



Town of Mount Holly Planning Commission

Town Office & Remote Electronic – Special Work Meeting Minutes

Wednesday August 3, 2022

7:00 P.M.

Commission Members Present: Jon McCann (Chair), Jim Seward (Vice Chair), Brigid Sullivan, Andrew Schulz

Commission Members Absent: Andrew Seward

Also Present: Renee Sarmento (Clerk), Stephen Michel, Barbara Noyes-Pulling (RRPC), Kyle Medash (DEC)

1. Chair called the meeting to order at 7:03 pm.
2. Changes to the agenda: None
3. Town Plan Revisions
 - a. Flood Resilience Plan
 - i. Discuss Flood Hazard Area with Barbara Noyes-Pulling (Rutland Regional Planning Commission) and Kyle Medash (Vermont DEC Floodplain Manager).
 1. Chair welcomed and introduced guests, Barbara Noyes-Pulling (RRPC) and Kyle Medash (DEC).
 2. Chair referenced agreement at the last meeting to get more information about any potential updates to the flood hazard area ordinance including but not limited to adding river corridor protection – as recommended by the Select Board approved Local Hazard Mitigation Plan. Such an update would provide financial benefits to the town, and strengthen the flood resilience chapter in the Town Plan.
 3. Kyle Medash gave a short presentation about floodplain management and state and local roles. An open discussion with Kyle Medash and Barbara Noyes-Pulling followed.
 - a. Barbara recommended that whatever the Commission comes up with should go through Kyle and DEC if want it to be regulatory, ie. something in addition to the Town Plan. Barbara stated she can help with Town Plan and ordinances, as well. Barbara presented a map of the town showing special flood hazard areas and potential river corridors.
 - b. Kyle reported that the town of Mount Holly joined the National Flood Insurance Program in the 1980s. The flood hazard regulations make federally subsidized flood insurance available for anyone in town, flood hazard or not, and provides federal public disaster assistance. Our Regulations were updated in 2008, when the Rutland County maps went into effect. Next update is coming up in 2028. At that point, the town would need to update our regulations.
 - c. DEC released a new standalone model bylaw in June for towns, like Mount Holly, that do not have zoning. It is a little higher than the federal minimum NFIP regulations that Mount Holly has now. Changes include: a two feet freeboard for new construction, making substantial improvements cumulative, and no net loss of flood storage. The model

bylaw also includes river corridor protections which if adopted would increase the VT Emergency Relief and Assistance Fund payouts from 12.5% to 17.5%. Kyle pointed out that since many river corridors in Mount Holly are already within special flood hazard areas the change would be relatively easy.

- d. Kyle also pointed out that adopting higher flood standards would also make Mount Holly more competitive for receiving state and federal hazard mitigation funds – as well as other grants.
- e. Commissioner Schulz asked for clarification on "prohibitions" within the river corridor area. Kyle explained that means new habitable structures like a house or a big fill pad. However, many developments are permissible by administrative review (without conditional use review) such as a small accessory structure (eg. 25' x 25' garage), improvement to utilities along existing rights of way, replacement of on-site septic system for existing house, access and parking, attached decks or patios to an existent structure (200 square feet or less), unimproved trails on native grades, and river and flood plain restoration projects. Commissioner Schulz clarified "prohibition" means you cannot build and not that you wouldn't be eligible for insurance. Kyle confirmed this and stated the river corridor piece is mostly just recognizing the area around the river that could be occupied.
- f. Kyle pointed out, on the map, that a lot of the flood hazard areas line up with the river corridors. This makes it easy to administer since one can just look for an area outside the river corridor instead of having to get an engineer to calculate elevations.
- g. Commissioner Schulz asked if the map was available online. Kyle stated that the same data is available as a layer on the online Agency of Natural Resources (ANR) Atlas. Can turn on river corridors and flood hazard areas and you can view it down to each little individual area. Barbara will send the digital version of the map to commissioners.
- h. Kyle talked about the point of a protected river corridor is to allow the river to move over time while maintaining the slowest least erosive path and thereby protecting property.
- i. Kyle pointed out that Mount Holly only has "Zona A" and no "Zone AE". It is more expensive to develop in "Zone A" due to the lack of base flood elevation engineering.
- j. Chair asked about new FIRM maps coming out in 2028, and if it is it related to the new engineering-based/lidar mapping of the West River and Black River. Kyle confirmed this is correct. The Town will be required to update our ordinance before new maps become effective. The Chair asked if there was any downside to updating our ordinance before 2028. Kyle said it would be to our advantage and put the Town ahead of the curve. Kyle said that another advantage of adopting the DEC model ordinance is that it is already fully vetted and approved by FEMA.
- k. Chair asked if published maps represent exactly the jurisdictional area, unless overridden by an engineering study or Kyle. Kyle agreed it would

be determined by the ANR Atlas. Kyle stated if there ever were some area with a bunch of ledge or other landscape limiting feature, one could talk to the river scientist or Kyle for an opinion. Essentially, a river corridor is a river corridor until someone contests it and then it is looked into the more scientific aspects of it. Kyle suggested that if a permit application comes before the Administrative Officer or Board of Adjustment, they can consult directly with Kyle and DEC. He suggested we bypass the "permit navigator" and contact him directly.

- l. Mr. Michel asked about what would happen if a specific property located near a river corridor wanted to make improvements (eg. add an addition)? Kyle clarified if they wanted to do something such as add an addition, they would just not want to extend the structure any closer to the river. The Administrative Officer would contact Kyle for input.
- m. Commissioner Schulz asked what Kyle's degree of confidence in the accuracy of the map where the structures are placed. Kyle stated that the ANR Atlas can display aerial imagery (orthophotos) of where existing structures sit in relation to the line. Chair stated for most of these things the permit application would include site plans prepared by an engineer.
- n. Commissioner Schulz asked if someone with a house in a river corridor or flood hazard area decides they want to build something new, how to do they know of the current regulations? Commissioner Sullivan asked how they currently know when to do a septic permit application. Kyle stated if the engineer was aware of the regulations, they would probably contact the Administrative Officer for help. Kyle recommended that the Town put information out to the public in mailers, different town publications, and on the town website. He said the Flood Hazard Area would be identified by any mortgage lender because it would require flood insurance. Chair stated other nearby towns trigger all of this kind of review with some equivalent to building construction registration. Chair suggested adding a question to the BCR form: "Is this in a flood hazard area?" Chair noted not sure if getting enough information in BCRs to make determination if it is in a river corridor. Commission agreed to look at Building Construction Registration forms at next meeting.
- o. Commissioner Sullivan asked for the site address for ANR Atlas. Kyle provided: <https://anrmaps.vermont.gov/websites/anra5/>
- p. Chair spoke about a presentation he saw by Zapata Courage. Kyle clarified she works for Wetlands. Chair asked how her area of interest relate to Kyle's work. Kyle states she is just wetlands. State has own wetland permitting system. Conversation about how a certain types of review are triggered. Kyle noted that the standalone model also adds clarity and specificity to what is exempt, what is conditional use, and what is administratively permitted.
- q. Barbara asked what the Planning Commission is wanting to do through the Town Plan in this regard. The Chair spoke how the Local Hazard Mitigation Plan (LHMP) is a key component of the Flood Resilience Plan and how the LHMP approved by the Select Board has as an action item to adopt river corridor protections and increase our ERAF benefit by 2021.

Chair expressed a desire to get the additional 5% reimbursement, have a concrete plan for increasing our flood resilience, prepare for the arrival of new FIRM panels, and potentially put those as action items in the Town Plan. The Chair explained to the guests that one of the reasons the Town Plan is being revised is that it doesn't meet the minimum criteria and include the required elements.

- r. The Chair noted that in addition to DEC models, Windham has a model (Shrewsbury took that one). Kyle said there are very small differences between models and that Two Rivers RC has a model permit on website.
- s. Chair noted during the last meeting they looked at a state summary chart with flood related statistics which stated only two dwellings have flood insurance in town and asked why that was the case. (Flood Ready VT is the website) Kyle stated he will check it, but if someone buys a property with cash they are not required to get insurance. Only required if get a mortgage.
- t. The Chair said a neighboring municipality's Planning Commission chair told him that if the town not doing due diligence about requirements for FEMA it possible all dwellings would lose flood insurance. Kyle it is possible but that it takes a while to get there. If warnings are received town will not be in the good graces of FEMA. Potential flood insurance could be suspended. Barbara clarified extra 5% is for public assistance, damaged roads or municipal properties, and it is not individual assistance. Chair clarified that replacement of a structure (bridges required for replacing culverts etc) is not always in the same form. Is the reimbursement/payout for the true cost of replacement? Kyle stated it would be case by case.
- u. Planning Commission clerk will send Kyle an email with Commissioner's contact information for a recap.
- v. Kyle recommended that if we are looking toward getting the ERAF benefit/river corridor protection - crunch it into one and adopt the new model since we may have to do an update soon anyway.
- w. Mr. Michel asked about adding a link on the unofficial Town website so people could look and check if would be in a flood zone. Kyle said could do that, or go through permit navigator. The link for the permit navigator could be linked to website (<https://dec.vermont.gov/permitnavigator>). Kyle said that flood training has a lot of information for the Administrative Officer.
- x. Chair asked if what Kyle issues is similar to jurisdictional opinions. If the Town asked questions what would we get back from Kyle and how would it be referenced. Kyle stated comments under section 4424 of the Vermont State statutes (<https://legislature.vermont.gov/statutes/section/24/117/04424>). Kyle stated he can be sent the permit application at the beginning to ask for opinion. Then can comment on permit application as needed.

4. Review draft application forms

Town of Mount Holly Planning Commission

- a. The Chair shared draft of flood hazard area permit application, subdivision application draft.
 - b. The Chair passed around permit application draft, subdivision application changes (section 6) reviewed draft/changes. Discussion about additional changes including Commissioner Schulz's suggestion that the applicant should be required to check a yes or a no box for clarification. A blank may mean "no" or that they forgot to answer. Commissioner Schulz stated it may be best for consistency to pose as a question will a surveyor be representing... yes or no. If yes, provide the following information.
 - c. Flood Hazard area permit is essentially the same structure. There are things in ordinance that are required, especially section five. Question raised if Town should be mailing letters to adjacent landowners with certified mail. Chair stated that a neighboring town informed us that will need to put placards/notices for subdivisions on subject property or adjacent to road on property. Will continue to discuss forms at next meeting.
5. Public Comments: none
6. Upcoming meetings
 - a. Regular meeting – August 17th, 2022
 - b. Special Meeting (The Chair will send around model, look at, and discuss if want to move forward.) September 7th, 2022
7. Meeting adjourned at 8:45pm

For the Commission,
Renee Sarmiento, Clerk

In draft form until approved on August 17, 2022

Town of _____
Flood Hazard and River Corridor Bylaw

I. Statutory Authorization and Effect

In accordance with 24 V.S.A. Chapter 117, §§ 4424 and 4414, this is a bylaw for areas at high risk of flood damage in the Town of _____, Vermont. Except as additionally described below, all administrative procedures follow municipal procedures under 24 V.S.A. Chapter 117 and 44 CFR § 60.3(d).

II. Purpose

- A.** To implement the goals, policies, and recommendations in the municipal plan;
- B.** To protect health, safety and welfare of the public, 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-related inundation and erosion hazards;
- C.** Support equitable wellbeing for the entire community;
- D.** Ensure that development in our community protects floodplain and river corridor functions, and avoids and reduces damage from flooding and erosion;
- E.** Manage all flood hazard areas pursuant to 24 VSA §4382 and 10 VSA §§751, 753; and
- F.** Make the Town of _____, its citizens, and businesses eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds, as may be available.

III. Summary Table: Development Review in Hazard Areas

- P** – Permitted (Administrative Permit)
C – Conditional Use Review and Permit
X – Prohibited
A – Exempted
S – State Permit Required

#	Activity	River Corridor	Flood Hazard Areas	Floodway
1	New Structures	C	C	X
2	Storage	C	C	X
3	Improvements to Existing Structures	P, C	P, C	C

		River Corridor	Flood Hazard Areas	Floodway
4	Small Accessory Structures	P, C	P	X
5	At Grade Parking	P	P	C
6	Replacement water supply or septic systems	P, C	P	P, C
7	Fill or grading resulting in no net loss of flood storage		C	
8	Fill or grading resulting in a loss of flood storage		X	X
9	Road maintenance	A	A	A
1 0	Road improvements	C	C	C
1 1	Bridges and culverts	S, A	S, A	S, C
1 2	Channel management	S, A	S, A	S, C
1 3	Recreational vehicles	P	P	P
1 4	Open space, recreation	A	A	A
1 5	Forestry and Agriculture	S, A	S, A	S, A

IV. River Corridor Protection

A. Purpose

River corridors provide rivers and stream channels with the space necessary to maintain or reestablish floodplain access and to reduce erosion hazards through natural physical processes. It is the intent of this bylaw to protect public health and safety by avoiding new encroachments into river corridors and minimizing erosion-related damage to existing structures.

A permit is required from the AO for all development that is located within the River Corridor except as provided in Section IV C.1. Where River Corridors and Flood Hazard Areas overlap, the Flood Hazard Area provisions shall also apply.

B. River Corridor Boundaries

1. This article applies to the River Corridors in the Town of _____ Vermont, as published by the Agency of Natural Resources (ANR) including refinements to that data which are hereby adopted by reference.

2. On streams with a watershed size greater than half a square mile for which River Corridors are not mapped, the standards shall apply to the area measured as 50 feet from the top of the stream bank or slope.

3. The information presented on any maps, or contained in any studies adopted by reference, is presumed accurate. If uncertainty exists with respect to the boundaries of the River Corridor, the location of the boundary on the property shall be determined by the Administrative Officer (AO).

4. If the applicant disagrees with the determination made by the AO or with the river corridor as mapped, the applicant has the option to either:

a. Hire a licensed land surveyor or registered professional engineer to stake out the River Corridor boundary as mapped on the property; or,

b. Provide data as needed for ANR to update the river corridor map following the Flood Hazard Area and River Corridor Protection Procedure ("Procedure"); or

c. Request a letter of determination from ANR that the proposed development meets the Performance standard in the Procedure.

C. Development Review in River Corridors

1. Exempted Activities

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 to a structure that will not change the footprint of the structure;

c. Maintenance of existing sidewalks, roads, parking areas, stormwater drainage, bridges, culverts, and channel stabilization;

d. Functionally dependent uses that must be placed in or cross 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 including the construction, removal, or repair of bridges and culverts, associated transportation and utility networks, dams, and dry hydrants;

e. Planting projects which do not include any construction or grading;

f. Subdivision of land that does not involve or authorize development;

g. Activities exempt from municipal regulation and requiring a permit from ANR under the Vermont Flood Hazard Area and River Corridor Rule (CVR 12-030-024) including:

i. State-owned and operated institutions and facilities;

- ii. 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;
- iii. 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;
- iv. Public utilities regulated under 30 V.S.A. § 248;
- v. Telecommunications facilities regulated under 30 V.S.A. § 248a;

2. Prohibited Development in the River Corridor

- a. New structures, fill, and development that do not meet the standards in Section IV.D 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.

3. Permitted by Administrative Review

The following development activities meeting the Development Standards in the River Corridor in Section IV. D1 or 2, may be permitted directly by the AO:

- a. Small accessory structures not larger than 500 square feet;
- b. Improvements to utilities along an existing right of way and serving a building;
- c. Replacement on-site septic systems;
- d. Access and parking;
- e. 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;
- f. Unimproved trails on native grades and soils that will be relocated as needed to accommodate channel adjustments and avoid degradation to bank stability and riparian habitat;
- g. 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;

4. Conditional Use Review

Conditional use review and approval by the DRB in accordance with 24 V.S.A. § 4461 is required prior to the issuance of a permit by the AO for any activity in the River Corridor that is not exempt, prohibited, or eligible for administrative review.

D. Development Standards within the River Corridor

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

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

2. 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). Only primary structures existing before this bylaw may be considered for shadowing other development.

3. River Corridor Performance Standard

Proposals that do not meet the infill or shadowing criteria in section D. 1 or 2 must demonstrate, and the DRB must find, that the proposed development will:

- a. not be placed on land with a history of fluvial erosion damage or threatened by fluvial erosion; and,
- b. 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,
- c. not result in a need for bank armoring or stream channelization 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.

4. The DRB may request or consider additional information to determine if the proposal meets the River Corridor Performance Standard, including data and analysis from a consultant qualified in the evaluation

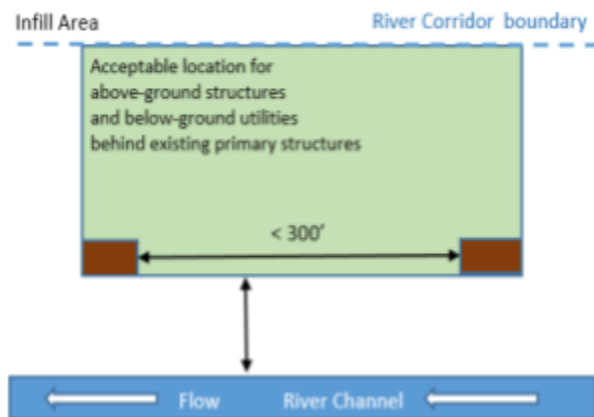


Figure : In-fill Development Standard

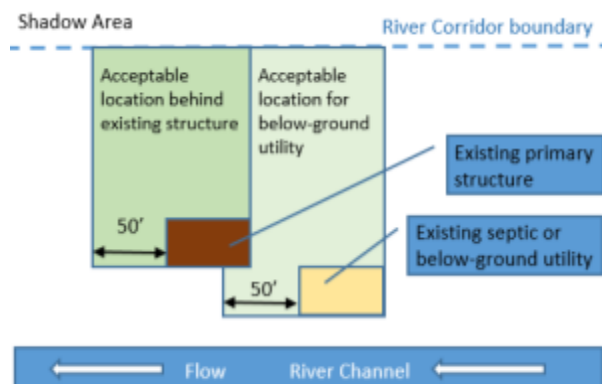


Figure : Shadow Area Development Standard

of river dynamics and erosion hazards; and comments provided by the DEC Regional Floodplain Manager on whether the proposal meets the River Corridor Performance Standard.

5. New paths or alterations to paths that provide access to the water for the public, and promote the public trust uses of the water, shall not necessitate bank armoring, and must be relocated when the channel adjusts toward the path.

V. Flood Hazard Area Protection

A. Purpose - To protect public health and safety by avoiding cumulative increases in flood elevations, velocities, and river instability; the cumulative loss of beneficial floodplain functions; and to minimize flood damage to development and services already located within this hazard zone.

B. Lands to Which this Bylaw Applies

1. Flood Hazard Areas

This bylaw shall apply to the Special Flood Hazard Areas (SFHA) as mapped in the Town of _____, Vermont identified in and on the most current flood insurance studies and maps published by the Department of Homeland Security, Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), as provided by the Secretary of the Agency of Natural Resources (ANR) pursuant to 10 V.S.A. § 753, which are hereby adopted by reference and declared to be part of this bylaw.

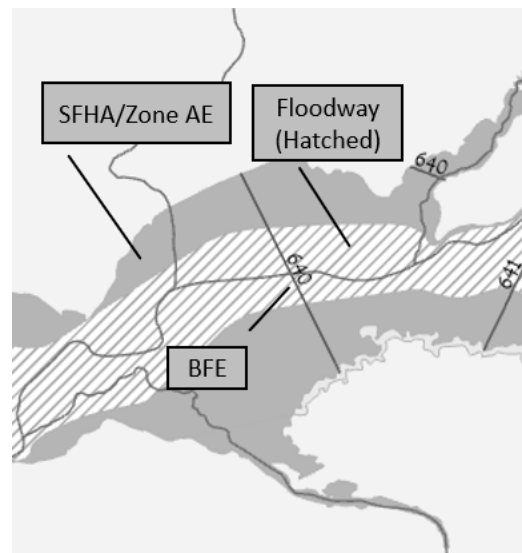
2. Base Flood Elevations and Floodway Limits

a. Where available, base flood elevations (BFE) 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 SFHA 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. Where available, the applicant shall use data provided by FEMA, or state or federal agencies to administer this bylaw.

d. If the Town acquires data that indicates a change in published base flood elevations, the Town will, within 6 months, submit the technical or scientific data to Vermont ANR and the NFIP Map Specialist.



C. Jurisdictional Determination

1. The information presented on any maps, or contained in any studies, adopted by reference, is presumed accurate.
2. If uncertainty exists with respect to the boundaries of the Flood Hazard Area, the location of the boundary shall be determined by the Administrative Officer (AO).

D. Development Requirements in the Flood Hazard Areas

1. Permits

Except as provided in Section V D.2 Exempted Activities, a permit is required from the AO for all development that is located within the Special Flood Hazard Area. Development that requires conditional use approval or a variance from the Development Review Board (DRB) under this bylaw must have such approvals prior to the issuance of a permit by the AO. All permits shall require that a permittee have all other necessary permits from state and federal agencies before work may begin.

2. Exempted Activities

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

- a. The removal of a building in whole or in part, so long as the ground elevations under and adjacent to the removed structure remain unchanged;
- b. Routine maintenance of existing buildings;
- c. Interior improvements or repairs to existing buildings that cost less than 500 dollars;
- d. Maintenance of roads, bridges, or stormwater drainage;
- e. Streambank stabilization, and abutment work that do not reduce the cross-sectional flow area of the river or stream channel and have coverage under a Stream Alteration Permit, if required;
- f. Planting projects which do not include any construction or grading activities in accordance with 24 V.S.A. § 4424(c);
- g. Subdivision of land that does not involve or authorize development;
- h. 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):
 - i. State-owned and operated institutions and facilities;
 - ii. 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;

- iii. 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 meeting community requirements;
- iv. Public utilities regulated under 30 V.S.A. § 248;
- v. Telecommunications facilities regulated under 30 V.S.A. § 248a;

3. Administrative Review; Permitted Development

The following development activities in the Special Flood Hazard Area and meeting the Development Standards in Section V E, may receive a permit from the AO without review by the DRB:

a. Outside of the Floodway:

- i. Accessory structures not greater than 500 square feet;
- ii. 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;
- iii. Recreational vehicles or travel trailers;
- iv. 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. Within the entire Special Flood Hazard Area:

- i. 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";
- ii. Building utilities;
- iii. At or below grade development (e.g. parking areas);
- iv. Open fencing or posts;
- v. Municipal transportation infrastructure improvements designed 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;

4. Prohibited Development:

- a. New critical facilities;
- b. New residential or non-residential structures in the Floodway;

- c. Storage of materials or junk yards;

5. 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 AO for any activity in the Special Flood Hazard Area that is not exempt, prohibited, or eligible for administrative review.

E. Development Standards within the Flood Hazard Area

1. No net loss of flood storage capacity,

- a. Except as needed to fill an existing basement or mitigate an existing structure;

2. All development below the DFE, except development that is exempt under Section V D2, shall be:

- a. Reasonably safe from flooding;
- 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;

3. Fuel storage tanks and vents must be elevated above the DFE and securely anchored;

Storage tanks may be placed underground if a qualified professional certifies the installation will be anchored and protected from flood forces.

4. 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;

5. Recreational vehicles, equipment, 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 Section V E 11;

5. Water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
6. 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;
7. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding;
8. 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 equilibrium;
9. 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;
10. Subdivisions and Planned Unit Developments shall be accessible by dry land access;

11. Structural Standards

- a. New or Substantially Improved structures shall have the lowest floor, including basement, elevated to or above the Design Flood Elevation (two feet above base flood elevation). This shall be documented in the proposed and as-built condition with a FEMA Elevation Certificate;
- b. New non-residential structures, and non-residential structures to be substantially improved, replaced, or that have incurred substantial damage shall:
 - i. Meet the standards of Section V E 11a, above; or,
 - ii. Have the lowest floor, including basement, together with attendant utility and sanitary facilities, designed so that to at least two feet above the base flood elevation the structure is dry floodproofed, meaning watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

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;
- c. New or Substantially Improved structures 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 community's FIRM, or at least three feet if no depth number is specified;
- d. Critical facilities to be substantially improved shall have the lowest floor, including basement, elevated or dry-floodproofed at least one foot above the elevation of the 0.2% annual flood height (500-year floodplain), or three feet above base flood elevation, whichever is higher;
- e. Historic structures being substantially improved shall meet the requirements in this bylaw other than the Lowest Floor Elevation (Section V E.11);

- f. Fully enclosed areas below grade on all sides (including below grade crawlspaces and basements) are prohibited;
- g. Fully enclosed areas below the lowest floor, that are above grade, below the DFE, and subject to flooding, shall:
 - i. Be solely used for parking of vehicles, storage, or building access, and such a condition shall clearly be stated on any permits; and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs shall be certified by a registered professional engineer or architect; or,
 - ii. 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
 - iii. A small accessory structure of 500 square feet or less need not be elevated to the base flood elevation if adequate flood openings are provided, the structure is placed on the site so as to offer the minimum resistance to the flow of floodwaters, and the construction meets the criteria in Section V E2 above.

F. Development Standards within the Floodway

1. Within the Floodway new encroachments are prohibited except for the following, which also shall comply with Section V F.2, 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.
2. Within the Floodway all proposed new encroachments are required to provide a hydraulic analysis, performed by a registered professional engineer, in accordance with standard engineering practice, certifying that the proposed development will:
 - a. Not result in any increase in flood levels during the occurrence of the base flood;
 - b. Not increase base flood velocities; and,

c. Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.

3. For development that will not result in any change in grade, the hydrologic & 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.

VI. Other Provisions

A. Precedence of Bylaw

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 bylaw imposes a greater restriction the provisions here shall take precedence.

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 of 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 bylaw shall not create liability on the part of the Town of _____, or any municipal official or employee thereof, for any flood or erosion damages that result from reliance on this bylaw, or any administrative decision lawfully made hereunder.

VII. Administration

A. Administrative Officer (AO)

An Administrative Officer (AO) shall be appointed to administer this bylaw pursuant to 24 V.S.A. § 4448. The AO shall administer this bylaw literally and in doing so shall inspect development, maintain records, enforce this bylaw, and perform all other necessary tasks to carry out the provisions of this bylaw and the statutory requirements of 24 V.S.A. Chapter 117. The AO shall not have the power to permit any land development that is not in conformance with this bylaw.

B. Development Review Board (DRB)

A Development Review Board (DRB) shall be appointed by the Selectboard in accordance with 24 V.S.A. § 4460. 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.

C. Applications All applications for development shall include:

1. A site plan that depicts the proposed development including water, Flood Hazard Areas, and River Corridor boundaries; the shortest horizontal distance from the proposed development to the top of bank of any stream, 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.

2. A copy of the ANR Permit Navigator Results Summary.

D. Action and Referrals

1. Within 30 days of receipt of a complete application the AO shall issue or deny a permit in writing or refer it to the DRB.

2. Any application for a proposed conditional use, variance, or appeal shall be referred by the AO to the DRB in accordance with 24 V.S.A. §§ 4448 and 4469.

3. Any application regarding New Construction, Substantial Improvement, development in a Floodway, development in a River Corridor, or a Variance shall be submitted by the AO 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 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.

4. If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall be submitted by the AO to the adjacent communities, the River Management Engineer at the Vermont Agency of Natural Resources, and the Army Corps of Engineers.

E. Public Notice

Prior to the issuance of a permit, proposals needing conditional use review, or consideration for a variance or appeal, must have a warned public hearing. Public notice of the hearing shall be provided by the AO at least 15 days before the date of the hearing by all the following:

1. Publication of the date, place, and purpose of the hearing in the newspaper of general circulation;

2. Posting of the same information in three or more public places within the municipality, including posting of notice by the applicant within view from the public right of way nearest to the property for which an application is made; and,

3. 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. In any situation in which a variance is sought regarding setbacks from a state highway, written notification shall be sent 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.

4. The applicant shall bear the cost of the public warning and notification of adjoining landowners.

F. Decisions

1. Decisions on applications that go to the DRB for review shall be made in accordance with 24 V.S.A. § 4464 including all findings of fact, conclusions, and conditions.

2. The DRB shall consider comments from the ANR.

3. No permit shall be issued by the AO for any use or structure which requires the approval of the DRB until such approval has been obtained.

G. Permits

1. Where eligible, a permit shall be issued by the AO only in accordance with 24 V.S.A. Chapter 117;

2. Permits must state that all other necessary permits from state and federal agencies must be obtained before work may begin. 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 must be posted until the appeals period has passed. Any Appeals shall be made within 15 days of permit issuance.

3. The AO, 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.

4. 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 DRB 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.

5. 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.

6. Expiration

a. A permit shall remain valid for two (2) years from the date it is issued as long as substantial land development has been made;

b. Permits shall run with the land regardless of owner;

c. Structures shall be considered abandoned where the structures are no longer being maintained as a habitable structure for a period of at least five years, regardless of evidence of intent to re-establish such use. A habitable structure is structurally sound, weathertight, with functional drinking water, wastewater, and heating systems.

H. Variances

Variances may be granted in writing by the DRB only in accordance with all the criteria in 24 V.S.A. § 4469 after a public hearing noticed in accordance 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. 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.

I. Appeals of a Permit Decision

Appeals from any decision or act of the AO in connection with this bylaw, shall be made to the DRB as provided for in 24 V.S.A. § 4465. Appeals from any decision of the DRB in connection shall be made to the Vermont Superior Court, as provided for in 24 V.S.A. § 4471.

J. Administrative Responsibilities

1. The AO shall properly file and maintain a record of:

- a. All permits and supporting documents;
- b. A FEMA Elevation Certificate for any new, replacement or substantially improved 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 AO and DRB (including those for Substantial Improvement, Substantial Damage, appeals, variances, and violations) and all supporting findings of fact, conclusions, and conditions.
- e. All Certificates of Occupancy, and receipts as required for the determination of Substantial Improvement.

2. Substantial Improvement and Substantial Damage Determinations

- a. In the event of damage of any kind to a structure located within any Flood Hazard Area, the AO shall determine if Substantial Damage occurred regardless of any intended repair at that time.
- b. In the review of any proposal for the repair or improvement of a structure located within any Flood Hazard Area District, the AO shall determine if the proposal indicates Substantial Improvement.
- c. Substantial Improvement or Substantial Damage determinations shall be made in accordance with current FEMA and ANR guidance, or by a procedure meeting FEMA standards and established by the Town in accordance with 24 V.S.A. § 1972.

3. Certificate of Occupancy

- a. A Certificate of Occupancy (CO) is required for any new or Substantially Improved primary structure permitted under this bylaw. It shall be unlawful to use or occupy any structure within the areas affected by this bylaw, until a CO is issued by the AO in accordance with 24 V.S.A. § 4449 stating that the structure 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 AO shall review the permit conditions and inspect the premises to ensure that:
 - i. any required state and federal permits have been received,
 - ii. all work has been completed in conformance with the zoning permit and associated approvals, and
 - iii. all required as-built documentation has been submitted to the AO (e.g. updated FEMA Elevation Certificate, dry floodproofing certificate, as-built volumetric analysis, or as-built floodway encroachment analysis).
- d. If a certificate of occupancy cannot be issued, notice will be sent to the owner and copied to the lender.

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 AO 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.

VIII. Definitions

“Accessory dwelling” means an efficiency or one-bedroom apartment that is clearly subordinate to a single-family dwelling, and has facilities and provisions for independent living, including sleeping, food preparation, and sanitation. Accessory dwellings are residential structures.

“Accessory structure” means a structure which is: 1) detached from and clearly incidental and subordinate to the principal use or structure on a lot, 2) located on the same lot as the principal structure or use, 3) clearly and customarily related to the principal structure or use, and 4) only used for vehicle parking, storage, or primarily building access. Examples include, garages, garden and tool sheds, and playhouses, but do not include “accessory dwellings.”

“Area of special flood hazard” is synonymous in meaning with the term “special flood hazard area” for the purposes of this bylaw.

“Associated transportation and utility networks” means those transportation and utility networks connected to a bridge, culvert, or utility for the purpose of crossing a river or stream and do not include transportation or utility networks within the river corridor that merely run parallel to a river or stream .

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

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

“Basement” means any area of a building having its floor elevation below ground level on all sides, including crawlspaces.

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

“Compensatory storage” means a volume not previously used for flood storage and which shall be incrementally equal to or exceed the theoretical volume of flood water at each elevation, up to and including the base flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream, or creek.

“Common plan of development” means where a structure will be refurbished or constructed under one approved plan or permit, but in separate stages, phases, or in combination with other construction activities. Such work may be planned unit by unit and may take place at different times, on different schedules.

“Construction trailer” means a vehicle which is: (1) built on a single chassis; (2) 500 square feet or less when measured at the largest horizontal projection; (3) designed to be self-propelled or permanently towable; and (4) designed for use as a temporary office facility used to support management of a construction project, and not as a permanent structure.

“Critical facilities” means facilities that are vital to public health and safety, including police stations, fire and rescue facilities, hospitals, shelters, schools, nursing homes, water supply and waste treatment facilities.

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

“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 buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials .

“Encroachment” means fill or development that reduces the functional river corridor (impairs the equilibrium condition) or increases flood levels.

“Equilibrium condition” means the width, depth, meander pattern, and longitudinal slope of a stream channel that occurs when water flow, sediment, and woody debris are transported by the stream in such a manner that it generally maintains dimensions, pattern, and slope without unnaturally aggrading or degrading the channel bed elevation.

“Fill” means any placed material that changes the natural grade, increases the elevation, redirects the movement of flood water, or diminishes the flood storage capacity at the site. Temporary storage of material for less than 180 days is not considered fill.

“Flood hazard” means those hazards related to damage from flood-related inundation or erosion.

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

“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.

“Floodproofing” 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. Please note that flood hazard areas and floodways may be shown on a separate map panels.

“Fluvial erosion” means the erosion or scouring of riverbeds and banks during high flow conditions of a river. Fluvial erosion is most likely to occur within the river corridor.

“Grading” means the movement or replacement of topsoil or other material originating on the site and within the hazard area. Grading results in minor or no changes in topographic elevations. If new material is brought from outside the hazard area and such new material is not offset with an equal or greater removal of material from the portion of the site within the hazard area, the new material shall be considered “fill” and shall not be considered grading.

“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.

“Lowest floor” means 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 C.F.R. § 60.3.

“Maintenance” means periodic actions required to keep up a condition and that do not significantly change the materials or extent of an existing condition in the hazard area.

“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”.

“New construction” means structures for which the start of construction commenced on or after the effective date of floodplain management regulation adopted by the community and includes any subsequent improvements to such structures.

"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, ordinances, and regulations prior to the enactment of the present bylaws, including a structure improperly authorized as a result of error by the administrative officer. Structures that were in violation of the regulations in effect at the time of their creation, and remain so, remain violations and are not nonconforming structures.

“Nonconforming use” means use of land that does not conform to the present bylaws but did conform to all applicable laws, ordinances, and regulations prior to the enactment of the present bylaws, including a use improperly authorized as a result of error by the administrative officer.

“Non-residential” includes: businesses, churches, schools, nursing homes, pool houses, clubhouses, recreational buildings, government buildings, mercantile structures, industrial structures, and warehouses.

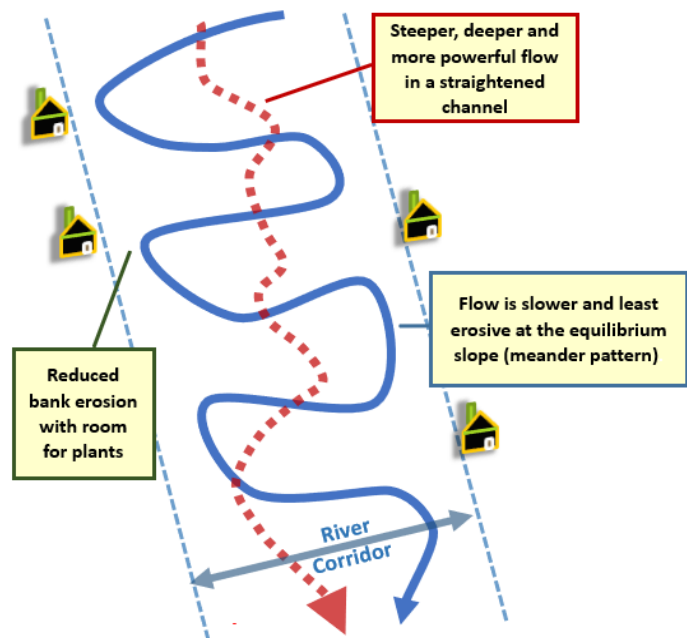
“Recreational vehicle” means a vehicle which is: (a) built on a single chassis; (b) 400 square feet or less when measured at the largest horizontal projection; (c) designed to be self-propelled or permanently towable by a light duty truck; and (d) designed primarily not for use as a permanent dwelling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

“Replacement structure” means a new building placed in the same footprint as the pre-existing building and does not include a change in use.

“River” means the full length and width, including the bed and banks, of any watercourse, including rivers, streams, creeks, brooks, and branches which experience perennial flow. “River” does not mean constructed drainageways, including water bars, swales, and roadside ditches.

“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 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).

“Special flood hazard area” (SFHA) is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. For purposes of this bylaw, the term “area of special flood hazard” is synonymous in meaning with the phrase “special flood hazard area.” This area is usually labeled Zone A, AE, AO, AH, or A1-30 in the most current flood insurance studies and on the maps published by FEMA. Maps of this area are available for viewing in the municipal office or online from the FEMA Map Service Center: masc.fema.gov. Base flood elevations have not been determined in Zone A where the flood risk has been mapped by approximate methods. Base flood elevations are shown at selected intervals on maps of



special flood hazard areas that are determined by detailed methods. Please note, where floodways have been determined they may be shown on separate map panels from the Flood Insurance Rate Maps.

“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. 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, whether or not that alteration affects the external dimensions of the building.

“Storage” means the aggregation of materials, items, or objects whether natural or human-made; that is kept as a stockpile, collection, or inventory; where individual materials from the stockpile, collection or inventory may change, but where the general footprint of the stored materials continues to be used for the same purpose; whether set upon the land or within a container, structure, or facility; and that would not otherwise be in compliance with these development standards.

“Structure” means a walled and roofed building, as well as a manufactured home, including gas or liquid storage tanks.

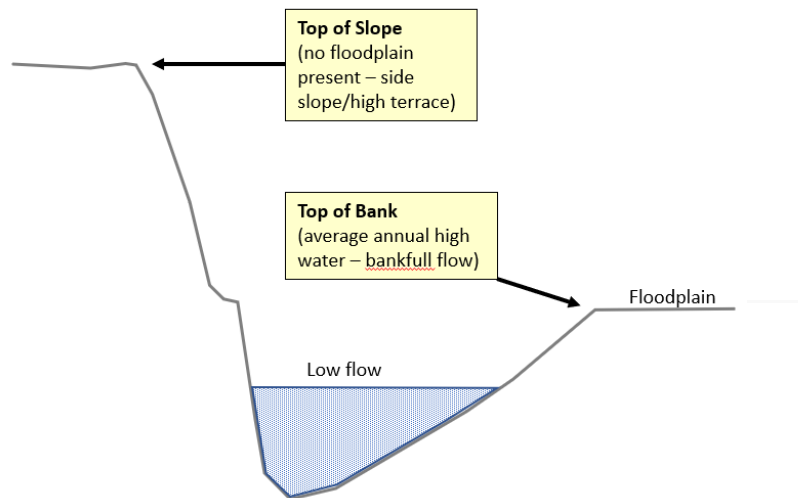
“Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged conditions would equal or exceed 50 percent of the market value of the structure before the damage occurred.

“Substantial improvement” means any repair, reconstruction, rehabilitation, addition, or other improvement of a structure after the date of adoption of this bylaw, the cost of which, over three years or over the period of a common plan of development, cumulatively equals or exceeds 50 percent of the market value of the structure before 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 specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or (b) Any alteration of an “historic structure,” provided that the alteration will not preclude the structure’s continued designation as an “historic structure.”

“Top of bank” means the point along a streambank where an abrupt change in slope is evident, and where the stream is generally able to overflow the banks and enter the adjacent floodplain during flows at or exceeding the average annual high water stage.

“Top of slope” means a break in slopes adjacent to steep-banked streams that have little or no floodplain; or a break in slope where the side slopes adjacent to an incised, or deeply cut, channel meet floodplains that have been abandoned or are undergoing abandonment.

“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 C.F.R. § 60.3 is presumed to be in violation until such time as that documentation is provided.



Municipal Guidance for Flood Emergencies In Vermont



WINDHAM
REGIONAL
COMMISSION

August 2016



riversmart
communities



This document was re-drafted for Vermont from a document originally developed for Western Massachusetts by Deerfield Watershed Creating Resilient, an ad hoc group of local political leaders, residents, scientists from UMass, engineers from NRCS and many others. It is encouraged that towns save this document to a server for electronic access, and include a hard copy in the town's LEOP binder.

Thanks and Acknowledgements

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*Cover photo: Flooding during Tropical Storm Irene, 2011
Photo credit: Jeff Nugent, Windham Regional Commission*

This publication available at <https://extension.umass.edu/riversmart/manuals>

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Remains of a home destroyed by Tropical Storm Irene, 2011
Photo credit: Jeff Nugent, Windham Regional Commission

Advance Preparations I: Have these in place

Training:

- Agents for Boards of Health, EMDs, Zoning Administrators, Planners and others are eligible to receive free trainings through the [Department of Homeland Security](#). Programs are available for flood response and other emergencies. (Transportation, room, board and program costs are paid for by DHS.) Additional trainings are available from the State of Vermont [here](#).
- Town Administrator/EMD: Be sure the Selectboard, fire, police, highway, DPW and emergency personnel have had Incident Command System (ICS) training, available through [FEMA](#). ICS provides a consistent framework and process for responding to emergencies among local, state, federal agencies, non-profit sectors and faith-based organizations. ICS-100 and ICS-200 are available [on-line](#) and can be done in a few hours.
- Town Administrator/EMD: Set up and get trained in [VAlert](#). VAlert is a web-based system that provides a portal through which information can be disseminated by state and local authorities to the public, including schools and colleges, state, local, and federal government, and first responders. It allows the public to sign up for and receive notifications through a number of delivery systems such as text, e-mail, or telephone.
- Town staff should have awareness of the Emergency Protective Measures (EPM) Rule in effect in Vermont. Emergency protective measures can be taken by municipalities to preserve life or protect property from severe damage and may proceed without prior authorization from ANR, but the measures taken must meet the standards established in the Rule and be minimized to that necessary to protect life and property. The measures must be approved by a member of the municipal legislative body and must be reported to the Agency of Natural Resources within 24 hours using the [online reporting form](#). [Contact a River Management Engineer](#) or contact the Rivers Program at ANR.WSMDRivers@vermont.gov or 802-490-6195. EPM informational video is [here](#).
- Town staff should have familiarity with the Natural Resources Conservation Service's [Emergency Watershed Protection](#) program and the staff at their [local Vermont NRCS office](#). This program's objective is to assist sponsors and individuals in implementing emergency measures to relieve imminent hazards to life and property created by a natural disaster.

- Selectboard/ Town Staff/ Zoning/Floodplain Administrator: It is important to be familiar with the Special Flood Hazard Area (SFHA) and River Corridor mapping and locations for your town, in addition to sharing amongst yourselves any local knowledge of unmapped flood risk areas. Know which roads, bridges and culverts are at risk. Maintain hard copies of all maps with highway department, EMS, and local police, and/or sheriff or state police.

Town Website / Plans / Policies:

- Town Administrator/Staff/EMD: Create an unpublished webpage for the Town website that includes emergency contact numbers and other emergency information that can be activated during emergencies.
- Selectboard/Town Staff: Make sure you have a Continuity of Operations Plan (COOP) in place so that basic municipal services can be maintained during an emergency.
- EMD/Selectboard: Maintain an up-to-date [Local Emergency Operations Plan](#) (LEOP). This Plan needs to be updated by the EMD and approved/adopted by the Selectboard in a warned meeting. This must take place annually between Town Meeting Day and May 1st.
- Animal Control Officer/Town Staff: Plan for how to handle/care for animals during a disaster. Completion of [Appendix B7](#) of the LEOP will assist in doing this. Vermont Disaster Animal Response Team (VDART) also has [resources to assist towns](#) in planning for animals and setting up animal shelters.
- EMD: Contact your regional planning commission's Emergency Planner for information on getting municipal trainings, assistance with developing emergency plans, information about the Local Emergency Planning Committee (LEPC) and Community Organizations Active in Disaster (COAD), and other emergency management related questions. Your RPC can be found [here](#).
- Town Administrator/Staff/EMD: Maintain a list of extra fire, police, highway equipment drivers who can be called upon in an emergency. Check with your insurance company on coverage for these workers.
- Selectboard: If not already outlined in the Town's personnel policy, create a Town policy discussing expectations of staff during emergencies. Is everyone expected to pitch in? Will they get paid overtime?

Records:

- Road Foreman/Commissioner: Maintain an up-to-date culvert and bridge inventory with photographs of existing conditions. If one is not already in place, set up a system to keep detailed records of town

infrastructure repair costs. This is important information to have when seeking disaster repair reimbursement and/or grant funding for upgrades or retrofits. Your inventory may be online at www.vtculverts.org.

- Road Foreman/Commissioner: Maintain a highway department equipment list. After a storm event, reimbursement may be available for use of backhoes, dump trucks, etc.
- Town Clerk/Treasurer/Listeners: Consider the vulnerability of the location of town records. If necessary, store records in an alternate, less vulnerable location for safe keeping.
- EMD: Know your town's vulnerable populations and their needs during events when power may be out or roads closed for extended periods of time. Keeping an updated vulnerable populations list is one way to do this. Towns can also provide information to individuals about registering for [Citizen Assistance Registration for Emergencies \(CARE\)](#).
- Zoning/Floodplain Administrator: Know what buildings are at risk structurally or subject to inundation.

Roles:

- Town Administrator/Selectboard/EMD: Predetermine a "Volunteer Coordinator" and train them as part of your town's Emergency Operations Center (EOC) response team. This will eliminate confusion following an event and also increase utilization of volunteer support. The Volunteer Coordinator should proactively make connections with local recovery groups that may be looking for volunteers following an event.
- Selectboard/Town Staff: Designate and train a public information officer (PIO) – someone with written skills and public speaking ability who will issue statements to the media during emergencies. Have a list of local media contacts available and keep it up to date.

Emergency Operations Center:

- Ensure your local EOC is adequately equipped with emergency radio communication capability (maybe at Fire Department) that allows for communications with police, fire, selectboard and highway department vehicles. Local EOC should also have back-up power source and technology capable of maintaining uninterrupted communication with the State Emergency Operations Center (SEOC).

Sheltering:

- EMD/Town Staff: Have local shelters pre-planned and their locations made known to residents. When choosing and establishing shelters,

consider individuals with functional needs, pets, and backup power. Shelters should be noted in the town's annually updated LEOP in the planning tasks. Contact the [American Red Cross](#) for shelter best practices.

- Vermont has eight regional emergency shelters, but these can only be opened with agreement from the host town, facility, and American Red Cross. If a community doesn't have a shelter and needs one opened during a disaster, they can contact the Red Cross through the SEOC at 1-800-347-0488. This may result in opening a regional shelter, sending folks to a nearby shelter, or other situation-dependent options.
- Animal Control Officer/EMD/Town Staff: Plan for how to handle/care for animals during a disaster. Talking with shelter operators about how/where animals can be housed is the first step. Work with willing local farmers to find shelter locations for large animals that may need to be evacuated from vulnerable locations. Vermont Disaster Animal Response Team (VDART) has [resources to assist towns](#) in planning for animals and setting up animal shelters.

Recovery:

- Road Foreman/Commissioner: Have pre-bid contracts for large equipment, materials (gravel, rock) and contractor services to avoid procurement delays. Can bid once a year.
- Town Administrator/Town Staff: Have a pre-determined debris management site identified in your community's solid waste implementation plan (SWIP). Contact your Solid Waste District or private hauler for appropriate protocol if your town does not have a SWIP.
- Develop and maintain a supportive relationship with local/regional EMS and Search and Rescue groups serving your town.



*Tropical Storm Irene
damage, 2011
Photo credit: Joe Flynn,
Department of Public Safety*

Advance Preparations II: Major storm is forecast with high risk of flooding

Highway Department:

- Ensure there is an adequate inventory of “Road Closed” signs. Ready “Road Closed” signs and place face down near locations susceptible to flood damage.
- Check and clear debris from swales, turn outs, catch basins and other drainage structures. Photograph catch basins (can use GPS units or smart phone with date/time stamp) to document pre-storm condition.
- Document mileage of highway department trucks, and other equipment at the start of the storm in order to be eligible for reimbursement for costs associated with their use during and after the storm.
- Either activate or alert back-up/extra staff of possible activation.
- Stay in contact with your [VTrans District Tech](#) and [ANR River Engineer](#) to advise them of possible issues and the need for emergency repairs.

Selectboard/Emergency Management Director/Town Staff:

- Watch river gauge information. Know at what discharges roads begin to flood.
- Alert police and highway department about potential flood emergency.
- Hold pre-event meeting with police, highway, selectboard, fire and emergency services personnel to share information and coordinate actions. Either activate or alert back-up/extra staff of possible activation. Have the “Volunteer Coordinator” begin to line up volunteers and create a schedule for shifts.
- Activate local EOC staff. Gather provisions needed for EOC staff.
- Stock up on bottled water.
- Contact local restaurants that have volunteered to cook for emergency personnel during and immediately following a storm event.
- Reach out to local faith community to solicit their help in aiding homebound residents.
- Begin keeping track of all costs, including donated time, food and materials, as it may be eligible to count as ‘local match’ for FEMA reimbursement if a federal disaster is declared.
- Contact USDA, Natural Resource Conservation Service personnel at your [local NRCS office](#) to alert them to possibility of flood damages.

NRCS may activate extra staff to go to flood damage sites to evaluate them for restoration funding via the Emergency Watershed Protection (EWP) Program. EWP funds can be used to make repairs where infrastructure is damaged or threatened. These funds can be accessed where damage has occurred due to any severe event. It need not be a federally declared emergency but non-federal disasters are put on a waitlist and not immediately funded. However, NRCS staff must evaluate damage sites before any repairs are made by the town. Call NRCS staff as soon as possible after the storm (Rob Allen, 802-951-6796 x232 or rob.allen@vt.usda.gov).

Local Police, Sheriff and/or State Police:

- Activate or alert back-up/extra officers of possible activation.
- Prepare and distribute to officers a form for people to sign who refuse to evacuate a flooded area.



*Spring 2011 flooding in Vermont
Photo credit: Vermont Civil Air Patrol*

Activation Time: During the Storm

Highway Department:

- Maintain contact with your local EOC and selectboard.
- Find and remove downed trees.
- Report downed electrical wires.
- Maintain lines of communication with your [VTrans District Tech](#) and [regional planning commission](#). Report all damages as requested and by the time given.
- Record keeping is vital. Keep track of all materials, equipment time, and staff overtime, as it may be eligible to count as 'local match' for FEMA reimbursement if a federal disaster is declared.
- Coordinate with town staff on any needed Emergency Protective Measure (EPM) authorizations for emergency repairs required to address flood-related imminent threats to life or imminent severe damage to property. Adhere to all requirements of this process as outlined in LEOP [appendix C2](#). EPMs must be approved by a member of the municipal legislative body and must be reported to ANR within 24 hours using the [online reporting form](#). [Contact a River Management Engineer](#) or contact the Rivers Program at ANR.WSMDRivers@vermont.gov or 802-490-6195.

Local Police, Sheriff and/or State Police:

- Maintain contact with EOC and selectboard.
- Conduct well-being checks on homebound and at-risk populations. Take those needing assistance to local shelters.
- Set up "Road Closed" signs where necessary.
- Determine when and where flood evacuation is needed. Evacuate people and animals from flood-inundated areas and take them to shelters. Once the Governor declares a state of emergency, the Governor has the authority to order the evacuation of persons living or working within all or a portion of an area for which a state of emergency has been proclaimed. Vermont does not have a specific procedure in place regarding enforcement of an evacuation order.

Selectboard/Emergency Management Director/Town Staff:

- Be at EOC and maintain communication with police, highway, fire and emergency personnel.
- If needed, the town can submit a request for the Governor to declare an emergency (using the form in [appendix A](#) of the LEOP). Multiple towns requesting an emergency declaration is a signal to the governor that the SEOC should be opened, an emergency should be declared

for the state, and they should consider requesting a Preliminary Damage Assessment (PDA) from FEMA.

- Track costs during emergency response, including donated time, food and materials, as it may be eligible to count as 'local match' for FEMA reimbursement.
- Designate an emergency shelter, if necessary. During the event, a town may activate an emergency shelter. If a community doesn't have a shelter and needs one opened during a disaster, it can contact the Red Cross through the SEOC at 1-800-347-0488. This may result in opening a regional shelter, sending folks to a nearby shelter, or other situational dependent options. In addition to SEOC, notify your regional planning commission when any shelter is being opened.
- Notify your regional planning commission/SEOC of all damages using the situational report form (appendix A2 of the LEOP). Your regional planning commission and/or the SEOC will give you direction, including submission deadlines and methods.
- Any requests for resources that exceed mutual aid can be communicated to the SEOC by calling 1-800-347-0488.
- If needed, contact DEMHS, using the SEOC hotline, and request activation of a Community Emergency Response Team (CERT). These volunteers can perform non-medical assistance via the Incident Command System (ICS). CERT can direct traffic, assist in shelters and provide other services. DEMHS must activate these teams in order for them to be covered under DEMHS liability coverage.

Zoning Administrator/Floodplain Administrator:

- Check status of buildings that are at risk structurally or subject to inundation.



Tropical Storm Irene damage, 2011

Photo credit: Jeff Nugent, Windham Regional Commission

After the Storm: Recovery

Zoning Administrator/Floodplain Administrator:

- Local zoning bylaws and floodplain regulations should be utilized during consideration of repair/replacement options for damaged properties and infrastructure. Local permits may be needed, depending on your town.
- Substantial Damage determinations need to be completed and homeowners must be told if their home is substantially damaged ASAP (includes labor even if DIY) because that will change how they can complete repairs. Information on how to make that determination can be found [here](#).

Board of Health:

- Inspect crops for contamination. Be sure crops contaminated by flood debris are plowed under or removed. For assistance in evaluating crops contact the VT Department of Health at the SEOC: 1-800-347-0488
- Contact Vermont Agency of Agriculture, Food and Markets for requirements for burying or disposing of animal carcasses, at the SEOC: 1-800-347-0488
- First line of communication for any questions about potential public health issues should be the SEOC, and they can get in contact with the VT Department of Health for further assistance.
- Centers for Disease Control Emergency Response Hotline (24-hour): 1-770-488-7100.
- The USDA's Farm Service Agency (FSA) can provide disaster relief assistance for farmers. The FSA may offer Emergency Conservation Program cost-shares to eligible producers, depending on funding allocations, to help repair farmland and conservation facilities damaged by a natural disaster occurrence. A Federal Declaration is not required to implement this program. More information can be found [here](#) or by contacting your [county FSA office](#).

Selectboard/Emergency Management Director/Town Staff:

- Report spills or releases of hazardous materials or waste 24/7 by calling the [Vermont HAZMAT](#) Hotline at 1-800-641-5005 or by calling the ANR Spills Program during business hours at 802-828-1138. The ANR Spill Program assesses the environmental impact of hazardous materials spills, oversees the cleanup of spills, and enforces environmental regulations triggered by spills. By calling the HAZMAT Hotline and providing the information, the State will make sure that the right groups know about it and can assist in response.

- Any release which impacts surface water must also be reported 24/7 to the [National Response Center \(NRC\)](#) at 1-800-424-8802.
- Information about the triggers for reporting hazardous material spills or releases can be found [here](#).
- Wastewater releases should be reported to the wastewater treatment facility operator, and then be reported through the ANR online services portal [ANR Online](#).
- Contact your responsible COAD for additional recovery assistance if needed. Your regional planning commission can assist with making this contact.
- Assistance to landowners who have experienced severe property damage may be available through the [Natural Resources Conservation Service](#). This work must have a state or local government sponsor and serve to reduce threats to life and property, be economically and environmentally defensible and sound from an engineering standpoint. NRCS covers 75% of costs and the sponsor is responsible for the remaining 25%. Applications for assistance must be submitted within 60 days of the disaster. Contact your [local NRCS office](#) for assistance.
- Direct all volunteers to your town's pre-determined Volunteer Coordinator for how they can assist the town and/or local recovery groups.
- FEMA provides 75% of the cost for emergency work and permanent work after a declared disaster. Emergency work categories include debris removal and emergency protective measures. Examples of emergency protective measures include sandbagging, closing roads, and a quick repair to a road. Permanent work categories include upgrades or retrofits of road systems (bridges, culverts, roads), water control facilities (levees), equipment, public facilities, or parks, recreational, and other (cemeteries). More information about this reimbursement can be found [here](#).
- When a Federal Disaster Declaration is made, FEMA opens up a [Hazard Mitigation Grant Program \(HMGP\)](#) funding source. This program requires local governments to apply on behalf of applicants, or for themselves. This is a state competitive grant program, which pays 75% of eligible costs and requires a 25% local match, which the town either directly provides or is responsible for receiving. This program can be used for projects that serve to mitigate future damage from natural disasters. A Benefit/Cost Analysis is required for this grant, for which records must be available to complete. Information can be found by contacting your [regional planning commission](#) or [Vermont State Hazard Mitigation staff](#).

Highway Department:

- Maintain line of communication with your [VTrans District Tech](#). Report all damages as requested by VTrans.
- Record keeping is vital. Take pictures before completing any repairs. Keep track of all materials, equipment time, and staff overtime, as it may be eligible to count as 'local match' for FEMA reimbursement if a federal disaster is declared.
- Coordinate with town staff on any needed Emergency Protective Measure (EPM) authorizations for emergency repairs required to address flood-related imminent threats to life / imminent severe damage to property. Adhere to all requirements of this process as outlined in [appendix C2](#). EPMs must be approved by a member of the municipal legislative body and must be reported to the Agency within 24 hours using the [online reporting form](#). [Contact a River Management Engineer](#) or contact the Rivers Program at ANR.WSMDRivers@vermont.gov or 802-490-6195.

Acronyms:

ANR – VT Agency of Natural Resources
CERT – Community Emergency Response Team
COOP – Continuity of Operations Plan
COAD – Community Organizations Active in Disaster
DEMHS – VT Division of Emergency Management and Homeland Security
DHS – Federal Department of Homeland Security
EMD – Emergency Management Director
EMS – Emergency Medical Services
EOC – Emergency Operations Center (local)
EPM – Emergency Protective Measures
FEMA – Federal Emergency Management Agency
FSA – USDA's Farm Service Agency
GPS – Global Positioning System
ICS – Incident Command Systems
LEOP – Local Emergency Operations Plan
NRC – National Response Center
NRCS – Natural Resources Conservation Service (Division of USDA)
PDA – Preliminary Damage Assessment
SEOC – State Emergency Operations Center
SFHA – Special Flood Hazard Area
SWIP – Solid Waste Implementation Plan
USDA – United States Department of Agriculture
VDART – Vermont Disaster Animal Response Team

Resources:

Vermont DEMHS: <http://demhs.vermont.gov/>

Vermont Division of Fire Safety: <http://firesafety.vermont.gov/>

VTrans: <http://vtrans.vermont.gov/>

Vermont Agency of Natural Resources: <http://anr.vermont.gov/>

Regional Planning Commission map and list: <http://www.vapda.org/>

Natural Resources Conservation Service: <http://www.nrcs.usda.gov>

FEMA Emergency Management Institute: <https://training.fema.gov/>

USDA Farm Service Agency: <https://www.fsa.usda.gov/index>



Spring 2011 floods

Photo credit: Mike Cannon, Department of Public Safety

TOWN/CITY/VILLAGE OF _____

FLOOD AND FLUVIAL EROSION HAZARD REGULATIONS

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I. Statutory Authorization and Effect

In accordance with 10 V.S.A. Chapter 32, and 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/City/Village of _____**, Vermont. Except as additionally described below, all administrative procedures follow town procedures under 24 V.S.A. Chapter 117.

II. Statement of Purpose

It is the purpose of this bylaw to:

1. Implement the goals, policies, and recommendations in the current municipal plan;
2. 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;
3. 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 flood and loss or damage to life and property in a flood hazard area and does not impair stream equilibrium, floodplain services, or the river corridor; and
4. Manage all flood hazard areas designated pursuant to 10 V.S.A. Chapter 32 § 753, 24 V.S.A. Chapter 117 § 4424, and the municipal hazard mitigation plan; and make the **Town/City/Village of _____**, its citizens, and businesses eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds as may be available.

III. Other Provisions

A. Precedence of Bylaw and Greater Restrictions

The provisions of these flood hazard bylaws 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 any of the provisions of this bylaw, the more restrictive shall apply.

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/City/Village of _____**, 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.

IV. Lands to Which these Regulations Apply

A. Identification

The Regulated Flood Hazard Areas include:

1. The River Corridors and Small Stream 50-foot setbacks as published by the Vermont Agency of Natural Resources on the Natural Resources Atlas as the Statewide River Corridor Map Layer, and refinements to that data based on field-based assessments. On streams with a watershed size between half a square mile and two square miles, the standards in this bylaw apply also to a Small Stream Setback area measured as 50-feet from the top of the stream bank or slope. Together 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 regulations¹; and

¹ Official River Corridor Maps are available on the Vermont Agency of Natural Resources online Natural Resources Atlas: <http://anrmaps.vermont.gov/websites/anra/>

NOTE: River Corridors are defined and mapped with an additional 50-foot setback on either side of the meander belt to allow space for the establishment and maintenance of a vegetated setback when the equilibrium slope and planform are achieved. A municipality may choose to regulate only the River Corridor Protection Area (RCPA), which is the fluvial erosion hazard area without the 50-foot setback. If this is chosen, the above needs to be altered for the RCPA. For enhanced Emergency Relief Assistance Fund match, small stream setbacks must be regulated regardless of whether also regulating RC or RPCA. *Disclaimer: Regulating only River Corridor Protection Areas does not offer the highest level of protection from fluvial erosion hazards.*

2. The Special Flood Hazard Area (SFHA) in and on the Flood Insurance Study (FIS) and the accompanying Flood Insurance Rate Maps (FIRMs) dated [insert map effective date], or the most recent revision thereof, issued by the Department of Homeland Security, Federal Emergency Management Agency (FEMA), 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 FIS²; and
3. **[OPTIONAL]** any Town Identified Flood Hazard Overlay Areas pursuant to 24 V.S.A. Chapter 117 § 4414(2) are hereby adopted and declared to be a part of this bylaw. These shall be those areas where the Town/City/Village of _____ has identified local flood hazard or ponding areas, as delineated and adopted on a “Local Flood Hazard Map” using best available topographic data and locally derived information such as flood of record, historic high water marks, soils or approximate study methodologies. **[NOTE: This could include town recognized local flood hazard areas outside of the SFHA and River Corridor, and/or any dam flowage easement areas.]**

These regulations shall apply to the above referenced areas (hereafter called “Regulated Flood Hazard Areas” unless referenced specifically) in the Town/City/Village of _____, Vermont. These hazard areas and the regulations herein are the minimum standards that must be met before meeting any additional applicable standards.

B. 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 Floodplain Administrator (FA). If the applicant disagrees with the determination made by the FA, he or she may appeal to the *[insert appropriate DRB or BOA]*. The burden of proof shall be on the appellant. A Letter of Map Amendment from the 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 FA. If the applicant disagrees with the determination made by the FA, he or she may appeal to the *[insert appropriate DRB or*

² FIS and FIRMs are available digitally on FEMA’s online Map Service Center: <https://msc.fema.gov/portal>

BOA]. The burden of proof shall be on the appellant. A letter of determination from the Vermont Agency of Natural Resources shall constitute proof.

3. **[Use only if utilizing IV A3]** If uncertainty exists with respect to the boundaries of the Town Identified Floodplain Area, the location of the boundary shall be determined by the FA. If the applicant disagrees with the determination made by the FA, he or she may appeal to the *[insert appropriate DRB or BOA]*. The burden of proof shall be on the appellant. A letter of determination from a third party licensed surveyor or engineer shall constitute proof.

C. Description of FEMA Identified Special Flood Hazard Areas

The FEMA identified floodplain area shall consist of the following specific areas:

1. The Floodway Area shall be those areas identified in the FIS and the FIRM as floodway (AE with Floodway) and 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. This term shall also include floodway areas which have been identified in other available studies or sources of information for those Special Flood Hazard Areas where no floodway has been identified in the FIS and FIRM.
 - a) Within any floodway area, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
2. The AE Area/District shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided.
 - a) AE Area without floodway shall be those areas identified as an AE zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided but no floodway has been determined.
3. The A Area/District shall be those areas identified as an A Zone on the FIRM included in the FIS prepared by FEMA and 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.

In lieu of the above, the town may require the applicant to determine the base flood elevation with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the municipality.

4. The AO and AH Area/District shall be those areas identified as Zones AO and AH on the FIRM and in the FIS. 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.

D. Changes in Identification of Area

The Identified Floodplain Area may be revised or modified by the *[insert appropriate DRB or BOA]* 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 community shall notify FEMA of the changes to the Special Flood Hazard Area by submitting technical or scientific data. See Section VIII.D of this bylaw for situations where FEMA notification is required.

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*.

V. Administration

A. Designation of the Floodplain Administrator

The *[Insert title of individual responsible for this role – ex. Administrative Officer, Planner, Permit Officer, Engineer, etc.]* is hereby appointed to administer and enforce this bylaw and is referred to herein as the *[choose either Floodplain Administrator or Administrative Officer – all references throughout this bylaw should be consistent with either FA or AO]*. The Floodplain Administrator 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.

Administration of any part of these regulations by another entity shall not relieve the community 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.

In the absence of a designated Floodplain Administrator, the Floodplain Administrator duties are to be fulfilled by the [*Chief Executive Officer or other town designee*].

B. Duties and Responsibilities of the Floodplain Administrator

1. The Floodplain Administrator shall issue a Permit only after it has been determined that the proposed work to be undertaken will be in conformance with the requirements of this and all other applicable codes and bylaws. Within 30 days after a municipal land use permit has been issued or within 30 days of the issuance of any notice of violation, the FA shall:
 - a. Deliver the original or a legible copy of the permit, or notice of permit, and any approvals to the municipal clerk for recording in the land records as provided in 24 VSA, § 1154(a), and § 4449;
 - b. File a copy of the permit and any approvals in the town office in a location where all town land use permits shall be kept; and,
 - c. The FA may charge the applicant for the cost of the recording fees as required by law.
2. Prior to the issuance of any permit, the Floodplain Administrator shall inform any person applying for a permit or authorization that the person should contact the regional permit specialist employed by the Agency of Natural Resources in order to assure timely action on any other related state or federal permits; nevertheless, the applicant retains the obligation to identify, apply for, and obtain relevant state and federal permits. The applicant shall provide the Floodplain Administrator with a copy of the Project Review Sheet issued by the regional permit specialist for awareness of what other permits are required.
 - a. Per 24 VSA § 4424, a permit for development outside of the SFHA 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 [*insert appropriate DRB or BOA*] should consider comments from the NFIP Coordinator at ANR.
 - b. For development within the FEMA Identified SFHA, no permit shall be issued until all other necessary government permits required by state and federal laws have been obtained.

NOTE: Information on what other state and federal permits are or may be required is available by contacting the ANR Regional Permit Specialist.

3. In the case of existing structures, prior to the issuance of any Development/Permit, the Floodplain Administrator shall review the history of repairs to the subject building, so that any Repetitive Loss issues can be addressed before the permit is issued.

NOTE: Questions about Repetitive Loss should be directed to FEMA. FEMA directly insures all Repetitive Loss properties through the National Flood Insurance Program.

4. Within three days following the issuance of a permit, the FA shall:
 - a. Deliver a copy of the permit to the Listers of the municipality; and
 - b. Post a copy of the permit in at least one public place in the municipality until the expiration of 15 days from the date of issuance of the permit.
5. During the construction period, the Floodplain Administrator or other authorized official shall inspect the premises to determine that the work is progressing in compliance with the information provided on the permit application and with all applicable local laws and bylaws. He/she shall make as many inspections before, during and upon completion of the work as are necessary, including, but not limited to, once the site has been staked out or demarcated but before actual start of construction.
6. In the discharge of his/her duties, the Floodplain Administrator shall have the authority to enter any building, structure, premises or development in the Regulated Flood Hazard Area, upon presentation of proper credentials, at any reasonable hour to enforce the provisions of this bylaw.
7. In the event the Floodplain Administrator discovers that the work does not comply with the permit application or any applicable laws and bylaws, or that there has been a false statement or misrepresentation by any applicant, the Floodplain Administrator shall revoke the Permit and report such fact to the *[insert appropriate DRB or BOA]* for whatever action it considers necessary.
8. The Floodplain Administrator shall maintain all records associated with the requirements of this bylaw including, but not limited to:
 - a. All permits issued in areas covered by this bylaw;
 - b. Elevation Certificates with the as-built elevation (consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the municipality) of the lowest floor, including basement, of all new or substantially improved buildings (not including accessory buildings) in the Special Flood Hazard Areas;
 - c. All flood proofing and other certifications required under this regulation;

- d. All decisions of the *[insert appropriate DRB or BOA]* (including conditional use decisions, waivers, variances and violations) and all supporting findings of fact, conclusions and conditions;
 - e. Finished construction elevation data;
 - f. Inspection documentation; and
 - g. Enforcement documentation.
9. The Floodplain Administrator is the official responsible for submitting a biennial report to the FEMA concerning community participation in the National Flood Insurance Program.

C. Public Notice

1. Prior to the issuance of a permit, proposals needing conditional use review, nonconforming structures and uses review, or approval for a variance or waiver, must have a warned public hearing as per 24 V.S.A. Chapter 117 § 4464. A copy of the application shall be submitted to VT Agency of Natural Resources (ANR) at least 30 days prior to the date of the public hearing. Public notice of the hearing shall be provided not less than 15 days prior to the date of the public hearing by all the following:
 - a. Publication of the date, place, and purpose of the hearing in a newspaper of general circulation in the town affected;
 - b. Posting of the same information in three or more public places within the town including posting within view from the public right-of-way nearest to the property for which an application is made;
 - 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 waiver or variance is sought regarding setbacks from a state highway, also including 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; and
 - d. For hearings on subdivision plats located within 500 feet of a municipal boundary, written notification to the clerk of the adjoining town.
2. Public notice of all other types of development review hearings, including site plan review shall be given not less than seven (7) days prior to the date of the public hearing, and shall at minimum include the following:
 - a. Posting of the date, place and purpose of the hearing in three (3) or more public places within the affected municipality; 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 highway, also

including 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.

NOTE: If this bylaw allows for dimensional waivers than the above public notice requirements includes them. If this bylaw does not allow for dimensional waivers, they are not permitted in the Regulated Flood Hazard Area.

3. The applicant shall bear the cost of the public warning and notification of adjoining landowners and interested parties as defined per 24 V.S.A. Chapter 117 § 4465(b).
4. Per 24 V.S.A. Chapter 117 § 4464(a)(5), no defect in the form or substance of any required public notice under this section shall invalidate the action of the *[insert appropriate DRB or BOA]* 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 *[insert appropriate DRB or BOA]* or the Environmental Court, the action shall be remanded to the *[insert appropriate DRB or BOA]* to provide new posting and notice, hold a new hearing, and take a new action.

D. Decisions

The FA shall act within 30 days to approve or deny the application, or refer the application to the *[insert appropriate DRB or BOA]*. Applications that cannot be approved in compliance with this bylaw shall be denied. The decision shall be issued in writing and include a statement of the factual bases on which the conclusions were made. Decisions of the FA can be appealed as per this bylaw and 24 V.S.A. Chapter 117 § 4465-4472. If the FA fails to act within the 30-day period, a permit shall be deemed issued on the 31st day.

E. Appeals

An interested party may appeal any decision or act taken by the Floodplain Administrator in any town by filing a notice of appeal with the secretary of the *[insert appropriate DRB or BOA]* of that town or with the clerk of that town if no such secretary has been elected. This notice of appeal must be filed within 15 days of that decision or act, and a copy of the appeal shall be filed with the Floodplain Administrator. The *[insert appropriate DRB or BOA]* shall set a date and place for a public hearing of an appeal within 60 days of the filing of the notice of appeal and shall mail the appellant a copy of that notice not less than 15 days prior to the hearing date. Hearings on appeals are governed per 24 V.S.A. Chapter 117 § 4468. Decisions on appeals are governed per 24 V.S.A. Chapter 117 § 4464(b).

1. The *[insert appropriate DRB or BOA]* shall consider comments from the NFIP Coordinator at ANR. The *[insert appropriate DRB or BOA]* may recess the proceedings

on any application pending submission of additional information. The *[insert appropriate DRB or BOA]* should close the evidence promptly after all parties have submitted the requested information, adjourn the hearing, and may deliberate prior to issuing its decision.

2. Decisions of the *[insert appropriate DRB or BOA]* shall be issued in writing within 45 days after the adjournment of the final hearing, and failure of the *[insert appropriate DRB or BOA]* to issue a decision within this period shall be deemed approval and shall be effective on the 46th day. Decisions shall be in writing and shall be sent by certified mail to the applicant and the appellant. Copies of the decision shall also be mailed to every person or body appearing and having been heard at a hearing. The decision will include a notice that an interested person may appeal the decision to the Environmental Court as per 24 V.S.A. Chapter 117 § 4471.
3. Decisions by the *[insert appropriate DRB or BOA]* shall include a statement of the factual basis on which the *[insert appropriate DRB or BOA]* has made its conclusions regarding how the proposed development will meet the development standards, and a statement of the conclusions. The minutes of the meeting may suffice, provided the factual bases and conclusions relating to the review standards are provided.
4. In rendering a decision in favor of the applicant, the *[insert appropriate DRB or BOA]* may attach additional reasonable conditions and safeguards as it deems necessary to implement the purposes of this bylaw and the town plan then in effect. *[insert appropriate DRB or BOA]* decisions shall be conditioned to assure that all necessary permits must be also received from those government agencies from which approval is required by Federal, State or Municipal law for the approval to be valid. The *[insert appropriate DRB or BOA]* may provide for the conditioning of permit issuance on the submission of a bond, escrow account, or other surety in a form acceptable to the legislative body of the municipality to assure one or more of the following: the completion of the project, adequate stabilization, or protection of public facilities that may be affected by a project.

NOTE: Granting of an appeal will not relieve a landowner or a town from the obligation to comply with the minimum requirements of the National Flood Insurance Program. Landowners and municipalities that fail to meet the Program's minimum requirements, notwithstanding any appellate decision to the contrary, are in violation of the National Flood Insurance Program and remain subject to the accompanying penalties.

F. Permit Validity

Each permit issued shall:

1. Contain a statement of the period of time within which an appeal may be filed;

2. Require posting of a notice of permit on a form prescribed by the town within view from the public right-of-way most nearly adjacent to the subject property for not less than 15 days after issuance, which is the appeal filing period.
3. Not take effect until 16 days after issuance, or in the event that a notice of appeal of a decision by the FA is properly filed, no such permit shall take effect until adjudication of that appeal by the *[insert appropriate DRB or BOA]* is complete and the time for taking an appeal to the environmental court has passed without an appeal being taken. If an appeal is taken to the environmental court, the permit shall not take effect until adjudication by the environmental court; and,
4. Be valid for a period of two years after issuance.

G. 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 Floodplain Administrator. If changes are deemed necessary, requests for such change shall be in writing, and shall be submitted by the applicant to the Floodplain Administrator for consideration. The FA shall determine if the change requires a new permit application, or an amendment can be made to the existing permit. The FA 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 FA in determining if a new application is required.

H. Start of Construction

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 Floodplain Administrator.

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.

Time extensions shall be granted only if a written request is submitted by the applicant, who sets forth sufficient and reasonable cause for the Floodplain Administrator 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.

VI. Permit Application Guidelines

A. Application Submission Requirements

1. Applications for development in a Regulated Flood Hazard Area shall be made, in writing, to the Floodplain Administrator on forms supplied by the **Town/City/Village of** **_____**. Such application shall include:
 - a. The name and contact information for the owner of the property, including any agents authorized to act on their behalf;
 - b. A thorough description of the proposed development;
 - c. General location map including the address of the property, tax parcel ID, relative locations of the existing development and the nearest public road;
 - d. Where applicable, a site plan that depicts the proposed development, all water bodies, Special Flood Hazard Areas, River Corridors and 50-foot stream setbacks, 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;
 - e. **XXX copies** of the application, including one to be forwarded to the State National Flood Insurance Program Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation, River Management Program; and,
 - f. The appropriate fee as determined by the Selectboard.
2. If any proposed construction or development is located entirely or partially within any FEMA defined Special Flood Hazard Area or Town Identified Flood Hazard Area, applicants for Permits shall provide all the necessary information listed below, in addition to that mentioned above in VI.A(1), in sufficient detail and clarity to enable the Floodplain Administrator to determine that:
 1. all such proposals are consistent with the need to minimize flood damage and conform with the requirements of this and all other applicable codes and bylaws;
 2. all utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damage;
 3. adequate drainage is provided so as to reduce exposure to flood hazards;
 4. structures will be anchored to prevent floatation, collapse, or lateral movement;
 5. building materials are flood-resistant;
 6. appropriate practices that minimize flood damage have been used; and
 7. electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities have been designed and located to prevent water entry or accumulation.

3. If any proposed construction or development is located entirely or partially within any FEMA defined Special Flood Hazard Area or Town Identified Flood Hazard Area, applicants for Permits shall provide the following data and documentation, in addition to that mentioned above in VI.A(1) and (2):
 1. if available, information concerning flood depths, pressures, velocities, impact and uplift forces and other factors associated with a base flood;
 2. detailed information concerning any proposed floodproofing measures and corresponding elevations;
 3. document, certified by a registered professional engineer or architect, which states that the proposed construction or development has been adequately designed to withstand the pressures, velocities, impact and uplift forces associated with the base flood. Such statement shall include a description of the type and extent of flood proofing measures which have been incorporated into the design of the structure and/or the development;
 4. documentation, certified by a registered professional engineer or architect, to show that the cumulative effect of any proposed development within any Special Flood Hazard Area (See Section IV.C of this bylaw), when combined with all other existing and anticipated development in the municipality, will not cause any increase in the base flood elevation in any identified Floodway and will not increase the base flood elevation more than one (1) foot at any point in any Special Flood Hazard Area outside the Floodway; and
 5. If a Vermont Agency of Natural Resources Project Review Sheet was completed and submitted to ANR, this shall also be included in your application to the Town. The ANR Project Review Sheet is a tool that identifies all State and Federal agencies from which permit approval *may* be required for the proposal. Regardless of whether a Project Review Sheet is completed, all required state and federal permits shall be submitted to the FA and attached to the permit before work can begin in any FEMA defined Special Flood Hazard Area.
4. For applicants seeking conditional use approval, approval under nonconforming structures and uses, a waiver, or a variance, for development within any Regulated Flood Hazard Area, the following also need to be provided , in addition to that mentioned above in VI.A(1), (2) and (3):
 - a. A list of abutters names and mailing addresses;
 - b. A statement of purpose and need for the proposed development;
 - c. A description of the alternatives considered to the proposed development, including alternate locations on the parcel or site, especially outside of the hazard area;
 - d. Such pertinent information as identified in the regulations or deemed necessary by the *[insert appropriate DRB or BOA]* for determining the suitability of the proposed development for the site;

- e. For a variance, then the application must include responses to the regulations set forth in 24 VSA § 4469, and CFR 60.6 (only if located in the FEMA Identified SFHA), and Section XII of this bylaw;
 - f. For a waiver, then the application must include responses to the regulations set forth in CFR 60.6 (only if located in the FEMA Identified SFHA), and Section XI of this bylaw;
 - g. Copies of the application sufficient for the *[insert appropriate DRB or BOA]* members, the State National Flood Insurance Program Coordinator, and additional parties such as the VT DEC Stream Alteration Engineer and adjacent communities if affected under Section V.C.1(d) of this bylaw; and,
 - h. Any additional fees as required by the Selectboard.
5. It is the responsibility of the applicant to provide material necessary for the Floodplain Administrator, *[insert appropriate DRB or ZBA]*, and any other designated Town official, to fully understand the development proposal and to be able to make appropriate determinations using the data and materials provided by the applicant. Costs incurred for the development of application materials are the responsibility of the applicant.

B. Referrals

1. Upon receipt of a complete application for a substantial improvement or new construction, the Floodplain Administrator shall submit a copy of the application and supporting information to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. Chapter 117 § 4424. A permit may be issued only following receipt of comments from the Agency, or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner. The *[insert appropriate DRB or BOA]* should consider comments from the NFIP Coordinator at ANR.
2. If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall also be submitted to the adjacent communities, the Stream Alteration Engineer at the Vermont Agency of Natural Resources, and the Army Corps of Engineers. Copies of such notice shall be provided to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation. A permit may be issued only following receipt of comments from the Vermont Agency of Natural Resources, or the expiration of 30 days from the date the application was mailed to the Vermont Agency of Natural Resources, whichever is sooner. The *[insert appropriate DRB or BOA]* should consider comments from the NFIP Coordinator at ANR.

VII. Development in Regulated Flood Hazard Areas

A. Permit Requirement

A permit is required from the Floodplain Administrator (FA) for all proposed construction and development in all areas defined in Section IV.A. Development that requires conditional use

approval, non-conforming use approval, a waiver, or a variance from the *[insert appropriate DRB or BOA]* under these flood hazard regulations, must have such approvals prior to the issuance of a permit by the FA. Any development subject to municipal jurisdiction in the designated hazard areas shall meet all relevant criteria in Section VIII 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 *[insert appropriate DRB or BOA]* 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.

B. Permitted Development

For the purposes of review under these regulations, the following development activities in the Special Flood Hazard area, where outside of the floodway and outside of the River Corridor, and meeting the Technical Provisions in Section VIII of this bylaw, require only an administrative permit from the FA:

1. Non-substantial improvements of less than a 500 square foot footprint to existing residential and non-residential structures, providing the improvements do not decrease the pre-existing distance between the unaltered structure and the top of bank;
2. Accessory structures built in accordance with VIII.A.8 of this bylaw;
3. Development related to on-site septic or water supply systems in accordance with VIII.A.11 and 13 of this bylaw;
4. Building utilities in accordance with relevant Technical Provisions in Section VIII of this bylaw;
5. Open fencing and signs elevated on poles or posts that create minimal resistance to the movement of floodwater;
6. Stream crossings in the SFHA that do not require Stream Alteration Permits, span top-of-bank to top-of-bank, and are to be used exclusively for recreational uses;
7. At-grade parking for existing buildings; and,
8. Storage or parking of recreational vehicles, not to exceed 180 days, provided they are fully licensed and ready for highway use.

C. Prohibited Development in Regulated Flood Hazard Areas

For the purposes of review under these regulations, the following development activities are prohibited in any Regulated Flood Hazard Area, and would only be allowed via issuance of a variance or waiver.

1. New residential or non-residential structures (including the placement of new manufactured homes);
2. Any improvement to an existing structure that decreases the pre-existing distance between the unaltered structure and the top of bank;
3. Storage or junk yards;
4. New fill, except as necessary to elevate structures above the base flood elevation, and placed in accordance with VIII.A.16 of this bylaw;

5. Accessory structures in the Floodway;
6. Critical facilities in all areas affected by mapped flood hazards; and,
7. All development not otherwise exempted, permitted, or conditionally permitted.

D. Conditional Use Review

Conditional use review and approval by the *[insert appropriate DRB or BOA]*, is required prior to the issuance of a permit by the FA for the following proposed development, which shall be undertaken in accordance with all relevant technical provisions described in Section VIII.A of this bylaw:

1. Substantial improvement, elevation, relocation, or flood-proofing of an existing residential or non-residential structure that does not expand the footprint of the existing structure more than 500 square feet and does not decrease the pre-existing distance between the unaltered structure and the top of bank;
2. Any improvement to an existing residential or non-residential structure that does expand the footprint of the existing structure more than 500 square feet and does not decrease the pre-existing distance between the unaltered structure and the top of bank;
3. Non-substantial improvement of less than a 500 square foot footprint to an existing residential or non-residential structure in the River Corridor that does not decrease the pre-existing distance between the unaltered structure and the top of bank;
4. New or replacement storage tanks for existing structures placed in accordance with VIII.A.17, 19 and 24 of this bylaw;
5. Any improvements to existing residential and non-residential structures in the floodway;
6. Grading, excavation, or the creation of a pond;
7. Improvements to existing roads or streets, in accordance with VIII.A.14 of this bylaw;
8. Construction or repair of stream crossing structures (bridges and culverts), associated transportation and utility networks, dams, dry hydrants, and other functionally dependent uses that must be placed in or over rivers and streams that are located in the SFHA and that have coverage under a Stream Alteration Permit, if required, under 10 V.S.A. Chapter 41 and the rules adopted thereunder;
9. Subdivision of land in the SFHA or River Corridor in accordance with VIII.A.15 of this bylaw;
10. Accessory structures in the River Corridors, of 500 square feet or less, and in accordance with VIII.A.8 of this bylaw;
11. Storage or parking of recreational vehicles in the River Corridor, not to exceed 180 days, provided they are fully licensed and ready for highway use, and comply with all relevant sections of this Bylaw.
12. Building utilities placed in accordance with the relevant standards of this bylaw;
13. Power generation Facilities and telecommunications infrastructure not otherwise regulated by 30 V.S.A. Chapter 5 § 248 or § 248a; and
14. At-grade parking for existing buildings in the River Corridor.

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, in conjunction with an approved site stabilization plan³;
2. Previously Developed Sites:
 - a. Pre-existing development may continue.
 - b. A pre-existing building or developed site may be used for any purpose allowed in the zoning district.
3. Maintenance of existing roads, parking areas and stormwater drainage, not including any expansions;
4. Maintenance of existing trails, and the expansion or development of new trails that do not include any type of channel management or stabilization;
5. Maintenance of existing bridges, culverts, and channel stabilization activities, not including any expansions;
6. Construction or repair of stream crossing structures (bridges and culverts), associated transportation and utility networks, dams, dry hydrants, and other functionally dependent uses that must be placed in or over rivers and streams that are located within the River Corridor and not in the SFHA, and that have coverage under a Stream Alteration Permit, if required, under 10 V.S.A. Chapter 41 and the rules adopted thereunder;
7. Stream crossings in the River Corridor that do not require Stream Alteration Permits, span top-of-bank to top-of-bank, and are to be used exclusively for recreational uses;
8. Silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices; and,
9. Agricultural activities conducted in accordance with the Vermont Department of Agriculture's Required Agricultural Practices (RAP). Prior to the construction of farm structures the farmer must notify the FA in writing of the proposed activity. The notice must contain a sketch of the proposed structure including setbacks.

F. Nonconforming Structures and Uses

The *[insert appropriate DRB or BOA]* may, after public notice and hearing, approve the repair, relocation, replacement, or enlargement of a nonconforming structure within a Regulated Flood Hazard Area provided that:

³ Approval could come from Army Corps of Engineers, Agency of Natural Resources, a grant funding entity, or the Floodplain Administrator.

1. The proposed development is in compliance with all the Technical Provisions in Section VIII of this bylaw;
2. A nonconforming structure that is substantially damaged or destroyed may be reconstructed in place only in circumstances when the structure cannot be relocated to a less hazardous location on the parcel, provided it is outside of the Floodway. A nonconforming structure cannot be rebuilt in the floodway. The lowest floor of the reconstructed residential structure must be rebuilt with the lowest floor elevated to one foot *[Choose two feet here if two feet is chosen for VIII.A.3]* or more above the base flood elevation, and a non-residential structure must be floodproofed according to VIII.A.4 of this bylaw, and the structure must otherwise comply with all requirements of the National Flood Insurance Program and this bylaw;
3. Nonconforming structures or uses shall be considered abandoned where such structures or uses are discontinued for not less than 12 months;
4. An individual manufactured home remaining occupied 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; and
5. A nonconformity, located in a Regulated Flood Hazard Area, that the town deems to be a public nuisance or public health risk or hazard may be abated or removed as per 24 V.S.A. Chapter 117 § 4412.7(C).

G. Small Stream Setbacks

On previously developed lots, natural woody vegetation will not have to be re-established on areas within the riparian setback maintained as lawns or gardens. However, the maintenance or establishment of forested vegetation within designated small stream setbacks and mapped River Corridors is strongly encouraged. Undisturbed forested setbacks serve to protect habitat and quality of waterways. Vegetation removal and management, including the control of invasive species, within setbacks should be done following accepted management practices such as those listed on vtinvasives.org⁴.

⁴ Questions regarding what is an acceptable vegetation management practice should be directed to the Vermont Agency of Natural Resources Department of Forest, Parks and Recreation.

	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	X
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 than also in building shadow)	P	C	C
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 than 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 than also in building shadow)	C	C	C
5	Any improvement to an existing structure that decreases pre-existing distance to waterway	X	X	X
6	Accessory structure ⁵ not meant for human habitation and not larger than 500 sq ft	P	X	C
7	Accessory structure ⁵ built human habitation and/or larger than 500 sq ft	X	X	X
8	On-site septic and water supply systems	P	X	C
9	At-grade parking for existing buildings	P	C	C
10	Open fencing and elevated signage	P	C	C
11	RV parking, fully licensed and ready for highway use	P	X	C
12	RV parking, unlicensed or not drivable	X	X	X
13	Storage or junk yards	X	X	X
14	Fill ⁵ as needed to elevate existing structures	C	C	C
15	Fill	X	X	X
16	Critical facilities	X	X	X
17	New or replacement storage tanks	C	X	C
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 ⁵	C	C	C
24	Trail maintenance and expansion without stabilization	A	A	A
25	Building utilities ⁵	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

⁵ See appropriate Technical Provisions in this bylaw.

	Activity	Hazard Zone		
		Special Flood Hazard Area	Floodway (with no increase to BFE)	River Corridors
	P Permitted C Conditional Review X Prohibited A Exempt			
27	Nonconforming structure repair, relocation, replacement or enlargement	C	C	C
28	⁶ Removal of structure in whole or part ⁷	A	A	A
29	⁸ Silvicultural activities ⁹	A	A	A
30	¹⁰ Agricultural activities ¹¹	A	A	A
31	All development not otherwise noted	X	X	X

VIII. Technical Provisions

The criteria below are the minimum standards for any development which is permitted (P), exempt (A), approved via conditional use approval (C), or granted via variance or waiver in Regulated Flood Hazard Areas. Where more than one zone or area is involved, the most restrictive standard shall take precedence.

A. Regulated Flood Hazard Area Development Standards

1. *All development* shall be:

- a. Reasonably safe from flooding and fluvial erosion risk;
- b. Designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, release, or lateral movement of the structure;
- c. Constructed with materials resistant to flood damage¹²;
- d. Constructed by methods and practices that minimize flood damage;
- e. Constructed with electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities designed and/or located to prevent water from entering or accumulating within the components during conditions of flooding;
- f. Adequately drained to reduce exposure to flood hazards; and
- g. Located so as to minimize conflict with changes in channel location over time and the need to intervene with such changes.

2. **[OPTION 1 – Minimum Standard]** *Within any SFHA*, no development shall be permitted without first determining the base flood elevation and demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated encroachments in the municipality, will not cause any increase in the BFE in a Floodway and not more than a one (1) foot increase in any SFHA area outside of the Floodway within the municipality during a base flood discharge. This demonstration must be supported by

⁷ In conjunction with an approved stabilization plan.

⁹ Conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practice.

¹¹ Conducted in accordance with the Vermont Department of Agriculture's Required Agricultural Practices (RAP).

¹² Refer to *FEMA Technical Bulletin 2-9: Flood Resistant Materials Requirements*

technical data that conforms to standard hydraulic engineering principles and is certified by a licensed professional engineer.

[OPTION 2 – Higher Standard] *Within any SFHA*, no development shall be permitted without first determining the base flood elevation and demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated encroachments in the municipality, will not cause any increase in the BFE. New development that proposes to displace floodwater storage in the SFHA must provide compensatory storage to offset the impacts of any increase in the extent or level of floodwaters during peak flows up to and including the base flood discharge. This demonstration must be supported by technical data that conforms to standard hydraulic engineering principles and is certified by a licensed professional engineer.

NOTE: The ordinance must be made consistent throughout to reflect the option chosen above.

3. *New Residential Structures or Residential Structures to be substantially improved* in Zones A, A1-30, AE, and AH shall be located such that the lowest floor is at least one foot above base flood elevation **[Option: This standard can be raised to two feet above base flood elevation]**. This must be documented in as-built condition, with a FEMA Elevation Certificate.
4. *Non-residential structures in the SFHA to be substantially improved* shall:
 - a. Meet the elevation standards for Residential Structures outlined above in VIII.A3 of this bylaw; 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 watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; A permit for flood-proofing shall not be issued until a licensed professional engineer or architect has reviewed the structural design, specifications and plans, and has certified that the design and proposed methods of construction are in accordance with accepted standards of practice for meeting the provisions of this subsection.
5. *Fully enclosed areas below grade on all sides* (including below grade crawlspaces and basements) are prohibited.
6. *Fully enclosed areas that are above grade on all sides*, but below the lowest floor, below BFE and/or are subject to flooding, shall:

- a. Be used solely for the parking of a vehicle, building access, or incidental storage in an area other than a basement, and such a condition shall clearly be stated on any permits; and,
- b. Be designed and constructed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs must be certified by a licensed professional engineer or architect, or meet or exceed the following minimum criteria: (1) 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; (2) The bottom of all openings shall be no higher than one foot above grade; and (3) 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* must be fully licensed and ready for highway use.

8. *Accessory structures*

Structures accessory to a principal building need not be elevated or floodproofed to remain dry, but shall comply, at a minimum, with the following requirements:

- a) the structure shall not be designed or used for human habitation, but shall be limited to the parking of vehicles, or to the storage of tools, material, and equipment related to the principal use or activity.
- b) floor area shall not exceed 500 square feet.
- c) the structure will have a low damage potential.
- d) the structure will be located on the site so as to cause the least obstruction to the flow of flood waters.
- e) power lines, wiring, and outlets will be elevated to one foot above the base flood elevation.
- f) permanently affixed utility equipment and appliances such as furnaces, heaters, washers, dryers, etc. are prohibited.
- g) sanitary facilities are prohibited.
- h) the structure shall be adequately anchored to prevent flotation or movement and shall be designed to automatically provide for the entry and exit of floodwater for the purpose of equalizing hydrostatic forces on the walls. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
 - i. a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.
 - ii. the bottom of all openings shall be no higher than one (1) foot above grade.
 - iii. openings may be equipped with screens, louvers, etc. or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

NOTE: If a municipality chooses not to include the above language related to accessory structures, then all structures located in the Regulated Flood Hazard Area, including accessory structures will have to be elevated or floodproofed as established in Section VIII.A.4 of this bylaw.

9. If a variance is obtained according to Section XII of this bylaw, *all manufactured homes, and any improvements thereto*, shall be:

1. placed on a permanent foundation.
2. elevated so that the lowest floor of the manufactured home is at least to one foot above the base flood elevation ***[Choose two feet here if two feet is chosen for VIII.A.3]*** and,
3. anchored to resist flotation, collapse, or lateral movement.
4. OPTIONAL: and have all ductwork and utilities including HVAC/heat pump elevated to one foot above the base flood elevation ***[Choose two feet here if two feet is chosen for VIII.A.3]***.

10. *Historic Structures*

Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined in this bylaw, must comply with all bylaw requirements that do not preclude a structure or district's continued historic designation. Documentation that a specific bylaw requirement will cause removal of the structure, or district that the structure lies within, from the National Register of Historic Places or the State Inventory of Historic places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from bylaw requirements will be the minimum necessary to preserve the historic character and design of the structure and/or district.

11. *Water supply systems* shall be designed to minimize or eliminate infiltration of flood waters into the systems.

12. *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.

13. *On-site waste disposal systems* shall be located to avoid impairment to them or contamination from them during flooding.

14. *Streets* finished elevation shall be no more than one (1) foot below the base flood elevation.

15. *Subdivisions, Manufactured Home Parks, and Planned Unit Developments* must be accessible by dry land access outside the special flood hazard area. All subdivision proposals and development proposals containing at least 50 lots or at least 5 acres, whichever is the lesser, in FEMA Identified SFHA's where base flood elevation data are not available, shall be supported by hydrologic and hydraulic engineering analyses that determine base flood

elevations and floodway information. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision and Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant. If such a subdivision is proposed in a flood prone area, assure that:

- a. Such proposal minimizes flood damage;
- b. Is proposed to be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; and
- c. Adequate drainage is provided to reduce exposure to flood hazards.
- d. New parcels created by subdivision require a reasonable development envelope that conforms to all natural hazard and dimensional standards in this bylaw without requiring a variance or waiver.

16. If *Fill* is used to elevate structures above the base flood elevation, it shall:

- a. extend laterally at least fifteen (15) feet beyond the building line from all points;
- b. consist of soil or small rock materials only - Sanitary Landfills shall not be permitted;
- c. be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling;
- d. be no steeper than one (1) vertical to two (2) horizontal feet unless substantiated data justifying steeper slopes are submitted to, and approved by the Floodplain Administrator; and
- e. be used to the extent to which it does not adversely affect adjacent properties.
- f. Fill shall be inspected and approved by the FA or a professional engineer prior to placement of any structure atop fill.

17. *Storage* of all materials that are buoyant, flammable, explosive or in times of flooding, could be injurious to human, animal, or plant life, shall be stored at or above one foot above the base flood elevation or floodproofed to the maximum extent possible, including being firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.

18. *Existing residential and non-residential buildings, including manufactured homes, to be substantially improved in Zone AO* shall have the lowest floor, including basement, elevated above the highest adjacent grade, at least as high as the depth number specified on the community's FIRM, or at least two feet if no depth number is specified.

19. *Anchoring*

1. All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.

2. All air ducts, large pipes, storage tanks, and other similar objects or components located below the base flood elevation shall be securely anchored or affixed to prevent flotation.

20. Floors, Walls and Ceilings

1. Wood flooring used at or below the base flood elevation shall be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain without causing structural damage to the building.
2. Plywood used at or below the base flood elevation shall be of a "marine" or "water-resistant" variety.
3. Walls and ceilings at or below the base flood elevation shall be designed and constructed of materials that are "water-resistant" and will withstand inundation.
4. Windows, doors, and other components at or below the base flood elevation shall be made of metal or other "water-resistant" material.

21. Paints and Adhesives

1. Paints and other finishes used at or below the base flood elevation shall be of "marine" or "water-resistant" quality.
2. Adhesives used at or below the base flood elevation shall be of a "marine" or "water-resistant" variety.
3. All wooden components (doors, trim, cabinets, etc.) used at or below the base flood elevation shall be finished with a "marine" or "water-resistant" paint or other finishing material.

22. Electrical Components

Electrical distribution panels shall be at least three (3) feet above the base flood elevation. Separate electrical circuits shall serve lower levels and shall be dropped from above.

23. Equipment

Water heaters, furnaces, air conditioning and ventilating units, and other electrical, mechanical or utility equipment or apparatus shall not be located below the base flood elevation.

24. Fuel Supply Systems

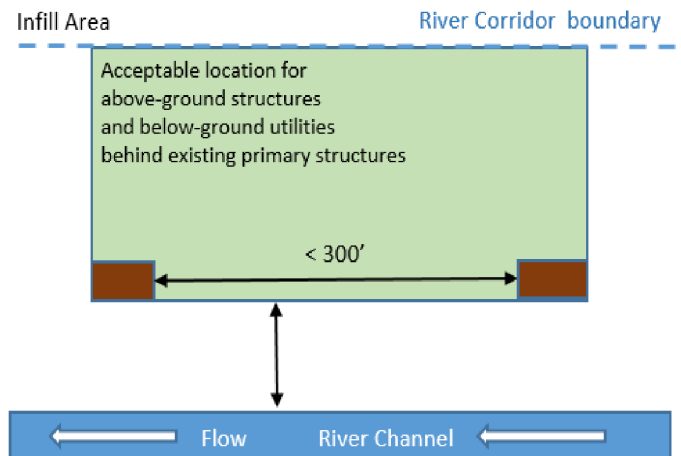
All gas and oil supply systems shall be designed to prevent the infiltration of flood waters into the system and discharges from the system into flood waters. All components located below the base flood elevation shall be securely anchored or affixed to prevent flotation or unmooring. Additional provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

B. Floodway Areas

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

- a) Not result in any increase in flood levels (0.00 feet) during the occurrence of the base flood;
- b) Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.

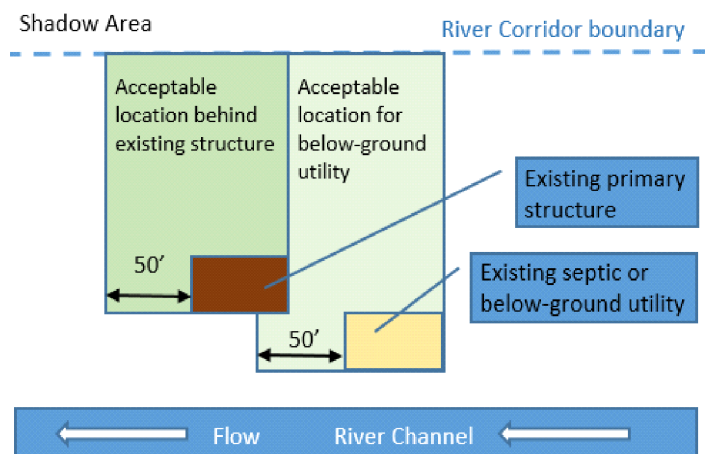
2. Public utilities may be placed underground, and the analyses may be waived, where a licensed professional engineer certifies that there will be no change in grade and the utilities will be adequately protected from scour.



C. 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.

1. In a designated center that lies in the River Corridor, infill development is allowed provided that the location of said development is not less than the distance between pre-existing adjacent structures and the top of bank.



2. 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, or
- b. Down River Shadow: New proposed development that is adjacent to existing structures 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.

3. 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.
4. Accessory structures may be located within 50 feet of the existing primary building provided that the location is not less than the distance between the existing primary structure and the top of bank.
5. Proposals that do not meet the infill or shadowing criteria in section VI.C.2 a or b must demonstrate and the *[insert appropriate DRB or ZBA]* must find that the proposed development will:
 - a. Not increase the susceptibility of that or other properties to fluvial erosion damage;
 - b. Not increase the potential of materials being swept onto other lands or into the stream and causing damage to other properties from fluvial erosion;
 - c. Not cause an undue burden on public services and facilities including roads, bridges, culverts, and emergency service providers during and after fluvial erosion events;
 - d. Not be placed on land with a history of fluvial erosion damage or be imminently threatened by fluvial erosion;
 - e. 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
 - f. 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.
6. Bridge and culvert projects must have a Stream Alteration permit.
7. Channel management activities must be authorized by the Vermont Agency of Natural Resources.
8. Recreational Vehicles in the River Corridor shall be fully licensed and ready for highway use, and be located no closer to top of bank than the primary structure on the property.
9. Storage of all materials that are buoyant, flammable, explosive or in times of flooding, could be injurious to human, animal, or plant life, shall be floodproofed to the maximum extent possible, including being firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.
10. The *[insert appropriate DRB or ZBA]* may request or consider additional information to determine if the proposal meets the standards listed in VI.C.5, including:
 - a. a description of why the shadowing and infill criteria in VI.C.2 a or b cannot be met;
 - b. data and analysis from a consultant qualified in the evaluation of river dynamics and erosion hazards;
 - c. Comments provided by the DEC Regional Floodplain Manager on whether or not the proposal meets the River Corridor Performance Standard.

D. Alteration or Relocation of Watercourse

1. No encroachment, alteration, or improvement of any kind shall be made to any watercourse until all adjacent municipalities which may be affected by such action have been notified by the municipality, and until all required permits or approvals have first been obtained from the Vermont Agency of Natural Resources.
2. No encroachment, alteration, or improvement of any kind shall be made to any watercourse unless it can be shown that the activity will not decrease stream stability, or reduce or impede the flood carrying and sediment transport capacity of the watercourse in any way.
3. In addition, FEMA shall be notified prior to any alteration or relocation of any watercourse.

NOTE: While submission of technical or scientific data is a municipal responsibility, a municipality may pass this responsibility onto the applicant. Since there are often fees associated with processing Letters of Map Change, communities should consider who will fulfill this requirement.

- E. Any new construction, development, uses or activities allowed within any Regulated Flood Hazard Area shall be undertaken in strict compliance with the provisions contained in this bylaw and any other applicable codes, bylaws and regulations.
- F. Any modification, alteration, reconstruction, or improvement of any kind that meets the definition of “Repetitive Loss” shall be undertaken only in full compliance with the provisions of this bylaw.
- G. *Optional:* Within any Regulated Flood Hazard Area, no new construction or development shall be located within the area measured fifty (50) feet landward from the top-of-bank of any watercourse.**

IX. *[OPTIONAL]* Certificate of Occupancy

In accordance with Chapter 117 § 4449, it shall be unlawful to use or occupy, or permit the use or occupancy of any land or structure, or part thereof, created, erected, changed, converted, or wholly or partly altered or enlarged in its use or structure within a Special Flood Hazard Area or River Corridor until a Certificate of Occupancy is issued therefore by the FA. A Certificate of Occupancy ensures your project complies with current zoning standards. 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.

To obtain a Certificate of Occupancy, about two weeks from when you expect your project to be finished, fill out a Certificate of Occupancy application and provide copies of your water and wastewater certifications or engineering letters to the FA. Within 14 days of the receipt of the application the FA will contact you to perform a site visit, to do some exterior measurements of your project and ensure that all permits identified on the Project Review Sheet have been acquired and that all work has been completed in conformance with the zoning permit and associated approvals. In consideration of a Certificate of Occupancy, the FA shall follow all relevant Administrative procedures outlined in Section V of this bylaw. If the FA fails to grant or deny the Certificate of Occupancy within 14 days of the submission of the application, the certificate shall be deemed issued on the 15th day. If a Certificate of Occupancy cannot be issued, notice will be sent to the owner and copied to the lender.

X. Enforcement and Penalties

- A. This bylaw shall be enforced under the municipal zoning bylaw in accordance with 24 V.S.A. Chapter 117 § 4451, § 4452 and 24 V.S.A. Chapter 59 § 1974a.
- B. Whenever the Floodplain Administrator or other authorized municipal representative determines that there are reasonable grounds to believe that there has been a violation of any provisions of this bylaw, or of any regulations adopted pursuant thereto, the Floodplain Administrator shall give notice of such alleged violation as hereinafter provided. Such notice shall:
 - 1. be in writing;
 - 2. include a statement of the reasons for its issuance;
 - 3. state that the alleged offender has an opportunity to cure the violation within seven days of receipt;
 - 4. state that failure to cure the violation may result in fines and/or loss of flood insurance;
 - 5. state that the alleged offender will not be entitled to an additional warning notice for a violation occurring after the seven days within the next succeeding 12 months;
 - 6. be served upon the property owner or his agent as the case may require; provided, however, that such notice or order shall be deemed to have been properly served upon such owner or agent when a copy thereof has been served with such notice by any other method authorized or required by the laws of this State; and,
 - 7. contain an outline of remedial actions which, if taken, will effect compliance with the provisions of this bylaw.
- C. Copies of the notice of violation will be:
 - 1. Mailed to the Vermont NFIP Coordinator and, within 30 days be
 - 2. Filed in the land use permit files; and,
 - 3. Delivered to the municipal clerk for recording in the land records.

- D. After seven days, if the violation has not been remedied, in accordance with 24 VSA Chapter 59 § 1974a, and Chapter 117 § 4451 and § 4452; any person who is found to have violated this bylaw shall be fined by the court not more than \$200.00 for each offense. No action may be brought under this section unless such notice as required has been given as described above in this part. In default of payment of the fine, the violator shall pay double the amount of the fine. Each day that a violation is continued shall constitute a separate offense.
- E. If any appeals have been resolved, but the violation remains, the FA shall submit a declaration to the Administrator of the National Flood Insurance Program requesting a denial of flood insurance to the violator. 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 bylaw, (c) a clear statement that the Floodplain Administrator 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.

XI. Waivers

- A. The purpose of a waiver is to allow for the reduction of dimensional requirements that might not meet the standards necessary to grant a variance.
1. Pursuant to 24 V.S.A. § 4414(8), waivers to dimensional requirements of this bylaw may be granted by the *[insert appropriate DRB or BOA]* after considering the Waiver Criteria in Section XI.A(3) below. The burden of proof is on the applicant to demonstrate that the waiver requested meets the Waiver Criteria.
 2. A waiver may be granted to any of the dimensional requirements in this bylaw.

NOTE: This does not apply to Base Flood Elevations or elevation requirements, or to boundaries of Regulated Flood Hazard Areas. Boundaries of Regulated Flood Hazard Areas can only be changed according to section IV.D of this bylaw.

3. A waiver within the 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.
4. Waiver Criteria. The *[insert appropriate DRB or BOA]* may grant a waiver(s) to a dimensional requirement(s) after making findings on the following criteria:

- i. The waiver is helpful or necessary to allow for reasonable use of the property.
- ii. The waiver is the minimum reduction in the dimensional requirement that will enable the reasonable use of the property.
- iii. Any adverse effects of the waiver are mitigated by design, screening, or other remedies.
- iv. The need for a waiver was not created by past decisions of the applicant.
- v. The proposed project will still conform to the *[Town Plan]*.
- vi. The proposed project will still conform to the purpose of this bylaw, as stated in Section II of this bylaw.
- vii. The proposed project will not have an undue adverse effect on the following:
 - a) Surrounding properties and property values
 - b) The character and aesthetics of the neighborhood
 - c) Traffic patterns and circulation
 - d) Public health, safety, and utility services
 - e) Stormwater management
 - f) Water and wastewater capacity
 - g) Disability accessibility, fire safety, and other requirements of the law
 - h) Energy conservation and renewable energy structures
 - i) Changes in channel location over time and the need to intervene with such changes
 - j) Any increase in the BFE within the Floodway
 - k) Together with all other existing and anticipated development in the municipality, more than a one (1) foot increase in the BFE at any point within the A or AE Area without floodway
 - l) ***[OPTIONAL – if chosen delete j and k above. However, if the higher standard for XIII.A.2 was chosen, this standard should be chosen.]*** Any increase in the BFE in any FEMA Identified SFHA. In A districts, BFE's are determined using the methodology described in Section IV.C(3) of this bylaw.

B. Waiver Application and Review Process

1. The application shall come to the *[insert appropriate DRB or BOA]* either from the applicant as an appeal of a decision of the FA or a referral from the FA.
2. Requests for waivers are considered by the *[insert appropriate DRB or BOA]*. Any request for a waiver will be warned and a public hearing held, subject to procedures set forth in Section V of this bylaw.
3. The *[insert appropriate DRB or BOA]* shall consider the opinion of abutters in deciding whether to grant the waiver.

4. The *[insert appropriate DRB or BOA]* shall consider comments from the NFIP Coordinator at ANR in deciding whether to grant the waiver.
5. In granting a decision in favor of the applicant, the *[insert appropriate DRB or BOA]* may attach reasonable conditions, including mitigation by design, screening, or other remedy.
6. Any waiver granted under this section shall be limited to the specific property to which it has been granted. A waiver on one property shall not be construed as a general guideline or standard for any other property.
7. Expiration: Waiver approvals shall expire by limitation if work is not completed within twenty-four (24) months after the date of issuance. All work must be completed as shown on any approved plan before the expiration date. One year extensions of this deadline may be granted by the FA prior to expiration. Requests for extensions must be made in writing.
8. Appeals: Any request for a Waiver that is denied may be appealed subject to Section V.E of this bylaw.

XII. Variances

If compliance with any of the requirements of this bylaw would result in an exceptional hardship to a prospective builder, developer or landowner, the **Town/City/Village of _____** may, upon request, grant relief from the strict application of the requirements. Variances may be granted in writing by the *[insert appropriate DRB or BOA]* only in accordance with all the criteria below and in 24 V.S.A. § 4469 and 44 CFR Section 60.6.

1. ***[Optional – if chosen delete 2 and 3 below. If the higher standard for XIII.A.2 was chosen, this standard should be chosen.]*** No variance shall be granted in the Special Flood Hazard Area that would cause any increase in the BFE. In A districts, BFE's are determined using the methodology described in Section IV.C.3 of this bylaw.
2. No variance shall be granted for any construction, development, use, or activity within any Floodway Area/District that would cause any increase in the BFE.
3. No variance shall be granted for any construction, development, use, or activity within any A or AE Area/District without floodway that would, together with all other existing and anticipated development in the municipality, increase the BFE more than one (1) foot at any point. In A districts, BFE's are determined using the methodology described in Section IV.C.3 of this bylaw.
4. 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 these conditions, and not the circumstances or conditions generally created by the provisions of the bylaw in the neighborhood or district in which the property is located.

5. That the unnecessary hardship has not been created by the appellant.
6. If granted, a variance shall involve only the least modification necessary to provide relief.
7. In granting any variance, the **Town/City/Village of _____** shall attach whatever reasonable conditions and safeguards it considers necessary in order to protect the public health, safety, and welfare, and to achieve the objectives of this bylaw.
8. A variance for development within the 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.
9. Whenever a variance is granted, the **Town/City/Village of _____** shall notify the applicant in writing that:
 - a. The granting of the variance may result in increased premium rates for flood insurance.
 - b. Such variances may increase the risks to life and property.
10. In reviewing any request for a variance, the **Town/City/Village of _____** shall consider, at a minimum, the following:
 - a. That there is good and sufficient cause.
 - b. That failure to grant the variance would result in exceptional hardship to the applicant.
 - c. That the granting of the variance will:
 - i. neither result in an unacceptable or prohibited increase in flood heights, additional threats to public safety, or extraordinary public expense,
 - ii. nor create nuisances, cause fraud on, or victimize the public, or conflict with any other applicable state or local bylaws and regulations.
11. A complete record of all variance requests and related actions shall be maintained by the **Town/City/Village of _____**. In addition, a report of all variances granted during the year for properties within the Special Flood Hazard Area and properties insured by the National Flood Insurance Program, shall be included in the annual report to the FEMA.

Notwithstanding any of the above, however, all structures shall be designed and constructed so as to have the capability of resisting the one-percent (1%) annual chance flood.

NOTE: In granting a variance for a property within the Special Flood Hazard Area or insured by the National Flood Insurance Program, municipalities are held to the standard provided in 44 CFR 60.6. If a variance is granted erroneously, a municipality remains liable for failing to meet the minimum standards of the National Flood Insurance Program.

XIII. 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” is a combination of materials to form a permanent structure having walls and a roof. Included shall be all manufactured homes and trailers to be used for human habitation.

“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 community 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 community.

“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.

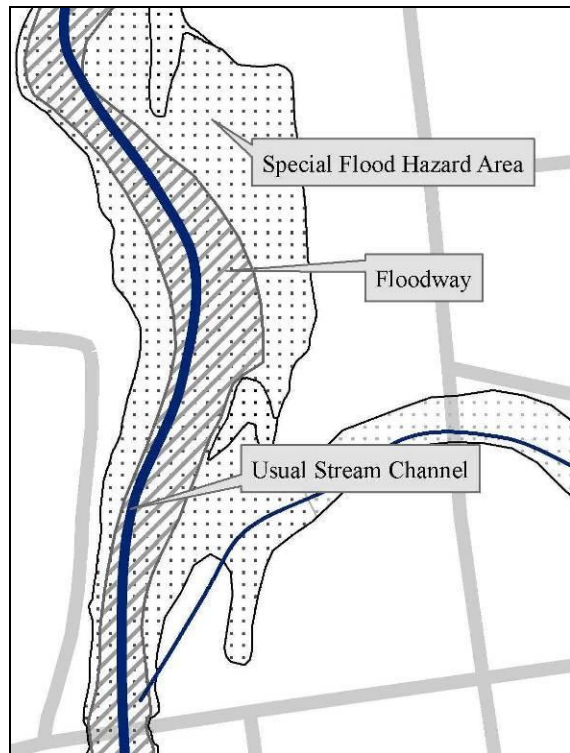
“Flood Insurance Rate Map” (FIRM) means the official map of a community, on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

“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 community 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 community. 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 exitway 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 [effective start date of this floodplain management bylaw] and includes any subsequent improvements to such structures. Any construction started after [effective date of community's first floodplain management bylaw adopted by the community] and before [effective start date of this floodplain management 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, bylawbylaws, and regulations prior to the enactment of the present bylaws, including a structure improperly authorized as a result of error by the Floodplain 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 Floodplain 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 MM/DD/YYYY, whichever is later, and, as such, would be required to be compliant with the regulations of the National Flood Insurance Program.

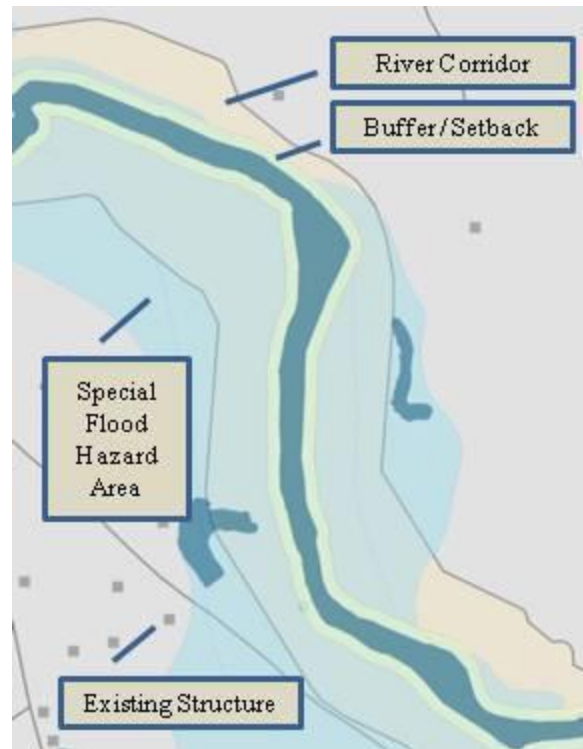
"Pre-FIRM Structure" is a structure for which construction or substantial improvement occurred on or before December 31, 1974 or before the effective date of the community's first Flood Insurance Rate Map (FIRM) dated MM/DD/YYYY, whichever is later, and, as such, would not be required to be compliant 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 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, AO, 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.

XIV. Enactment

A. Adoption

This Bylaw amends the *[Flood Hazard Area Regulations or other name given to current regulations, with most recent adoption date]* contained in *[list title of zoning document with adoption date, or remove this if stand-alone bylaw]* and shall be effective on *[choose either map effective date or any date that precedes the map effective date, including adoption date, twenty-one days after adoption, sixty days after adoption date, etc.]* and shall remain in force until modified, amended or rescinded by **Town/City/Village of _____**, _____ County, Vermont.

ENACTED AND ADOPTED by the *[Selectboard, Council, etc.]* this ____ day of

_____, _____.

Selectboard

Chair

ATTEST

Selectboard Assistant