

Town of Chelsea
FLOOD HAZARD BYLAW

1.0 Statutory Authorization

1.1 To effect the purposes of 10 V.S.A. Chapter 32, and in accord with the Vermont Planning and Development Act, 24 V.S.A. Chapter 117, Section 4412, there are hereby established bylaws for flood hazard areas in the Town of Chelsea.

2.0 Statement of Purpose

2.1 It is the purpose of these bylaws to promote the public health, safety and general welfare, to prevent increases in flooding caused by the uncontrolled development of lands in flood hazard areas, and to minimize losses due to floods by

- a. restricting or prohibiting uses that are dangerous to health, safety, or property in times of flood or cause excessive increase in flood heights or velocities;
- b. requiring that uses vulnerable to floods, including public facilities that serve such uses, shall be protected against flood damage at the time of initial construction;
- c. protecting individuals from buying lands that are unsuited for their intended purposes because of flood hazard.

3.0 Lands to which these regulations apply

~~3.1 This bylaw shall apply to all lands identified as areas of special flood hazard on the Federal Insurance Administration Flood Insurance Rate maps dated August 15, 1980, and as a regulatory floodway on the Federal Insurance Administration Flood Boundary and Floodway maps dated August 15, 1980.~~

3.1 These regulations shall apply for development in all areas in the Town of Chelsea identified as areas of special flood hazard on the National Flood Insurance Program maps which are hereby adopted by reference and declared to be part of these regulations.

4.0 Official Flood Hazard Area Map

- 4.1 The Official Flood Hazard Area Map shall consist of the Federal Insurance Administration Flood Insurance Study, including the Flood Insurance Rate Maps and Flood Boundary and Floodway Maps and any additional land identified thereon as special flood hazard areas. The Official Flood Hazard Area Map, together with all explanatory matter thereon and attached thereto, is hereby adopted by reference and declared to be part of these regulations.

5.0 Interpretation of District Boundaries

- 5.1 The administrative officer shall determine the boundaries of the designated flood hazard area by scaling distances on the Official Flood Hazard Area Map. Appeals with respect to a boundary interpretation shall be made by filing a notice with the board of adjustment within fifteen days of the decision or act.

6.0 Permitted Uses

- 6.1 The following open space uses shall be permitted within the flood hazard area to the extent that they are not prohibited by any other ordinance and provided that they do not require the erection of structures or storage of materials or equipment, or channel modification or relocation, and do not obstruct flood flows, affect the water carrying capacity of the floodway or channel, or increase off-site flood damage potential.
- a. Agricultural uses, such as general farming, pasture, orchard, grazing, outdoor plant nurseries, truck farming, and forestry.
 - b. Recreation uses, such as parks, camps, picnic grounds, tennis courts, golf courses, golf driving ranges, archery and shooting ranges, hiking and riding trails, hunting and fishing areas, game farms, fish hatcheries, wildlife sanctuaries, nature preserves, swimming areas, and boat launching sites.
 - c. Residential uses, such as lawns, gardens, parking areas, and play areas.

7.0 Conditional Uses

- 7.1 All new construction, substantial improvement, and development uses that do not meet the criteria of section 6.0 and fall within the designated flood hazard area are permitted only upon the granting of a conditional use permit by the board of adjustment as provided in section 11.0 and 12.0 of this bylaw.

8.0 Permit Requirements and Application Procedures

- 8.1 Permits are required for all proposed new construction, substantial improvements, and other developments, including the placement of mobile homes, within all lands to which these regulations apply.
- 8.2 All permit applications shall be submitted to the administrative officer, on forms furnished by him, who shall determine whether or not the proposed development is located within the flood hazard area by the procedures established in section 5.0.
- 8.3 If the proposed use will be located in the flood hazard area and does not meet the criteria of section 6.0, the administrative officer shall refer the applicant to the board of adjustment.

9.0 Records

- 9.1 The administrative officer shall maintain a record of
- a. all permits issued for development in areas of special flood hazard.
 - b. the elevation, in relation to mean sea level, of the lowest floor, including basement, of all new or substantially improved structures;
 - c. the elevation, in relation to mean sea level, to which such structures have been floodproofed;
 - d. all floodproofing certifications required under this regulation; and
 - e. all variance actions, including justification for their issuance.

10.0 Conditional Use Review Procedures

10.1 Upon receiving an application for a conditional use permit under the bylaw, the board of adjustment shall, prior to holding a hearing and rendering a decision thereon, obtain from the applicant

- a. base flood elevation data;
- b. the elevation, in relation to mean sea level, of the lowest habitable floor, including basement, of all new construction of substantial improvement of structures;

the elevation, in relation to mean sea level, to which any structure or substantial improvement has been floodproofed;
- d. certification from a registered professional engineer that the floodproofed structure meets the floodproofing criteria of section 12.1 of this bylaw.

10.2 In addition, the board of adjustment shall require such of the following information as it deems necessary for determining the suitability of the particular site for the proposed use.

- a. Plans showing the location, dimensions, contours, and elevation of the lot; 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; and the relation of the above to the location of the channel, floodway, and base flood elevation where such information is available.
- b. A typical valley cross-section showing the channel of the stream, elevation of land areas adjoining each side of the channel, and cross-sectional areas to be occupied by the proposed development.
- c. A profile showing the slope of the bottom of the channel or flow line of the stream.
- d. 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.

10.3 ~~In the absence of Federal Insurance Administration base flood elevation data, the board of adjustment shall utilize any base flood elevation data available from a federal, state, or other source as criteria for all new construction and substantial improvements under 10.1(b) and (d) above.~~

a. Where available, the base flood elevations and floodway limits provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps shall be used to administer the provisions of these regulations.

b. In areas where base flood elevations and floodway limits have not been provided by the National Flood Insurance Program; base flood elevation and floodway information available from State or Federal agencies or other sources, shall be obtained and reasonably utilized to administer the provisions of these regulations.

10.4 ~~The board of adjustment shall notify adjacent communities and the Vermont Department of Water Resources prior to approval of any alteration or relocation of a watercourse and shall submit copies of such notifications to the Federal Insurance Administrator.~~

Environmental Conservation at least 15 days prior to issuing any permit for the alteration or relocation of a watercourse and shall submit copies of such notification to the Federal Insurance Administrator.

~~10.5 The secretary of the board of adjustment shall transmit one copy of the information described in subsections 10.1, 10.2, and 10.3 to the Vermont Department of Water Resources in accordance with 24 V.S.A. Section 4409 (c)(2)(A).~~

10.5 In accordance with 24 V.S.A. Section 4409 (c)(2)(A), no permit may be granted for new construction or the development of land in any area designated as a flood plain by the Vermont Department of Water Resources Environmental Conservation prior to the expiration of a period of 30 days following the submission of a report to the Vermont Department of Water Resources

Environmental Conservation under section 10.5 above.

- 10.6 Proposed development shall be reviewed to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law.

11.0 Consideration by the Board of Adjustment

- 11.1 In reviewing each application, the board of adjustment shall consider

- a. the danger of life and property due to increased flood heights or velocities caused by encroachments;
- b. the danger that materials may be swept onto other lands or downstream to the injury of others;
- c. the proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions;
- d. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners;
- e. the importance of the services provided by the proposed facility to the community;
- f. the availability of alternative locations not subject to flooding for the proposed use.
- g. the compatibility of the proposed use with existing development and development anticipated in the foreseeable future;
- h. the relationship of the proposed use to the proposed comprehensive plan, insofar as it has been developed;
- i. the safety of access to the property in times of flood of ordinary and emergency vehicles;
- j. the expected heights, velocity, duration, rate or rise, and sediment transport of the flood waters expected at the site;

- k. such other factors as are relevant to the purposes of this ordinance.

~~12.0--Conditions-Attached-to-Conditional-Use-Approval~~

~~12.1--As-a-condition-of-approval,-the-board-of-adjustment-
shall-specifically-require-that~~

- ~~a.--all-new-construction-or-substantial-improvement
of-any-residential-structure-have-the-first-floor
and-basement-floor-elevated-to-or-above-the-base
flood-elevation-where-this-information-is--
available;--~~
- ~~b.--all-new-construction-or-substantial-improvement
of-nonresidential-structures-have-the-lowest
floor,-including-basement,-elevated-or
floodproofed-to-or-above-the-base-flood-elevation
where-this-information-is-available;~~
- ~~c.--the-lowest-floor,-including-basement,-and
attendant-utility-and-sanitary-facilities-of-all
new-construction-or-substantial-improvement-below
the-base-flood-elevation-by-floodproofed-so-that
the-structure-is-watertight-with-walls
substantially-impermeable-to-the-passage-of-water
with-structural-components-having-the-capability
of-resisting-hydrostatic-and-hydrodynamic-loads
and-the-effects-of-buoyancy;~~
- ~~d.--adequate-surface-drainage-be-provided-to-reduce
exposure-to-flood-hazards;~~
- ~~e.--any-encroachment,-including-fill,-new
construction,-substantial-improvement,-or-other
development,-be-prohibited-that-will-result-in
any-increase-in-flood-levels-within-the
regulatory-floodway-during-the-occurrence-of-the
base-flood-discharge,-except-as-flood-control
measure;-~~
- ~~f.--the-flood-carrying-capacity-within-any-portion-of
an-altered-or-relocated-watercourse-be
maintained;~~
- ~~g.--all-gas-and-electrical-equipment,-circuits,-and
appliances-be-located-and-constructed-to-minimize
or-eliminate-flood-damage;~~

- h. -- all new and replacement water supply systems be designed so as to minimize or prevent the infiltration of flood water into the systems;
- i. -- all new and replacement sanitary sewage systems be designed to minimize or prevent infiltration of flood waters into the systems and discharges from the systems into flood waters;
- j. -- on-site waste disposal systems be located to avoid impairment to them or contamination from them during flooding;
- k. -- all mobile homes to be placed in the designated area of special flood hazard be anchored to resist flotation, collapse, or lateral movement by
 - 1. -- over the top ties at each of the four corners of the mobile home, with two additional ties per side at intermediate locations and mobile homes less than 50 feet long requiring one additional tie per side;
 - 2. -- frame ties at each corner of the home with five additional ties per side at intermediate points and mobile homes less than 50 feet long requiring four additional ties per side;
- l. -- all components of the mobile home anchoring system shall be capable of carrying a force of 4,000 pounds and any additions to the mobile home shall be similarly anchored;
- m. -- all necessary permits be obtained from those governmental agencies from which approval is required by federal state law;
- n. -- all mobile homes placed on pilings, that (1) the lots are large enough to permit steps, (2) piling foundations are placed in stable soil no more than ten feet apart, and (3) reinforcement is provided for pilings more than six feet above the ground level.

12.0 Development Standards

12.1 Floodway areas

Development within the floodway is prohibited unless

a registered professional engineer certified that the proposed development will not result in any increase in flood levels during the occurrence of the base flood.

12.1 Fringe Areas

- a. All development shall be designed (i) to minimize flood damage to the proposed development and to public facilities and utilities, and (ii) to provide adequate drainage to reduce exposure to flood hazards.
- b. Structures shall be (i) designed or modified and adequately and anchored to prevent flotation, collapse, or lateral movement of the structure during the occurrence of the base flood, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damage, and (iv) 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.
- c. The flood carrying capacity within any altered or relocated portion of a watercourse shall be maintained.
- d. New and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.
- e. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- f. New and replacement manufactured homes shall be elevated on properly compacted fill such that the top of the fill under the entire manufactured home is above the base flood elevation.
- g. The lowest floor, including basement, of all new buildings shall be at or above the base flood elevation.

- h. Existing buildings to be substantially improved for residential purposes shall be modified or elevated to meet the requirements of subsection k.
- i. Existing buildings to be substantially improved for non-residential purposes shall either (i) meet the requirements of subsection h. or (ii) be designed to be watertight below the base flood elevation with walls substantially impermeable and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A permit for a building proposed to be floodproofed shall not be issued until a registered professional engineer or architect has reviewed the structural design, specifications and plans, and has certified that the design and proposed methods of construction are in accordance with accepted standards of practice for meeting the provisions of this subsection.
- j. All new construction and substantial improvements with fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalized 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 meet or exceed the following minimum criteria: 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 shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- k. Areas to be used for junkyards or for storage of floatable, hazardous or toxic materials shall be filled and graded to at least one foot above the base flood elevation.

12.3 Upon consideration of those factors in section 11.0 above, and the purposes of these regulations, the board of adjustment shall attach such additional

conditions to the granting of a permit as are necessary to meet the purposes and flood hazard area management requirements of this bylaw.

13.0 Time for Acting on Application

13.1 The board of adjustment shall hold a properly warned hearing within 30 days of receiving the application, and shall act on such application in a manner described in sections 11.0 and 12.0 above, within 30 days of the final hearing, subject to the limitation of section of 10.6 of this bylaw.

13.2 A copy of the public notice shall be mailed to the applicant at least 15 days prior to the hearing date.

14.0 Issuance & Transmission of Permits

14.1 Upon granting a permit, the board of adjustment shall send to the applicant, by certified mail, a copy of the decision. Copies of the decision shall also be mailed or delivered to every person heard at the hearing, the administrative officer, who shall forthwith issue a permit, and the town clerk as a part of the public records.

15.0 Effective Date

15.1 Conditional use permits shall take effect upon adjudication by the board of adjustment.

16.0 Appeals

16.1 An interested person, as defined in 24 V.S.A. Section 4464 (b), may appeal a decision of the board of adjustment to the superior court in accordance with the provisions of 24 V.S.A. Section 4471.

17.0 Variances to the Development Standards

17.1 Variances shall be granted by the board of adjustment only

a. in accordance with the provision of 24 V.S.A. Section 4468 and Section 4412(h) and in accordance with the criteria for granting variances found in 44 CFR, Section 60.6, of the National Flood Insurance Program regulations;

- b. upon a determination that during the base flood discharge the variance will not result in increased flood levels.
- c. upon a determination that the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

17.2 The secretary of the board of adjustment shall notify the applicant that

- a. the issuance of a variance to construct a structure below the base flood elevation will result in increased premium rates for flood insurance commensurate with the resulting increase in risk up to amounts as high as \$25 for \$100 of insurance coverage.
- b. such construction below the base flood elevation increases risks of life and property.

17.3 The secretary of the board of adjustment shall

- ~~a. maintain a record of all variance actions, including justifications for their issuance; and~~
- b. report such all variances issued actions to the Administrator upon request.

18.0 Nonconforming Structures

18.1 The board of adjustment may, after public notice and hearings, approve the repair, relocation, replacement, or enlargement of a nonconforming structure within a regulated flood hazard area, subject to compliance with the applicable considerations and requirements of section 11.0 and 12.0 of these regulations and provided that the following criteria are met:

- a. The board finds that the repair, relocation, or enlargement of such nonconforming structure is required for the continued economically feasible operation of a none-residential enterprise; and
- b. The board finds that the repair, relocation, or enlargement of a nonconforming residential or non-residential structure will not increase flood

levels in the regulatory floodway, threaten the health, safety, and welfare of the public or other property owners; and

- c. The permit so granted shall state that the repaired, relocated, or enlarged nonconforming structure is located in a regulated flood hazard, does not conform to the bylaws pertaining thereto, may not be eligible for any flood insurance which may pertain to regulated flood hazard areas, and will be maintained at the risk of the owner; and
- d. A copy of such permit shall be affixed to the copy of the deed of the concerned property on file in the municipal clerk's office.

19.0 Prohibited Uses

- 19.1 Junkyards, as defined in 24 V.S.A. Section 2068, and storage facilities for chemicals, explosives, flammable liquids, or other toxic materials shall be prohibited.

20.0 Fees

- 20.1 The board of selectmen shall establish such fees as may be necessary for the filing of notices and the processing of hearings and action thereon. All such fees shall be paid to the secretary of the board of adjustment upon application for a conditional use permit under these regulations.

21.0 Warning of Disclaimer of Liability

- 21.1 These regulations do not imply that land outside the areas of special flood hazard or land uses permitted within such districts will be free from flooding or flood damages. These regulations shall not create liability on the part of the Town of Chelsea or any town official or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision.

22.0 Severability

- 22.1 If a portion of this ordinance is held unconstitutional or invalid by a competent court, the remainder of this ordinance shall not be affected thereby.

23.0 Precedence of Regulations

23.1 The provisions of these regulations shall take precedence over any conflicting and less restrictive local laws.

24.0 Annual Report to Federal Insurance Administration

24.1 The administrative officer, shall to the extent possible, submit to the Administrator the required annual report form with respect to the administration and enforcement of the flood hazard area bylaw.

24.2 A copy of the annual report shall be submitted to the Vermont Department of Water Resources Environmental Conservation.

25.0 Definitions

ADMINISTRATOR. The Federal Insurance Administrator.

AREA OF SHALLOW FLOODING. A designated AO or AH zone on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

AREA OF SPECIAL FLOOD HAZARD. The land in the flood plain within a community subject to a one percent or greater chance of flooding in a given year. The area may be designated as Zone A on the Flood Hazard Boundary Map. After detailed rate making has been completed in preparation for publication of the Flood Insurance Rate Map, Zone A usually is refined into Zones A, AO, AH, AI-30, AE or A99.

BASE FLOOD. The flood having a one percent chance of being equaled or exceeded in any given year.

BASEMENT. Any area of the building having its floor sub-graded (below ground level) on all sides.

BUILDINGS. A walled and roofed building including a gas or liquid storage tank that is principally above ground.

DEVELOPMENT. The division of a parcel of land into two or more parcels, where any resulting lot will be less than 5 acres in size. The construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or other structure, or of any mining, excavation of landfill, and any change in the use of any building or other structure, or land, or extension of use of land.

FLOOD HAZARD BOUNDARY MAP (FHBM). An official map of the community, issued by the Administrator, where the boundaries of the flood, mudslide (i.e., mudflow) related erosion areas having special hazards have been designated as Zones A, M, and/or E.

FLOOD INSURANCE RATE MAP (FIRM). An official map of a community on which the Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY. An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations.

FLOODPROOFING. Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODWAY. The 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 a designated height.

LOWEST FLOOR. 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 enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Section 60.3.

MANUFACTURED HOME. A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes, the term "manufactured home" also

includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes, the term "manufactured home" does not include park trailers, travel trailers, and other similar vehicles.

MEAN SEA LEVEL. For the purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

~~MOBILE HOME.-- A structure, transportable in one 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.-- It does not include recreational vehicles or travel trailers.~~

NEW CONSTRUCTION. Structures commenced on or after the effective date of this ordinance.

STRUCTURE. An assembly of materials for occupancy or use, including, but not limited to, a building, mobile home or trailer, billboard, sign, wall or fence, except a wall or fence on an operating farm.

SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either, (a) before the improvement or repair is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. The term does not, however include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.