

**TOWN AND VILLAGE OF WATERBURY
ZONING AMENDMENTS FOR
FLOOD HAZARD AREA REGULATIONS**

DRAFT #3

DECEMBER 14, 2015

The Town of Waterbury Select Board and the Village of Waterbury Trustees will convene a Public Hearing on Monday, March 7, 2016, at 7:25 p.m., at the Municipal Center located at 28 N. Main St. in the Village of Waterbury to consider and receive public comment on the attached Draft #3 of the proposed Amendments to the Flood Hazard Area Regulations, dated December 14, 2015. The purpose of these proposed amendments is to address flood resiliency issues following the impacts of Tropical Storm Irene, and to protect and provide for the health, safety, and general welfare of the Town and Village of Waterbury. These Zoning Amendments apply to the entire Town of Waterbury including the Village of Waterbury.

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INTRODUCTION AND REPORT

The following are draft Zoning Amendments that were developed and approved by the Waterbury Planning Commission. The amendments primarily include changes to Article VI, the Flood Hazard Area Regulations and Overlay District, that are recommended to address flood resiliency issues following the impacts of Tropical Storm Irene. Section 308(b) in Article III is also amended to be in conformance with the proposed amendments to Article VI. These amendments are in compliance with the minimum standards in the current state and federal law, including 44 C.F.R 60.3. Article VI references the applicable enabling legislation and federal agencies overseeing our municipal flood hazard program.

The proposed amendments are shown to Article VI, the Interim Flood Hazard Area Regulations and Overlay District that were in effect from May 21, 2012 to May 21, 2015, with deleted and added language in tracked changes format. Some of the definitions in Article XIV pertaining to the Flood Hazard Area have been amended or added to compliment the amendments to Article VI and meet the minimum federal standards, and are also shown as tracked changes. These amendments would replace all of the current Article VI, Flood Hazard Area Regulations and Overlay District.

The Planning Commission has taken the last two years to study relevant and updated scientific information, consider public input and propose comprehensive regulations that balance economic realities, public safety and community welfare.

Draft amendments that exceed federal minimum standards, the Vermont Flood Hazard Area & River Corridor Rule and State DEC Flood Hazard Area and River Corridor Protection Procedure are recommended due to the following compelling evidence:

- The engineering firm Milone & MacBroom's study *Evaluating the Costs and Benefits of Floodplain Protection* completed in 2015, included the results of hydrological modeling and mapping based on current climate science and USGS stream gauge data since 1970, that concluded that the future 1% chance (100-yr.) flood elevations in the Village of Waterbury are very close to the current 0.2% chance (500-yr.) flood levels in the FEMA Flood Study that is the basis for the Flood Insurance Rate Maps used as the regulatory basis of our Flood Hazard Area Regulations. This data and modeling substantiates the trend that storms and the associated flooding is increasing in intensity, frequency, and elevation.
- Due to the Village of Waterbury's key geographic location and the large extent of the concentrated development within the 100-yr. floodplain, the community is extremely vulnerable to future flooding similar to the flooding experienced with Tropical Storm Irene. In order to protect the safety of the structures, residents, and

businesses in Waterbury, elevating new structures to three feet above the BFE is justified. An alternative that is being required by some Vermont municipalities is to prohibit all new development in the 100-yr. floodplain.

- The Planning Commission recognizes the challenges and large expense involved in reconstructing existing development in the floodplain and is recommending elevating existing non-historic structures that are substantially improved, at least two feet above the BFE rather than three feet, in order to be sensitive to the needs of current building owners and encourage the economical renovation of existing buildings.
- The State of Vermont elevated and dry floodproofed the new State Office Complex to approximately 6" above the 0.2% chance (500-yr.) flood level in order to safeguard that investment and the people who will occupy the buildings. The Planning Commission is making a compromise by reducing their original recommendation from at least one foot above the 0.2% (500-yr.) flood level to at least three feet above the BFE.

The key aspects of the proposed amendments that are recommended by the Planning Commission, with the relevant sections noted, are as follows:

- No-net rise to the Base Flood Elevation (BFE – 100-year flood level) as a result of placing fill or other development in the floodplain. We currently allow 0.25' of rise in the BFE. (see various Sections including **603(b)(5), 604(a)(1)(B), 604(a)(5) & (10) & (11), Section 605(a)(4)**). This exceeds the federal minimum standard that allows up to 1.00' of rise in the BFE.
- New buildings must be elevated so that the lowest floor is at least three feet above the 1.0% chance flood (BFE - 100-year flood level). (see Sections **604(a)(6) & (7)**. This exceeds the federal minimum standard that requires that new buildings be elevated to at or above the BFE. The justification for recommending at least three feet versus at least two feet above the BFE, that is the standard in the Vermont Flood Hazard Area and River Corridor Rule, and the State DEC Flood Hazard Area and River Corridor Protection Procedure, is one that balances public safety and welfare, and economic development and re-development of floodplain areas. When non-historic buildings are substantially improved (an investment of 50% or more of the pre-flood market value) the structure must be elevated so that the lowest floor is at least two feet above the 1% chance (100-year) flood level. (see Sections **604(a)(6) & (7)** This exceeds the federal minimum standard that requires that non-historic buildings that are substantially improved be elevated to at or above the 1.0% chance flood (100-year level).
- Historic buildings that are currently listed as contributing structures to our historic districts or can be proven to be eligible to be included as federally approved historic buildings, are currently exempt from all of our criteria for the review of substantially improved structures. This means that basically the only review criteria that applies to historic structures are that the improvements are "reasonably safe from flooding" and fuel tanks are anchored or buried. The draft amendments would no longer exempt historic structures from all the substantial improvement criteria but would set up a partial exemption process whereby the requirement to elevate the lowest floor of the building would be exempted under the definition of Substantial Improvement.

However, other criteria would be required as part of the review under **Section 604, (a)**. These criteria would include either elevating the major components of utilities or making sure they are floodproofed, and making sure that foundations and other parts of structures won't move or collapse in the event of a flood. These criteria would address a lot of the issues we had with historic structures that were damaged by Tropical Storm Irene. **(see Section 610 and definition of Substantial Improvement)** The variance process would still be available for the review of historic and non-historic structures under a standard that is outlined in **Section 610, Variances** and the federal standards and is a lesser standard than in **Section 308 Variances**, and in state statute, 24 V.S.A. Chapter 117 §4469(a).. This exceeds the federal minimum standard that allows historic structures that are substantially improved to be exempted from the federal minimum standards for buildings that are substantially improved, including the requirement that the building be elevated.

- The placement of material in basements to elevate the lowest floor for buildings with a footprint of 5,000 sq. ft. or less would be exempt from the definition and bylaws relating to the placement of fill. This would encourage the filling in of basements to elevate the lowest floor of buildings and significantly reduce flood insurance rates for the building owner. **(see Sections 604(a)(10) and the definition of Fill)** This meets or exceeds the federal minimum standard that allows up to 1.00' of rise in the BFE from the placement of fill, including material that is placed in the basements of buildings.
- Compensatory storage and alternate flood attenuation methods are regulated in **Section 604(a)(11)** with exceptions for additions and accessory structures less than or equal to 200 sq. ft., utility work that is primarily below grade, fences or poles, and replacement structures of equal size. This language is based on the language in the Vt. ANR's Flood Hazard Area and River Corridor Rule for structures that are exempt from local flood hazard area regulations such as agricultural structures. This meets or exceeds the federal minimum standard that allows up to 1.00' of rise in the BFE from grading and the placement of fill within the 100-year floodplain.

CONFORMANCE WITH THE MUNICIPAL PLAN:

These Zoning Amendments conform with and further the goals, objectives, and actions, as set forth in the 2013 Waterbury Municipal Plan, including the following:

Chapter 5, Housing

Goal 1. Ensure the availability of safe, decent and affordable housing for all current and future Waterbury residents.

Goal 2. Create new housing in locations that maintain the integrity of neighborhoods while increasing density, respecting the natural environment, and minimizing the need for infrastructure improvements.

Chapter 6, Natural Resources

Flood Plains

Goal 3. Flood resiliency, mitigation and restoration following flood events such as Tropical Storm Irene.

Objective 10. Mitigate damage sustained from flooding through land use regulations, flood proofing of critical facilities in the floodplain, engaging landowners in proactive measures to flood proof, and participate in the FEMA sponsored Community Rating System (CRS) to help further these efforts and reduce flood insurance premiums.

Chapter 11, Land Use

General Action 6. Review and update the Special Flood Hazard Area regulations utilizing the most recent data and consider the impacts of climate change in making land use decisions.

PLANNED COMMUNITY FACILITIES:

These Zoning Amendments do not contain any specific proposals for any planned community facilities.

PREPARATION AND PUBLIC REVIEW PROCESS:

These draft Zoning Amendments were developed through an open, public process over the past year. The amendments have been prepared with the help of staff from the Central Vermont Regional Planning Commission, the state's Northern VT Floodplain Manager, affected landowners, town officials, and other interested citizens. The Planning Commission seeks public comment on this draft. The Commission will review the responses and, as appropriate in their light, will revise the proposed amendments and forward them to the Select Board and Trustees for deliberation.

ARTICLE III PERMITS, APPEALS, and ENFORCEMENT

Section 308 Variances

(b) For variances sought for development in areas defined in Section 602 of Article VI, properties determined to be in a flood hazard area, in addition to the criteria in subset (a) above, the Development Review Board must review the development under find that the requirements of Article VI, Flood Hazard Area Regulations and Overlay District, ~~are met.~~

ARTICLE VI FLOOD HAZARD AREA REGULATIONS AND OVERLAY DISTRICT

Section 600 Statutory Authorization and Requirement for Zoning Permit

(a) To effect the purposes of 10 V.S.A. Ch. 32, and in accordance with 24 V.S.A. Chapter 117 §4424, §4411 and §4414 there is hereby established an ordinance for Areas of Special Flood Hazards ~~special flood hazard~~ in the Town/Village of Waterbury, Vermont.

Section 601 Statement of Purpose

(a) It is the purpose of this Article ordinance to:

- (1) Minimize and prevent the loss of life and property, the disruption of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding and other flood-related hazards;
- (2) Ensure that the design and construction of development in flood and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood and loss or damage to life and property;
- (3) Manage all flood hazard areas designated pursuant to 10 V.S.A. Chapter 32 §753 and the municipal hazard mitigation plan; and
- (4) Make the state, municipalities, and individuals eligible for federal flood insurance and other federal disaster recovery and hazard mitigation funds as may be available.

Section 602 Lands to Which this Article Applies ~~These Regulations Apply~~

(a) Regulated Flood Hazard Areas

~~This Article~~~~These regulations~~ shall apply to all areas in the Town/Village of Waterbury that are identified as ~~Areas~~areas of ~~Special Flood Hazard~~special flood hazard, including ~~Floodways~~, in and on the most current flood insurance studies and maps published ~~or amended~~ by the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), as provided by the Secretary of the Agency of Natural Resources pursuant to 10 V.S.A. Chapter 32 §753, which are hereby adopted by reference and declared to be part of ~~this Article~~. ~~Areas of Special Flood Hazard include Floodways~~~~these regulations~~.

(b) Base Flood Elevations and Floodway Limits in Special Flood Hazard Areas

Where available, ~~Base Flood Elevations~~base flood elevations and floodway limits provided by the National Flood Insurance Program and in the Flood Insurance Study and accompanying maps shall be used to administer and enforce ~~this Article~~.~~these regulations~~. In Special Flood Hazard Areas where ~~Base Flood Elevations~~base flood elevations and/or floodway limits have not been provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps, it is the applicant's responsibility to develop the necessary data. Where available, the applicant shall use data provided by FEMA, or State, or Federal agencies.

Section 603 Summary Table: Development Review in Hazard Areas

#	Activity	Hazard-Zone	
		Special Flood Hazard Area	Floodway
	A Administrative Permit Review B Board Review X Prohibited E Exempted		
1	New structures	B	X
2	Storage	B	X
3	Substantial improvements to existing structures	A,B	B
4	Small appurtenant structures	A	X
5	Additions to existing structures	A,B	B
6	At-grade parking	A	B
7	Water supply or septic systems	A	A
8	Fill as needed to elevate existing structures	B	B
9	Fill	B	X
12	Grading/excavation	BA	BA
13	Road maintenance	E	E
14	Road improvements	A	B
15	Bridges and culverts	B	B
16	Channel management	B	B
17	Recreational vehicles	A	A
18	Open space, recreation	E	E
19	Forestry	E	E
20	Agricultural activities/farm structures	E	E

Section 604 — Development Review in Hazard Areas

(a) Permit

(1) A permit is required from the ~~Administrative Officer~~ Zoning Administrator (ZA) for all development in all areas defined in Section 602. A permit shall only be issued for development that meets all applicable Development Standards in Section 604 as well as all other requirements of this Article. Development that requires ~~Board approval, nonconforming use approval, or a variance from the~~ Development Review Board approval shall under these flood hazard regulations must have such approvals prior to the issuance of a permit by the Zoning Administrator.

~~(2) ZA.~~ Any permit issued shall development subject to municipal jurisdiction in the designated hazard areas shall meet the applicable criteria in Sections 605. Any permit issued will require that all other necessary permits from State or Federal Agencies have been received before work may begin, as described in Section ~~605~~606(a)(7).

(b) Administrative Permit Review

~~The~~For the purposes of review under these regulations, the following development activities ~~in the~~ Special Flood Hazard Areas requires only administrative review by the Zoning Administrator for conformance with all Area that are outside of the Floodway and meet the applicable Development Standards in Section ~~604~~605 — require only an administrative permit from the ZA:

- (1) Non-substantial improvements;
- (2) Small accessory structures 200 square feet or less;
- (3) Additions to existing structures not requiring fill;
- (4) Development related to on-site septic or water supply systems not requiring fill;
- (5) Grading and excavation of areas less than or equal to 10,000 sq. ft. of total disturbance, excluding any fill, that will not raise/elevate the Base Flood Elevation/BFE by any amount, that is not for the purpose of creating a pond, and that does not involve the placement of fill.
- ~~(6)~~ Building utilities;
- ~~(7)~~ At-grade parking for existing buildings outside of Floodways;
- ~~(8)~~ Recreational vehicles not exempt from regulation under this Article; ; and
- ~~(9)~~ Subdivisions fewer than five ~~four~~ lots, including the original parcel or less than five acres, where no development is proposed within ~~the~~ Special Flood Hazard Areas; and
- (10) Road improvements outside of Floodways Area.

(c) Prohibited Development

~~(1) The~~For purposes of review under these regulations, the following development is activities ~~are~~ prohibited in ~~the~~ Special Flood Hazard Areas Area and Floodway:

- ~~(A)~~ Junk yards;
- ~~(B)~~ New structures in the floodway;
- ~~(3)~~ Fully enclosed areas that are below grade on all sides (including below grade basements

and crawl spaces) that do not comply with the Development Standards in Section 604605;
and

(C4) All development not exempted or permitted-allowed in the applicable zoning district.

(2) The following development is prohibited in Floodways only:

(A) New structures;

(B) Storage facilities;

(C) Small appurtenant structures larger than 200 square feet; and

(D) The placement of fill, including fill placed to elevate a building or placed inside a basement.

(d) Development Review Board Review

The Development Review and approval by the Board shall review applications, is required prior to the issuance of a permit by the ZA for the following proposed development activities in the Special Flood Hazard Areas for conformance with all applicable Development Standards in Section 604 of this Article Area and Floodway:

(1) New residential or non-residential structures (including the placement of manufactured homes);

(2) The substantial improvement, elevation, relocation, or floodproofing of existing structures;

(3) Small appurtenant structures larger than 200 square feet;

(4) Additions to existing structures in Floodways the floodway that require fill;

(5) Grading and; excavation of areas greater than 10,000 sq. ft. of total disturbance or, that will raise the Base Flood Elevation by any amount; or for the purpose of creation of a pond;

(6) The placement of fill, including fill placed to elevate a building or placed inside a basement;

(767) Bridges, culverts, channel-management activities, or public projects that are functionally dependent on stream access or stream crossing;

(8) Road improvements in Floodway;

(9(78)) Storage facilities; and-

(10) At-grade parking in Floodways.

(e) Exempted Activities

The following activities are exempt from regulation under this Article regulation:

(1) The removal of a building or other structure in whole or in part;

(2) Maintenance of existing roads and stormwater drainage systems;

(3) Recreational vehicles that are fully licensed and ready for highway use, that are onsite for fewer than 180 consecutive days, and that are not placed on sites within Zones A, A1-30, AH, and AE;

(4) Silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices; and

(5) Agricultural activities conducted in accordance with the Vermont Department of

Agriculture's Accepted Agricultural Practices (AAP).

(f) Nonconforming Structures and Uses

The Development Review Board ~~shall review requests for~~ ~~may, after public notice and hearing,~~ ~~approve~~ the repair, relocation, replacement, or enlargement of a nonconforming structure within a ~~Special Flood Hazard Area for conformance~~ ~~flood hazard area,~~ ~~provided that the proposed development is in compliance~~ with the following limitations and all the applicable Development Standards in Section 604605 of this Article.

- (1) A structure that is located in Special Flood Hazard Area ~~the flood hazard area~~ and is destroyed may be reconstructed. All reasonable effort shall be taken to place the new structure in a less hazardous location on the parcel.
- (2) An individual manufactured-home lot in an existing manufactured home park that is vacated shall not be considered a discontinuance or abandonment of a nonconformity. Replacement manufactured homes must be placed so as to meet the development standards in this Article ~~regulation~~.
- (3) Any fuel storage tank that does not fully conform to the requirements set forth in Section 604605(a)(31)(C) shall be brought fully into compliance with those requirements no later than the time when any development occurs on the parcel where the tank is located. A nonconforming tank may not be altered, expanded, maintained, repaired, rebuilt or replaced without being brought into compliance with Section 604605(a)(31)(C). A structure containing a nonconforming fuel storage tank may not be relocated or enlarged unless the nonconforming tank is brought into compliance with Section 604605(a)(31)(C). A fuel storage tank that is destroyed by any cause may not be replaced unless the replacement tank is brought into compliance with Section 604605(a)(31)(C). With respect to nonconforming fuel storage tanks, this subsection shall take precedence over any contrary provision, and any more permissible provision of Section 304 of the Bylaws, as well as any other contrary or more permissible provision found elsewhere in these Bylaws.

Section 604605

Development Standards

(a) Special Flood Hazard Areas

- (1) All development within the Special Flood Hazard Areas ~~Area~~ shall ~~be~~:

~~(A) Be reasonably~~ Reasonably safe from flooding; and

~~(A)(B) Neither~~ Not reduce the effective flood storage volume of the Special Flood Hazard Area nor regulatory floodplain and/or shall not create a net increase in the Base Flood Elevation. (BFE).

- (2) Recreational vehicles placed on sites within Zones A, A1-30, AH, and AE must:

~~(A either: (1)~~ be onsite for fewer than 180 consecutive days; or

(B(2)) 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

(B)(C) (3) meet the elevation and anchoring requirements in Section 604605(a)(6). 2)(H);
and

(3) All fuel storage tanks within the Special Flood Hazard Area shall meet the requirements set forth in Sections 604605(a)(42)(A) through (D) and shall be either elevated or floodproofed.

(42) All substantial improvements and new construction (including fuel storage tanks) within the Special Flood Hazard AreasArea shall meet the following criteria:

(A) Be designed, operated, maintained, modified and adequately anchored to prevent flotation, collapse, release, or lateral movement of the structure, including all foundations;

(B) Be constructed with materials resistant to flood damage;

(C) Be constructed by methods and practices that minimize flood damage;

(D) Be constructed with electrical, heating, ventilation, plumbing 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. Any major components, including those listed above, such as electrical panels, furnaces, hot water heaters, and water pumps, where water can enter the component, shall be located at least two feet above the 1% annual chance (100-year) flood level for existing structures and at least three feet above the 1% annual chance (100-year) flood level for new structures;

(E) Provide adequate drainage to reduce exposure to flood hazards;

(FEE) New and replacement water supply systems must be designed to minimize or eliminate infiltration of flood waters in the systems;

(GFG) New and replacement sanitary sewer systems and onsite waste disposal systems must obtain a permit from the Agency of Natural Resources prior to commencement of construction.

(HGH) All new subdivisions and other proposed developments that are greater than 50 lots or 5 acres, whichever is the lesser shall include within such proposal base flood elevation data. All new subdivisions: (i) shall be consistent with the need to minimize flood damage; (ii) shall have public utilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage; and (iii) shall provide adequate drainage to reduce exposure to flood hazards.

(IHI) The fully enclosed areas below the lowest floor that are useable solely for parking

of vehicles, building access, or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or have a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above the finished floor elevation. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

~~(H) A non-residential, appurtenant structure of 500 square feet or less that represents a minimal investment need not be elevated to or above the base flood elevation in this area, provided the structure is placed on the building site so as to offer the minimum resistance to the flow of floodwaters and shall meet the criteria in Section 604605(a)(86).~~

(53) In Zones ~~AE, A, and A1-30~~—A30 where ~~Base Flood Elevations~~base flood elevations and/or floodway limits have not been determined, new construction and substantial improvement shall not be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated encroachment, will not increase the ~~Base Flood Elevation~~base flood elevation more than 1.00 foot at any point within the ~~Special community~~Special Flood Hazardhazard Area. The demonstration must be supported by technical data that conforms to standard hydraulic engineering principles and certified by a registered professional engineer.

(64) All new construction ~~and substantial improvements~~ of residential structures within Zones ~~A, A1-30, and AE, -~~ must have the lowest floor of all residential structures (including basement) elevated to at least ~~one foot~~three feet above the base flood level. ~~All substantial improvements of residential structures within Zones A, A1-30 and AE, with the exception of historic structures, must have the lowest floor of all residential structures (including basement) elevated to at least two feet above the 1% annual chance (100-year) flood level.~~ All manufactured homes to be placed within Zones ~~A, A1-30, A, and AE~~ shall be installed using methods and practices which minimize flood damage. For purposes of this requirement, manufactured homes must be elevated on a permanent foundation such that the lowest floor of the manufactured home is at least ~~one foot~~three feet above base flood elevation, and they must be anchored to an adequately anchored foundation to resist flotation collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

(75) All new construction and substantial improvements of non-residential structures within Zones ~~A, -A1-30, and AE,~~ ~~with the exception of historic structures,~~ shall ~~comply with the following requirements:~~

(A) ~~The structure shall either:~~

(i) ~~_____ Have the lowest floor (including basement) of new construction elevated to at least two~~three feet above the base flood level, ~~and the lowest floor (including basement) of substantial improvements elevated to at least two feet above the 1% chance (100-year) flood level;~~ or

(iiB) Be designed so that below the elevation of three feet above the base flood level the structure is water tight with walls substantially impermeable to the passage of water with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy to a point at least ~~two~~ three feet above the base flood level.

~~(B)~~ ~~(C)~~ Where a non-residential structure is intended to be made watertight below the elevation of three feet above the base flood level, a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of Section 604605(a)(7)(A)(ii5)(B).

(8) The substantial improvement of any historic structure located in the Special Flood Hazard Area may be reviewed under Section 611, Variances.

(96) Adequate drainage paths shall be required around structures on slopes to guide floodwaters around and away from proposed structures.

(108) The placement of fill in the Special Flood Hazard AreasArea, excluding the placement of material in basements for structures with a footprint of 5,000 sq. ft. or less, shall require certification from a professional engineer that the amount and location of the fill will not elevate the Base Flood ElevationBFE by any amount and may require compensatory storage or alternate flood attenuation. NOTE: The placement of fill in Floodways the Floodway is prohibited.

(119) Compensatory storage or alternate flood attenuation methods utilized for development, including the placement of structures and/or fill, shall:

(A) Not increase the Base Flood Elevation (BFE) or decrease Special Flood Hazard Area flood fringe storage capacity. Development that displaces floodwater storage in the Special Flood Hazard Area flood fringe must provide compensatory storage to offset the impacts of the proposal, when the development will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows up to and including the base flood discharge. Volumetric analyses and supporting data must be provided by the applicant and certified by a registered professional engineer.

(B) Provide equivalent compensatory flood volume or other flood mitigation features at equivalent elevations to that flood storage capacity being displaced.

(C) Compensatory storage and all other flood attenuation measures, shall be provided in the same construction season as when the displacement of flood storage volume occurs.

(D) Require a certification by a licensed professional engineer supported by hydraulic or hydrologic technical data, or an explanation why an explanation was not required, based on the computer model utilized to develop the Flood Insurance Rate Maps and the results tabulated in the related Flood Insurance Study.

E) Exceptions. The compensatory storage or alternate flood attenuation requirements may be waived for:

- (i) Additions and accessory structures that are less than or equal to 200 sq. ft. in footprint provided that the designs will have no more than a minimal effect on floodwater storage and will not divert floodwaters onto adjacent property.
- (ii) Designs that do not effect on floodwater storage include open foundation designs, and utility work that is largely below grade.
- (iii) Minor above ground improvements such as fences or poles that minimally displace or divert floodwaters.
- (iv) Replacement structures provided that there is no increase in the structure's footprint.
- (v) Replacement structures relocated to a less hazardous location within the Special Flood Hazard Area flood fringe provided that there is no increase in the structure's footprint

(127) The flood carrying and sediment transport capacity within the altered or relocated portion of any watercourse shall be maintained, and any alteration or relocation shall not result in any decrease of stream stability.

(138) Bridge and culverts, which by their nature must be placed in or over the stream, must obtain a stream alteration permit from the Agency of Natural Resources, if required.

(b) Floodways Floodway Areas

(1) Encroachment or development above grade and less than one foot above the base flood elevation are prohibited unless hydrologic and hydraulic analyses are performed in accordance with standard engineering practice, by a registered professional engineer certifying that the proposed development will:

(A) Not result in any increase in flood levels (0.00 feet) during the occurrence of the base flood; and

(B) Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.

(2) Public utilities may be placed underground, and the analyses may be waived, where a registered professional engineer certifies that there will be no change in grade and the utilities will be adequately protected from scour.

Section 605606 Application Submission Requirements

(a) Applications for development in Areas of Special Flood Hazard shall include:

(1) Base Flood Elevation data for all subdivisions, new construction, and

substantial improvements;

(2) The elevation, in relation to mean sea level, of the lowest floor, including basement, of all new construction or substantial improvement of structures consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community;

(3) Where floodproofing is used in lieu of elevation, the elevation, in relation to mean sea level, to which any structure or substantial improvement will be floodproofed;

(4) Where an application requires Development Review Board review under Section ~~603604~~(d), the application shall include certification by a registered professional engineer ~~or architect~~ demonstrating that the proposed development will not increase Base Flood Elevations. ~~base flood elevations more than 0.25 foot. A flood elevation~~ The demonstration of no net increase in the Base Flood Elevation (BFE) must be supported by technical data that conforms to standard hydraulic engineering principals and certified by a registered professional engineer. Compensatory storage of displaced flood waters must be above the water table, hydrologically equivalent, and serve to reduce flood and storm water impacts. Development may not result in any adverse affects on existing structures during the occurrence of the base flood. A floodproofed structure must meet the floodproofing criteria of this Article;

(5) Where a development proposal is subject to one or more of the requirements set forth in Section ~~603605~~ that require new construction, substantial improvement or other development to be located at or above a Base Flood Elevation~~base flood elevation~~, and in cases where development is otherwise required to occur with reference to a specified elevation, the application for a permit shall include a certification by a registered professional engineer ~~or architect~~ demonstrating compliance with the elevation requirements consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community.- Thereafter, the permittee shall submit a FEMA Elevation Certificate, where applicable, or other certification providing ~~providing~~ as-built certification- from a registered professional engineer or architect as to such elevation at the time the permittee applies for the a Certificate of Completion;

(6) A description of the extent to which any watercourse will be altered or relocated as a result of the proposed development; ~~and~~

(7) A Vermont Agency of Natural Resources Project Review Sheet for the proposal. The Project Review Sheet shall identify all State and Federal agencies from which permit approval is required for the proposal, and shall be filed as a required attachment to the permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Zoning Administrator~~ZA~~ and attached to the permit before work can begin; ~~and~~.

(8) Proposed floodproofing, as required in applicable portions of Section 603605, must be supported by a FEMA Floodproofing Certificate.

(b) In addition, the Development Review Board shall require such of the following information as it deems necessary for determining the suitability of the particular site for the proposed use:

(1) Plans in triplicate, drawn to scale, showing the location, dimensions, contours, and elevation of the lot consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community; the size and location on the site of existing or proposed structures, fill or storage of materials; the location and elevations of streets, water supply, and sanitary facilities consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community; and the relation of the above to the location of the channel, Floodway~~floodway~~, and base flood elevation; and

(2) Specifications for building construction and materials, floodproofing, mining, dredging, filling, grading, paving, excavation, or drilling, channel improvement, storage of materials, water supply, and sanitary facilities.

Section 606607 Procedures

(a) Any applicant for development subject to review by the Development Review Board in the Areas~~areas~~ of Special Flood Hazard~~special flood hazard~~ must notify adjacent landowners by certified mail of the nature of the application and the upcoming Development Review Board review at least ten-fifteen days prior to such review. The applicant must submit copies of certified mail receipts indicating that all adjacent landowners have been sent the notice, and a copy of the notice sent.

(b) Prior to issuing a permit for development requiring Development Board~~Review Board~~ review under Section 603604(d), a copy of the application and supporting information shall be submitted by the Zoning Administrator to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. Chapter 117 §4424. A permit may be issued only following receipt of comments from the Agency or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner.

(c) If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall also be submitted to the adjacent communities, the Stream Alteration Engineer at the Vermont Agency of Natural Resources, and the Army Corps of Engineers. Copies of such notice shall be provided to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation. A permit may be issued only following receipt of comments from the Vermont Agency of Natural Resources, or the expiration of 30 days from the date the application was mailed to the Vermont Agency of Natural Resources, whichever is sooner.

(d) Prior to the construction of any farm structures in Areas~~areas~~ of Special Flood Hazard~~special flood hazard~~, the applicant must notify the Zoning Administrator~~ZA~~ in writing of the proposed activity. The notice must contain a sketch of the proposed structure including setbacks.

Section 607608 Interpretation of District Boundaries

The Zoning Administrator shall determine the boundaries of any designated ~~Area~~ area of Special Flood Hazard ~~special flood hazard~~ by scaling distances on the ~~latest~~ Official Flood Insurance Rate Hazard Map. If the applicant disagrees with the determination make by the Zoning Administrator ~~ZA~~, a Letter of Map Amendment (LOMA) from FEMA shall constitute proof that the development is outside the Special Flood Hazard Area.

Section 608609 Base Flood Elevations and Floodway Limits

(a) In Zones A, ~~AE~~, and A1-30—~~A30~~ where Base Flood Elevations ~~base flood elevations~~ and/or floodway limits are available, Base Flood Elevations ~~base flood elevations~~ and floodway limits (or data from which a community can designate regulatory floodway limits) provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps shall be used to administer and enforce this Article ~~these regulations~~.

(b) In Zones A, AE, and A1-30—~~A30~~ where Base Flood Elevations ~~base flood elevations~~ and/or floodway limits have not been determined, development shall not be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated encroachment, will not increase the Base Flood Elevation ~~base flood elevation more than 1.00 foot~~ at any point within the community. The demonstration must be supported by technical data that conforms to standard hydraulic engineering principles and certified by a registered professional engineer.

Section 609610 Recordkeeping

The Zoning Administrator shall properly file and maintain a record of:

(a) All permits issued for development in Areas ~~areas~~ of Special Flood Hazard ~~special flood hazard~~;

(b) Elevation Certificates with the as-built elevation (consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community) of the lowest floor, including basement, of all new or substantially improved buildings (not including appurtenant structures) in ~~the~~ Special Flood Hazard Areas ~~Area~~;

(c) The elevation (consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community) to which buildings have been flood proofed;

(d) All floodproofing and other certifications required under this Article ~~regulation~~; and

(e) All decisions of the Development Review Board including variances and violations and all supporting findings of fact, conclusions and conditions.

Section 610611 Variances

(a) Variances from the requirements of this Article for development other than for the substantial improvement of historic structures located in Special Flood Hazard Areas shall only be granted by the Development Review Board if the development conforms appropriate municipal panel only in accordance with the following provisions: 24 V.S.A. Chapter 117 §4469(ad); Article III, Section 308 of these regulations; this regulation and the 24 V.S.A. Chapter 117 § 4424 (E) and in accordance with the and the criteria for granting variances found in 44 CFR, Section 60.6(a), of the National Flood Insurance Program regulations, which are hereby adopted by reference and declared to be part of this Article. The requirements of 24 V.S.A. Chapter 117 §4469(a) do not apply to the review of variances for the substantial improvement of non-historic structures.

(b) Variances from the requirements of this Article for the substantial improvement of historic structures located in Special Flood Hazard Areas shall only be granted by the Development Review Board if the development conforms with the following provisions: 24 V.S.A. Chapter 117 §4469(d) and the criteria for granting variances found in 44 CFR, Section 60.6(a) of the National Flood Insurance Program regulations, which are hereby adopted by reference and declared to be part of this Article. The requirements of 24 V.S.A. Chapter 117 §4469(a) do not apply to the review of variances for the substantial improvement of historic structures. No variance shall be granted unless the following additional requirements are met:

(1) The variance is the minimum necessary to preserve the historic character and design of the structure; and

(2) The substantial improvement shall not preclude the structure's continued designation as a historic structure; and

(3) Compliance with the Development Standards in Sections 604(a)(4)(A) (I) shall be required as a condition of variance approval.

(c) Any variance granted for development issued in the Special Flood Hazard Areas Area will shall not increase Base Flood Elevation the elevation of the base flood heights other than as permitted allowed by in this Article. Furthermore, the applicant shall will be notified in writing over the signature of a community official that the issuance of a variance to construct a structure below the Base Flood Elevation base flood elevation increases risk to life and property and may result in increased flood insurance premiums up to amounts as high as \$25 for every \$100 of insurance coverage. Such notification shall be maintained with a record of all variance actions.

Section 611612 Warning of Disclaimer of Liability

This Article ordinance does not imply that land outside of the Areas areas of Special Flood Hazards special flood hazard or land use permitted within such districts will be free from flooding or flood damages. This Article ordinance shall not create liability on the part of the Town of Waterbury or any Town official or employee thereof for any flood damages that result from reliance on this Article ordinance or any administrative decision lawfully made there under.

Section 612613 Validity and Severability

If any portion of this [Article ordinance](#) is held unconstitutional or invalid by a competent court, the remainder of this [Article ordinance](#) shall not be affected.

Section 613614 Precedence of this Article Ordinance

The provisions of this [Article ordinance](#) shall not in any way impair or remove the necessity of compliance with any other applicable ordinances. Where this [Article ordinance](#) imposes a greater restriction, the provisions of this [Article ordinance](#) shall take precedence.

Section 614615 Certificate of Completion

In accordance with 24 V.S.A. Chapter 117 §4449, it shall be unlawful to use or occupy, or permit the use or occupancy of any land or structure, or part thereof, created, erected, changed, converted, or wholly or partly altered or enlarged in its use or structure within Special Flood Hazard ~~Areas~~ [Area](#) until a certificate of completion is issued therefore by the Zoning Administrator stating that the proposed use of the structure or land conforms to the requirements of [this Article these regulations](#). A certificate of completion is not required for structures that were built in compliance with the regulations at the time of construction and have not been improved since the adoption of this regulation. Within 14 days of the receipt of the application for a certificate of completion, the [Zoning Administrator ZA](#) shall inspect the premises to ensure that all work has been completed in conformance with the zoning permit and associated municipal approvals. If the [Zoning Administrator ZA](#) fails to grant or deny the certificate of completion within 14 days of the submission of the application, the certificate shall be deemed issued on the 15th day. If a certificate of completion cannot be issued, notice will be sent to the owner and copied to the lender.

Section 615616 Enforcement and Penalties

(a) It shall be the duty of the Zoning Administrator to enforce the provisions of this [Article ordinance](#). Whenever any development occurs contrary to ~~this Article these flood hazard area regulations~~, the Zoning Administrator, in his discretion, shall institute appropriate action in accordance with the provisions of Section 31009 of the Zoning Regulations, and 24 V.S.A. §1974a, –§4451, and § 4452, to correct the violation.

(b) No action may be brought unless the alleged offender has had at least a seven-day warning notice of violation by certified mail. A copy of the notice of violation will be mailed to the State NFIP Coordinator. An action may be brought without the seven-day notice and opportunity to cure if the alleged offender repeats the violation after the seven-day notice period and within the next succeeding twelve months. The seven-day warning notice shall state that a violation exists, that the alleged offender has an opportunity to cure the violation within the seven days, and that the alleged offender will not be entitled to an additional warning notice for a violation occurring after the seven days.

(c) If the structure is still noncompliant after the seven-day opportunity to cure has passed, the

Zoning Administrator shall submit a declaration to the Administrator of the National Flood Insurance Program requesting a denial of flood insurance. Section 1316 of the National Flood Insurance Act of 1968, as amended, authorizes FEMA to deny flood insurance to a property declared by a community to be in violation of their flood hazard area regulations. The declaration shall consist of: (a) the name of the property owner and address or legal description of the property sufficient to confirm its identity or location, (b) a clear and unequivocal declaration that the property is in violation of a cited state or local law, regulation, or ordinance, (c) a clear statement that the public body making the declaration has authority to do so and a citation to that authority, (d) evidence that the property owner has been provided notice of the violation and the prospective denial of insurance, and (e) a clear statement that the declaration is being submitted pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended.

(d) Violations of the Accepted Agricultural Practices shall be immediately reported to the Secretary of Agriculture for enforcement under 6 V.S.A. [Chapter 215 §-§ 4812](#).

NOTE: The following definitions add to and substitute for existing definitions in ARTICLE XIV, DEFINITIONS.

APPURTENANT STRUCTURE: For purposes of Article VI, the Flood Hazard Area Regulations [and Overlay District](#), “appurtenant structure” means a structure which is on the same parcel of property as the principal structure, the use of which is incidental to the use of the principal structure.

AREA OF SPECIAL FLOOD HAZARD: The land in the floodplain within Waterbury subject to a 1 percent or greater chance of flooding in any given year. This area is labeled Zone A, AO, AH, AE, or A1 – A30 in the most current flood insurance studies and on the maps published by the Federal Emergency Management Agency. Maps of this area are available for viewing in the municipal office or online from the FEMA Map Service Center: msc.fema.gov. Base ~~Flood Elevations~~[flood elevations](#) have not been determined in Zone A where the flood risk has been mapped by approximate methods. Base ~~Flood Elevations~~[flood elevations](#) are shown at selected intervals on maps of Special Flood Hazard Areas that are determined by detailed methods. Please note, where ~~Floodways~~[floodways](#) have been determined they may be shown on separate map panels from the Flood Insurance Rate Maps. For purposes of [Article VI, Flood Hazard Area Regulations and Overlay District](#) ~~these regulations~~, the term “~~Special Flood Hazard Area~~[special flood hazard area](#)” is synonymous in meaning with the phrase “~~Area~~[area](#) of [Special Flood Hazards\[special flood hazard\]\(#\).”](#)

BASE FLOOD ELEVATION (BFE): The elevation of the water surface elevation resulting from a flood that has a 1 percent chance of equaling or exceeding that level in any given year. On the Flood Insurance Rate Map, the elevation of the base flood is usually in feet, in relation to the National Geodetic Vertical Datum of 1929, the North American Vertical Datum of 1988, or other datum referenced in the Flood Insurance Study report, or average depth of the base flood, usually in feet, above the ground surface.

BASEMENT: [For the purposes of Article VI, Flood Hazard Area Regulations and Overlay District](#), “basement” refers to any ~~any~~[any](#) area of a building having its floor sub-grade (below ground level) on all sides.

FILL: Any placed material that changes the natural grade, increases the elevation, or diminishes the flood storage capacity at the site. The placement of material in basements for structures with a footprint of 5,000 sq. ft. or less shall not be defined as fill.

NEW CONSTRUCTION: For floodplain management purposes, new construction means structures for which the start of construction commenced on or after the effective date of the floodplain management regulation adopted by a community and includes any subsequent improvements to such structures. For all other zoning purposes, “new construction” means structures commenced on or after the effective date of this bylaw.

NON-SUBSTANTIAL IMPROVEMENT: For the purposes of Article VI, Flood Hazard Area Regulations and Overlay District, any improvement to existing structures that: (a) constitutes development, (b) is not Substantial Improvement that requires a zoning permit under Section 300, and (c) is not specifically exempted from regulation under Article VI, as an activity in Section 603, Summary Table: Development Review in Hazard Areas, and Section 6043(e), Exempted Activities, shall be considered a Non-substantial Improvement. Non-substantial Improvement includes, without shallimitation, ~~also include~~ repairs to damaged portions of buildings that have been flooded that do not result in increased floor area.

STRUCTURE: For the purposes of Article VI, Flood Hazard Area Regulations and Overlay District, "structure" means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

SUBSTANTIAL IMPROVEMENT: Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of the which, over three years, or over the period of a common plan of development, cumulatively equals or exceeds 50 percent of the market value of the structure before start of construction of the improvement. This term includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either (1) any project for improvement of the structure to correct existing violations of state or local health, sanitary, or safety code specification that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions, or (2) any alteration the elevation of a “historic structure,” as described in Sections 604(a)(6) and (7), provided that ~~the alteration the substantial improvement of the “historic structure”~~ will not preclude the structure’s continued designation as a “historic structure.”