of 1958, as amended.

Adopted at Town Meeting, DATE

Kathryn Wall, Town Clerk

Agenda Item No. ___
Request for Town Council Action

TO: The Honorable Mayor and Town Council

FROM: Denise McNair, Interim Town Manager

DATE: July 21, 2008

SUBJECT: Floodplain Ordinance

Summary of Agenda Item:

FEMA (Federal Emergency Management Agency) has mandated that towns must adopt changes to their floodplain ordinance that meets or exceeds the minimum federal standards of 44CFR 60.3 and new state requirements by September 26, 2008 in order for the town to remain eligible to participate in NFIP (National Flood Insurance Program). The attached ordinance incorporates all the changes required by FEMA.

The Town Council referred the changes to the Ordinance Committee at their June 17th meeting. Corporation Counsel has stated that since the changes are mandated by FEMA the ordinance can just be sent to a Public Hearing. The Ordinance Committee has not had a formal meeting on the amendments but its' members agree that this should be sent to a Public Hearing on August 5th and that the Town Council should adopt the changes mandated by FEMA.

The Council received the marked up version of the ordinance showing all the changes in their packet for the June 17th meeting. The previous ordinance should be repealed and the attached ordinance adopted.

Action Needed:

Move to authorize the Interim Town Manager to schedule and advertise a Public Hearing for Tuesday, August 5, 2008 at 6:15 p.m. The notice shall state "That an ordinance entitled "An Ordinance Establishing Floodplain Management Regulations for Special Flood Hazard Areas" is hereby repealed and the following amended ordinance entitled "An Ordinance Establishing Floodplain Management Regulations for Special Flood Hazard Areas in The Town of Berlin, Connecticut" be accepted, adopted and legalized by printing. The purpose of this is to incorporate amendments mandated by the Federal Emergency Management Agency.

Attachments:

Proposed Ordinance

Prepared By: Kate Wall, Town Clerk