

ENVIRONMENTAL PROTECTION RULE

CHAPTER 29

VERMONT FLOOD HAZARD AREA AND RIVER CORRIDOR RULE

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Agency of Natural Resources
Department of Environmental Conservation**

**Watershed Management Division
River Corridor & Floodplain Protection Program
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Vermont Flood Hazard Area and River Corridor Rule

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Subchapter 1 - Purpose; Policy; Authority; Enforcement

§29-101 Purpose

The purpose of this Rule is to:

- (a) Clarify how the state of Vermont will regulate development exempt from municipal regulation in flood hazard areas and river corridors to ensure compliance with National Flood Insurance Program (NFIP) criteria and enhance flood resilience.
- (b) Avoid and minimize the loss of life and property, the disruption of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding.
- (c) Ensure that the selection, design, creation, and use of development exempt from municipal regulation and located in flood hazard areas and river corridors is safe and accomplished in a manner that is consistent with the public health, safety, and welfare, and does not impair stream equilibrium, floodplain services, or the river corridor.

§29-102 Policy

- (a) Flood events are Vermont's most frequent and costly type of natural disaster. Historic floodplain encroachments and flood mitigation approaches have either maintained or increased the State's flood vulnerability over time.

A majority of communities in Vermont are enrolled in NFIP and are required to adopt and enforce minimum NFIP regulatory standards. It is the policy of the State to ensure that Vermont communities remain in good standing with NFIP. The Vermont Agency of Natural Resources (Agency or ANR) provides municipalities and agencies of state government regulatory technical assistance in evaluating land development proposals in designated flood hazard areas and river corridors.

NFIP minimum standards seek to reduce the risk to new structures in the flood hazard area, but do not provide an adequate means of protecting the beneficial functions of the floodplain resource or development that is already located within floodplains. In addition, NFIP maps and standards do not recognize the dynamic processes that take place within the river corridor that are essential to maintain floodplain function. Undeveloped floodplains and river corridors provide a suite of social, economic, and ecological benefits.

- (b) It is the policy of the state of Vermont to balance the need to protect new and existing investments from flood hazards with the need to protect natural and beneficial floodplain functions to reduce property loss and damage. (10 V.S.A. § 751, 10 V.S.A. § 1421). Improvements on property within flood hazard areas and river corridors are highly vulnerable to flood damage. Encroachments in flood hazard areas and river corridors result in cumulative degradation of natural floodplain function leading to increased flood elevations, velocities, and river instability.

The State recognizes that flood hazard vulnerability is due to loss of natural and beneficial floodplain functions and it is in the interest of the State to protect and restore floodplain function

to the maximum extent possible. Floodplain functions that reduce flood hazards include attenuation of flood flows, storage of sediment and debris, water quality protection, and groundwater infiltration. Over the last two centuries, humans have attempted to secure investments located in floodplains by employing channel management practices, such as riverbank armoring, straightening, dredging, and berming. Combined with the effects of changing land uses, these practices have created a degraded condition in many Vermont rivers and streams where flows are largely kept within the channel, resulting in increased stream power and reduced access to floodplains. Loss of floodplain access can trigger physical instability in a river system and lead to greater sensitivity to erosion hazards such as bank failures, dramatic changes in stream path, enlargement of the channel, and severe flood damages. NFIP maps and regulations fail to consider loss of floodplain access, which exacerbates the problem. Protection of the river corridor provides rivers and streams with the lateral space necessary to maintain or reestablish floodplain access and stability through natural, physical processes.

- (c) It is in the interest of the State to promote and encourage infill and redevelopment of designated centers and to discourage encroachments in undeveloped flood hazard areas and river corridors that provide for floodwater and sediment storage.

§29-103 Authority

- (a) This Rule shall apply to all development that is exempt from municipal regulation and that is:
 - (1) Located within a flood hazard area or river corridor of a municipality that has adopted a flood hazard bylaw or ordinance under 24 V.S.A. Chapter 117, or
 - (2) A state-owned or operated institution or facility that is located within a flood hazard area or river corridor, regardless of whether the municipality in which the institution or facility is located has adopted a flood hazard bylaw or ordinance. (10 V.S.A. § 754(a)(1)).
- (b) This Rule may establish requirements that exceed the requirements of NFIP for uses exempt from municipal regulation, provided the purpose of the requirements that exceed NFIP is to prevent or limit a risk of harm to life, property, or infrastructure from flooding. (10 V.S.A. § 754(c)).
- (c) This Rule is adopted by ANR pursuant to 10 V.S.A. § 754 to meet or exceed NFIP regulations, 44 C.F.R. §§ 59 and 60.
- (d) This Rule applies to development exempt from municipal regulation in designated flood hazard areas identified in the most current flood insurance studies and on maps published by the Department of Homeland Security, Federal Emergency Management Agency (FEMA), and NFIP, and provided by the Secretary of Natural Resources pursuant to 10 V.S.A. § 753.
- (e) This Rule applies to development exempt from municipal regulation in river corridors as delineated by the Agency.

§29-104 General Provisions

- (a) The provisions of this Rule shall not affect the requirement to comply with any other local, state, or federal laws or regulations. Where this Rule imposes a greater restriction on the activities regulated herein, the provisions herein shall take precedence.
- (b) All permits issued under this Rule shall require that the permittee receive all other necessary permits from state and federal agencies before work may begin.
- (c) If any portion of this Rule is held unconstitutional or invalid by a competent court, the remainder of this Rule shall not be affected.
- (d) This Rule does not imply that land outside of the areas covered by this Rule will be free from flood or fluvial erosion damages. This Rule shall not create liability on the part of the state of Vermont or any state official or employee thereof, for any flood damage that results from reliance on this Rule, or any administrative decision made consistent with this Rule.

§29-105 Enforcement

Violations of this Rule are subject to enforcement under applicable Vermont law including, 10 V.S.A. Chapter 32 and 10 V.S.A. Chapters 201 and 211. Failure to comply with the requirements of this Rule as outlined in a general or individual permit shall constitute a violation of this Rule.

Subchapter 2 – Definitions

§29-201 Definitions

For the purposes of this Rule, the following terms shall have the specified meaning. If a term is not defined, it shall have its common meaning.

“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.

“Agency” or “ANR” means the Vermont Agency of Natural Resources.

“Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year.

“Base Flood Elevation” (BFE) means 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.

“BFE” see Base Flood Elevation.

“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 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.

“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 managing a construction project, and not as a permanent structure.

“Critical facility” means development exempt from municipal regulation that is state-owned and operated and vital to public health and safety or a facility regulated under 30 V.S.A. § 248. For the purposes of this definition state-owned and operated facilities include facilities that provide services or functions related to public health and safety during emergency response and recovery and facilities that must be protected to a higher standard to protect public health and safety.

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

“Development exempt from municipal regulation” means the following for the purposes of this Rule: development and substantial improvements to structures that a municipality is prohibited by law from regulating, including: (1) public utility power generating plants and transmission facilities regulated under 30 V.S.A. § 248 (24 V.S.A. § 4413(b)), (2) telecommunications facilities regulated under 30 V.S.A. § 248a (30 V.S.A. § 248a(h)), (3) accepted agricultural practices and silvicultural practices, including farm structures as defined by 24 V.S.A. § 4413(d)(1) (24 V.S.A. § 4413(d)), and (4) state-owned and operated institutions and facilities (24 V.S.A. § 4413(a)(2)).

“Farm production area” means the part of a farm that includes the animal confinement area, the manure storage area, the feed storage area, the waste containment areas, washing or processing areas, the fertilizer and pesticide storage areas, and areas used for the storage, handling, treatment, or disposal of mortalities.

“FEMA” means the Federal Emergency Management Agency.

“Fill” means any placed material that permanently changes the natural grade, increases the elevation, or diminishes the flood storage capacity at a site. Temporary storage of material is not considered fill.

“FIRM” see Flood Insurance Rate Map.

“Flood” means (1) a general and temporary condition of partial or complete inundation of normally dry land areas from: (A) the overflow of inland or tidal waters; (B) the unusual and rapid accumulation or runoff of surface waters from any source; or (C) 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; or (2) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

“Floodplain” means any land area susceptible to being inundated by water from any source (see definition of “Flood”).

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

“Flood hazard” means those hazards related to inundation damages.

“Flood hazard area” means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The term has the same meaning as “area of special flood hazard” under 44 C.F.R. § 59.1.

“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” 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.

“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. Flood hazard areas and floodways may be shown on separate map panels.

“Fluvial erosion hazards” means those hazards related to the erosion or scouring of riverbeds and banks during high flow conditions of a river.

“Functionally dependent use” means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water (e.g., bridges and culverts).

“Historic structure” means any structure that is: (1) listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined

by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (2) certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; (3) individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or (4) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either: (A) by an approved state program as determined by the Secretary of the Interior or (B) directly by the Secretary of the Interior in states without approved programs.

“Infill development” means, for the purposes of designated centers, construction, installation, modification, renovation, or rehabilitation of land, interests in land, buildings, structures, facilities, or other improvements in an area that was not previously developed but is surrounded by existing development. For the purposes of farm production areas, infill development means construction on a vacant area within the farm production area.

“Letter of Map Amendment” (LOMA) is a letter issued by FEMA officially removing a structure or lot from the flood hazard area based on information provided by a certified engineer or surveyor. This is used where structures or lots are located above the base flood elevation and have been inadvertently included in the mapped special flood hazard area.

“Lowest floor” means the lowest floor of the lowest enclosed area of a building, including the basement, except 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.

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

“NFIP” means the National Flood Insurance Program.

“Public water access” means a state-owned access to a water of the State and, except for toilet facilities, shall not include structures as defined in this Rule.

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

“Redevelopment” means construction, installation, modification, renovation, or rehabilitation of land, interests in land, buildings, structures, facilities, or other improvements in a previously developed area within a designated center or farm production area. The term includes substantial improvements and repairs to substantially damaged buildings.

“Replacement structure” means a new building placed in the same location, footprint, and orientation as the pre-existing building.

“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 Agency in accordance with river corridor protection procedures. (10 V.S.A. § 1422(12)).

“Secretary” means the Secretary of Natural Resources or his or her authorized representative.

“Special flood hazard area” is synonymous with “flood hazard area” and “area of special flood hazard” (44 C.F.R. § 59.1), and is the floodplain within a community subject to a one percent or greater chance of flooding in any given year. This area is usually labeled Zone A, AO, AH, AE, or A1-30 in the most current flood insurance studies and on the maps published by FEMA. 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” includes substantial improvements, 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. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footing, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, regardless of whether that alteration affects the external dimensions of the building.

“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 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, replacement, or other improvement of a structure for which a building permit is issued after the date of adoption of this Rule, the cost of which, over five years, 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: (1) 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 (2) any alteration of a “historic structure”, provided that the alteration will not preclude the structure’s continued designation as a “historic structure”.

“Transportation network” means municipally-owned transportation infrastructure for which the Vermont Agency of Transportation is the responsible party under this Rule or state-owned roads and transportation infrastructure, including state forest highways and management roads. “Transportation network” shall not include “structures,” as defined in this Rule.

“Utility network” means above or below ground linear facilities subject to 30 V.S.A. § 248 or 248a.

“Violation” means noncompliance with the requirements of this Rule.

“Watercourse” means any perennial stream and shall not include ditches or other constructed channels primarily associated with land drainage or water conveyance through or around private or public infrastructure.

“Wet-floodproofing” means permanent or contingent measures applied to a structure that prevent or provide resistance to damage from flooding by allowing water to enter the structure in accordance with Technical Bulletin 7 published by FEMA.

Subchapter 3 – Applicability; Exemptions; Prohibitions

§29-301 Applicability

(a) Except as provided in §29- 302 of this Rule:

- (1) A person shall not engage in development exempt from municipal regulation within a flood hazard area or river corridor of a municipality that has adopted a flood hazard bylaw or ordinance under 24 V.S.A. Chapter 117 unless authorized by the Secretary in accordance with §29-303 or Subchapter 4 of this Rule, or
- (2) In the case of a state-owned or operated institution or facility, the State shall not engage in development within a flood hazard area or river corridor, regardless of whether the municipality in which the development is located has adopted a flood hazard bylaw or ordinance, unless authorized by the Secretary in accordance with §29-303 or Subchapter 4 of this Rule. (10 V.S.A. § 754(a)(1)).

(b) Lands to which this Rule applies:

(1) Flood Hazard Areas.

(A) Flood hazard areas shall be delineated in a manner consistent with the federal definition of *“area of special flood hazard”* (44 C.F.R § 59.1), i.e., that land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. (10 V.S.A. § 752(3)).

(B) Except as provided in subdivision (C) of this subsection, the flood hazard area shall be the area as shown on the most current flood insurance studies and maps published by the Department of Homeland Security, FEMA, NFIP, and as provided by the Secretary pursuant to 10 V.S.A. § 753.

(C) If there is disagreement with respect to the boundaries of the flood hazard area or the floodway, the applicant may contest the determination by providing a Letter of Map Amendment or Letter of Map Revision from FEMA, which shall constitute proof that the applicant’s property is not located in the flood hazard area or floodway.

(2) River Corridors. River corridors shall be delineated by ANR’s River Corridor and Floodplain Protection Program pursuant to 10 V.S.A. § 1427. Note, pursuant to 10 V.S.A. §§ 1422(12)

and 1427, a separate river corridor protection procedure is available for applicants wanting to contest a river corridor delineation.

(c) Base Flood Elevations and Floodway Limits in Flood Hazard Areas.

- (1) An applicant must use base flood elevations and floodway limits provided by NFIP in the most current flood insurance studies and accompanying maps. Where an approximate flood hazard area has been delineated on rivers for which base flood elevations and floodway limits have not been provided by NFIP, or on lakes for which base flood elevations have not been provided by NFIP, it is the applicant's responsibility to develop the necessary data. The applicant shall use data provided by FEMA or state or federal agencies where available.
- (2) For development along rivers and streams with watershed areas greater than two square miles, and where a flood hazard area has not been mapped, the Secretary may require base flood elevation and floodway data if documented flood damages or flood history exist indicating the risk of inundation hazards exist outside of the river corridor.

§29-302 Exemptions

The following activities shall not require approval under this Rule:

- (1) The removal of a structure or the removal of any other improvement to property in whole or in part that is located in a flood hazard area or river corridor, so long as the ground elevations under and adjacent to the removed structure or improvement remain unchanged.
- (2) Maintenance or repair of development in the usual course of business. This does not include substantial improvements to structures.
- (3) Repair, maintenance, replacement, or reconstruction of transportation and utility networks provided that they are of approximately the same vertical and horizontal dimension. This exemption shall include the repaving of transportation networks.

§29-303 Prohibitions and Exceptions

- (a) Development exempt from municipal regulation shall not be located within the floodway unless it meets the applicable requirements of Subchapter 4 of this Rule and the applicant must provide:
 - (1) Hydrologic and hydraulic analyses performed in accordance with standard engineering practice, by a registered professional engineer, certifying that the proposed development will not increase base flood elevations or velocities. The Secretary has determined that hydrologic and hydraulic analyses conducted in accordance with FEMA's *Guidelines and Standards for Risk Analysis and Mapping* are standard engineering practices; or
 - (2) Concurrence and approval from FEMA through the Conditional Letter of Map Revision review process confirming that the proposal meets the requirements of NFIP in 44 C.F.R. § 60.3(d)(3) or (d)(4).

- (b) Development exempt from municipal regulation shall not be allowed within the river corridor, except for:
- (1) Redevelopment and infill development within designated centers and farm production areas provided that the distance between the redevelopment or infill development and the river or stream is no less than the shortest distance between immediately adjacent existing above ground development and such river or stream or, pursuant to subdivisions (A) and (B) of this subsection, if the Secretary determines that the proposed redevelopment or infill development will not cause or contribute to fluvial erosion hazards. Outside of designated centers and farm production areas, development shall be allowed within the river corridor if the Secretary determines that the proposed development will not cause or contribute to fluvial erosion hazards. The Secretary must find that a proposed development will not:
 - (A) cause the river reach to depart from or further depart from the channel width, depth, meander pattern, and slope associated with natural stream process and equilibrium conditions; and
 - (B) result in an immediate need or anticipated future need for 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.
 - (2) Bridges, culverts, utility crossings, and associated transportation and utility networks; dams; and functionally dependent uses that must be placed in or over rivers and streams.
“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.
 - (3) Public water accesses, if the applicant demonstrates and the Secretary finds that the recreational area provides access to the water for the general public and promotes the public trust uses of the water. The Secretary may require additional permit conditions that further the purpose of this Rule, including conditions that prohibit the State from actively managing the section of river associated with the public water access and requiring that the river be allowed to attain the channel width, depth, meander pattern, and slope associated with its equilibrium condition.
- (c) Development exempt from municipal regulation and located in the flood hazard area or river corridor shall not have fully enclosed areas that are below grade on all sides (including below grade crawlspaces and basements).

Subchapter 4 –Standards for Issuance of a Flood Hazard Area & River Corridor Permit

§29-401 Standards for Issuance of an Individual Permit or Authorization under a General Permit

- (a) No Adverse Impact Standard (NAI) – River Corridor. An individual permit or authorization under a general permit for development exempt from municipal regulation located solely within the river corridor shall be granted, if the development complies with §29-303(b) and (c).

(b) Flood Hazard Area. An individual permit or authorization under a general permit for development exempt from municipal regulation located within the flood hazard area shall be granted if, pursuant to §29-401(c), the applicant demonstrates that the development:

- (1) Will not adversely affect the public safety by increasing flood elevations, flood velocities, or decreasing flood storage volume; and
- (2) Will not be in violation of NFIP Floodplain Management Criteria in 44 C.F.R. § 60.3.

(c) In determining whether or not proposed development exempt from municipal regulation and located in the flood hazard area meets the criteria for permit issuance in §29-401(b) above, the Secretary shall apply the following standards:

(1) No Adverse Impact Standard (NAI) – Compensatory Storage in Flood Fringe.

(A) Except as provided in § 401(c)(1)(C), development shall not decrease flood fringe storage capacity. Development that displaces floodwater storage in the flood fringe must provide compensatory storage to offset the impacts of the proposal, when the development will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows up to and including the base flood discharge. NAI volumetric analyses and supporting data must be provided by the applicant and certified by a registered professional engineer.

(B) The Secretary may require a hydraulic analysis to verify that a proposed development will not increase flood elevations or velocities on floodwaters that would materially impact adjacent landowners. Hydraulic analyses and supporting data must be provided by the applicant and certified by a registered professional engineer.

(C) Exceptions.

(i) The NAI requirement for compensatory storage may be waived for designs that have no more than a minimal effect on floodwater storage and will not divert floodwaters onto adjacent property. Examples of designs that have a minimal effect on floodwater storage include open foundation designs, utility work that is largely below grade, and minor above ground improvements such as fences or poles that minimally displace or divert floodwaters.

(ii) The NAI requirement for compensatory storage shall be waived for replacement structures provided:

(I) that there is no increase in the structure's footprint, and

(II) the proposal complies with the standards in §§ 29-401(a) and 29-401(c)(2)-(6).

(iii) The NAI requirement for compensatory storage is waived for replacement structures relocated to a less hazardous location within the flood fringe provided that there is no increase in the structure's footprint

- (2) Development must comply with the following requirements and shall be presumed to be reasonably safe from flooding if it complies with the following:
- (A) Development must be designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure;
 - (B) Development must be constructed with materials resistant to flood damage;
 - (C) Development must be constructed by methods and practices that minimize flood damage;
 - (D) Development must be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
 - (E) Development must be constructed with adequate drainage to reduce exposure to flood hazards; and
 - (F) Fuel storage tanks (as needed to serve buildings in the flood hazard area) must be located a minimum of one foot above the base flood elevation and be securely anchored to prevent flotation, and protected from flood forces and debris; or storage tanks may be placed above or below ground, if securely anchored and certified by a qualified professional that the design is watertight and will resist buoyancy, scour and uplift forces, and that the fuel storage tank vent is located at least one foot above the base flood elevation.

(3) Standards for structures.

- (A) Except for critical facilities regulated by §29-401(c)(3)(B) and structures that may be wet-floodproofed pursuant to §29-401(c)(3)(C), structures to be constructed, placed, replaced, substantially improved, or that have been determined to meet the definition of substantial damage in the flood hazard area shall:
- (i) Be located such that the lowest floor is at least two feet above the base flood elevation. Support structures and other foundation members shall be certified by a registered professional engineer or architect as designed in accordance with ASCE 24-05, *Flood Resistant Design and Construction*, or shall be constructed with designs meeting this standard. Elevation must be documented, in as-built condition, with a FEMA Elevation Certificate, provided to the Secretary within 90 days of project completion; or
 - (ii) 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 issued pursuant to this Rule 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.

- (B) Critical facilities to be constructed, placed, replaced, substantially improved, or that have been determined to meet the definition of substantial damage shall have the lowest floor elevated or floodproofed, pursuant to §29-401(c)(3)(A)(ii), to at least the 500-year flood elevation or two feet above the base flood elevation, whichever is greater.
 - (C) The Secretary shall not issue a permit for fully enclosed areas that are above grade, below the lowest floor, below base flood elevation, and subject to flooding; or for structures used for parking or storage, such as barns, to be constructed, placed, replaced, substantially improved, or that have been determined to meet the definition of substantial damage, unless:
 - (i) The structure is solely used for parking of vehicles, storage, or building access, and such a condition is clearly stated in the permit;
 - (ii) The structure is designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs must be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
 - (I) 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;
 - (II) The bottom of all openings shall be no higher than one foot above grade; and
 - (III) 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) The permit includes a condition requiring that the enclosed area below the base flood elevation will not be converted to another use and that the Secretary shall have the ability to inspect the exterior and interior of the enclosed area, with previous notification to the structure owner, to ensure that the enclosure is in compliance with the permit condition.
 - (D) Structures to be constructed or substantially improved in Zone AO shall have the lowest floor, including the basement, elevated above the highest adjacent grade, at least as high as the depth number specified on the community's FIRM, or at least three feet if no depth number is specified. "Zone AO" is a sheet flow flood hazard area shown on the Flood Insurance Rate Map.
- (4) Trailers and vehicles. Recreational vehicles, equipment and boat trailers, portable toilets, and construction trailers placed in the flood hazard area must:
- (A) Be on-site for fewer than 180 consecutive days,
 - (B) Be currently, registered, licensed, and ready for highway use, or

- (C) Meet the permit requirements of §§ 29-401(c)(2) and 401(c)(3), as appropriate.
- (5) Small accessory structures. A small accessory structure of 500 square feet or less that represents a minimal investment need not be elevated to the base flood elevation, provided the structure meets the criteria in §§ 29-401(c)(2) and 401(c)(3)(c)(ii) and (iii).
- (6) Wastewater and potable water supplies. Wastewater and potable water supply systems shall be in compliance with state of Vermont Environmental Protection Rules, Chapter 1, Wastewater System and Potable Water Supply Rules.
- (d) (1) No practicable alternative standard for transportation and utility networks. If a transportation or utility network project associated with an existing encroachment cannot meet the requirements of §§ 29-401(a), (b), (c)(1), and (c)(2), the Vermont Agency of Transportation or utility must demonstrate to the Secretary of Natural Resources that there is not a practicable alternative by:
- (A) Describing why the impacts of the transportation or utility network within the flood hazard area or river corridor cannot be avoided;
 - (B) Describing alternatives to the transportation or utility network and why they are not viable;
 - (C) Providing an analysis of impacts of the transportation or utility network;
 - (D) Providing actions to mitigate or minimize the impacts from the transportation or utility network; and
 - (E) Presenting the findings through public notification pursuant to §29-601(c).
- (3) The Secretary of Natural Resources may not delegate the implementation of this subsection to any other state agency.

Subchapter 5 – General Permits; Administration

§29-501 Purpose and Applicability

This subchapter sets forth a process for the development and issuance of general permits required by this Rule.

§29-502 Types of General Permits

- (a) The Secretary may issue general permits for discrete categories of development exempt from municipal regulation located in flood hazard areas or river corridors.
- (b) The Secretary may specify different types of reporting requirements in general permits, including reporting and non-reporting categories of activities. Activities seeking authorization under the reporting category shall submit an application for coverage under the general permit in accordance with §29-506 of this Rule and any additional application requirements specified in the general permit. Activities in a non-reporting category may proceed without the submission of an

application and are considered covered by the permit if eligible as specified in the permit and if conducted in compliance with all the applicable terms and conditions of the general permit.

§29-503 Issuance of General Permits; Notice and Hearing; Public Comment Period

- (a) The Secretary may prepare a draft general permit and shall provide notice of the draft within each geographic area to which the permit would apply and shall include at least all of the following:
 - (1) written notice to the clerk and administrative officer of the municipalities in the geographic areas covered by the general permit;
 - (2) written notice to each affected Vermont state agency and such other government agencies as the Secretary deems appropriate;
 - (3) notice to at least one newspaper that circulates generally within each geographic area to which the permit would apply;
 - (4) posting of the notice and a copy of the general permit on the Department's webpage;
 - (5) mailing notice and a copy of the proposed general permit to any individual, group, or organization upon request;
 - (6) mailing a copy of the notice and a copy of the proposed general permit to the chairs of the House Committees on Commerce and Economic Development; Fish, Wildlife and Water Resources; and Natural Resources and Energy; and the chairs of the Senate Committees on Economic Development, Housing and General Affairs and on Natural Resources and Energy. With this mailing, the Secretary shall also include a brief summary of any scientific information on which the proposed general permit is based. If the Secretary proposes to amend a general permit previously issued under this chapter the Secretary shall also include an annotated text showing changes from the existing permit.
- (b) The notice of the draft general permit shall:
 - (1) accurately summarize the proposed general permit, including a summary of eligible activities and its terms and conditions;
 - (2) indicate how and where copies of the proposed permit can be obtained and information on the procedure for submitting comments and requesting a public information meeting;
 - (3) contact information; and
 - (4) the deadline for submission of comments and the request for a public information meeting.
- (c) The Secretary shall provide a period of not less than 30 days following the date of publication in newspapers of general circulation during which any person may submit written comments on the proposed general permit.

- (d) Any request for a public meeting shall be submitted to the Secretary in writing no later than the end of the public comment period. The Secretary shall hold a public meeting if one is requested. The Secretary shall publish notice of any public meeting at least 30 days prior to the meeting. Notice shall be given in the same manner as notice of the draft general permit, except that the Secretary need not set a new comment deadline or provide, with the notice of the meeting, a copy of the proposed general permit to any person or entity to which the Secretary has already provided a copy. Any person shall be permitted to submit oral or written statements and data concerning the proposed general permit at the informational meeting. All statements, comments, and data presented at the meeting shall be retained by the Secretary and considered in the formulation of the Secretary's determinations regarding the final general permit.
- (e) The Secretary may adopt a final general permit following consideration of any written comments submitted on the general permit and any statements, comments and data presented at a public information meeting on the permit. Where the Secretary decides, in adopting a final general permit, to overrule substantial arguments and considerations raised for or against the original proposal, the Secretary's final adoption of the final general permit shall include a responsiveness summary stating the reasons for the Secretary's decision.
- (f) The Secretary shall provide copies by direct mail or email of any final general permit and a response summary addressing all substantial arguments and considerations received during the public comment period to all persons receiving notice prior to or during the comment period and to all persons who file timely written comments.

§29-504 Duration of General Permit and Authorizations Under the General Permit

- (a) A general permit shall be valid for a period of five years from the date of issuance, unless the Secretary specifies a shorter period of time.
- (b) Authorizations under the general permit shall be valid for an indefinite term from the date of issuance, unless the Secretary specifies a shorter period of time. If the authorization is for an indefinite term, it shall be recorded in the land records of the municipality in which the permitted project is located.

§29-505 Modification of General Permit

The Secretary may modify a general permit in the same manner as described in §29-503 of this Rule.

§29-506 Authorizations Under the General Permit

- (a) Purpose. This section sets forth a process for the issuance of authorizations under a general permit.
- (b) Application for coverage under the general permit.
 - (1) An applicant for coverage under the general permit shall comply with all application requirements in the general permit that are applicable to the proposed activity. Activities may be listed in a reporting category that may become eligible under a non-reporting category where certain standards are met. Proponents of reported activities that have such eligibility standards shall contact the Secretary for a determination to proceed under a non-reporting

category. Activities required to proceed under a reporting category must submit a completed application form with all necessary attachments and fees and all other application information required by the general permit and Secretary.

- (2) An applicant proposing to conduct an activity that is a non-reporting activity under the general permit does not need to submit an application to the Secretary as long as the activity is eligible as specified in the permit and if the activity is conducted in compliance with all the applicable terms and conditions of the general permit.
 - (3) The Secretary may require an applicant to submit any additional information that the Secretary considers necessary in order to make a decision on the issuance or denial of an authorization. The Secretary may deny coverage if the requested information is not provided within 60 days of the Secretary's request.
 - (4) Activities that are listed in a reporting category that are required to submit an application, shall submit a completed application form with all necessary attachments and fees and all other application information required by the general permit and the Secretary.
 - (5) The Secretary may require an applicant to submit any additional information that the Secretary considers necessary to make a decision on the issuance or denial of authorization. The Secretary may deny authorization under the general permit if the project proponent does not provide requested information to the Secretary within 60 days of the Secretary's request.
- (c) Public notice of application under the general permit.
- (1) Once the Secretary determines that an application is complete, the applicant shall provide notice, on a form provided by the Secretary, to the clerk of the municipality in which the activity is proposed, to the local and regional planning commissions, and to the owners of land adjoining the site of the proposed activity.
 - (2) The applicant shall provide a copy of this notice to the Secretary, with such confirmation as the Secretary deems adequate to demonstrate that the clerk, planning commissions, and adjoining landowners have received the notice.
 - (3) Following receipt of the notice, the Secretary shall post the notice on the Agency's website and provide an opportunity of at least ten working days for written comment regarding whether the application complies with the terms and conditions of the general permit under which coverage is sought.
- (d) Issuance or denial of authorizations under the general permit. Proponents of activities for coverage under the general permit shall have the burden to show that a proposed activity complies with this Rule, the standards set forth in this Rule, and any requirements in the general permit applicable to the proposed activity.
- (1) The Secretary may issue an authorization under a general permit after determining that each of the following applies:
 - (A) The filings required in §29-506(b) and (c) are complete;

- (B) The activity is eligible for coverage under and will meet the terms and conditions of the general permit; and
 - (C) The activity will meet the standards set forth in this Rule.
- (2) The Secretary may deny a request for a general permit authorization and require application for an individual permit as provided in Subchapter 6 of this Rule.
 - (3) Denials of an authorization under a general permit shall be issued in writing, stating the reasons for the denial.
- (e) Notice of issuance or denial of permit. The Secretary shall provide notice of the issuance or denial of the permit to the clerk of the town in which the project is located and each abutting landowner and to any person who files written comments on the application.
 - (f) Transfer of authorization. A permittee may transfer an authorization by submitting a notice of transfer on a form provided by the Secretary. The notice shall be submitted at least five days prior to transfer and shall include, at a minimum, the name and address of the new permittee, the name and address of the former permittee, the date of transfer, and a statement signed by the new permittee stating that the permittee had read and is familiar with the terms and conditions of the permit and the authorization and agrees to comply with the permit and authorization.
 - (g) Changes to authorized activity. The permittee shall notify the Secretary of any planned changes to the authorized activity prior to carrying out such changes. The Secretary may require the permittee to submit additional information on the proposed change. The Secretary shall determine the appropriateness of continued authorization under the general permit and may require an amendment to the authorization, including renouncing the project for public comment, or may require that the permittee apply for an individual permit.
 - (h) Revocation of authorization. The Secretary may, after notice and opportunity for a hearing, revoke or suspend, in whole or in part, an authorization under a permit for cause, including:
 - (1) violation of the terms or conditions of the permit;
 - (2) obtaining authorization by misrepresentation or failure to fully disclose all relevant facts;
 - (3) a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized activity.
 - (i) Requiring coverage under an individual permit. The Secretary may require any applicant for or permittee authorized under a general permit to apply for an individual permit. The Secretary may require an individual permit if any one of the following applies:
 - (1) In consideration of each of the following factors:
 - (A) the current physical condition and flood loss history of the flood hazard area within which the activity would occur;

- (B) the size and scope of the applicant's or permittee's activity;
 - (C) the quantity and nature of the activity; and
 - (D) other relevant factors.
- (2) The permittee is not in compliance with the terms and conditions of the general permit.
 - (3) The application does not qualify for coverage under a general permit issued by the Secretary.
 - (4) A change has occurred in the availability of demonstrated technology or practices for the activity.
 - (5) NFIP requirements have been adopted that conflict with one or more provisions of a general permit issued under this Rule.
- (j) If the Secretary finds that a permittee authorized by a general permit is required to apply for an individual permit, the Secretary shall so notify the permittee. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a time for the permittee to file the application, and a statement that on the effective date of the individual permit, the permittee's authorization under the general permit shall automatically terminate. The Secretary may grant additional time upon request of the applicant.
- (k) Requiring authorization under a general permit.
- (1) The Secretary may require any person applying for an individual permit to apply for coverage under a general permit provided the Secretary finds the activity complies with all terms and conditions of the general permit and the discharge is more appropriately covered under the general permit.
 - (2) Any permittee subject to an individual permit shall be authorized under the terms of a general permit upon issuance of a notice by the Secretary authorizing the activity under the general permit. The individual permit's applicability to the permittee is automatically terminated on the effective date of the authorization under the general permit.

Subchapter 6 – Individual Permits

§29-601 Individual Permits

- (a) Purpose. This section sets forth a process for the issuance of individual flood hazard area permits.
- (b) Application.
- (1) An applicant for an individual permit shall submit a completed application form with all necessary attachments and fees.

- (2) The Secretary may require an applicant to submit additional information that the Secretary considers necessary to make a decision on the issuance or denial of an individual permit. The Secretary may deny the individual permit if the requested information is not provided within 60 days of the Secretary's requests.
- (c) Public notice. Upon a determination by the Secretary that an application is complete, the applicant shall file a copy of the application for posting by the town clerk of the town in which the development is located, and shall mail a copy of the application to each abutting landowner. The names of these property owners shall be provided on the application.
- (d) Public comment on individual permit application. The applicant shall notify the Secretary that the applicant has provided notice to the town clerk and abutting landowners as required by §29-601(c) of this Rule. The Secretary shall post notice on the Agency's website and shall provide an opportunity for public comment on the application for no less than ten days. At the Secretary's discretion, the Secretary may provide additional notice of the permit application and may conduct a public meeting to receive additional public comment.
- (e) Issuance or denial of individual permit.
- (1) The Secretary may issue an individual permit after determining that:
- (A) The filings required by §§29-601(b) and (c) are complete;
- (B) The activity will meet the standards set forth in §29-303(b) and (c) and Subchapter 4 of this Rule.
- (2) Denials for an authorization under an individual permit shall be issued in writing, stating the reasons for the denial.
- (f) Notice of issuance or denial of permit. The Secretary shall provide notice of the issuance or denial of the permit to the clerk of the town in which the project is located and each abutting landowner and to any person who files written comments on the application.
- (g) Transfer of individual permit. A permittee may transfer an individual permit by submitting a notice of transfer on a form provided by the Secretary. The notice shall be submitted at least ten days prior to transfer and shall include, at a minimum, the name and address of the new permittee, the name and address of the former permittee, the date of transfer, and a statement signed by the new permittee stating that he/she has read and is familiar with the terms and conditions of the individual permit and agrees to comply with the individual permit.
- (h) Changes to authorized activity. The permittee shall notify the Secretary of any planned changes to the authorized activity prior to carrying out such changes. The Secretary may require the permittee to submit additional information on the proposed change. The Secretary may require an amendment to the individual permit, which may require re-noticing of the project for public comment.
- (i) Revocation of individual permit. The Secretary may, after notice and opportunity for a hearing, revoke or suspend, in whole or in part, an individual permit for cause, including:

- (1) Violation of the terms or conditions of the individual permit;
- (2) Obtaining authorization by misrepresentation or failure to fully disclose all relevant facts;
- (3) A change in any condition or new information that requires either a temporary or permanent reduction or elimination of the authorized activity.

Subchapter 7 – Appeals

§29-701 – Appeals

Appeals from any act or decision of the Secretary under this Rule are governed by 10 V.S.A. § 8504 or 10 V.S.A. § 8506.

Subchapter 8 - Transition

§29-801 – Transition

A permit for development exempt from municipal regulation shall not be required for a project that has applied for or obtained all necessary local, state, and federal permits as of March 1, 2015. If no local, state, or federal permit is required for a project, but construction commences prior to March 1, 2015, a permit under this Rule shall not be required.