

## ARTICLE 9: FLOOD HAZARD AREA REGULATIONS

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### Section 9.1 Statutory Authorization

To effect the purposes of 10 V.S.A. Chapter 32, and in accordance with 24 V.S.A. §4424, there is hereby established an ordinance for areas at risk of flood damage in the Town of East Montpelier, Vermont. Except as additionally described below, all administrative procedures follow municipal procedures under 24 V.S.A. Chapter 117.

### Section 9.2 Statement of Purpose

It is the purpose of this ordinance to:

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

### Section 9.3 Lands to Which These Regulations Apply

- (A) **Regulated Flood Hazard Areas.** These regulations shall apply to the **Floodway, Special Flood Hazard Area and River Corridors** (hereafter called “hazard areas”) in the Town of East Montpelier, Vermont as described below. 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. These hazard areas include:
  - (1) The **Floodway**, which is the channel of a river or stream and the adjacent land where water moves fastest during a storm and poses the greatest danger. The floodway must be kept free of development to prevent floodwaters from rising. For regulatory purposes, the Floodway is defined in Section 9.13 and shown on the Federal Emergency Management Agency’s most current flood insurance studies and maps. These studies and maps are incorporated and adopted into these regulations by reference.
  - (2) The **Special Flood Hazard Area**, which is the area that has a 1% chance of flooding in any year and includes the floodway. For regulatory purposes, the Special Flood Hazard Area is defined in Section 9.13 and shown on the Federal Emergency Management Agency’s most current flood insurance studies and maps published by the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), as provided by the Secretary of the Agency of Natural Resources pursuant to 10 V.S.A. §753, which are hereby adopted and declared to be part of these regulations.
  - (3) The **River Corridor**, which is the land along rivers and streams that is prone to erosion, and the area needed to accommodate a geomorphically stable river or stream channel. Erosion ranges from gradual bank erosion to catastrophic changes in river channel location and dimension during major storms. For regulatory purposes, the River Corridors are determined as the most current River Corridors mapped and published by the Vermont Agency of Natural Resources, beginning with the East Montpelier River Corridor, dated 2/27/2015, which are hereby adopted by reference. Where River Corridors are not mapped, the standards in Section 9.6 (C) shall apply to the area measured as fifty (50) feet from the top of the stream bank or slope. [See also Section 3.12 of the general regulations.]

**(B) Base Flood Elevations and Floodway Limits in Special Flood Hazard Areas.** Where available, base flood elevations and floodway limits (or data from which a community can designate regulatory floodway limits) provided by the National Flood Insurance Program in the Flood Insurance Study, and accompanying maps, shall be used to administer and enforce these regulations. In Special Flood Hazard Areas, where base flood elevations and/or floodway limits have not been provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps, base flood elevations and floodway data provided by FEMA, or available from State or Federal agencies or other sources, shall be obtained and utilized to administer and enforce these regulations.

**(C) Interpretation.** The information presented on any maps, or contained in any studies, adopted by reference, is presumed accurate.

- (1) 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 using the Federal Emergency Management Agency’s most current flood insurance studies and maps. If the applicant disagrees with the determination made by the Zoning Administrator, a Letter of Map Amendment from FEMA shall *constitute proof*.
- (2) If uncertainty exists with respect to the boundaries of the River Corridor, the location of the boundary shall be determined by the Zoning Administrator using the Vermont Agency of Natural Resources’ most current River Corridor Map. If the applicant disagrees with the determination made by the Zoning Administrator, a letter of determination from the Vermont Agency of Natural Resources shall *constitute proof*.

#### Section 9.4 Summary Table: Development Review in Hazard Areas

The hazard areas are not appropriate sites for new structures nor for development that increases the base flood elevation or obstructs the ability of rivers or streams to establish and maintain a geomorphically stable channel.

#	Activity	Hazard Area		
		Floodway	Special Flood Hazard Area	River Corridors
	<b>P</b> Permitted <b>C</b> Conditional Use Review <b>X</b> Prohibited <b>E</b> Exempted			
1	New Structures	X	X	X
2	New Structures in Designated Village Center	X	C	C
3	Storage	X	X	X
4	Substantial Improvements to Existing Structures	C	C	C
5	Non-Substantial Improvements to Existing Structures	C	P	C
6	Small Accessory Structures	X	P	C
7	At Grade Parking	C	P	C
8	Replacement water supply or septic systems	C	C	C
9	Fill as needed to elevate existing structures	C	C	C
10	Fill	X	X	X
11	Grading	C	C	C
12	Road maintenance	E	E	E
13	Road improvements	C	C	C
14	Bridges and culverts	C	C	C
15	Channel management	C	C	C
16	Recreational vehicles	C	P	P
17	Open space, recreation	E	E	E
18	Forestry	E	E	E
19	Agriculture	E	E	E

## Section 9.5 Development Review in Hazard Areas

(A) **Permit.** A permit is required from the Zoning Administrator for all development in all areas defined in Section 9.3. Development that requires conditional use approval, non-conforming use approval, or a variance from the Development Review Board (DRB) under these flood hazard regulations, must have such approvals prior to the issuance of a permit by the Zoning Administrator. Any development subject to municipal jurisdiction in the designated hazard areas shall meet the criteria in Sections 9.5 and 9.6.

(B) **Permitted Development.** For the purposes of review under these regulations, the following development activities in the Special Flood Hazard area where located outside of the floodway and outside of the River Corridors, and meeting the Development Standards in Section 9.6, require only a permit from the Zoning Administrator:

- (1) Non-substantial improvements;
- (2) Accessory structures;
- (3) Development related to on-site septic or water supply systems;
- (4) Building utilities;
- (5) At-grade parking for existing buildings; and
- (6) Recreational vehicles.

### (C) Prohibited Development in Special Flood Hazard Area and River Corridors

- (1) New residential or non-residential structures (including the placement of manufactured homes);
- (2) Storage or junk yards;
- (3) New fill except as necessary to elevate existing structures above the base flood elevation;
- (4) Accessory structures in the floodway;
- (5) Critical facilities in all areas affected by mapped flood hazards; and
- (6) All development not exempted, permitted, or conditionally permitted.

(D) **Conditional Use Review.** Conditional use review and approval by the Development Review Board is required prior to the issuance of a permit by the Zoning Administrator for the following proposed development:

- (1) Substantial improvement, elevation, relocation, or flood proofing of existing buildings;
- (2) New or replacement storage tanks for existing structures;
- (3) Grading, excavation; or the creation of a pond;
- (4) Improvements to existing roads;
- (5) Bridges, culverts, channel management activities, or public projects which are functionally dependent on stream access or stream crossing;
- (6) Public utilities;
- (7) Improvements to existing primary structures in the River Corridors that do not expand the footprint of the existing structure more than 500 square feet;
- (8) Accessory structures in the River Corridors, of 500 square feet or less, that represent minimal investment;
- (9) Building utilities in the River Corridors;
- (10) At-grade parking for existing buildings in the River Corridors;

- (11) Development in a floodway; and
- (12) Notwithstanding the provisions of Section 9.4 and Section 9.5, new structures in the Designated Village Center.

(E) **Exempted Activities.** The following are exempt from regulation under this bylaw:

- (1) The removal of a building or other structure in whole or in part;
- (2) Maintenance of existing roads and storm water drainage;
- (3) Silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices; and
- (4) Agricultural activities conducted in accordance with the Vermont Department of Agriculture's Accepted Agricultural Practices (AAP). Prior to the construction of farm structures, the farmer must notify the Zoning Administrator in writing of the proposed activity. The notice must contain a sketch of the proposed structure including setbacks.

(F) **VariANCES.** Variances shall be granted by the Development Review Board only in accordance with 24 V.S.A. §4469, and in accordance with the criteria for granting variances found in 44 C.F.R. 60.6 of the National Flood Insurance Program regulations.

- (1) A variance for development within the River Corridor may be allowed if, based on a review by Vermont Agency of Natural Resources, it is determined that the proposed development will not obstruct the establishment and maintenance of a geomorphically stable river or stream channel.
- (2) Any variance issued in the Special Flood Hazard Area will not increase flood heights. The variance will inform the applicant in writing over the signature of a community official that the issuance of a variance to construct a structure below the base flood elevation: (a) increases the risk to life and property, and (b) will result in increased flood insurance premiums up to amounts as high as \$25 for \$100 coverage. Such notification shall be maintained with a record of all variance actions.

(G) **Nonconforming Structures and Uses.** The Development Review Board may, after public notice and hearing, approve the repair, relocation, replacement, or enlargement of a nonconforming structure within a flood hazard area provided that:

- (1) The proposed development is in compliance with all the Development Standards in Section 9.6 of this bylaw;
- (2) A nonconforming structure that is substantially damaged or destroyed may be reconstructed only in circumstances when the structure cannot be relocated to a less hazardous location on the parcel. The lowest floor of the reconstructed structure must be rebuilt to one foot or more above the base flood elevation, and the structure must otherwise comply with all requirements of the National Flood Insurance Program;
- (3) Nonconforming structures or uses shall be considered abandoned when such structures or uses are discontinued for more than 12 months; and
- (4) An individual manufactured home lot in an existing manufactured home park that is vacated shall not be considered a discontinuance or abandonment of nonconformity. Replacement manufactured homes must be placed so as to meet the development standards in this bylaw.

## **Section 9.6 Development Standards**

The criteria below are the minimum standards for development in the flood hazard areas. Where more than one zone or area is involved, the most restrictive standard shall apply.

(A) **Floodway Areas**

- (1) Development or any encroachments, above grade and less than one foot above the base flood elevation, within the regulatory floodway as determined in Section 9.3 (B), is prohibited unless it

has been demonstrated through hydrologic and hydraulic analyses, performed in accordance with standard engineering practice, by a registered professional engineer certifying that the proposed development will result in no increase in flood levels during the occurrence of the base flood, and will not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.

- (2) Public utilities may be placed underground, and the analyses may be waived, where a licensed professional engineer certifies that there will be no change in grade and the utilities will be adequately protected from scour.
- (3) Where applicable, all development shall meet standards under Section 9.6 (B).

## **(B) Special Flood Hazard Area**

- (1) **All Development.** All development shall be reasonably safe from flooding and:
  - (a) Be designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure during the occurrence of the base flood;
  - (b) Be constructed with materials resistant to flood damage;
  - (c) Be constructed by methods and practices that minimize flood damage;
  - (d) Be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
  - (e) Be adequately drained to reduce exposure to flood hazards;
  - (f) Be located as to minimize conflict with changes in channel location over time and the need to intervene with such changes; and
  - (g) Be required to locate any fuel storage tanks (as needed to serve an existing building in the Special Flood Hazard Area) a minimum of one foot above the base flood elevation and be securely anchored to prevent flotation; or storage tanks may be placed underground, if securely anchored as certified by a qualified professional.
- (2) **Residential Development.** Structures to be substantially improved that are located in Zones A and AE shall be located such that the lowest floor, including basement, is at least one foot above the base flood elevation. This must be documented, in as-built condition, with a FEMA Elevation Certificate.
- (3) **Non-Residential Development**
  - (a) Substantial improvements in Zones A or AE shall meet the standards in Section 9.6(B)(3); or,
  - (b) Have the lowest floor, including basement, together with attendant utility and sanitary facilities be designed so that, two feet above the base flood elevation, the structure is watertight, with walls substantially impermeable to the passage of water, and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Elevations must be documented for the structure, in as-built condition, with a FEMA Elevation Certificate.
  - (c) A permit for a building proposed to be floodproofed shall not be issued until a registered professional engineer or architect has reviewed the structural design, specifications and plans, and has certified that the design and proposed methods of construction are in accordance with accepted standards of practice for meeting the provisions of this subsection.
- (4) **Subdivisions and Planned Unit Developments** that include land within this overlay district must be accessible by dry land access outside this overlay district. New subdivision proposals and other proposed development (including proposals for manufactured home parks and subdivisions) that are greater than 50 lots or 5 acres, whichever is the lesser, shall include base flood elevation data.
- (5) **Fully enclosed areas below grade** on all sides (including below grade crawlspaces and basements) are prohibited.

- (6) **Fully enclosed areas that are above grade**, below the lowest floor, below Base Flood Elevation and subject to flooding shall:
  - (a) Be used solely for parking of vehicles, building access, or storage, and such a condition shall be clearly stated on any permit.
  - (b) Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria: A minimum of two openings on two walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above 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.
- (7) **Recreational Vehicles:** Recreational Vehicles must be capable of being moved, fully registered and ready for highway use.
- (8) **Accessory Structures.** A small accessory building of 500 square feet or less that represents a minimal investment need not be elevated to the base flood elevation, provided the building:
  - (a) Shall not be used for human habitation;
  - (b) Shall be designed to have low flood damage potential;
  - (c) Shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
  - (d) Shall be firmly anchored to prevent flotation; and
  - (e) Shall have service facilities such as electrical and heating equipment elevated or floodproofed.
- (9) **Water Supply Systems.** New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.
- (10) **Sanitary Sewage Systems.** 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.
- (11) **On-Site Waste Disposal Systems.** Replacement on-site waste disposal systems shall be located to avoid impairment to the systems or contamination from the systems during flooding.
- (12) **Watercourse Carrying Capacity.** The flood carrying and sediment transport capacity within any altered or relocated portion of a watercourse shall be maintained, and any alteration or relocation shall not result in any decrease of stream stability.
- (13) **Development in Designated Village Center.** New structures within the Designated Village Center shall be located such that the lowest floor, including basement, is at least one foot above the base flood elevation. This must be documented, in as-built condition, with a FEMA Elevation Certificate.

### C. River Corridors

- (1) All development within this district shall meet the following standards, as applicable to the proposed use or activity.
  - (a) Improvements to existing structures, and any associated fill as needed to comply with elevation requirements in the Special Flood Hazard Area, shall not decrease the distance between the existing primary building and the top of bank;
  - (b) Accessory structures may be located within 50 feet of the existing primary building, provided that the location does not decrease the distance between the existing primary structure and the top of bank;
  - (c) Bridge and culvert projects must have a Stream Alteration Permit;
  - (d) Channel management activities must be authorized by the Agency of Natural Resources; and

- (e) New structures within the Designated Village Center shall not decrease the average distance between existing primary structures on adjacent properties or 50 feet, whichever is greater, from the top of bank.
- (2) The Development Review Board, in consultation with the River Management Program (RMP) of the Vermont Agency of Natural Resources, must find that conditional uses within the River Corridor shall not:
  - (a) Increase the susceptibility of that or other properties to fluvial erosion damage;
  - (b) Increase the potential of materials being swept onto other lands or into the stream and causing damage to other properties from fluvial erosion; or
  - (c) Cause an undue burden on public services and facilities including roads, bridges, culverts and emergency service providers during and after fluvial erosion events.

## **Section 9.7 Procedures**

### **A. Application Submission Requirements.** Applications for development shall include:

- (1) Where applicable, a site plan that depicts the proposed development, all water bodies, Special Flood Hazard Areas, Floodways, River Corridors, the shortest horizontal distance from the proposed development to the top of bank of any stream, any existing and proposed drainage, any proposed fill, and pre and post development grades, and the elevation of the proposed lowest floor, as referenced to the same vertical datum as the elevation on the current Flood Insurance Rate Maps.
- (2) A Vermont Agency of Natural Resources Project Review Sheet that shall identify all State and Federal agencies from which permit approval is required for the proposal and shall be filed as a required attachment to the town permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Zoning Administrator and attached to the permit before work can begin.

### **B. Referrals**

- (1) Prior to issuing a permit, a copy of the application and supporting information shall be submitted by the Zoning Administrator to the State National Flood Insurance Program Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation, River Management Section in accordance with 24 V.S.A. §4424. A permit may be issued only following receipt of comments from the Agency or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner.
- (2) Adjacent communities and the Stream Alteration Engineer at the Vermont Agency of Natural Resources, Department of Environmental Conservation, River Management Section shall be notified at least 30 days prior to issuing any permit for the alteration or relocation of a watercourse and copies of such notification shall be submitted to the Administrator of the National Flood Insurance Program. Any permit issued shall assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

### **C. Decisions.** The Development Review Board shall consider comments from the National Flood Insurance Program Coordinator at the Agency of Natural Resources. The DRB may recess the proceedings on any application pending submission of additional information.

### **D. Records.** The Zoning Administrator shall maintain a record of:

- (1) All permits issued for development in areas of special flood hazard;
- (2) An Elevation Certificate with the as-built elevation (consistent with the datum of the elevation on the NFIP maps for the community) of the lowest floor, including basement, of all new, substantially improved, or flood proofed buildings (not including accessory buildings) in the Special Flood Hazard Area;

- (3) The elevation (consistent with the datum of the elevation on the NFIP maps for the community) to which buildings have been floodproofed;
- (4) All floodproofing certifications required under this regulation; and
- (5) All decisions of the DRB (including variances and violations), including justification for their issuance.

### **Section 9.8 Warning of Disclaimer of Liability**

This ordinance does not imply that land outside of the hazard areas or land use permitted within such districts, will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Town of East Montpelier, or any town official or employee thereof, for any flood or erosion damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

### **Section 9.9 Validity & Severability**

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

### **Section 9.10 Precedence of Ordinance**

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

### **Section 9.11 Certificate of Compliance**

The Zoning Administrator must approve a Certificate of Compliance in accordance with the provisions of Section 7.4 before a structure or use permitted under the provisions of this chapter is occupied or commenced. The Zoning Administrator must not approve a Certificate of Compliance until the applicant has provided copies of all necessary state and federal permits.

### **Section 9.12 Enforcement & Penalties**

- (A) It shall be the duty of the Zoning Administrator to enforce the provisions of this ordinance. Whenever any development occurs contrary to these flood hazard area regulations, the Zoning Administrator, in his/her discretion, shall institute appropriate action in accordance with the provisions of 24 V.S.A. §1974a, or pursuant to 24 V.S.A. §4451 or 24 V.S.A. §4452 to correct the violation. No action may be brought unless the alleged offender has had at least a seven-day warning notice by certified mail. An action may be brought without the seven-day notice and opportunity to cure if the alleged offender repeats the violation after the seven-day notice period and within the next succeeding twelve months. The seven-day warning notice shall state that a violation exists, that the alleged offender has an opportunity to cure the violation within the seven days, and that the alleged offender will not be entitled to an additional warning notice for a violation occurring after the seven days.
- (B) If the structure is still noncompliant after the opportunity to cure has passed, the Zoning Administrator shall submit a declaration to the Administrator of the NFIP requesting a denial of flood insurance. Section 1316 of the National Flood Insurance Act of 1968, as amended, authorizes FEMA to deny flood insurance to a property declared by a community to be in violation of their flood hazard area regulations. The declaration shall consist of: (a) the name of the property owner and address or legal description of the property sufficient to confirm its identity or location, (b) a clear and unequivocal declaration that the property is in violation of a cited State or local law, regulation, or ordinance, (c) a clear statement that the public body making the declaration has authority to do so, and a citation to that authority, (d) evidence that the property owner has been provided notice of the violation and the prospective denial of insurance, and (e) a clear statement that the declaration is being submitted pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended.



### Section 9.13 Definitions (for terms in Article 9)

**Base Flood:** The flood having a one percent chance of being equaled or exceeded in any given year.

**Base Flood Elevation (BFE):** The height of the base flood, usually in feet, in relation to the National Geodetic Vertical Datum of 1929, the North American Vertical Datum of 1988, or other datum referenced in the Flood Insurance Study report, or average depth of the base flood, usually in feet, above the ground surface.

**Basement:** Any area of the building having its floor elevation (below ground level) on all sides.

**Building Utilities:** Building support systems including any heating, ventilating, and air conditioning (HVAC) systems, fuel systems, electrical systems, sewage management systems, or potable (drinking) water systems.

**Channel:** An area that contains continuously or periodic flowing water that is confined by banks and a streambed.

**Channel width (or bankfull width):** 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, about once every 1 to 2 years.

**Critical Facilities:** Police stations, fire and rescue facilities, hospitals, shelters, schools, nursing homes, water supply and waste treatment facilities, and other structures the community identifies as essential to the health and welfare of the population and that are especially important following a disaster. The type and location of a business, such as a grocery or gas station for example, may raise its status to a Critical Facility.

**Cumulative Substantial Improvement:** See Substantial Improvement.

**Designated Village Center:** The core of a traditional settlement, typically comprised of a cohesive mix of residential, civic, religious, commercial, and mixed-use buildings, arranged along a main street and intersecting streets, that are within walking distance for residents who live within and near the core. The Town of East Montpelier's Village Center Boundary map as designated by the Vermont Agency of Commerce and Community Development is incorporated and adopted into these regulations by reference.

**Development:** Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**Existing manufactured home park or subdivision:** 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 community.

**Expansion to an existing manufactured home park or subdivision:** The preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing 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:** Any placed material that changes the natural grade, increases the elevation, or diminishes the flood storage capacity at the site.

**Flood:** (1) 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. (2) 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

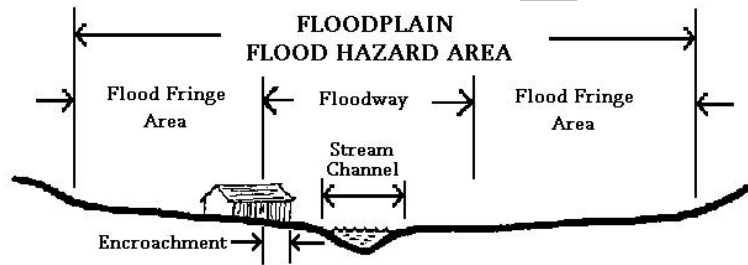
natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

**Flood Insurance Rate Map (FIRM):** An official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

**Flood Insurance Study:** An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood related erosion hazards.

**Floodplain or flood-prone area:** Any land area susceptible to being inundated by water from any source (see definition of “flood”).

**Flood proofing:** 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.



FLOOD PLAIN CROSS SECTION

**Floodway:** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot at any point.

**Fluvial Erosion:** 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:** A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water.

**Geomorphically stable river or stream channel:** The condition in which the sediment and water input from the watershed are in balance. Thus a geomorphically stable river or stream channel experiences little erosion, stores organic material and nutrients in its floodplain, and provides aquatic and riparian habitat diversity.

**Historic Structure:** Any structure that is: (1) 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; (2) 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; (3) 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 (4) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either: (a) by an approved state program as determined by the Secretary of the Interior, or (b) directly by the Secretary of the Interior in states without approved programs.

**Legislative Body:** The Selectboard in the case of a town, the trustees in the case of an incorporated village, and the mayor, alderpersons, and city council members in the case of a city, and the supervisor in the case of an unorganized town or gore.

**Letter of Map Amendment (LOMA):** A letter issued by the Federal Emergency Management Agency officially removing a structure or lot from the flood hazard zone based on information provided by a licensed engineer or surveyor. This is used where structures or lots are located above the base flood elevation and have been inadvertently included in the mapped special flood hazard area.

**Lowest Floor:** The lowest floor of the lowest enclosed area, including basement. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of 44 CFR 60.3.

**Manufactured home:** A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

**Manufactured home park or subdivision:** A parcel (or contiguous parcels) of land divided into three or more manufactured home lots for rent or sale.

**New construction:** *For the purposes of determining insurance rates*, new construction means structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. *For floodplain management purposes*, new construction means structures for which the start of construction commenced on or after the effective date of the floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

**New manufactured home park or subdivision:** 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 effective date of the floodplain management regulations adopted by a community.

**Non-residential:** Includes, but is not limited to: small business concerns, churches, schools, nursing homes, farm buildings (including grain bins and silos), pool houses, clubhouses, recreational buildings, government buildings, mercantile structures, agricultural and industrial structures, and warehouses.

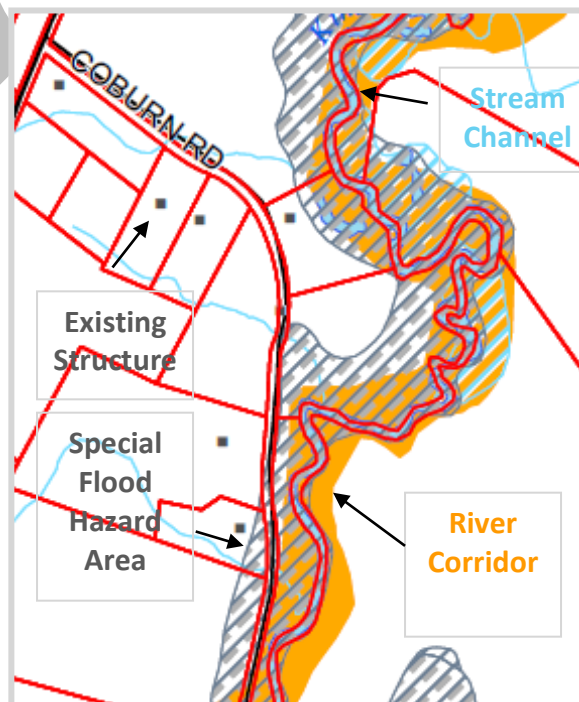
**Public Utilities:** Those utilities using underground or overhead transmission, distribution or collection lines or systems, including but not limited to electric, telephone, water, sanitary sewer and storm sewer utilities.

**Recreational vehicle:** A vehicle which is: (1) built on a single chassis; (2) 400 square feet or less when measured at the largest horizontal projection; (3) designed to be self-propelled or permanently towable by a light duty truck; and (4) designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

**River Corridor:** The land area adjacent to a river that is required to accommodate the dimensions, slope, plan form, 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. The River Corridor is delineated by the Agency of Natural Resources (ANR), in accordance with the ANR River Corridor Protection Guide.

**Scour:** Degradation of a material due to hydrodynamic forces. "Scour" is a specific form of the more general term "erosion."

**Special Flood Hazard Area:** The land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard



Boundary Map (FHBM). After detailed ratemaking has been completed in preparation for publication of the Flood Insurance Rate Map (FIRM), Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/AI-30, AR/AE, AR/AO, AR/AH, AR/A, VO or V1-30, VE, or V. For purposes of these regulations, the term “special flood hazard area” is synonymous in meaning with the phrase “area of special flood hazard.”

**Start of Construction:** The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The *actual start* means either the first placement of permanent construction of a structure 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 of whether or not that alteration affects the external dimensions of the building.

**Structure:** *For floodplain management purposes, a structure* is a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. *For insurance purposes, a structure* means: (1) a building with two or more outside rigid walls and a fully secured roof, that is affixed to a permanent site; (2) a manufactured home (a “manufactured home,” also known as a mobile home, is a structure built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation); or (3) a travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the community’s floodplain management and building ordinances or laws. For the latter purpose, “structure” does not mean a recreational vehicle or a park trailer or other similar vehicle, except as described in (3) of this definition, or a gas or liquid storage tank.

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

**Substantial improvement:** Any reconstruction, rehabilitation, addition or other improvement of a structure, during any 5-year period, the cumulative cost of which equals or exceeds fifty percent (50%) 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: (1) any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or (2) any alteration of a structure listed on the state or National Register of Historic Places, provided that the alteration will not preclude the structure’s continued designation as a historic structure.

**Top of Bank:** 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.

**Violation:** The failure of a structure or other development to be fully compliant with the community’s floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR 60.3 is presumed to be in violation until such time as that documentation is provided.