

Recommendations from Zoning and Floodplain Administrator

Permitted Uses:

Change #1 Accessory structures **not greater than 500 square feet and outside of the Floodway**

Add **Bridges and Culverts** (#3 in Conditional Use).

Add **Channel management** (#4 in Conditional Use).

Add **Footbridges** as a separate category

Change #6 Recreational vehicles (parking of) **outside of the Floodway.**

Add **River and floodplain restoration projects, including dam removal that restore natural and beneficial floodplain functions and include written information from the ANR Regional Floodplain Manager that the project is designed to meet or exceed the applicable standards in this bylaw”**

Conditional Uses:

Expand #1 Accessory Structures larger than 500 square feet, **outside of the Floodway.**

Expand #2 All other new structures, (including Accessory Dwelling Units) **outside of the Floodway.**

Remove Bridges and Culverts (Add to Permitted).

Remove Channel management (Add to Permitted).

Expand #5 Fill (to elevate new and existing structures **or for primary access**).

Prohibited Uses:

Change Accessory structures in floodway to **All new residential or non-residential structures, including small Accessory Structures, in the Floodway.**

Expand #4 Fill (for any purpose other than elevating structures **or primary access**).

Exempted Activities:

Expand #4 Removal of a structure (in whole or in part), **so long as the ground elevations under and adjacent to the removed structure remain unchanged;**

Add **Routine maintenance of an existing building.**

Add **Interior improvements or repairs to existing buildings that cost less than 500 dollars**

Change “Road Maintenance” to **Maintenance of roads, bridges, or stormwater drainage”**

Add **“Streambank stabilization, and abutment work that do not reduce the cross-sectional flow area of the river or stream channel and have coverage under a Stream Alteration Permit, if required.”**

Add **“Subdivision of land that does not involve or authorize development.”**

TABLE 2.8 FLOOD HAZARD AREA OVERLAY [FHO] DISTRICT

(A) Purposes. The purposes of the Flood Hazard Area Overlay are to 1) avoid and minimize 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; 2) ensure that the selection, design, creation, and use of development is reasonably safe and accomplished in a manner that is consistent with public wellbeing, does not impair floodplain services, and 3) manage the flood hazard area designated pursuant to 10 V.S.A. Chapter 32 § 753, the municipal hazard mitigation plan; and make the Town of Hardwick, its citizens, and businesses eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds as may be available;

| (B) Permitted Uses | (C) Conditional Use | (D) Prohibited Uses | (E) Exempted |
|--|--|--|--|
| 1. Accessory structures (of 500 square feet or less, outside of floodway) | 1. Accessory structures larger than 500 square feet | Accessory structures in floodway | Agriculture** Forestry** |
| 2. Building utilities | 2. All other new structures, (including accessory dwelling units) | Caretaker’s apartments | Open space |
| 3. New or replacement storage tanks for existing structures | 3. Bridges and culverts | Critical facilities | Removal of a structure (in whole or in part) |
| 4. Non-substantial improvements to existing structures (outside of floodway) | 4. Channel management | Fill (for any purpose other than elevating structures) | Road maintenance |
| 5. Parking, at grade (outside of floodway) | 5. Fill (to elevate new and existing structures) | Salvage Yards | |
| 6. Recreational vehicles (parking of) | 6. Grading, excavation or the creation of a pond | Storage | |
| 7. Replacement of water supply or septic systems | 7. Non-substantial improvements to existing structures (in floodway) | | |
| | 8. Parking, at grade (in floodway) | | |
| | 9. Public utilities | | |
| | 10. Road improvements | | |
| | 11. Substantial improvements to existing structures | | |

**Forestry activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices; and agriculture activities conducted in accordance with the Vermont Agency of Agriculture Food & Markets Required Agricultural Practices

(F) Dimensional Standards (unless otherwise specified for a particular use):

As required for the underlying zoning district. Subject to conditional use approval by the Development Review Board, a waiver may be granted to dimensional standards in the underlying district in order to locate development outside of flood hazard prone areas. Such a waiver shall represent the minimum deviation from dimensional standards in order to locate development away from flood prone areas and shall not encroach into public and private rights of way or required replacement fields or separation distances to accommodate on-site potable water and waste water systems.

(G) Development Standards [See section 5.3]

Section 5.3 Flood Hazard Review

- (A) **Applicability.** These regulations shall apply to the ~~Special~~ Flood Hazard Area in and on the most current flood insurance studies and maps published by the Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, as provided by the Secretary of the Agency of Natural Resources pursuant to 10 V.S.A. Chapter 32 Section 753, which are hereby adopted by reference and declared to be part of these regulations. A permit is required from the Zoning Administrator for all development in all areas defined in Table 2.8 of these bylaws. Development that requires conditional use approval, non-conforming use approval, or a variance from the Development Review Board under these regulations must have such approvals prior to the issuance of a permit by the Zoning Administrator. Any development subject to municipal jurisdiction in the designated hazard areas shall meet the criteria of 5.3(G) and 5.3(H). Any permit issued will require that all other necessary permits from State and Federal Agencies have been received before work may begin.
- (B) **Warning of Disclaimer of Liability.** This bylaw does not imply that land outside of the areas covered by this bylaw will be free from flood damages. This regulation shall not create liability on the part of the Town of Hardwick, or any municipal official or employee thereof, for any flood damages that result from reliance on this regulation, or any administrative decision lawfully made hereunder.
- (C) **Permitted Development.** For the purposes of review under these regulations, the following development activities in the ~~Special~~ Flood Hazard Area where outside of the Floodway, and meeting the Development Standards in Sections 5.3(G), require only an administrative permit from the Zoning Administrator: **FIX**
1. Non-substantial improvements;
 2. Small accessory structures of 500 square feet or less;
 3. Development related to on-site septic or water supply systems;
 4. Building utilities;
 5. At-grade parking for existing buildings;
 6. Recreational vehicles; and
 7. New or replacement storage tanks for existing structures.
- (D) **Conditional Use Review.** Conditional use review and approval by the Development Review Board is required prior to the issuance of a permit by the Zoning Administrator for the following development activities: **FIX**
1. New structures
 2. Substantial improvement, elevation, relocation, or flood proofing of existing structures;
 3. Improvements to existing structures in the floodway;
 4. Grading, excavation; or the creation of a pond;
 5. Improvements to existing roads;
 6. Bridges, culverts, channel management activities, or public projects which are functionally dependent on stream access or stream crossing;
 9. Public utilities;

(E) **Application.** An application for development shall include:

- (1) Where applicable, a site plan that depicts the proposed development, all water bodies, **Special** Flood Hazard Areas, floodways, any existing and proposed drainage, any proposed fill, and pre and post development grades, and the elevation of the proposed lowest floor, as referenced to the same vertical datum as the elevation on the current Flood Insurance Rate Maps;
- (2) A Vermont Agency of Natural Resources 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 municipal permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Zoning Administrator and attached to the permit before work can begin.

(F) **Referrals.**

1. Upon receipt of a complete application for a substantial improvement or new construction, the Zoning Administrator shall submit a copy of the application and supporting information to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. §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.
2. 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. The Board should consider comments from the NFIP Coordinator at ANR.

(G) **Development Standards – **Special** Flood Hazard Area.**

- (1) **No net loss of flood storage capacity,**
 - a. **Except as needed to fill an existing basement or mitigate an existing structure.**
- (~~4~~2) All development **below the Development Flood Elevation (DFE), except development that is except under Table 2.8** shall be:
 - a. reasonably safe from flooding;
 - b. designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure;
 - c. constructed with materials resistant to flood damage;
 - d. constructed by methods and practices that minimize flood damage;
 - e. 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;
 - f. adequately drained to reduce exposure to flood hazards;
 - ~~g. located so as to minimize conflict with changes in channel location over time and the need to intervene with such changes; and~~
 - h. required to locate any fuel storage tanks **and vents** ~~(as needed to serve a building in the Special~~

~~Flood Hazard Zone) a minimum of one foot above the base flood elevation to be elevated above the DFE and be securely anchored to prevent flotation, or storage tanks may be placed underground, if securely anchored as certified by a qualified professional certifies the installation will be anchored and protected from flood forces.~~

- (2 3) In Zones AE, AH, and A1-30, where ~~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 by 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.
- (3 4) All new or substantially improved structures in Zones A, A1-30, AE, and AH shall be located such that the lowest floor ~~is at or above the base flood elevation, including the basement, elevated to or above the Design Flood Elevation (two feet above base flood elevation).~~ ~~and~~ This must be documented, in ~~the proposed and~~ as-built condition, with a FEMA Elevation Certificate.
- (4 5) New or substantially improved non-residential structures shall:
- a. Meet the standards in 5.3(G)(~~3-4~~); or,
 - b. Have the lowest floor, including basement, together with attendant utility and sanitary facilities, be designed so that ~~at or above the base flood elevation to at least two feet above the base flood elevation the structure is dry floodproofed, meaning watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.~~ ~~the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;~~

A permit for ~~dry floodproofing flood proofing~~ 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.
- (5 6) Fully enclosed areas below grade on all sides (including below grade crawlspaces and basements) are prohibited.
- (6 7) Fully enclosed areas that are above grade, below the lowest floor, below ~~the Design Flood Elevation the base flood elevation~~, that are subject to flooding shall:
- a. be solely used for parking of vehicles, storage, or building access, and such condition shall be clearly stated on any permits; ~~and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs must be certified by a registered engineer or architect; or and~~
 - b. meet or exceed the following minimum criteria: ~~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 meet or exceed the following minimum criteria:~~ a minimum of two openings ~~on two walls~~ 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 ~~adjacent~~ grade. Openings may be equipped with screens, louvers, valves or other cover coverings or devices provided that they permit the automatic entry and exit of floodwaters.

- (7) Recreational Vehicles or job site trailers placed on sites within Zones A1-A30, AH and AE, shall either (1) be on the site for fewer than 180 consecutive days, (2) be fully licensed and ready for highway use, or (3) meet all standards of Section 60.3(b)(1) of the National Flood Insurance Program Regulations and the elevation and anchoring requirements for “manufactured homes” of Section 60.3(c)(6).
- (8) Accessory Structures: A small accessory structure of 500 square feet or less that represents a minimal investment need not be elevated to the base flood elevation ~~if adequate flood openings are provided, the structure is placed on the site so as to offer the minimum resistance to the flow of floodwaters, and the construction meets the criteria of 5.3 (G)???, provided the structure is placed on the building site so as to offer the minimum resistance to the flow of flood waters and meet the requirements of 5.3(G)(6).~~
- (9) New and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate the infiltration of flood waters into the systems and discharges from the systems into flood waters.
- (10) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- (11) The flood carrying and sediment transport capacity within any altered or relocated portion of a watercourse shall be maintained, and any alteration or relocation shall not result in any decrease of stream ~~stability equilibrium.~~
- (12) Bridges and culverts ~~and channel management activities,~~ which by their nature must be placed in or over the ~~watercourse stream,~~ must have a stream alteration permit from the Agency of Natural Resources ~~where applicable if applicable.~~
- (13) Subdivisions and planned unit developments must be accessible by dry land access ~~outside the Special Flood Hazard Area.~~
- (14) New and replacement manufactured homes shall be elevated or placed on a permanent foundation so that the lowest floor is elevated to or above ~~the base flood elevation~~ ~~the Design Flood Elevation~~ (two feet above a base flood elevation). This shall be documented in the proposed and as-built condition with a FEMA Elevation Certificate.
- ?# Critical facilities to be substantially improved shall have the lowest floor, including basement, elevated or dry-floodproofed at least one foot above the elevation of the 0.2% annual flood height (500-year floodplain), or three feet above base flood elevation, whichever is higher;
- ?# Historic structures being substantially improved shall meet the requirements in this bylaw other than the Lowest Floor Elevation (section???)

(H) Development Standards – Floodway Areas

- (1) Within the Floodway new encroachments are prohibited except for the following, which also shall comply with Section (?) below:
 - a. changes to existing structures where the footprint is proposed to expand horizontally into the floodway less than 500 square feet;
 - b. new encroachments relating to bridges, culverts, roads, stabilization projects, public utilities, functionally dependent uses, and river and floodplain restoration projects;
 - c. new encroachments relating to health and safety measures, such as replacement of pre-existing on-site septic and water supply systems, if other practical alternative is available.
- 2. Within the Floodway all proposed new encroachments are require to provide a hydraulic analysis,

performed by a registered professional engineer, in accordance with standard engineering practice, certifying that the proposed development will:

- a. Not result in any increase in flood levels during the occurrence of the base flood;
 - b. Not increase base flood velocities; and,
 - c. Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.
3. For development that will not result in any change in grade, the hydrologic and hydraulic analyses may be waived, where the applicant will provide pre- and post-development elevations demonstrating that there will be no change in grade, and that the development will be adequately protected from scour.

~~Encroachments 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;~~
 - ~~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.~~

(I) Nonconforming Structures and Uses.

The Development Review Board may, after public notice and hearing, approve the repair, relocation, replacement, or enlargement of a nonconforming structure within a flood hazard area **but outside of the Floodway** provided that:

- (1) The proposed development is in compliance with all the Development Standards in Section **5.3(G)-(H) FIX** of this bylaw;
- (2) A nonconforming structure that is substantially damaged or destroyed may be reconstructed only in circumstances when the structure cannot be relocated to a less hazardous location on the parcel. The lowest floor of the reconstructed structure must be rebuilt to **at or above the base flood the Design Flood Elevation (two feet above a base flood elevation). This shall be documented in the proposed and as-built condition with a FEMA Elevation Certificate.** The structure must otherwise comply with all requirements of the National Flood Insurance Program; and
- (3) An individual manufactured home lot in an existing manufactured home park that is vacated shall not be considered a discontinuance or abandonment of nonconformity. Replacement manufactured homes must be placed so as to meet the development standards in this bylaw.

DEFINITIONS:

“Design Flood Elevation” (DFE) in the Town of Hardwick means the Base Flood Elevation plus two feet.