

**THE TOWN OF
SHREWSBURY, VT
FLOOD HAZARD AREA & RIVER CORRIDOR
REGULATIONS**



2022

**ADOPTED BY THE SHREWSBURY SELECTBOARD 11/16/2022
EFFECTIVE 12/07/2022**

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Pursuant to 24 V.S.A §§ 4441, 4442 and 4444 the Town of Shrewsbury, VT Flood Hazard Area & River Corridor Regulations was duly enacted by the Town of Shrewsbury, as follows:

- ◇ Shrewsbury Planning Commission Public Hearing – October 11, 2022
- ◇ Shrewsbury Planning Commission Report and draft presented to the Shrewsbury Selectboard – October 19, 2022
- ◇ Shrewsbury Selectboard Public Hearing – November 16, 2022
- ◇ Adopted by the Shrewsbury Selectboard – November 16, 2022
- ◇ Effective – December 7, 2022

**TOWN OF SHREWSBURY
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Table of Contents

ARTICLE I ^(OBJ) GENERAL PROVISIONS 4

SECTION 101: Introduction 4

SECTION 102: Statutory Authorization and Effect 4

SECTION 103: Statement of Purpose 4

SECTION 104: Other Provisions 5

ARTICLE II LANDS TO WHICH THESE REGULATIONS APPLY 6

..... 6

SECTION 201: Identification/Definition of Regulated Flood Hazard Areas 6

201.1: Federally Regulated Flood Hazard Areas 6

201.2: Base Flood Elevations and Floodway Limits..... 8

201.3: Vermont State Regulated Flood Hazard Areas – River Corridors 8

SECTION 203: Interpretation..... 8

SECTION 204: Changes in Identification of Area..... 9

ARTICLE III ADMINISTRATION..... 9

SECTION 301: Designation of the Floodplain Administrator..... 9

SECTION 302: Appropriate Municipal Panel..... 10

SECTION 303: Application and Administration Requirements..... 10

303.1 Application Submission Requirements 10

303.2 Referrals 12

303.3 Public Notice 12

303.4 Decisions 13

303.5 Permits 14

303.6 Changes 15

303.7 Start of Construction 15

303.8 Expiration 16

303.9 Waivers 16

303.10 Variances 17

303.11 Appeals of a Permit Decision 18

SECTION 304: Administrative Responsibilities, Records 19

304.1 Records..... 19

304.2 Substantial Improvement and Substantial Damage Determinations, Post Flood Procedures..... 19

304.3 Certificate of Occupancy 20

304.4 Enforcement..... 20

ARTICLE IV DEVELOPMENT IN FEDERALLY REGULATED FLOOD HAZARD AREAS^(OBJ)..... 21

SECTION 401: Permit Requirement 21

SECTION 402: Development in Special Flood Hazard Areas.....	21
402.1 Exempted Activities in Special Flood Hazard Areas	21
402.2 Permitted Development in Special Flood Hazard Areas	22
402.3 Prohibited Development in Special Flood Hazard Areas.....	23
402.4 Conditional Use Review in Special Flood Hazard Areas	24
402.5 Non-Conforming Structures and Uses in Special Flood Hazard Areas	24
402.6 Development Standards and Construction Standards in Special Flood Hazard Areas.....	24
ARTICLE V. DEVELOPMENT IN RIVER CORRIDORS	30
SECTION 501: Permit Requirements in River Corridors	30
SECTION 502: Development in River Corridors.....	31
502.1 Exempted Activities in River Corridors.....	31
502.2 Permitted Development in River Corridors.....	32
502.3 Prohibited Development in River Corridors	32
502.4 Conditional Use Review	32
502.5 Development Standards in River Corridors.....	33
502.6 Permit Conditions for River Corridors	35
ARTICLE VI TABLE OF ACTIVITIES IN FLOOD HAZARD AREAS.....	36
ARTICLE VII DEFINITIONS.....	38

ARTICLE I GENERAL PROVISIONS

SECTION 101: Introduction

When development encroaches into floodplains, streams can become unstable, flood depths increase, erosion increases, and flow can be diverted toward and onto other properties and existing buildings. Repairs to damage to public and private infrastructure often require expensive and unsustainable channel alterations. These alterations further destabilize the situation, leading to a greater risk to public safety in an unsustainable, vicious cycle.

Federal Emergency Management Agency (FEMA) has mapped the inundation hazard associated with the base flood. The base flood has a one percent chance of being equaled or exceeded in a given year. Over the term of a 30 year mortgage, a structure in the Special Flood Hazard Area has a 26% chance of being damaged by a flood as compared to a 9% chance of damage from fire. Inundation is not the only form of damage from flooding. Erosion from flash flooding is the most expensive form of flood damage in the state. Over time, streams meander laterally and fill or degrade vertically as they adjust to their water levels, sediments, and slope. Stream channels may change suddenly and catastrophically. The land area adjacent to a river that is required to accommodate the dimensions, slope, planform, and buffer of the naturally stable channel is the River Corridor area. This area is necessary for the natural maintenance or natural restoration of a dynamic equilibrium condition and for minimization of fluvial erosion hazards, as delineated by the Vermont Agency of Natural Resources in accordance with river corridor protection procedures. (10 V.S.A. § 1422).

SECTION 102: Statutory Authorization and Effect

In accordance with 10 V.S.A. Chapter 32, 24 V.S.A. Chapter 117 § 4411, § 4412, § 4414, § 4424, and 24 V.S.A. Chapter 59, there is hereby established a bylaw for areas at risk of flood damage in the Town of Shrewsbury, Vermont. Except as additionally described below, all administrative procedures follow town procedures under 24 V.S.A. Chapter 117.

SECTION 103: Statement of Purpose

It is the purpose of this bylaw to:

- A. Implement the goals, policies, and recommendations in the current town plan;
- B. 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- related inundation and erosion;

- C. Ensure that the selection, design, creation, and use of development in flood hazard areas is accomplished in a manner that minimizes or eliminates the potential for flooding, loss of life, or damage to property in a flood hazard area, and does not impair stream equilibrium, floodplain services, or the river corridor;
- D. Manage all flood hazard areas designated pursuant to 10 V.S.A. Chapter 32 §§ 751 and 753, 24 V.S.A. Chapter 117 § 4424, and the local hazard mitigation plan; and make the Town of Shrewsbury, its citizens and businesses, eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds as may be available; and
- E. Protect the river corridor, providing rivers and streams with the lateral space necessary to maintain or reestablish floodplain access and minimize erosion hazards through natural, physical processes. It is the intent of this bylaw to allow for wise use of property within river corridors that minimizes potential damage to existing structures and development from flood-related erosion, to discourage encroachments in undeveloped river corridors, and to provide for infill and redevelopment that meets the River Corridor Development Standards in Section 502.5.

SECTION 104: Other Provisions

A. Precedence of Bylaw and Greater Restrictions.

The provisions of this bylaw shall not in any way impair or remove the necessity of compliance with any other local, state, or federal laws or regulations. Where this flood hazard regulation imposes a greater restriction, the provisions here shall take precedence. If there is any conflict between the provisions of this bylaw, the more restrictive shall apply, including the Shrewsbury Unified Zoning and Subdivision Regulations Surface Waters and Wetlands Overlay.

B. Validity and Severability.

If any portion of this bylaw is held unconstitutional or invalid by a competent court, the remainder of this bylaw shall not be affected.

C. Warning and Disclaimer of Liability.

This bylaw does not imply that land outside of the areas covered by this bylaw will be free from flood or erosion damages. This regulation shall not create liability on the part of the Town of Shrewsbury, or any town official or employee thereof, for any flood or erosion damages that result from reliance on this regulation, or any administrative decision lawfully made hereunder.

ARTICLE II LANDS TO WHICH THESE REGULATIONS APPLY

These regulations shall apply to the below referenced areas (hereafter called “Regulated Flood Hazard Areas”). These hazard areas overlay any other existing zoning districts, and the regulations herein are the minimum standards that must be met before meeting the additional standards applicable in the underlying district.

The Regulated Flood Hazard Areas include:

- Federally Regulated Flood Hazard Areas, also known as the Special Flood Hazard Area (SFHA). These are areas mapped by Federal Emergency Management Agency (FEMA). The SFHA in Shrewsbury include the Floodway and the Flood Fringe as further defined in this section.
- The River Corridors, as published by the Vermont Agency of Natural Resources.

SECTION 201: Identification/Definition of Regulated Flood Hazard Areas

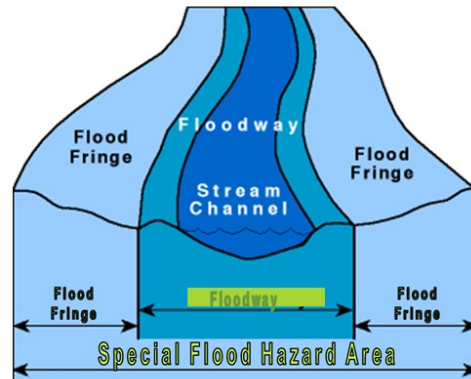
201.1: Federally Regulated Flood Hazard Areas

The Federally Regulated Flood Hazard Area includes the Special Flood Hazard Area (SFHA) in and on the Flood Insurance Study (FIS) and the accompanying Flood Insurance Rate Maps (FIRMs) issued by the Department of Homeland Security, Federal Emergency Management Agency (FEMA), and National Flood Insurance Program, as provided by the Secretary of the Agency of Natural Resources (ANR) pursuant to 10 V.S.A. Chapter 32 § 753, which are hereby adopted by reference and declared to be part of these regulations. This includes all digital data developed as part of the FIS¹.

¹ FIS and FIRMs are available digitally on FEMA’s online MAP Service Center: <http://msc.fema.gov/portal>
Town of Shrewsbury, VT Flood Hazard Area & River Corridor Regulations
Effective December 7, 2022

Special Flood Hazard Areas

- Areas mapped by FEMA
- Two distinct zones
 - Floodway
 - Flood Fringe
 - Zone A
 - Zone AE
 - Zone AO and AH



The FEMA Special Flood Hazard Areas shall consist of the following specific areas. All of the areas are identified in the Flood Insurance Study (FIS) and the Flood Insurance Rate Map (FIRM)².

- A. The Floodway Area. The Floodway Area shall be those areas which represent the channel of a watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without increasing the water surface elevation by more than one (1) foot at any point.
- B. The AE Area. The AE Area shall be those areas identified as an AE Zone for which base flood elevations have been provided. An AE Area without floodway shall be those areas identified as an AE zone for which base flood elevations have been provided but no floodway has been determined.
- C. The A Area. The A Area/District shall be those areas identified as an A Zone for which no base flood elevations have been provided. For these areas, elevation and floodway information from other Federal, State, or other acceptable sources shall be used when available. Where other acceptable information is not available, the base flood elevation shall be determined by using the elevation of a point on the boundary of the identified floodplain area which is nearest the construction site.

² FIS and FIRMs are available digitally on FEMA's online MAP Service Center: <http://msc.fema.gov/portal>
Town of Shrewsbury, VT Flood Hazard Area & River Corridor Regulations
Effective December 7, 2022

D. The AO and AH Area. The AO and AH Area/District shall be those areas identified as Zones AO and AH. These areas are subject to inundation by 1-percent annual-chance shallow flooding where average depths are between one and three feet. In Zones AO and AH, drainage paths shall be established to guide floodwaters around and away from structures on slopes.

201.2: Base Flood Elevations and Floodway Limits

- A. Where available, base flood elevations and floodway limits provided by the NFIP and in the Flood Insurance Study and accompanying maps shall be used to administer and enforce this bylaw.
- B. The floodway, as adopted by this community, shall consist of the channel of a river or other watercourse and the adjacent land areas that shall be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot at any point.
- C. In the Flood Hazard Area where base flood elevations and/or floodway limits have not been provided by the NFIP in the Flood Insurance Study and accompanying maps, it is the applicant's responsibility to develop the necessary data, as specified in Article III [Administration]. Where available, the applicant shall use data provided by FEMA, or state or federal agencies to administer this bylaw.

201.3: Vermont State Regulated Flood Hazard Areas – River Corridors

The River Corridors are as published by the Vermont Agency of Natural Resources on the Natural Resources Atlas as the Statewide River Corridor Map Layer³, and refinements to that data are based on field-based assessments. These areas are referred to as the “River Corridor” in this bylaw and, pursuant to 24 V.S.A. Chapter 117 § 4424, are hereby adopted by reference and declared to be part of these regulations.

Small perennial streams with a watershed size greater than half a square mile, for which River Corridors are not mapped, are regulated in the Town of Shrewsbury Unified Zoning and Subdivision Regulations Surface Waters and Wetlands Overlay. This overlay requires a 100 foot setback from the top of bank for development.

SECTION 203: Interpretation

The information presented on any maps, or contained in any studies adopted by reference, is presumed accurate.

³ Official River Corridor Maps are available on the Vermont Agency of Natural Resources online Natural Resources Atlas: <http://anrmaps.vermont.gov/websites/anra/>

- A. If uncertainty exists with respect to the boundaries of the Special Flood Hazard Area or the floodway, the location of the boundary shall be determined by the Zoning Administrator (ZA). If the applicant disagrees with the determination made by the ZA, he or she may appeal to the Development Review Board (DRB). The burden of proof shall be on the appellant. A Letter of Map Amendment from the FEMA shall constitute proof.
- B. If uncertainty exists with respect to the boundaries of the River Corridor, the location of the boundary shall be determined by the ZA. If the applicant disagrees with the determination made by the ZA, he or she may appeal to the DRB. The burden of proof shall be on the appellant. A letter of determination from the Vermont Agency of Natural Resources shall constitute proof.

SECTION 204: Changes in Identification of Area

- A. The Identified Floodplain Area may be revised or modified by the DRB where studies or information provided by a qualified agency or person documents the need for such revision. However, prior to any such change to the Special Flood Hazard Area, approval must be obtained from FEMA. Additionally, as soon as practicable, but not later than six (6) months after the date such information becomes available, a municipality shall notify FEMA of the changes to the Special Flood Hazard Area by submitting technical or scientific data.
- B. Administrative revisions to the River Corridor may be made at the request of the municipal legislative body to facilitate infill and redevelopment away from undeveloped river corridors and protect public infrastructure. The Agency of Natural Resources shall make those administrative revisions to the River Corridor or River Corridor Protection Area on the Statewide River Corridor Map Layer that are consistent with the procedure outlined in the most recent *Vermont DEC Flood Hazard Area and River Corridor Protection Procedures*.

ARTICLE III ADMINISTRATION

SECTION 301: Designation of the Floodplain Administrator

- A. The Zoning Administrator is hereby appointed to administer and enforce this bylaw and is referred to herein as the *Zoning Administrator (ZA)*. The ZA may:
 - (A) Fulfill the duties and responsibilities set forth in these regulations,
 - (B) Delegate duties and responsibilities set forth in these regulations to qualified technical personnel, plan examiners, inspectors, and other employees, or
 - (C) Enter into a written agreement or written contract with another agency or private sector entity to administer specific provisions of these regulations.
- B. Administration of any part of these regulations by another entity shall not relieve the municipality of its responsibilities pursuant to the participation

requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 C.F.R. Section 59.22.

C. In the absence of a designated Zoning Administrator, the Zoning Administrator duties are to be fulfilled by a designee of the Selectboard.

SECTION 302: Appropriate Municipal Panel

A. The Appropriate Municipal Panel for this bylaw shall be the Development Review Board (DRB) which shall be appointed by the Selectboard in accordance with 24 V.S.A. § 4460.

B. The DRB shall have the duties and responsibilities as described in 24 V.S.A. Chapter 117 and as otherwise required by the municipal bylaws.

SECTION 303: Application and Administration Requirements

303.1 Application Submission Requirements

All Applications for development shall include:

- A. Site Plan. A site plan that depicts the proposed development, all water bodies, all Flood Hazard Area and Surface Waters and Wetlands Overlay boundaries, the shortest horizontal distance from the proposed development to the top of bank of any river, any existing and proposed drainage, any proposed fill, 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.
- B. Project Review Sheet. A Vermont Agency of Natural Resources Project Review Sheet.
- C. Supplemental Application Requirements. Some applications may require additional information based on the location and type of the development. The following information shall be developed and provided with an application, as required below:
- D. Base Flood Elevation (BFE). BFE information is required for:
 - a. Replacement, substantially improved, or substantially damaged structures located within any Flood Hazard Area, including Zone A, where no BFEs have been provided; Projects requiring elevation or dry-floodproofing above BFE;
 - b. Additions to existing historic structures; and
 - c. Any accessory structure proposed to be built in accordance with subsection 402.6.4.G and having building utility systems that will need to be protected from flood waters through elevation above the BFE.
- E. Floodway Data. The following information is required for development located in the floodway.
 - a. All floodway data shall be certified by a registered, professional engineer.

- b. All submitted proposals shall include electronic input/output files and mapping showing cross-section locations.
 - c. Hydraulic calculations demonstrating no rise in BFE or velocity for proposed new or expanded encroachments within the Floodway District.
 - d. In accordance with 44 C.F.R. § 60.3(c)(10), where BFE data has been provided by FEMA, but no floodway areas have been designated, the applicant shall provide a floodway delineation that demonstrates that the proposed development, when combined with all existing and anticipated future development, will not increase the water surface elevation of the base flood by more than one foot at any point within the community.
- F. Compensatory Flood Storage. The following information is required for applications that require compensatory flood storage pursuant to subsection 402.6.2:
- a. Designs shall provide equivalent storage volumes during peak flows up to and including the base flood discharge. This No Adverse Impact (NAI) volumetric analysis and supporting data shall be certified by a registered professional engineer.
 - b. If it appears that the design may create an undue adverse impact to adjacent landowners or structures, a hydraulic analysis may be required to verify that a proposed development will not increase flood elevations or velocities of floodwaters. Hydraulic analyses and supporting data shall be provided by the applicant and certified by a registered professional engineer.
- G. River Corridor Assessment. The following information is required for applications proposing development within the river corridor:
- a. Information clearly demonstrating how the proposed development meets the infill or down river shadow requirements in subsection 502.5 A or B; or
 - b. A narrative and supporting technical information from a qualified consultant that demonstrates how the proposal meets the River Corridor Performance Standard in Section 502.5; or
 - c. Evidence of an approved major or minor map update issued by ANR in accordance with the process outlined in the DEC Flood Hazard Area & River Corridor Protection Procedure, finding the proposed development is not located within the river corridor. Please note that ANR may require the applicant to provide technical data from a qualified consultant to justify a map update.
- H. Waivers. Upon written request from the applicant, the DRB may waive specific application requirements when the data or information is not needed to comply with Articles IV and V of this bylaw. A determination to waive the compensatory storage requirement shall include written

concurrence from the ANR regional floodplain manager, that project it will have only a minimal effect on floodwater storage.

303.2 Referrals

- A. Upon receipt of a complete application for new construction or a substantial improvement, the ZA 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. The ZA and DRB shall consider all comments from ANR.
- B. Any application for a proposed conditional use or a request for a variance from these regulations shall be referred to the DRB in accordance with 24 V.S.A. § 4460.
- 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 River Management 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.

303.3 Public Notice

- A. Prior to the issuance of a permit, proposals needing conditional use review, nonconforming structures and uses review, or approval for a variance, must have a warned public hearing. A copy of the application shall be submitted to ANR at least 30 days prior to the date of the public hearing. Public notice of the hearing shall be provided at least 15 days before the date of the hearing by all the following:
 - a. Publication of the date, place, and purpose of the hearing in the newspaper of general circulation in the municipality affected.
 - b. Posting of the same information in three or more public places within the municipality, including posting within view from the public right-of-way -nearest to the property for which an application is made; and,
 - c. Written notification to the applicant and to owners of all properties adjoining the property subject to development, without regard to

any public right-of-way, and in any situation in which a variance is sought regarding setbacks from a State highway, written notification to the Secretary of Transportation. The notification shall include a description of the proposed project and shall be accompanied by information that clearly informs the recipient where additional information may be obtained, and that participation in the local proceeding is a prerequisite to the right to take any subsequent appeal.

- d. For hearings on subdivision plats located within 500 feet of a municipal boundary, written notification to the clerk of the adjoining municipality.
- B. Public notice of all other types of development review hearings, including site plan review, shall be given not less than seven days prior to the date of the public hearing, and shall include at minimum all the following:
- a. Posting of the date, place, and purpose of the hearing in three or more public places within the municipality in conformance with the time and location requirements of 1 V.S.A. § 312(c)(2); and
 - b. Written notification to the applicant and to owners of all properties adjoining the property subject to development, without regard to public rights-of-way, and in any situation in which a variance is sought regarding setbacks from a State highway, written notification to the Secretary of Transportation. The notification shall include a description of the proposed project, information that clearly informs the recipient where additional information may be obtained, and that participation in the local proceeding is a prerequisite to the right to take any subsequent appeal.
- C. The applicant shall bear the cost of the public warning and notification of adjoining landowners.
- D. No defect in the form or substance of any required public notice under this section shall invalidate the action of the AMP where reasonable efforts have been made to provide adequate posting and notice. However, the action shall be invalid when the defective posting or notice was materially misleading in content. If an action is ruled to be invalid by the Environmental Court Division of the Superior Court or by the AMP itself, the action shall be remanded to the applicable municipal panel to provide new posting and notice, hold a new hearing, and take a new action.

303.4 Decisions

- A. The ZA/DRB shall consider comments from the ANR when making a decision on an application.
- B. Decisions on applications that go to the DRB for review shall be made in accordance with 24 V.S.A. § 4464.

303.5 Permits

A permit shall be issued by the ZA only in accordance with 24 V.S.A. Chapter 117 and the following provisions:

- A. Within 30 days of receipt of a substantially complete application as described in subsection 303.1. Application Submission Requirements, including all application materials and fees, the ZA shall act to either issue or deny a permit in writing, or to refer the application to the DRB or to ANR for consideration, as required by subsection 303.2 [Referrals]. An application is not deemed complete until receipt of comments from ANR and/or action by the DRB if such actions are determined to be necessary by the ZA. In accordance with 24 V.S.A. § 4448 [Appointment and Powers of Administrative Officer], if the ZA fails to act with regard to a complete application for a permit within the 30-day period, a permit shall be deemed issued on the 31st day.
- B. No permit shall be issued by the ZA for any use or structure which requires the approval of the DRB until such approval has been obtained. For permit applications that must be referred to a state agency for review, no permit shall be issued until a response has been received from the State, or the expiration of 30 days following the submission of the application to the State, whichever is sooner.
- C. A permit shall include a statement that any and all appeals shall be made within 15 days of permit issuance and shall require posting of a notice of permit on a form prescribed by the municipality within view from the public right-of-way most nearly adjacent to the subject property until the appeals period has passed. A permit shall also include a statement, approved by the Secretary of Natural Resources, that State permits may be required, and that the permittee should contact State agencies to determine what permits must be obtained before any construction may commence.
- D. The ZA, within three days of the date of issuance of a permit, shall deliver a copy of the permit to the listers of the municipality, and shall post a copy of the permit in the Town Offices for a period of 15 days from the date of issuance.
- E. Effective Date. No permit shall take effect until the time for appeal (15 days) has passed, or in the event that a notice appeal is properly filed, no such permit shall take effect until adjudication of that appeal by the AMP is complete and the time for taking an appeal to the Environmental Division of the Superior Court has passed without an appeal being taken. If an appeal is taken to the Environmental Division, the permit shall not take effect until the Environmental Division rules in accordance with 10 V.S.A. § 8504 on whether to issue a stay, or until the expiration of 15 days, whichever comes first.
- F. Notice of Permit. The notice of a permit must be displayed within view from the public right-of-way nearest to the property until the time for appeal has passed.

- G. Within 30 days after a permit has been issued or within 30 days of the issuance of any notice of violation, the appropriate municipal official shall:
- a. deliver the original or a legible copy of the permit or notice of violation or a notice of permit generally in the form set forth in 24 V.S.A. § 1154(c) to the town clerk for recording as provided in 24 V.S.A. § 1154(a); and
 - b. file a copy of that permit in the offices of the municipality in a location where all municipal land use permits shall be kept.

303.6 Changes

After the issuance of a permit, no changes of any kind shall be made to the application, permit, or any of the plans, specifications or other documents submitted with the application without the written consent or approval of the Zoning Administrator. If changes are deemed necessary, requests for such change shall be in writing, and shall be submitted by the applicant to the ZA for consideration. The ZA shall determine if the change requires a new permit application, or an amendment can be made to the existing permit. The ZA may require the applicant to hire a professional engineer, or other professional of demonstrated qualifications, to determine if the change will cause any change to the Base Flood Elevation, but that may not be the only consideration taken by the ZA in determining if a new application is required.

303.7 Start of Construction

- A. Work on the proposed construction or development shall begin within 180 days after the date of issuance of the permit. Work shall also be completed within twenty-four (24) months after the date of issuance of the permit or the permit shall expire unless a time extension is granted, in writing, by the ZA.
- B. The actual start of construction means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
- C. Time extensions shall be granted only if a written request is submitted by the applicant, who sets forth sufficient and reasonable cause for the ZA to

approve such a request and the original permit is compliant with the bylaw & FIRM/FIS in effect at the time the extension is granted.

303.8 Expiration

- A. A zoning permit shall remain valid for two (2) years from the date it is issued. If, before that time expires, the applicant files a renewal application and has made substantial progress of the land development described in the permit, the ZA shall issue not more than two consecutive 12-month permit renewals without fee. If a zoning permit expires without substantial land development the permit shall become null and void.
- B. If a permit expires, any land development on the lot covered under that permit must cease. All subsequent land development must be approved after the submission of a new application for a permit, and all laws and ordinances then in effect will be applicable.
- C. Permits shall run with the land regardless of owner.

303.9 Waivers

- A. Waivers are intended to allow the reduction of dimensional requirements, but not density requirements, in accordance with specific standards as allowed for 24 VSA 4418 (8). The primary intent of this provision is to provide relief to lots unduly burdened by zoning requirements adopted after the lots were created. Request for waivers shall be heard as a Conditional Use Approval and requests for waivers must be acceptable with regard to how they meet the criteria. The burden of proof is on the applicant to demonstrate that the waiver requested meets the waiver criteria. Waivers may be considered in the following cases:
 - a. The proposed development conforms to the existing development patterns of the immediate neighborhood.
 - b. The proposed development will more effectively preserve open land or scenic vistas.
 - c. The proposed development will provide for energy conservation and renewable energy structures.
 - d. Meeting the dimensional requirements will create an undue hardship on the applicant and the hardship was not created by the applicant.
 - e. Waivers may be granted for a permitted use by the DRB to reduce dimensional requirements as needed to allow for disability accessibility, fire safety, and other requirements of law.
 - f. A waiver within the SFHA or River Corridor may be allowed if, based on a review by VT ANR, it is determined that the proposed development will not obstruct the establishment and maintenance of fluvial geomorphic equilibrium for the watercourse.

- B. Additionally, the DRB may grant such waivers only if the Board finds that the proposed development meets ALL the following standards:
- a. The proposed development shall not reduce the dimensional requirements by more than the minimum amount necessary.
 - b. The proposed development does not alter the essential character of the neighborhood or district in which the property is located.
 - c. The proposed development does not substantially or permanently impair the appropriate use or development of adjacent property.
 - d. The proposed development does not reduce access to renewable energy resources.
 - e. The proposed development shall not be detrimental to the public welfare including the safety and maintenance of the Town's highways.
 - f. The need for a waiver was not created by past decisions of the applicant.
 - g. The proposed development does not lead to changes in channel location over time and the need to intervene with such changes.
 - h. The proposed development does not result in any increase in the BFE within the Floodway.
 - i. The Proposed development together with all other existing and anticipated development in the municipality, does not result in more than a one (1) foot increase in the BFE at any point within the A or AE Area without floodway.
- C. Any waiver approval granted under this Bylaw shall expire along with the associated building/subdivision permit after two (2) years from the date of the written decision granting such approval unless a building permit has been issued by the DRB for the approved project.
- D. The approval or denial of a waiver by the DRB may be appealed to the Environmental Court in a manner as specified in section 4471 of the Act.
- E. At the discretion of the DRB, a survey or confirmation of exact boundary lines may be required as part of the request.

303.10 Variances

- A. Variances may be granted in writing by the DRB only in accordance with the following criteria in 24 V.S.A. § 4469 after a public hearing noticed in accordance subsection 303.3 [Public Notice], consistent with 24 V.S.A. § 4464. If the proposed development is located within any Flood Hazard Area, the proposal shall comply with 44 C.F.R. § 60.6.
- a. That there are unique physical circumstances or conditions, including irregularity, narrowness or shallowness of lot size or shape, or exceptional topographical or other physical conditions peculiar to the particular property, and that unnecessary hardship

is due to such conditions, and not the circumstances and conditions generally created by the provisions of the Zoning Regulations in the neighborhood or district in which the property is located.

- b. That because of such physical circumstances or conditions, there is no possibility that the property can be developed in strict conformity with the provisions of the Zoning Regulations and that the authorization of a variance is therefore necessary to enable the reasonable use of the property.
 - c. That the unnecessary hardship has not been created by the appellant.
 - d. That the variance, if authorized, will not alter the essential character of the neighborhood or district in which the property is located, substantially or permanently impair the appropriate use or development of adjacent property, reduce access to renewable energy resources, or be detrimental to the public welfare.
 - e. That the variance, if authorized, will represent the minimum variance that will afford relief and will represent the least deviation possible from the Zoning Regulations and the Town Plan.
- B. Any variance issued in the Flood Hazard Area shall not increase flood heights and shall inform the applicant in writing over the signature of a community official that the issuance of a variance to construct a structure below the BFE increases risk to life and property and will result in increased flood insurance premiums up to amounts as high as \$25 for \$100 of coverage. Such notification shall be maintained with a record of all variance actions.

303.11 Appeals of a Permit Decision

- A. Appeals from any decision or act of the ZA in connection with this bylaw shall be made as provided for in 24 V.S.A. § 4465. Additional provisions applicable to appeal of a substantial improvement or substantial damage determination made by the ZA can be found in subsection 304.2 [Substantial Improvement and Substantial Damage Determinations, Post Flood Procedures].
- B. Whenever the DRB does not grant a conditional use permit or a variance request on any basis other than the failure of the applicant to submit a complete application, such action may not be reconsidered by the respective DRB at a later time unless in accordance with 24 V.S.A. § 4470. The applicant shall clearly demonstrate that:
- a. Circumstances affecting the property that is the subject of the application have substantially changed,
 - b. New information is available that could not with reasonable diligence have been presented at a previous hearing. A request to be heard on this basis shall be filed with the ZA within the time

period for an appeal. However, such a request does not extend the period within which an appeal shall be taken.

- c. Appeals from any decision or act of the DRB in connection with this bylaw shall be made to the Vermont Superior Court, Environmental Division as provided for in 24 V.S.A. § 4471.

SECTION 304: Administrative Responsibilities, Records

304.1 Records

The ZA shall properly file and maintain a record of:

- A. All permits issued for development under the jurisdiction of this bylaw;
- B. A FEMA Elevation Certificate 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, replacement, substantially improved, substantially damaged or flood-proofed buildings (not including accessory buildings) in the Flood Hazard Area;
- C. All floodproofing and other certifications required under this regulation; and
- D. All decisions of the ZA and DRB (including those for substantial improvement, substantial damage, variances, and violations) and all supporting findings of fact, conclusions, and conditions.

304.2 Substantial Improvement and Substantial Damage Determinations, Post Flood Procedures

- A. When a proposal for the renovation, rehabilitation, restoration, or repair of a structure located within any Flood Hazard Overlay District is reviewed, the ZA shall make a substantial improvement determination.
- B. In the event of damage to a structure located within any Flood Hazard Area from flooding or other causes (such as, but not limited to, fire, wind or snow), the ZA shall make a substantial damage determination based on the damage sustained by the structure regardless of intended repair at that time.
- C. Substantial improvement or substantial damage determinations shall be made in accordance with current FEMA guidelines⁴ or procedure established by the DRB in accordance with 24 V.S.A. § 1972 and 24 V.S.A. § 4461 and shall be used to determine the appropriate development standards for repair and rebuilding.
- D. A substantial improvement or substantial damage determination can be appealed by an applicant or property owner to the DRB in accordance with sub-paragraph 303.11 [Appeals of a Permit Decision] of this bylaw. In the consideration of an appeal of the ZA's determination, the DRB shall consider additional documentation provided by the applicant which may include:

⁴ FEMA P-758, Substantial Improvement/Substantial Damage Desk Reference: <https://www.fema.gov/media-library/assets/documents/18562>

- a. A recent building appraisal (within the past calendar year, or as determined to still be applicable) completed by a licensed and qualified real estate appraiser that documents the structure's market value (excluding land value) prior to the damage or improvement; or
- b. A project/repair cost estimate provided by a qualified contractor, professional engineer, or licensed architect. The material and labor cost estimate shall include a detailed accounting of the proposed improvements, additions, reconstruction or rehabilitation work, repairs or associated construction and development; or
- c. In the case of substantial damage, an estimate of structure damage provided or reviewed by a local official from FEMA's Substantial Damage Estimator software.

304.3 Certificate of Occupancy

- A. In accordance with 24 V.S.A. § 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 the areas affected by this bylaw, until a certificate of occupancy is issued by the ZA stating that the proposed use of the structure or land conforms to the requirements of this bylaw.
- B. A certificate of occupancy is not required for structures that were built in compliance with the bylaws at the time of construction and have not been improved since the adoption of this bylaw.
- C. Upon receipt of the application for a certificate of occupancy, the ZA shall review the permit conditions and inspect the premises to ensure that:
 - a. any required state and federal permits that have been received,
 - b. all work has been completed in conformance with the zoning permit and associated approvals, and
 - c. all required as-built documentation certified by a licensed engineer has been submitted to the ZA, e.g. updated FEMA Elevation Certificate, dry floodproofing certificate, as-built volumetric analysis, or as-built floodway encroachment analysis.
- D. If the ZA fails to grant or deny the certificate of occupancy within 29 days of the submission of the application, the certificate shall be deemed issued on the 30th day. If a certificate of occupancy cannot be issued, notice will be sent to the owner and copied to the lender.

304.4 Enforcement

- A. This bylaw shall be enforced in accordance with 24 V.S.A. §1974a, 4451, and 4452. All notices of violation shall be provided to the State NFIP Coordinator.

B. No new flood insurance shall be provided for any property which the Federal Insurance Administrator finds has been declared to be in violation of local flood hazard area regulations. If any appeals have been resolved, but the violation remains, the ZA shall submit a declaration to the Administrator of the National Flood Insurance Program requesting a denial of flood insurance to the property pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended. New and renewal flood insurance shall be denied to a structure upon a finding by the Federal Insurance Administrator of a valid declaration of a violation.

ARTICLE IV DEVELOPMENT IN FEDERALLY REGULATED FLOOD HAZARD AREAS

SECTION 401: Permit Requirement

A permit is required from the ZA for all proposed construction and development in all areas defined in subsection 201.1 Federal Regulated Flood Hazard Areas. Development that requires conditional use approval, non-conforming use approval, a waiver, or a variance from the DRB under these flood hazard regulations, must have such approvals prior to the issuance of a permit by the ZA. Any development subject to town jurisdiction in the designated hazard areas shall meet all relevant criteria in subsection 402.6, Development Standards, of this bylaw. 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 Agency, whichever is sooner. The DRB should consider comments from the NFIP Coordinator at ANR. For development within the SFHA, no permit shall be issued until all other necessary government permits required by state and federal laws have been obtained.

SECTION 402: Development in Special Flood Hazard Areas

402.1 Exempted Activities in Special Flood Hazard Areas

The following activities do not require a permit under this section of this bylaw:

- A. The removal of a building or other improvement, in whole or in part, so long as the ground elevations under and adjacent to the removed structure remain unchanged. For damaged structures where FEMA mitigation funds may be used, the damaged structure may be required to remain in place until funds are granted.
- B. Routine maintenance of existing buildings in the usual course of business required or undertaken to conserve the original condition, while compensating for normal wear and tear. Routine maintenance includes actions necessary for retaining or restoring a piece of equipment, machine,

- or system to the specified operable condition to achieve its maximum useful life and does not include expansions or improvements to development.
- C. Interior improvements to existing buildings that cost less than \$500.
 - D. Maintenance of existing sidewalks, roads, parking areas, or stormwater drainage; this does not include expansions.
 - E. Maintenance of existing bridges, culverts, and channel stabilization activities; this does not include expansions.
 - F. Streambank armoring and stabilization, retaining walls, and abutment work that does not reduce the cross-sectional flow area of the river or stream channel and has coverage under a Stream Alteration Permit, if required, under 10 V.S.A. Chapter 41 and the rules adopted thereunder.
 - G. The following activities are exempt from municipal regulation, but may require a permit under the State’s “Vermont Flood Hazard Area and River Corridor Rule” (Environmental Protection Rule, Chapter 29):
 - a. State-owned and -operated institutions and facilities.
 - b. Forestry operations and silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont or other accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation.
 - c. Agricultural activities conducted in accordance with the Vermont Agency of Agriculture Food and Market’s Required Agricultural Practices (RAPs). Prior to the construction of farm structures, the farmer shall notify the AO in writing of the proposed activity. The notice shall contain a sketch of the proposed structure including setbacks.
 - d. Public utility power generating plants and transmission facilities regulated under 30 V.S.A. § 248.
 - H. Telecommunications facilities regulated under 30 V.S.A. § 248a.
 - I. Planting projects which do not include any construction or grading activities in accordance with 24 V.S.A. § 4424(c).
 - J. Subdivision of land that does not involve or authorize development.

402.2 Permitted Development in Special Flood Hazard Areas

The following development activities in Special Flood Hazard Area meeting the Development Standards in subsection 402.6, require an administrative review from the ZA and may receive a permit from the ZA without review by the DRB:

- A. Permitted Development Within the Entire Special Flood Hazard Area:
 - a. Above grade development located on ground, which has not been elevated by the placement of fill, that is one foot above base flood elevation and documented with field-surveyed topographic information certified by a registered professional engineer or licensed land surveyor.

- b. Open fencing and signs elevated on poles or posts that create minimal resistance to the movement of floodwater.
 - c. At-grade parking or other at-grade/below-grade development that will not create an obstruction to flood flows.
 - d. Municipal transportation infrastructure improvements designed and constructed by the Vermont Agency of Transportation that have written confirmation from the ANR Regional Floodplain Manager that the project is designed to meet or exceed the applicable standards in this bylaw.
 - e. River and floodplain restoration projects, including dam removal, that restore natural and beneficial floodplain functions and include written confirmation from the ANR Regional Floodplain Manager that the project is designed to meet or exceed the applicable standards in this bylaw.
- B. Permitted Development Within Only the Flood Fringe Area:
- a. Improvements or repairs from damage to structures that do not expand the existing footprint and do not meet the definition of “substantial improvement” or “substantial damage”.
 - b. Accessory structures not greater than 500 square feet.
 - c. Development related to on-site septic or water supply systems.
 - d. Building utilities.
 - e. Recreational vehicles or travel trailers.
 - f. New fill for existing associated transportation and utility networks or to accommodate a replacement on-site septic system, if it can be demonstrated that no other practicable alternative is available.

402.3 Prohibited Development in Special Flood Hazard Areas

Except as provided in subsection 402.1 [Exempted Activities], the following is prohibited:

- A. Prohibited Development Within the entire Special Flood Hazard Area
 - a. Fully enclosed areas below grade on all sides, including below grade crawlspaces and basements.
 - b. New critical facilities.
- B. Prohibited Development Within the Floodway Area:
 - a. New accessory structures.
 - b. New encroachments, except for minor improvements⁵ to existing structures or relating to bridges, culverts, roads, stabilization projects, public utilities, river and/or floodplain restoration projects, or health and safety measures.

⁵ Minor improvements are those that would not affect base flood elevations, consistent with the provisions of FEMA P-480; Desk Reference for Local Officials: https://www.fema.gov/pdf/floodplain/nfip_sg_unit_5.pdf

- c. Changes to existing structures where the footprint of the structure is proposed to expand laterally into the floodway greater than 500 square feet.
- d. Storage of materials or junk yards.

402.4 Conditional Use Review in Special Flood Hazard Areas

In accordance with 24 V.S.A. § 4414, conditional use review and approval by the DRB is required prior to the issuance of a permit by the ZA for any activity in the Special Flood Hazard Area that is not exempt or eligible for administrative review.

402.5 Non-Conforming Structures and Uses in Special Flood Hazard Areas

- A. A nonconforming structure in the Special Flood Hazard Area that has been substantially damaged or destroyed may be reconstructed in its original location only if it is rebuilt to comply with all requirements of the National Flood Insurance Program and this bylaw;
- B. Nonconforming structures and uses shall be considered abandoned where the structures or uses are discontinued for more than 12 months. An abandoned structure shall not be permitted for re-occupancy unless brought into compliance with this bylaw. An abandoned use shall not be permitted unless brought into compliance with this bylaw.

402.6 Development Standards and Construction Standards in Special Flood Hazard Areas

The criteria described are the minimum standards for development in the Special Flood Hazard Area (SFHA). If the floodway or flood fringe is not specified, the standard applies to the entire SFHA. Where more than one district is involved, the most restrictive standard shall take precedence.

402.6.1 Development Standards in Floodway Area

Within the Floodway Area, the following standards apply:

- A. New encroachments are prohibited within the floodway, except for the following, which also shall comply with subsection 406.1.B, 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 or 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 no other practicable alternative is available;

- B. For all proposed new encroachments and above-grade development, a hydraulic analysis is required to be provided for review. The analysis should be 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 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.
- C. For development that is either below grade or will not result in any change in grade, the hydrologic & 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.
- D. For any new encroachment that is proposed within the floodway sub-district where a hydraulic analysis is required, the applicant may provide a FEMA Conditional Letter of Map Revision (CLOMR)⁶, in lieu of a hydraulic analysis, to demonstrate that the proposed activity will not have an adverse impact.

402.6.2 Development Standards within the Flood Fringe

Within the flood fringe, the following No Adverse Impact (NAI) Standards apply:

- A. Compensatory Flood Storage Requirements. New development or redevelopment shall not decrease flood storage capacity. Therefore, except as noted in subsection 406.2.B [Compensatory Flood Storage Requirement Exceptions] below, development that displaces floodwater storage in the flood fringe shall provide compensatory storage to offset the impacts of the proposal. This is required 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.
 - a. Volumetric analyses and supporting data, demonstrating compensatory storage to offset the impacts of the proposal, shall be provided by the applicant and certified by a registered professional engineer.
 - b. An applicant may submit a hydraulic analysis that demonstrates that a project will not increase flood elevations and velocities on floodwaters in lieu of a NAI volumetric analysis.
 - c. Compensatory flood storage designs shall not materially impact adjacent landowners or structures.
 - d. If the design may create an undue adverse impact to adjacent landowners or structures, a hydraulic analysis shall be required to verify that a proposed development will not increase base flood elevations and velocities. Hydraulic analyses and supporting data

⁶ <https://www.fema.gov/conditional-letter-map-revision>

shall be provided by the applicant and certified by a registered professional engineer

B. Compensatory Flood Storage Requirement Exceptions

- a. The NAI compensatory storage requirement may be waived for proposed designs that have no more than a minimal effect on floodwater storage and will not result in diverting floodwaters onto an adjacent property or structure. Examples of designs that have a minimal effect on floodwater storage include an open foundation design; utility work that is largely or completely located below grade; minor above ground improvements, such as fences or poles, that minimally displace or divert floodwaters; and development that will not result in any change to the pre-development ground elevations. A determination to waive the NAI compensatory storage requirement shall include written concurrence from the ANR regional floodplain manager, that the project will have only a minimal effect on floodwater storage.
- b. For remediation of properties with contaminated soils, such as Brownfields sites, the NAI compensatory storage requirement may be waived, if hydraulic analysis demonstrates that the remediation will not increase flood elevations and velocities. Hydraulic analyses and supporting data shall be provided by the applicant and certified by a registered professional engineer.
- c. The NAI compensatory storage requirement may be waived for a replacement structure if:
 - i. there is no increase in the structure's footprint, or
 - ii. An open foundation design is used. Examples include using compliant flood vents or openings, or elevating the structure on post, piers, or pilings with no structural foundation walls below the design flood elevation
- d. The NAI compensatory storage requirement may be waived for associated transportation and utility networks⁷ and replacement on-site septic system proposals, if the applicant demonstrates that the placement of fill cannot be mitigated.

402.6.3 Development Standards in the Special Flood Hazard Areas (Zones A1-30, AE, AH, AO)

Within the Special Flood Hazard Areas (SFHA), the following standards apply:

- A. All development, except development that is exempt under subsection 402.1[Exempted Activities], shall be:
- a. Reasonably safe from flooding.

⁷ These do not include state transportation networks or power generation and transmission utility networks subject to the Public Utility Commission jurisdiction, as those are exempt from municipal regulation and are regulated under the State Flood Hazard Area & River Corridor Rule; <http://dec.vermont.gov/sites/dec/files/documents/wsmd-fha-and-rc-rule-adopted-2014-10-24.pdf>

- b. Designed (or modified) and adequately anchored to prevent flotation, collapse, release, 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. Required to elevate or floodproof any fuel storage tanks to at least two feet above the base flood elevation. This can be achieved by:
 - i. Elevating the fuel storage tank a minimum of two feet above the BFE and securely anchoring the tank to prevent flotation. The tank shall be located on the land-ward or downstream side of the building and all inlets, fill openings, line connections, and vents shall be elevated to two feet above the BFE. Any structure or platform used to elevate the tank shall be designed to withstand anticipated flood loads and forces;
 - ii. In places where elevation of the fuel storage tank is not possible due to the location of existing fuel hookup/fuel lines into an existing building:
 - The tank shall be securely anchored to prevent floatation while protecting it from flood forces and debris. Any structure or platform used to anchor and protect the tank shall be designed to withstand anticipated flood forces and debris. The tank vent pipe/valve shall be located at a minimum two feet above the BFE; or
 - Storage tanks may be placed underground, if securely anchored and certified by a qualified professional and are protected from flood forces such as scour, erosion, velocity flow, and buoyancy (uplift) force.
- B. For any new structure, replacement structure, substantially improved structure, or structure that has experienced substantial damage, outdoor utilities (electrical, heating, ventilation, plumbing, and air conditioning equipment) and other service facilities (such as sewer, gas, and water systems), shall be located on the landward or downstream side of the building and/or behind structural elements, and located and constructed to minimize or eliminate flood damage.
- C. In Zones AE and A1 – A30 where 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 more than one foot at any point within the community. The

demonstration shall be supported by technical data that conforms to standard hydraulic engineering principles and certified by a registered professional engineer (see Article III – Administration, for more information about application submittal requirements).

- D. For new, replacement, or substantially improved structures, or for structures that have incurred substantial damage, fully enclosed areas below grade on all sides (including below grade crawlspaces and basements) are prohibited.
- E. Recreational vehicles, equipment and boat trailers, portable toilets, construction trailers, and other travel trailers shall:
 - a. Be currently registered, licensed and ready for highway use; or
 - b. Be on site for fewer than 180 consecutive days; or
 - c. Meet the requirements for structures in subsections 402.6.1, 402.6.2 and 406.6.3, as appropriate.
- F. Water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- G. 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.
- H. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- I. The flood carrying capacity within any altered or relocated portion of any watercourse shall be maintained, any alteration or relocation shall not result in any decrease of stream stability.
- J. Bridges, culverts and channel management activities, which by their nature shall be placed in or over the watercourse, shall have a Stream Alteration permit from the Agency of Natural Resources, if required.
- K. Access - Subdivisions and Planned Unit Developments shall be accessible by dry land access outside of any SFHA.

402.6.4 Construction (Structural and Building) Standards in SFHA Zones/Areas

- A. New structures, existing structures to be substantially improved or replaced, or that have incurred substantial damage shall be located such that the lowest floor is at least two feet above base flood elevation. This shall be documented in the proposed and as-built condition with a FEMA Elevation Certificate.
- B. New structures to be substantially improved or replaced, or that have incurred substantial damage in Zone AO, shall have the lowest floor, including basement, elevated above the highest adjacent grade, at least two feet above the depth number specified on the Town's FIRM, or at least three feet if no depth number is specified.

- C. New non-residential structures, and non-residential structures to be substantially improved, replaced, or that have incurred substantial damage shall:
- a. Meet the standards of subsection 402.6.4.A, above; or
 - b. Have the lowest floor, including basement, together with attendant utility and sanitary facilities, designed so that 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.
 - c. A permit for dry floodproofing 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;
 - d. Dry floodproofing measures used to meet the above floodproofing standard shall work without the use of human intervention at the time of flooding. Exceptions to this standard are when the facility is adequately staffed at all hours with people trained and able to deploy the facility's floodproofing measures, or if the structure is located in a floodplain that has a National Weather Service flood forecast stream gauge that provides adequate advanced warning of potential flooding for the deployment of the floodproofing system.
- D. Critical facilities that are to be replaced, substantially improved, or meet the definition of substantial damage shall be constructed so that the lowest floor, including basement, shall be 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. A critical facility shall have at least one access road connected to land outside the 0.2% annual chance floodplain that is capable of accommodating emergency services vehicles. The top of the access road shall be no lower than six inches below the elevation of the 0.2% annual chance flood event.
- E. For Historic structures that would meet the definition of substantial improvement or substantial damage if not for their historic structure designation, the improved or repaired building shall meet the following mitigation performance standards for areas below the base flood elevation:
- a. Any future damage to enclosures below the lowest floor shall not result in damage to the foundation, utility connections, or elevated portions of the building or nearby structures;
 - b. Utility connections (e.g., electricity, water, sewer, natural gas) shall be protected from inundation and scour or be easily repaired;
 - c. The building foundation shall be structurally sound and reinforced to withstand a base flood event;

- d. The structure's historic designation shall not be precluded;
 - e. The likelihood of flood waters entering the structure during the base flood is reduced; and
 - f. There shall be no expansion of uses below base flood elevation except for parking, storage, building access, or, in the case of non-residential buildings, where the space is dry floodproofed.
- F. Fully enclosed areas that are above grade, below the lowest floor, below BFE, and subject to flooding, shall:
- a. Be solely used for parking of vehicles, storage, or building access, and such a condition shall clearly be stated on any permits; and
 - b. Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs shall 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 coverings or devices provided that they permit the automatic entry and exit of floodwaters; and
 - c. Include a signed non-conversion agreement from the owner of the structure with the permit application stating that the enclosed area below the BFE will not be converted to another use not listed above in subsection 402.6.4.F.a, and that the community would have the ability to inspect the exterior and interior of the enclosed area in compliance with the standards laid out in the non-conversion agreement.
- G. A small accessory structure of 500 square feet or less need not be elevated to the base flood elevation, 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 subsection 402.6.4.F above.

ARTICLE V. DEVELOPMENT IN RIVER CORRIDORS

SECTION 501: Permit Requirements in River Corridors

A permit is required from the ZA for all proposed construction and development in all areas defined in Section 201.3. Development that requires conditional use approval, non-conforming use approval, a waiver, or a variance from the DRB under these flood hazard regulations, must have such approvals prior to the issuance of a permit by the ZA. Any development subject to town jurisdiction in

the designated hazard areas shall meet all relevant criteria in Section 502.5, Development Standards, of this bylaw. 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 Agency, whichever is sooner. The DRB should consider comments from the NFIP Coordinator at ANR. For development within the River Corridor, no permit shall be issued until all other necessary government permits required by state and federal laws have been obtained.

SECTION 502: Development in River Corridors

502.1 Exempted Activities in River Corridors

The following activities do not require a permit under this section of the bylaw

- A. The removal of a building or other improvement in whole or in part, so long as the ground elevations under and adjacent to the removed structure remain unchanged.
- B. Any changes, maintenance, repairs, or renovations to a structure that will not result in a change to the footprint of the structure or a change in use.
- C. Maintenance of existing sidewalks, roads, parking areas, or stormwater drainage; this does not include expansions.
- D. Maintenance of existing bridges, culverts, and channel stabilization activities; this does not include expansions.
- E. Construction or repair of stream crossing structures (bridges and culverts), associated transportation and utility networks⁸, dams, dry hydrants, and other functionally dependent uses that must be placed in or over rivers and streams that are not located in a flood hazard area and that have coverage under a Stream Alteration Permit, if required, under 10 V.S.A. Chapter 41 and the rules adopted thereunder.
- F. Activities exempt from municipal regulation and requiring a permit under the State's "Vermont Flood Hazard Area and River Corridor Rule" (Environmental Protection Rule, Chapter 29) ⁹:
 - a. State-owned and operated institutions and facilities.
 - b. Forestry operations or silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont or other accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation.
 - c. Agricultural activities conducted in accordance with the Vermont Agency of Agriculture, Food and Market's Required Agricultural

⁸ New transportation or utility development that runs parallel to the river is not exempt and shall meet the Development Standards in Section 502.5.

⁹ State-owned and -operated institutions and facilities, Forestry, Required Agricultural Practices, and Public Utility Commission jurisdictional facilities located in a Flood Hazard Area or River Corridor are regulated under the State Flood Hazard Area & River Corridor Rule, 10 V.S.A. § 754.

Practices (RAPs). Prior to the construction of farm structures, the farmer shall notify the AO in writing of the proposed activity. The notice shall contain a sketch of the proposed structure including setbacks.

- d. Public utility power generating plants and transmission facilities regulated under 30 V.S.A. § 248.
 - e. Telecommunications facilities regulated under 30 V.S.A. § 248a.
- G. Planting projects which do not include any construction or grading activities in accordance with 24 V.S.A. § 4424(c).
- H. Subdivision of land that does not involve or authorize development.

502.2 Permitted Development in River Corridors

The following development activities in the River Corridor meeting the Development Standards in Section 502.5, require an administrative review from the ZA and may receive a permit from the ZA without review by the DRB:

- A. Small accessory structures not larger than 500 square feet.
- B. Improvements to existing utilities that are along an existing right of way and serve a building.
- C. Replacement on-site septic systems.
- D. An attached deck or patio to an existing structure that is 200 square feet or less and is located no less than 100 feet from the top of bank.¹⁰
- E. River or floodplain restoration projects that do not involve fill, structures, utilities, or other improvements, and which have written confirmation from the ANR Regional Floodplain Manager that the project is designed to meet or exceed the applicable standards in this bylaw.¹¹

502.3 Prohibited Development in River Corridors

The following are prohibited in the River Corridor:

- A. New structures, fill, development, and accessory dwellings that do not meet the standards in Section 502.5 [Development Standards];
- B. Any other development that is not exempt, permitted, or listed as a conditional use which would cause or contribute to fluvial erosion hazards.

502.4 Conditional Use Review

In accordance with 24 V.S.A. § 4414, conditional use review and approval by the DRB is required prior to the issuance of a permit by the ZA for any activity¹² in the River Corridor that is not exempt or eligible for administrative review.

¹⁰ An attached deck or patio does not include enclosed or three-season porches.

¹¹ Applicants should be made aware that any restoration project involving work within the stream channel may require a Stream Alteration Permit under 10 V.S.A. Chapter 41 and the rules adopted thereunder.

¹² This includes public water accesses and unimproved paths that provide access to the water for the general public and promote the public trust uses of the water. Permits for such accesses and paths must include a condition

502.5 Development Standards in River Corridors

The criteria below are the minimum standards for development in the River Corridor. Where more than one district is involved, the most restrictive standard shall take precedence.

A. Development outside of designated centers shall meet the following criteria:

- a. In-Fill Between Existing Development: Development must be located no closer to the channel than the adjacent existing primary structures, within a gap that is no more than 300 feet (see Figure 1), or

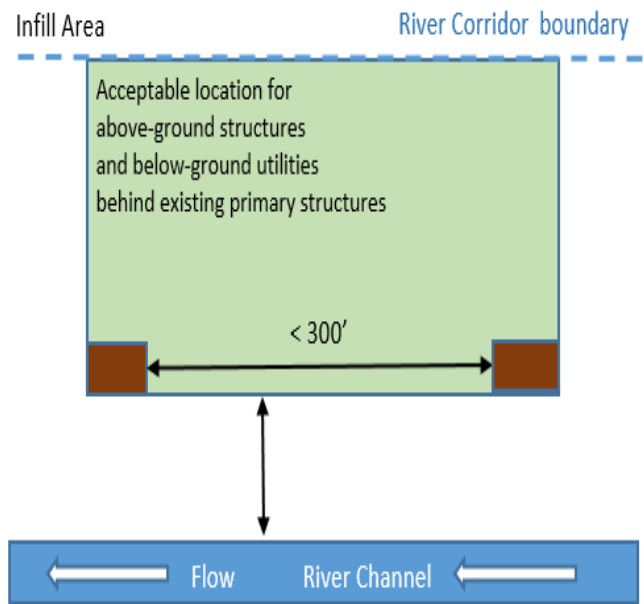


Figure 1: In-fill Development Standard

prohibiting the permittee from actively managing the section of river to solely protect the public water access from lateral river channel adjustment.

If there are pre-existing investments such as infrastructure or habitable structures in close proximity to the access, it may be appropriate to provide streambank armoring in compliance with the Vermont Stream Alteration Rules; <http://dec.vermont.gov/watershed/rivers/river-management#rules>

b. Down River Shadow:

An addition to an existing habitable structure, or an accessory structure that is adjacent to an existing structure, shall be located in the shadow area directly behind and further from the channel than the existing structure, or within 50 feet to the downstream side and no closer to the top of bank. Below-ground utilities may also be placed within the same shadow dimensions of an existing below-ground system (see Figure 2).

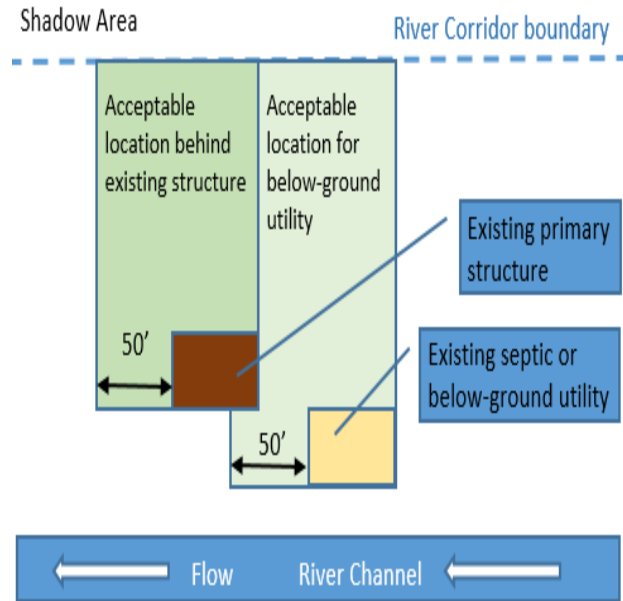


Figure 2: Shadow Area Development Standard

B. River Corridor Performance Standard

- a. Proposals that do not meet the infill or shadowing criteria in subsection 502.5 [Development Standards] a. or b. must demonstrate, and the DRB must find, that the proposed development will:
 - i. not be placed on land with a history of fluvial erosion damage or be imminently threatened by fluvial erosion;
 - ii. not cause the river reach to depart from or further depart from the channel width, depth, meander pattern, and slope associated with natural stream processes and equilibrium conditions; and
 - iii. not result in an immediate need, or anticipated future need, for stream channelization solely as a result of the proposed development that would increase flood elevations and velocities or alter the sediment regime triggering channel adjustments and erosion in adjacent and downstream locations.
- b. Proposals that meet the infill or shadowing criteria in subsection 502.5 [Development Standards] a. or b., are presumed to meet the River Corridor Performance Standard. However, The DRB has the option to require an applicant to demonstrate that a proposal

meets the River Corridor Performance Standard if there is a concern that the proposed development is at particular risk from fluvial erosion or may increase fluvial erosion, based on location or past flood damage.

- c. The DRB may request or consider additional information to determine if the proposal meets the River Corridor Performance Standard, including:
 - i. description of why the shadowing and infill criteria in subsection 502.5 a or b cannot be met;
 - ii. data and analysis from a consultant qualified in the evaluation of river dynamics and erosion hazards;
 - iii. comments provided by the DEC Regional Floodplain Manager on whether the proposal meets the River Corridor Performance Standard.

502.6 Permit Conditions for River Corridors

Permits for public water accesses and unimproved paths that provide access to the water for the general public and promote the public trust uses of the water shall include a condition prohibiting the permittee from actively managing the section of river to solely protect the public water access from lateral river channel adjustment.

ARTICLE VI TABLE OF ACTIVITIES IN FLOOD HAZARD AREAS

	Activity	Hazard Zone		
		Special Flood Hazard Area	Floodway (with no increase to BFE)	River Corridors
	P Permitted C Conditional Review X Prohibited A Exempt			
1	New Structures (including new manufactured homes)	X	X	C
2	Non-substantial improvement (<50% Fair Market Value) of less than 500 sq ft to an existing structure that is no closer to waterway (If River Corridor then also in building shadow)	P	C	P
3	Substantial improvement (>50% Fair Market Value) of less than 500 sq ft to an existing structure that is no closer to waterway (If River Corridor then also in building shadow)	C	C	C
4	Any improvement of more than 500 sq ft to an existing structure that is no closer to waterway (If River Corridor then also in building shadow)	C	C	C
5	Accessory structure not meant for human habitation and not larger than 500 sq ft	P	X	C
6	Accessory structure built human habitation and/or larger than 500 sq ft	X	X	X
7	On-site septic and water supply systems	P	X	C
8	At-grade parking for existing buildings	P	C	C
9	Open fencing and elevated signage	P	C	C
10	RV parking, fully licensed and ready for highway use	P	X	C
11	RV parking, unlicensed or not drivable	X	X	X
12	Storage or junk yards	X	X	X
13	Fill as needed to elevate existing structures	C	C	C
14	Fill	X	X	X
15	Critical facilities	X	X	X
16	New or replacement storage tanks	C	X	C
	Activity	Hazard Zone		

	P Permitted C Conditional Review X Prohibited A Exempt	Special Flood Hazard Area	Floodway (with no increase to BFE)	River Corri dors
18	Grading, excavation or creation of a pond	C	C	C
19	Maintenance of existing road/bridge/culvert/channel stabilization, not including expansions	A	A	A
20	Road improvements/expansions	C	C	C
21	Exclusively recreational stream crossings that do not require a SAP and span top-of-bank	P	P	A
22	Bridges, culverts, channel management, and functionally dependent uses ⁵ that have coverage under a SAP	C	C	A
23	Subdivision of land	C	C	C
24	Trail maintenance and expansion without stabilization	A	A	A
25	Building utilities	P	C	C
26	Power generation or telecom infrastructure and facilities not otherwise regulated by 30 V.S.A. Chapter 5 § 248 or § 248a	C	X	C
27	Nonconforming structure repair, relocation, replacement or enlargement	C	C	C
28	Removal of structure in whole or part ¹³	A	A	A
29	Silvicultural activities ¹⁴	A	A	A
30	Agricultural activities ¹⁵	A	A	A
31	All development not otherwise noted	X	X	X

¹³ In conjunction with an approved stabilization plan.

¹⁴ Conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practice.

¹⁵ Conducted in accordance with the Vermont Department of Agriculture's Required Agricultural Practices (RAP).

ARTICLE VII DEFINITIONS

“Accessory Structure” means a structure which is: 1) detached from and clearly incidental and subordinate to the principal use of or structure on a lot, 2) located on the same lot as the principal structure or use, and 3) clearly and customarily related to the principal structure or use. For residential uses these include, but may not be limited to garages, garden and tool sheds, and playhouses.

“Area of Special Flood Hazard” is synonymous in meaning with the phrase “special flood hazard area” for the purposes of these regulations.

“Base Flood” means the flood having a one percent chance of being equaled or exceeded in any given year (also referred to as the “100-year flood” or one-percent (1%) annual chance flood).

“Base flood discharge” is the volume of water resulting from a Base Flood as it passes a given location within a given time, usually expressed in cubic feet per second (cfs).

“Base Flood Elevation” (BFE) is the elevation shown on the Flood Insurance Rate Map (FIRM) for Zones AE, AH, A1-30 that indicates the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.

“Basement” is any area of the building having its floor below ground level on all sides.

“Building” Structure having a roof supported by columns or walls and intended for the shelter or enclosure of persons, animals or chattel.

“Channel” means an area that contains continuously or periodically flowing water that is confined by banks and a streambed.

“Channel width” (or bankfull width) is the width of a stream channel when flowing at a bankfull discharge. The bankfull discharge is the flow of water that first overtops the natural banks. This flow occurs, on average, once every 1 to 2 years.

“Community” means any State or area political subdivision thereof, or any Indian tribe or authorized tribal organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

“Critical facilities” - includes police stations, fire and rescue facilities, hospitals, shelters, schools, nursing homes, water supply and waste treatment facilities, and other structures the municipality identifies as essential to the health and welfare of the population and that are especially important following a disaster. For example, the type and location of a business may raise its status to a Critical Facility, such as a grocery store or gas station.

“Designated center” means a downtown, village center, new town center, growth center, or neighborhood development area designated pursuant to 24 V.S.A. Chapter 76A.

“Development” means any human-made change to improved or unimproved real estate, including but not limited to the construction, reconstruction, renovation, repair, expansion, or alteration of buildings or other structures, the placement of manufactured homes; streets, and other paving; utilities; filling, grading and excavation; mining; dredging; drilling operations; storage of equipment or materials; and the subdivision of land.

“Existing manufactured home park or subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a municipality.

“Expansion to an existing manufactured home park or subdivision” means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

“Fill” means any placed material that changes the natural grade, increases the elevation, or diminishes the flood storage capacity at the site.

“Flood” means (a) a general and temporary condition of partial or complete inundation of normally dry land areas from: the overflow of inland or tidal waters; the unusual and rapid accumulation or runoff of surface waters from any source; and mudslides which are proximately caused by flooding and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current. (b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an

unanticipated force of nature, such as flash flood or abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

“Flood fringe” means the portion of the flood hazard area that is outside of the floodway but still inundated by the base flood (the flood having a one percent chance of being equaled or exceeded in any given year).

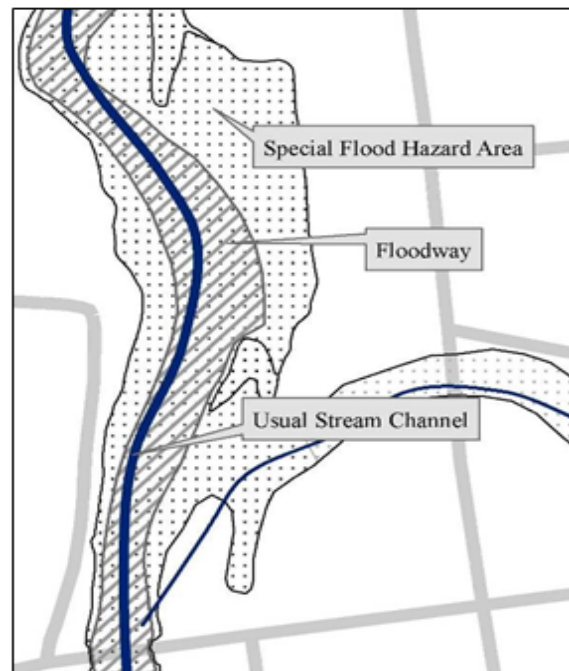
“Flood Insurance Rate Map” (FIRM) means the official map of a municipality, on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the risk premium zones applicable to the municipality.

“Flood Insurance Study” (FIS) means an examination, evaluation and determination of flood hazards and, if appropriate, the corresponding water surface elevations or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood related erosion hazards.

“Floodplain or flood-prone area” means a relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby stream, river or watercourse; and/or any area subject to the unusual and rapid accumulation of surface waters from any source.

“Flood proofing” means 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” means 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 one foot at any point.



“Fluvial Erosion” is erosion caused by streams and rivers. Fluvial erosion can be catastrophic when a flood event causes a rapid adjustment of the stream channel size and/or location.

“Functionally dependent use” means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water.

“Highest Adjacent Grade” is the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

“Historic structure” means any structure that is: (a) listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (b) certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; (c) individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or (d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either: (i) by an approved state program as determined by the Secretary of the Interior or (ii) directly by the Secretary of the Interior in states without approved programs.

“Identified Floodplain Area” is an umbrella term that includes all of the areas within which the municipality has selected to enforce floodplain regulations. It will always include the area identified as the Special Flood Hazard Area on the Flood Insurance Rate Maps and Flood Insurance Study, but may include additional areas identified by the municipality. See Section IV.A of this bylaw for what areas the community has included in the Identified Floodplain Area.

“Letter of Map Amendment” (LOMA) is an official amendment, by letter from FEMA, to an effective National Flood Insurance Program map. A LOMA establishes a property's location in relation to the Special Flood Hazard Area. LOMAs are usually issued because a property has been inadvertently mapped as being in the floodplain, but a licensed engineer or surveyor is able to show that the property or structure is actually above the base flood elevation.

“Lowest floor” means the lowest floor of the lowest enclosed area, including basement. An unfinished or flood resistant partially enclosed area, used solely for parking of vehicles, building access or incidental storage in an area other than a basement area is not considered a building's lowest floor provided that

such enclosure is not designed and built so that the structure in violation of the applicable non-elevation design requirements of this bylaw.

“Manufactured home” (or Mobile home) means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term “manufactured home” does not include a “recreational vehicle”.

“Manufactured home park or subdivision” is a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

“Minor repair” is the replacement of existing work with equivalent materials for the purpose of its routine maintenance and upkeep, but not including the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the exit-way requirements; nor shall minor repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, oil, waste, vent, or similar piping, electric wiring, mechanical or other work affecting public health or general safety.

“New construction” means structures for which the start of construction commenced on or after the effective date of this bylaw and includes any subsequent improvements to such structures. Any construction started after the effective date of Shrewsbury’s previously adopted Flood Hazard Area Regulations (2011) and before the effective date of this bylaw is subject to the bylaw in effect at the time the permit was issued, provided the start of construction was within 180 days of permit issuance.

“New manufactured home park or subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the most recent effective date of floodplain management regulations adopted by a community.

“Nonconforming structure” means a structure or part of a structure that does not conform to the present bylaws but was in conformance with all applicable laws, bylaws, and regulations prior to the enactment of the present bylaws, including a structure improperly authorized as a result of error by the Zoning Administrator. Structures that were in violation of the flood hazard regulations at the time of their creation, and remain so, remain violations and are not nonconforming structures.

“Nonconforming use” means use of land or a structure that does not conform to the present bylaws but did conform to all applicable laws, bylaws, and regulations prior to the enactment of the present bylaws, including a use improperly authorized as a result of error by the Zoning Administrator. Uses that were in violation of the flood hazard regulations at the time of their creation, and remain so, remain violations and are not nonconforming uses.

“Nonconformity” means a nonconforming use, structure, lot, or parcel.

“Non-residential” means a commercial or mixed-use building where the primary use is commercial or non-habitational. This includes, but is not limited to: small businesses, churches, schools, farm buildings (including grain bins and silos), pool houses, clubhouses, recreational buildings, government buildings, mercantile structures, agricultural and industrial structures, and warehouses.

“Non-substantial improvement” means any reconstruction, rehabilitation, addition, or other improvement of a structure, of which the cost is less than 50 percent of the market value of the structure before the “start of construction” of the improvement.

“Person” means an individual, partnership, public or private association or corporation, firm, trust, estate, municipality, governmental unit, public utility or any other legal entity whatsoever, which is recognized by law as the subject of rights and duties.

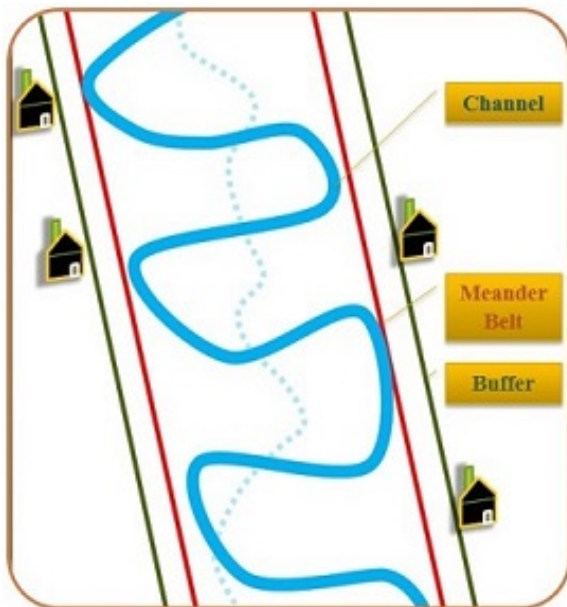
“Post-FIRM Structure” is a structure for which construction or substantial improvement occurred after December 31, 1974 or on or after the effective date of the community’s first Flood Insurance Rate Map (FIRM) dated 09/01/1978, whichever is later, and, as such, would be required to be compliant with the regulations of the National Flood Insurance Program.

“Pre-FIRM Structure” is a structure for which construction or substantial improvement occurred on or before December 31, 1974 or before the effective date of the community’s first Flood Insurance Rate Map (FIRM) dated 09/01/1978, whichever is later, and, as such, would not be required to be compliant with the regulations of the National Flood Insurance Program.

“Recreational vehicle” means a vehicle which is: (a) Built on a single chassis; (b) 400 square feet or less when measured at the largest horizontal projection; (c) Designed to be self-propelled or permanently towable by a light duty truck; and (d) Designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

“Repetitive Loss” is flood related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

“Regulated Flood Hazard Areas” is a term that refers to all areas defined in Section IV.A of this bylaw and regulated by this bylaw, and is the total land to which these regulations apply. These hazard areas overlay any other existing zoning districts and the regulations herein are the minimum standards that must be met before meeting the additional standards applicable in the underlying district.



“River Corridor” means the land area adjacent to a river that is required to accommodate the dimensions, slope, planform, and buffer of the naturally stable channel and that is necessary for the natural maintenance or natural restoration of a dynamic equilibrium condition, as that term is defined in 10 V.S.A. § 1422, and for minimization of fluvial erosion hazards, as delineated by the Vermont Agency of Natural Resources (ANR) on the online Natural Resources Atlas.

“Setback” means an undisturbed area consisting of trees, shrubs, ground cover plants, duff layer, and generally uneven ground surface that extends a specified distance horizontally across the surface of the land from the mean water level of an adjacent lake or from the top of the bank of an adjacent river or stream.

“Small streams” are those streams as delineated by the Vermont Agency of Natural Resources (ANR) on the online Natural Resources Atlas, with drainage areas of between .5 and 2 square miles, which, because of their low sensitivity, small watershed size, steeper valley slope, and/or valley confinement, may attain their least erosive form within an area delineated as a simple 50-foot setback measured horizontally and perpendicularly from the top of each streambank. The river corridor for small streams constitutes the stream channel plus the 50-foot setback on each side.

“Special Flood Hazard Area” (SFHA) means an area in the floodplain subject to a 1 percent or greater chance of flooding in any given year. It is shown on the FIRM as Zone A, ZA, A1-A30, AE, A99, or, AH.

“Start of construction” for purposes of floodplain management, determines the effective map or bylaw that regulated development in the Special Flood Hazard Area. The “start of construction” includes substantial improvement, and means the date the building permit was issued provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date and shall be completed within twenty-four (24) months after the date of issuance of the permit unless a time extension is granted, in writing, by the Floodplain Administrator. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footing, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, regardless whether that alteration affects the external dimensions of the building.

“Structure” means, for regulatory purposes under this bylaw, a walled and roofed building, as well as a manufactured home, and any related built systems, including gas or liquid storage tanks.

“Subdivision” is the division or re-division of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs, or devisees, transfer of ownership or building or lot development: Provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than five acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.

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

“Substantial improvement” means any reconstruction, rehabilitation, addition, or other improvement of a structure, of which the cost equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either: (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specification which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or (b) Any alteration of a “historic structure”, provided that the alteration will not preclude the structure’s continued designation as a “historic structure”.

“Top of Bank” means that vertical point along a stream bank where an abrupt change in slope is evident. For streams in wider valleys it is the point where the stream is generally able to overflow the banks and enter the floodplain. For steep and narrow valleys, it will generally be the same as the top of slope.

“Variance” means a grant of relief by a community from the terms of a floodplain management regulation.

“Violation” means the failure of a structure or other development to be fully compliant with this bylaw. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR § 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.