

**STATE OF VERMONT  
AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**DRAFT GENERAL PERMIT 3-9050 (2019)  
FOR OPERATIONAL STORMWATER DISCHARGES**

Effective **MONTH DAY**, 2019

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## **PART 1: COVERAGE UNDER THIS GENERAL PERMIT**

### **1.1 Introduction**

This general permit is issued by the Secretary (“Secretary”) of the Agency of Natural Resources (“Agency”) for discharges of regulated stormwater runoff to waters of the State of Vermont. This general permit provides coverage for the following categories of projects: proposed new or redeveloped impervious surface; renewal of previously-permitted projects; impervious surface of three or more acres; certain existing unpermitted discharges determined to require permit coverage by the Secretary; stormwater offset projects; and projects subject to stormwater impact fees. This general permit covers discharges to all waters of the State, including stormwater-impaired waters, Lake Champlain, Lake Memphremagog, and waters that contribute to the impairment of Lake Champlain or Lake Memphremagog, where a TMDL or water quality remediation plan has, or has not, been adopted.

This general permit supersedes previously issued General Permit 3-9010, General Permit 3-9015, and General Permit 3-9030. Under this general permit, existing valid authorizations under General Permit 3-9010, General Permit 3-9015, and General Permit 3-9030 shall remain in full force and effect.

This general permit complies with the minimum requirements for stormwater permits issued by the State of Vermont as the approved authority to administer a permit program consistent with the federal National Pollutant Discharge Elimination System (NPDES). All authorizations under this general permit shall be issued pursuant to the State’s approved authority.

### **1.2 Legal Authority**

This general permit is issued pursuant to the Vermont Water Pollution Control statute, 10 V.S.A. Chapter 47, specifically §§ 1258 and 1264 and the Vermont Stormwater Permitting Rule (Environmental Protection Rules, Chapter 22).

### **1.3 Permit Coverage Required**

The following activities require coverage under this general permit, unless the Secretary determines the discharge requires coverage under an individual permit pursuant to Subpart 8.5 of this permit:

- A. To commence the development or redevelopment of one or more acres of impervious surface;
- B. Effective July 1, 2022, to commence the development or redevelopment of one-half acre or more acres of impervious surface;

- C. To commence the expansion of existing impervious surface by more than 5,000 square feet, such that the total resulting impervious surface is equal to or greater than one acre;
- D. A discharge of regulated stormwater runoff from impervious surface of three or more acres, which was never previously permitted or was permitted under an individual permit or general permit that did not incorporate the requirements of the 2002 Stormwater Management Manual or any subsequently adopted Stormwater Management Manual. If any portion of an impervious surface of three or more acres in size was not permitted or was permitted under an individual permit or general permit that did not incorporate the requirements of the 2002 Stormwater Management Manual or any subsequently adopted Stormwater Management Manual, the entire site shall be subject to the requirements of this general permit;
- E. A designated discharge of stormwater runoff from impervious surface that the Secretary has determined requires permit coverage pursuant to the Secretary's authority under Section 22-107(c)(1) of the Stormwater Permitting Rule (Environmental Protection Rules, Ch. 22) and 40 C.F.R. § 122.26(a)(9)(i)(C) and (D); and
- F. Renewals of the following previously-issued authorizations for discharges of stormwater runoff:
  - 1. Projects authorized under General Permit 3-9030;
  - 2. Projects authorized under an individual state stormwater discharge permit;
  - 3. Projects authorized under a temporary pollution permit pursuant to 10 V.S.A. § 1265;
  - 4. Projects authorized under General Permit 3-9015; and
  - 5. Projects authorized under General Permit 3-9010.

#### **1.4 Phased Development and Circumvention**

- A. If the development, redevelopment, or expansion of impervious surface does not meet the permit thresholds under Subpart 1.3 but is part of a common plan of development that will meet such thresholds, then permit coverage for each phase is required. If the Secretary determines that a municipal or state transportation project has independent utility from adjoining and adjacent impervious surfaces and the project does not trigger Subpart 1.4.B, such project shall not be considered part of a common plan of development.
- B. If the Secretary determines that a person has separated a single project into components in order to avoid the regulatory minimum threshold or other requirements of the Stormwater Permitting Rule (Environmental Protection Rules, Chapter 22), the person shall be required to submit a permit application for the component parts.

- C. This Subpart does not apply to the types of scattered or non-contiguous projects that are set forth as planned development in long-range transportation plans, regional plans, municipal plans, or housing authority plans.

### **1.5 Exemptions from Coverage under this General Permit**

Coverage under this permit is not required for:

- A. Stormwater runoff from farms in compliance with agricultural practices adopted by the Secretary of Agriculture, Food and Markets;
- B. Stormwater runoff from concentrated animal feeding operations permitted under 10 V.S.A. § 1263(g);
- C. Stormwater runoff from accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation, including practices which are in compliance with the Acceptable Management Practices for Maintaining Quality on Logging Jobs in Vermont, as adopted by the Commissioner of Forests, Parks and Recreation;
- D. Stormwater runoff permitted under 10 V.S.A. § 1263 as part of a permit for the discharge of sanitary or industrial wastes;
- E. Stormwater runoff from dams and the portion of a bridge superstructure that spans the ordinary high water mark of a water. For purposes of this subpart, a “dam” shall have the meaning set forth in 10 V.S.A. § 1080(6); and
- F. Stormwater runoff requiring permit coverage under Subpart 1.3.B of this general permit, provided one of the following transition exemptions applies:
  - 1. Except for applications for permits issued pursuant to Section 22-107(b)(6) (construction permits) of the Stormwater Permitting Rule (Environmental Protection Rules, Ch. 22), complete applications for all local, State, and federal permits related to the regulation of land use or a discharge to waters of the State have been submitted as of July 1, 2022, the applicant does not subsequently file an application for a permit amendment that would have an adverse impact on water quality, and substantial construction of the project commences within two years from July 1, 2022;
  - 2. Except for permits issued pursuant to Section 22-107(b)(6) (construction permits) of the Stormwater Permitting Rule (Environmental Protection Rules, Ch. 22), all local, State, and federal permits related to the regulation of land use or a discharge to waters of the State have been obtained as of July 1, 2022, and substantial construction of the project commences within two years from July 1, 2022;
  - 3. Except for permits issued pursuant to Section 22-107(b)(6) (construction permits) of the Stormwater Permitting Rule (Environmental Protection Rules, Ch. 22), no local, State, or federal permits related to the regulation of land use or a discharge to waters of

the State are required, and substantial construction of the project commences within two years from July 1, 2022; or,

4. The construction, redevelopment, or expansion is a public transportation project, and as of July 1, 2022, the Agency of Transportation or the municipality principally responsible for the project has initiated right-of-way valuation activities or determined that right-of-way acquisition is not necessary, and substantial construction of the project commences within five years from July 1, 2022.

G. Impervious surfaces not requiring permit coverage under Subparts 1.5 (A), (B), (C), or (E) of this general permit shall not be counted towards the total resulting impervious surface for purposes of determining whether a permit is required under this general permit.

## **1.6 Municipalities and Stormwater Utilities That Have Assumed Full Legal Responsibility For Specific Impervious Surface**

If a municipality or stormwater utility has assumed full legal responsibility for the discharge of stormwater runoff from an impervious surface and has permit coverage for such impervious surface pursuant to an authorization issued under this general permit, or an individual permit, the requirements for permit coverage under Subparts 1.3.A-D and F shall be satisfied. For purposes of this general permit, “full legal responsibility” means legal control of the stormwater system, including a legal right to access the stormwater system, a legal duty to properly maintain the stormwater system, and a legal duty to repair and replace the stormwater system when it no longer adequately protects waters of the State.

## **1.7 Definitions**

“Agency” means the Vermont Agency of Natural Resources.

“Applicant” means a person or persons applying for permit coverage.

“Authorization” means approval issued by the Secretary.

“Best Management Practice,” or “BMP” means a schedule of activities, prohibitions or practices, maintenance procedures, green infrastructure, and other management practices to prevent or reduce water pollution.

“Clean Water Act” means the federal Clean Water Act, 33 U.S.C. § 1251 et. seq.

“Common plan of development” means development or redevelopment that is completed in phases or stages when such phases or stages share a common state or local permit related to the regulation of land use, the discharge of wastewater or a discharge to surface waters or groundwater, or a development designed with common infrastructure. Common plans include subdivisions, industrial and commercial parks, university and other campuses, and ski areas.

“Department” means the Vermont Department of Environmental Conservation.

“Designer” means a professional engineer practicing within the scope of their engineering specialty and licensed in the State of Vermont.

“Development” means the construction of impervious surface on a tract or tracts of land where no impervious surface previously existed.

“Discharge” means the placing, depositing, or emission of any wastes, directly or indirectly, into an injection well or into the waters of the State.

“Existing development” or “existing impervious surface” means an impervious surface that is in existence, regardless of whether it ever required a stormwater permit.

“Expansion” means an increase or addition of impervious surface, such that the total resulting impervious surface is greater than the minimum regulatory threshold.

“Impervious surface” means those man made surfaces, including paved and unpaved roads, parking areas, roofs, driveways, and walkways, from which precipitation runs off rather than infiltrates.

“Impervious surface of three or more acres” means a single tract of land with three or more acres of impervious surface; a project on a tract or tracts of land that was previously authorized under a stormwater permit that authorized the discharge of stormwater from three or more acres of impervious surface; and impervious surfaces adjacent to or adjoining the foregoing types of impervious surfaces where the surfaces in question are part of a related operation, such as a hospital, resort, or campus.

“Linear project” or “linear transportation facility” means, but is not limited to, highways, roads, streets, paths, and sidewalks.

“Municipality” means an incorporated city, town, village or gore, a fire district established pursuant to state law, or any other duly authorized political subdivision of the State.

“New development” means the construction of impervious surface on a tract or tracts of land where no impervious surface previously existed.

“Offset” means a State-permitted or State-approved action or project that mitigates the impacts that a discharge of regulated stormwater runoff has on receiving waters.

“Offset charge capacity” means the reduction in sediment load, nutrient load, or hydrologic impact that an offset project or projects eligible for receipt of stormwater impact fees generates.

“Owner” or “landowner” means a person that holds title, right, or interest in the impervious surface or stormwater system sufficient to ensure compliance with this general permit.

“Permittee” means a person who has received authorization to discharge pursuant to this general permit from the Secretary.

“Person” means any individual; partnership; company; corporation; association; joint venture; trust; municipality; the state of Vermont or any agency, department, or subdivision of the State; any federal agency; or any other legal or commercial entity.

“Project” means the development, expansion, and/or redevelopment of impervious surface, or existing impervious surface that the Secretary is considering for coverage under an individual or general permit or which has received coverage under an individual or general permit.

“Redevelopment” or “redevelop” means the construction or reconstruction of an impervious surface where an impervious surface already exists when such new construction involves substantial site grading, substantial subsurface excavation, or substantial modification of an existing stormwater conveyance, such that the total of impervious surface to be constructed or reconstructed is greater than the minimum regulatory threshold. Redevelopment does not mean public road management activities, including any crack sealing, patching, coldplaning, resurfacing, reclaiming, or grading treatments used to maintain pavement, bridges, and unpaved roads.

“Regulated stormwater runoff” means precipitation, snowmelt, and the material dissolved or suspended in precipitation and snowmelt that runs off impervious surfaces and discharges into surface waters or into groundwater via infiltration.

“Secretary” means the Secretary of the Agency of Natural Resources or the Secretary’s duly authorized representative.

“Site” means either the drainage area that includes all portions of a project contributing stormwater runoff to one or more discharge points, or the area that includes all portions of disturbed area within a project contributing stormwater runoff to one or more discharge points. The choice of either of these two methods of calculating the site area shall be at the discretion of the designer. In cases where there are multiple discharges to one or more waters, “site” shall mean the total area of the sub-watersheds. For linear projects, including highways, roads, streets, paths, and sidewalks, the term “site” includes the entire right-of-way within the limits of the proposed work, or all portions of disturbed area within the right-of-way associated with the project. The method of calculating the site area for linear projects shall be at the discretion of the designer. Calculations of site area are subject to the Secretary’s review.

“Stormwater discharge permit” or “stormwater permit” means a permit issued by the Secretary for the discharge of regulated stormwater runoff.

“Stormwater impact fee” means the monetary charge assessed to an applicant for the discharge of regulated stormwater runoff in order to mitigate impacts that the discharger is unable to control through on-site treatment or completion of an offset on a site owned or controlled by the applicant.

“Stormwater-impaired water” means a water of the state that the Secretary determines is significantly impaired by discharges of regulated stormwater runoff.

“Stormwater runoff” means precipitation and snowmelt that does not infiltrate into the soil, including material dissolved or suspended in it, but does not include discharges from undisturbed natural terrain or wastes from combined sewer overflows.

“Stormwater system” includes the storm sewers; outfall sewers; surface drains; manmade wetlands; channels; ditches; wet and dry bottom basins; rain gardens; and other control equipment necessary and appurtenant to the collection, transportation, conveyance, pumping, treatment, disposal, and discharge of regulated stormwater runoff.

“Stormwater utility” means a system adopted by a municipality or group of municipalities under 24 V.S.A. Chapter 97, 101, or 105 for the management of stormwater runoff.

“STP” means a stormwater treatment practice, which is a specific device or technique designed to provide stormwater quality treatment and/or quantity control.

“Total resulting impervious surface” means the total impervious area resulting from development, redevelopment, or expansion of impervious surface plus existing impervious surface and any impervious surface that is part of a common plan of development.

“TMDL” or “Total Maximum Daily Load” means the calculations and plan for meeting water quality standards approved by the U.S. Environmental Protection Agency (EPA) and prepared pursuant to 33 U.S.C. § 1313(d) and federal regulations adopted under that law.

“Tract of land” means a portion of land with defined boundaries created by a deed. A deed may describe one or more tracts.

“Vermont Stormwater Management Manual” or “Stormwater Management Manual” means the Agency of Natural Resources’ Stormwater Management Manual, as adopted and amended by rule.

“Water quality remediation plan” or “WQRP” means a plan, other than a TMDL, designed to bring an impaired water into compliance with applicable water quality standards in accordance with 40 C.F.R. § 130.7(b)(1)(ii) and (iii).

“Waters” and “waters of the State” includes all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs, and all bodies of surface waters, artificial or natural, which are contained within, flow through, or border upon the State or any portion of it.

“Watershed” means the total area of land contributing runoff to a specific point of interest within a receiving water.

“Watershed improvement permit” means a general permit specific to a stormwater-impaired water that is designed to apply management strategies to existing and new discharges and that

includes a schedule of compliance no longer than five years reasonably designed to assure attainment of the Vermont Water Quality Standards in the receiving waters.

## **PART 2: APPLICATION REQUIREMENTS AND IMPLEMENTATION DEADLINES**

### **2.1 Who Must File an Application**

- A. An applicant for coverage under this permit shall own the impervious surface for which permit coverage is required and the lands on which the stormwater system required to comply with Subpart 3.1 of this general permit is located. If the applicant does not own the impervious surface, or lands on which the stormwater system used to comply with the requirements of Subpart 3.1 is located, the owner shall be a co-applicant, and the owner's name, address, and telephone number shall also be included.
- B. If the application is for a multi-lot development, the application shall include the owners' association, condominium association, or other common association as co-applicant. The Secretary may waive this requirement for existing developments on a case-by-case basis if a responsible party or parties accepts responsibility for the stormwater management system. If application is made for a new housing or commercial development, the developer and owners' association, condominium association, other common association, or other legal entity accepting responsibility for the stormwater management system shall apply as co-applicants.
- C. If the applicant is a municipality, stormwater utility, or the Vermont Agency of Transportation and does not own the impervious surface, or lands on which the stormwater system used to comply with the requirements of Subpart 3.1 (discharge requirements) is located, the owner is not required to be a co-applicant, if the municipality, stormwater utility, or Vermont Agency of Transportation has assumed full legal responsibility for the impervious surface or stormwater system.

### **2.2 Content of Application & Where to File**

- A. An application for coverage under this general permit shall include the following.
  - 1. A completed Notice of Intent (NOI) form with all necessary attachments and fees required by 3 V.S.A. § 2822. The NOI shall include the legal name, address and telephone number of all applicants; the site name, if there is one, and address; the type of discharges to be authorized; the receiving waters; and, any other information required by the Secretary. Application instructions are available at the Stormwater Program's website at: <http://dec.vermont.gov/watershed/stormwater/permit-information-applications-fees>.
  - 2. A certification of each of the following: if located within zone one or two of a public water source protection area, the activity is consistent with the purpose of the identified

source protection area and the approved source protection plan; and, if located within an overlay district established by a municipality pursuant to 24 V.S.A. § 4414(2) for the protection of aquifers or public water source protection areas, the activity is not inconsistent with the requirements of that overlay district.

3. A certification signed by a designer who is a professional engineer licensed pursuant to 26 V.S.A. Chapter 20 and practicing within the scope of their engineering specialty, except for applications to transfer an authorization, or for an administrative amendment.

4. All required fee payments made by check, payable to the State of Vermont.

5. For previously permitted projects, any past due operating fees shall be included with the application.

6. All applications for authorization under this permit shall be submitted in the format identified in the instructions accompanying the NOI form, by U.S. mail, or via an electronic NOI system if available.

7. All applications shall be submitted to the address identified in the instructions accompanying the NOI form.

B. Applications submitted pursuant to Subparts 1.3.A, B, C, D, and E and renewal applications submitted after the expiration of a previously-issued authorization pursuant to Subpart 1.3.F shall constitute original applications for purposes of 3 V.S.A. § 2822.

### **2.3 When to Submit a Notice of Intent for Permit Coverage**

An applicant requiring permit coverage under this general permit shall submit a notice of intent per the following schedule.

A. For new development, expansions, and redevelopment: prior to the construction or redevelopment of regulated impervious surface.

B. For renewal of an authorization under a general permit or an individual permit, except projects subject to Subpart 2.3.C: prior to expiration of the existing authorization under the general permit or the individual permit.

C. For renewal of an authorization under a general permit or an individual permit, where such authorization or individual permit is for a project subject to Subpart 1.3.D and will expire prior to twelve months from the effective date of this general permit, and provided the project continues to comply with the terms and conditions of the previously issued authorization or individual permit during the period between the expiration of that authorization or individual permit and issuance of the new authorization under Subpart 1.3.D: no later than twelve months from the effective date of this general permit.

D. For renewal of an authorization under a general permit or an individual permit that is expired as of the effective date of this general permit, where such authorization or individual permit is for a project in a stormwater-impaired water: no later than 12 months from the effective date of this general permit.

E. For projects with three or more acres of impervious surface, where the project was not previously permitted:

1. For projects within the watersheds of the following lake segments as identified in the Lake Champlain TMDLs:

a. Missisquoi Bay, Main Lake, Burlington Bay, and Shelburne Bay: no later than January 1, 2021

b. All other segments: no later than January 1, 2022

2. For projects within the watersheds of stormwater-impaired waters: no later than July 1, 2020.

3. For projects within the watershed of Lake Memphremagog: no later than October 1, 2022.

4. For projects not within the watersheds of a stormwater-impaired water, Lake Champlain, or Lake Memphremagog: no later than the date to be determined by the Secretary, which, pursuant to 10 V.S.A. § 1264(g)(3)(A)(ii), shall be no later than October 1, 2033.

F. For projects requiring permit coverage pursuant to designation under Subpart 1.3.E: within 180 days of designation, unless the Secretary specifies a later date.

## **2.4 Additional Information**

The Secretary may require an applicant submit additional information that the Secretary considers necessary to make a decision on the issuance or denial of an authorization to discharge pursuant to this general permit. The Secretary may deny coverage under this general permit if the additional information requested is not provided to the Secretary within sixty (60) days of the Secretary's request or within a greater time period specified by the Secretary.

## **2.5 Public Notice of Application & Public Comment on Application**

Public notice for the NOI and all attachments shall comply with the Type 4 public noticing requirements under 10 V.S.A. Chapter 170 and all rules adopted thereunder. Public notice of amendments shall also comply with the public noticing requirements for amendments under 10 V.S.A. Chapter 170 and the rules adopted thereunder.

## **2.6 Authorization to Discharge**

- A. An applicant shall be authorized to discharge regulated stormwater runoff pursuant to this general permit upon the receipt of a written authorization by the Secretary that the discharge is eligible for coverage under the terms and conditions of this general permit.
- B. A project subject to Subpart 1.3.D, where such project was previously permitted and the authorization or individual permit has expired as of the effective date of this general permit, is authorized to discharge under this general permit as of the effective date of this general permit without submitting a Notice of Intent, provided the permittee submits a registration within 90 days of the effective date of this general permit and a complete application for permit coverage no later than twelve months from the effective date of this general permit pursuant to Subpart 2.2. Such authorization shall terminate when the Secretary acts upon the permittee's complete application for general permit coverage.
- C. A project subject to Subpart 1.3.D, where such project was previously permitted and the authorization or individual permit will expire prior to twelve months from the effective date of this general permit, is authorized to discharge under this general permit as of the effective date of this general permit without submitting a Notice of Intent, provided the project meets all of the following: the project continues to comply with the terms and conditions of the previously issued authorization or individual permit during the period between the expiration of the authorization or permit and issuance of the new authorization under Subpart 1.3.D; the permittee submits a registration prior to the expiration; and the permittee submits a complete application for permit coverage no later than twelve months from the effective date of this general permit pursuant to Subpart 2.2. Such authorization shall terminate when the Secretary acts upon the permittee's complete application for general permit coverage.

## **2.7 Implementation Deadlines**

- A. Projects requiring implementation of stormwater treatment practices as a condition of their authorization to discharge under this general permit shall implement the stormwater treatment practices, and associated infrastructure necessary to ensure proper functioning of the stormwater treatment practices, as follows:
  - 1. For discharges from new development and redevelopment, prior to the discharge of regulated stormwater from the new or redeveloped impervious surface;
  - 2. For discharges from an impervious surface of three or more acres requiring permit coverage under Subpart 1.3.D or designated discharges of stormwater requiring permit coverage under Subpart 1.3.E, per the schedule in the authorization to discharge but no later than prior to expiration of the authorization to discharge; and
  - 3. For offset projects requiring permit coverage under Subpart 4.4, per the schedule in the authorization to discharge.

## **2.8 Statement of Compliance**

If the permittee is constructing a stormwater management system pursuant to an authorization under this general permit, within 30 days of the completion of construction, the permittee shall submit to the Secretary a written certification signed by a designer, who is a professional engineer licensed pursuant to 26 V.S.A. Chapter 20 and practicing within the scope of their engineering specialty, that the stormwater management system was built and is currently operating in compliance with the permit requirements.

Except for applications to transfer an authorization, or for an administrative amendment, for applications for coverage under this general permit not requiring construction, including permit renewals, the applicant shall submit to the Secretary as part of the permit application a written statement signed by a designer, who is a professional engineer licensed pursuant to 26 V.S.A. Chapter 20 and practicing within the scope of their engineering specialty, that the stormwater management system is properly operating and maintained in compliance with the permit requirements.

## **2.9 Discharges Previously Authorized under General Permit 3-9030 Part III.A.3**

Discharges from existing impervious surface of less than one acre that first obtained stormwater permit coverage under General Permit 3-9030 Part III.A.3 (Designated Discharges from Property with Existing Impervious Surfaces Less than One Acre that do not have a Previously Issued State Stormwater Permit) are exempt from the requirements of Subpart 2.3 of this general permit. Such discharges are authorized under this general permit provided the permittee maximizes infiltration of stormwater runoff, prevents and eliminates soil erosion, and prevents and eliminates delivery of pollutants to stormwater conveyances. The Department has created a “Vermont Guide to Stormwater Management for Homeowners and Small Businesses” to assist property owners in meeting these requirements. The guide is available at [https://dec.vermont.gov/sites/dec/files/wsm/erp/docs/2018-06-14%20VT Guide to Stormwater for Homeowners.pdf](https://dec.vermont.gov/sites/dec/files/wsm/erp/docs/2018-06-14%20VT%20Guide%20to%20Stormwater%20for%20Homeowners.pdf) or upon request.

## **PART 3: DISCHARGE REQUIREMENTS**

### **3.1 Stormwater Treatment Standards**

A. For discharges of regulated stormwater runoff to a water that is not impaired for stormwater, that is not Lake Champlain or Lake Memphremagog, and that does not contribute to the phosphorus impairment of Lake Champlain or Lake Memphremagog, the following treatment standards apply:

1. For new development and for expansions, the project shall satisfy the requirements of the Vermont Stormwater Management Manual.

2. For redevelopment, the project shall satisfy the redevelopment standard of the Vermont Stormwater Management Manual, unless the impervious surface being redeveloped was constructed as new development after 2002 and was previously subject to the 2002 Stormwater Management Manual or any subsequently adopted Stormwater Management Manual, in which case the redevelopment project shall be treated as new development and shall satisfy the requirements of the Vermont Stormwater Management Manual for new development. Redevelopment on sites with impervious surfaces of three or more acres requiring permit coverage under Subpart 1.3.D shall comply with the applicable requirements of Subpart 3.1.A.4, but in no case shall redevelopment projects involving such sites meet less than the redevelopment standard of the Vermont Stormwater Management Manual.

3. Except for impervious surfaces of three or more acres requiring permit coverage under Subpart 1.3.D, for renewal of an authorization under a general permit or an individual permit, the project, whether previously built or not, shall comply with the terms of the operational stormwater permit issued most recently to the project, unless the project was built but the approved stormwater system was never built or has substantially deteriorated, meaning the condition of the stormwater treatment practice is beyond that which would be remedied by routine, periodic maintenance for a system of similar design, or unless substantial construction of the project did not commence prior to expiration of the permit and the previously authorized project did not meet the standards of the 2002 Vermont Stormwater Management Manual or its replacement. If the project was built but the system was never built or has substantially deteriorated, the permittee shall comply with the requirements of Subpart 3.1.A.4, except, if a previously authorized project met the standards of the 2002 Vermont Stormwater Management Manual, the project shall demonstrate compliance with the terms of the operational stormwater permit issued most recently to the project. If substantial construction of the project did not commence prior to expiration of the permit, and the project did not meet the standards of the 2002 Vermont Stormwater Management Manual or its replacement, the project shall comply with the requirements for new development.

4. For impervious surfaces of three or more acres requiring permit coverage under Subpart 1.3.D, the project shall satisfy the redevelopment standard of the Vermont Stormwater Management Manual determined to be technically feasible by an engineering feasibility analysis conducted pursuant to Subpart 4.1, unless subject to Subparts 3.1.A.5 or 6. For purposes of complying with this subpart, the entire impervious surface of three or more acres shall be treated as though it is being redeveloped.

5. For all or any portion of a site with impervious surface of three or more acres requiring permit coverage under Subpart 1.3.D of this general permit where the stormwater runoff is from a road or other linear transportation facility and the runoff does not comingle with stormwater runoff from adjoining or adjacent impervious surface that requires permit coverage as part of a project that includes the road, the project shall satisfy on site the road BMP standards in Part 11 determined to be technically feasible by an engineering feasibility analysis conducted pursuant to Subpart 4.1.

6. For all or any portion of a site with impervious surface of three or more acres requiring permit coverage under Subpart 1.3.D of this general permit where the stormwater runoff is from isolated impervious surfaces with a footprint of no more than 400 square feet where the impervious surface is separated from other impervious surface, with the exception of impervious surface associated with roads and other linear transportation facilities, by a distance of at least 50 linear feet, the project shall repair all areas of erosion where erosion rivulets are greater than 1” and prevent runoff from re-connecting with impervious surfaces when accomplishable without causing erosion or property damage.
  7. For regulated stormwater runoff requiring permit coverage pursuant to designation under Subpart 1.3.E, the project shall comply with any requirements the Secretary deems necessary to ensure the regulated stormwater runoff does not cause or contribute to violations of the Vermont Water Quality Standards.
- B. For discharges of regulated stormwater runoff to a stormwater-impaired water, for discharges of phosphorus to Lake Champlain or Lake Memphremagog, or for discharges of phosphorus to a water that contributes to the impairment of Lake Champlain or Lake Memphremagog, **for which no TMDL, watershed improvement permit, or WQRP has been adopted**, the following treatment standards apply:
1. For new development and for expansions, the project shall satisfy the requirements of the Vermont Stormwater Management Manual and the discharge shall not increase the pollutant load in the receiving water for stormwater. If a project is unable to infiltrate the regulated stormwater runoff from the one-year 24-hour storm event, the project shall comply with the offset or stormwater impact fee requirements of Subparts 4.2 and 4.4.
  2. For redevelopment; for renewal of an authorization under a general permit or an individual permit, whether or not the previously authorized project has been built; for impervious surfaces of three or more acres requiring permit coverage under Subpart 1.3.D; and for regulated stormwater runoff requiring permit coverage pursuant to designation under Subpart 1.3.E, the discharge shall not increase the pollutant load in the receiving water for stormwater and the project shall satisfy on-site the groundwater recharge, water quality treatment, and channel protection standards of the Vermont Stormwater Management Manual that are determined to be technically feasible by an engineering feasibility analysis conducted pursuant to Subpart 4.1, except, if portions of a previously authorized project met the standards of the 2002 Vermont Stormwater Management Manual, or its replacement, those portions shall demonstrate compliance with the terms of the operational stormwater permit issued most recently to the project. If an engineering feasibility analysis determines that compliance with the applicable standards is achievable on less than 75% of a site, the project shall comply with the offset or stormwater impact fee requirements of Subparts 4.2 and 4.4. If an engineering feasibility analysis determines that compliance with the applicable standards is achievable on 85% or more of a site, the project may be eligible for receipt of stormwater impact fees under Subpart 4.3.

C. For discharges of regulated stormwater runoff to a stormwater-impaired water, for discharges of phosphorus to Lake Champlain or Lake Memphremagog, or for discharges of phosphorus to a water that contributes to the impairment of Lake Champlain or Lake Memphremagog, **for which a TMDL, watershed improvement permit, or WQRP has been adopted**, the Secretary shall determine that there are sufficient pollutant load allocations for the discharge and the discharge shall comply with the following treatment standards and any additional requirements necessary to comply with the Vermont Water Quality Standards or implement the TMDL or WQRP. If the Secretary determines that there are not sufficient pollutant load allocations for the discharge, the project shall comply with the requirements of Subpart 3.1.B.

1. For new development and for expansions, the project shall satisfy the requirements of the Vermont Stormwater Management Manual.

2. For redevelopment, the project shall satisfy the redevelopment standard of the Vermont Stormwater Management Manual, unless the impervious surface being redeveloped was constructed as new development after 2002 and was previously subject to the 2002 Stormwater Management Manual or any subsequently adopted Stormwater Management Manual, in which case the redevelopment project shall be treated as new development and shall satisfy the requirements of the Vermont Stormwater Management Manual for new development. Redevelopment on sites with impervious surfaces of three or more acres requiring permit coverage under Subpart 1.3.D shall comply with the applicable requirements of Subpart 3.1.A.4, but in no case shall redevelopment projects involving such sites meet less than the redevelopment standard of the Vermont Stormwater Management Manual.

3. Except for renewals subject to the standards under Subpart 3.1.C.4, for renewal of an authorization under a general permit or an individual permit, the project, whether previously built or not, shall comply with the terms of the operational stormwater permit issued most recently to the project, unless the project was built but the approved stormwater system was never built or has substantially deteriorated, meaning the condition of the stormwater treatment practice is beyond that which would be remedied by routine, periodic maintenance for a system of similar design. If the project was built but the system was never built or has substantially deteriorated, the permittee shall comply with the requirements of Subpart 3.1.C.4, except, if a previously authorized project met the standards of the 2002 Vermont Stormwater Management Manual, the project shall demonstrate compliance with the terms of the operational stormwater permit issued most recently to the project.

4. For impervious surfaces of three or more acres that require permit coverage under Subpart 1.3.D; for the renewal of an authorization under a general permit or an individual permit for impervious surface of less than three acres for which the Secretary has determined additional controls are necessary to implement the TMDL or WQRP for Lake Champlain, Lake Memphremagog, or the stormwater-impaired water; and for regulated stormwater runoff requiring permit coverage pursuant to designation under Subpart 1.3.E, the project shall:

a. For discharges to a stormwater-impaired water, satisfy on-site the redevelopment and channel protection standards of the Vermont Stormwater Management Manual determined to be technically feasible by an engineering feasibility analysis conducted pursuant to Subpart 4.1, unless subject to Subparts 3.1.C.4.c or d, however the Secretary may waive the requirement to meet the channel protection standard on a watershed basis upon a determination by the Secretary that the TMDL waste load allocation has been met as of the effective date of an authorization under a general permit issued pursuant to this Subpart. For purposes of complying with the redevelopment requirement, the entire impervious surface of three or more acres shall be treated as though it is being redeveloped.

b. For discharges to Lake Champlain, Lake Memphremagog, or a water that contributes to the impairment of Lake Champlain or Lake Memphremagog, satisfy on-site the redevelopment standard of the Vermont Stormwater Management Manual determined to be technically feasible by an engineering feasibility analysis conducted pursuant to Subpart 4.1, unless subject to Subparts 3.1.C.4.c or d. For purposes of complying with this Subpart, the entire impervious surface of three or more acres shall be treated as though it is being redeveloped.

c. For all or any portion of a site where the stormwater runoff is from a road or other linear transportation facility and the runoff does not comingle with stormwater runoff from adjoining or adjacent impervious surface that requires permit coverage as part of a project that includes the road, the project shall satisfy on site the road BMP standards in Part 11 determined to be technically feasible by an engineering feasibility analysis conducted pursuant to Subpart 4.1. Where supported by a field evaluation, an applicant may limit installation of BMPs on isolated roads to those segments meeting the criteria in Subpart #.

d. For all or any portion of a site where the stormwater runoff is from isolated impervious surfaces with a footprint of no more than 400 square feet where the impervious surface is separated from other impervious surface, with the exception of impervious surface associated with roads and other linear transportation facilities, by a distance of at least 50 linear feet, the project shall satisfy on site the simple disconnection standard in the Vermont Stormwater Management Manual determined to be technically feasible by an engineering feasibility analysis conducted pursuant to Subpart 4.1.

e. If an engineering feasibility analysis determines that a project cannot fully comply with the redevelopment standard under Subparts 3.1.C.4.a and b, the project shall comply with the offset or stormwater impact fee requirements of Subpart 4.2 and Subpart 4.4. If a project exceeds the requirements of the redevelopment standard to the extent that 60% or more of the water quality volume is achieved pursuant to the Vermont Stormwater Management Manual, the project may be eligible for receipt of stormwater impact fees under Subpart

4.3. If an engineering feasibility analysis determines that compliance with the channel protection standard under Subpart 3.1.C.4.a is achievable on less than 75% of a site, the project shall comply with the offset or stormwater impact fee requirements of Subpart 4.2 and 4.4. If an engineering feasibility analysis determines that compliance with the channel protection standard is achievable on 85% or more of a site, the project may be eligible for receipt of stormwater impact fees under Subpart 4.3.

- D. For all projects subject to Subpart 3.1, compliance with the redevelopment standard and the percentage of water quality volume achieved will be determined on an average basis for a site by multiplying the percentage of the water quality volume provided for a given portion of a site by the percentage of the site impervious surface treated by that volume. No portions of a site may achieve more than 100% of the water quality volume for purposes of determining the average water quality volume achieved.

### **3.2 Vermont Stormwater Management Manual STPs**

A permittee shall comply with the required design elements in the Vermont Stormwater Management Manual for the chosen STPs authorized by the Secretary's approval.

A permittee shall use the STPs in the Vermont Stormwater Management Manual, alone or in combination, to meet the applicable treatment standard(s), unless the project is subject to Subpart 3.1.C.4.c or Subpart 3.1.C.4.d. An alternative STP may be used to meet the applicable water quality treatment standard if it is accepted by the Secretary pursuant to the requirements for alternative STPs set forth in the Vermont Stormwater Management Manual in effect at the time of application.

### **3.3 Compliance with Antidegradation Policy & Discharges to High Quality Waters**

The requirements of this permit reflect the general goals of the federal Clean Water Act and Vermont law to restore and maintain surface waters. Under the Antidegradation Policy in the Vermont Water Quality Standards and Vermont's Interim Anti-degradation Implementation Procedure (dated October 12, 2010) ("Procedure"), all waters are presumed to be high quality for at least one criterion for at least some portion of the year. Discharges to high quality waters require a Tier 2 analysis under the Procedure. However, an individual Tier 2 analysis is not required for discharges authorized under a general permit.

Pursuant to Section IX of the Procedure, discharges authorized under and in compliance with the requirements of this permit satisfy the Antidegradation Policy because such discharges comply with the Vermont Stormwater Management Manual, and, if such discharges are to a stormwater-impaired water, Lake Champlain, Lake Memphremagog, or a water that contributes to the impairment of Lake Champlain or Lake Memphremagog, there is a sufficient pollutant load allocation under applicable stormwater or phosphorus TMDLs.

Pursuant to Section III.C.3 of the Procedure, permits for stormwater remediation projects installed to mitigate the impact of existing stormwater discharges to receiving waters, including permits for projects subject to Subparts 1.3.D and E, are exempt from review under the Antidegradation Policy.

## **PART 4: ENGINEERING FEASIBILITY ANALYSIS, STORMWATER IMPACT FEES, AND OFFSETS**

### **4.1 Engineering Feasibility Analysis**

A project that must complete an engineering feasibility analysis pursuant to the standards under Subpart 3.1 shall:

- A. For discharges that must comply with the redevelopment standard, maximize the acreage in compliance with the redevelopment standard.
- B. For discharges that must comply with groundwater recharge, channel protection, or water quality treatment standards (including the redevelopment standard), maximize the acreage in compliance with the applicable standards in accordance with the following prioritization: groundwater recharge first, followed by channel protection second, and water quality treatment third.
- C. Maximization.
  1. For portions of a project that are exempt from compliance with a specific standard under the Vermont Stormwater Management Manual or for which compliance with a specific standard under the Vermont Stormwater Management Manual is waived, the project shall not be required to maximize compliance with that specific standard on the portion of the project that is exempt from compliance or for which compliance is waived, and the project shall not be required to comply with offset or stormwater impact fee requirements for that specific standard for the portion of the project that is exempt from compliance or for which compliance is waived.
  2. For a project included in a designated MS4's Flow Restoration Plan approved by the Agency prior to the effective date of the Stormwater Permitting Rule (Environmental Protection Rules, Chapter 22), the Secretary shall consider a project to have maximized compliance with the redevelopment, groundwater recharge, water quality treatment, and channel protection standards if the Flow Restoration Plan identified the required level of treatment and the project complies with the Flow Restoration Plan. This shall apply only to portions of the project assessed as part of a feasibility analysis undertaken for the project.
  3. Maximization feasibility criteria. A project shall not be required to undertake the following activities to maximize compliance with the redevelopment, groundwater recharge, water quality treatment, or channel protection standards, or to comply with

the requirements for isolated impervious surfaces and roads, under Subparts 3.1.A.5 and 6.

- a. The purchase or acquisition of land for off-site treatment of stormwater;
- b. Removal of, or actions that would permanently preclude the use or operation of existing structures, utilities, roads, parking areas, sidewalks, and similar infrastructure;
- c. Site re-grading or site re-contouring that would permanently preclude the existing land use;
- d. Pumping of stormwater runoff;
- e. Infiltration where basement flooding or subsurface pollutant plume transport would occur based on a site-specific analysis identifying seasonal high-water table, soil-infiltrative capacity, and direction of groundwater flow;
- f. Construction that would not be in compliance with the Agency's "Flood Hazard Area and River Corridor Protection Procedure";
- g. Construction within any wetland or its 50-foot buffer zone, which shall not preclude implementation of passive reforestation within any wetland or buffer;
- h. Destruction of contiguous forested areas exceeding 5,000 square feet where such forested areas are to remain forested under the terms of a permit issued pursuant to the terms of an authorization issued pursuant to this general permit; and,
- i. Activities not approvable under local, state, and federal laws and regulations.

4. If an engineering feasibility analysis shows that constructing a new best management practice will equate to an increase in compliance with an applicable standard by a factor of 10% or less, the project shall not be required to construct a new best management practice to comply with the applicable standard and shall satisfy the maximization requirement for purposes of compliance with that standard.

## **4.2 Stormwater Impact Fees**

- A. A project requiring payment of stormwater impact fees or completion of an offset under Subpart 3.1 shall pay a stormwater impact fee in accordance with this Subpart or complete an offset in accordance with Subpart 4.4.
- B. The Secretary shall assess stormwater impact fees based on the acreage of impervious surface where compliance with the applicable treatment standards is not achieved. Areas

shall be determined in square feet, with the total area converted to acres rounded to the nearest hundredth of an acre.

- C. If an applicant is paying fees to satisfy the requirements of 3.1.B of this general permit, the Secretary must determine that sufficient offset charge capacity has been created in the stormwater-impaired water or phosphorus-impaired lake segment of Lake Champlain or Lake Memphremagog in which the project is located to ensure the discharge will not increase the pollutant load in the receiving water for the pollutant of concern. If there is insufficient offset charge capacity, the applicant shall, in accordance with Subpart 4.4, complete an offset that generates sufficient offset charge capacity to ensure the discharge will not increase the pollutant load in the receiving water for the pollutant of concern. If the offset will not have a monetary value equal to or greater than the stormwater impact fee assessed for the project, then the applicant must pay the difference between the monetary value of the offset and the stormwater impact fee assessed for the project.
- D. The Secretary shall not issue an authorization to an applicant until the applicant has paid the required stormwater impact fees.
- E. For projects required to pay stormwater impact fees to satisfy the requirements of Subpart 3.1, the fees shall be as follows:
  - 1. For new development and expansions - \$10,000.00 per acre of impervious surface for which compliance with the applicable treatment standards is not achieved.
  - 2. For all other projects:
    - a. Redevelopment - \$25,000 per acre of impervious surface multiplied by the difference between the required water quality volume and the average water quality volume achieved.
    - b. Water quality treatment - \$25,000.00 per acre of impervious surface for which water quality treatment is required by the treatment standard but not achieved. For projects that must comply with the groundwater recharge standard, compliance with that standard shall be counted towards compliance with the water quality treatment standard.
    - c. Channel protection - \$25,000.00 per acre of impervious surface for which channel protection is required by the treatment standard but not achieved.
- F. Fees shall be deposited in the Stormwater Fund, established under 10 V.S.A. § 1264b, and into the account for the stormwater-impaired water or phosphorus-impaired lake segment of Lake Champlain or Lake Memphremagog in which the project is located.

If a permittee has paid a stormwater impact fee in accordance with this Subpart and subsequently does not construct the permitted project and the Secretary revokes the stormwater discharge permit, the permittee may request that the Secretary reimburse the stormwater impact fee. The Secretary shall reimburse the permittee when sufficient monies are available in the

account of the Stormwater Fund into which the permittee paid. Requests for reimbursement shall be honored in the order in which they are received by the Secretary.

#### **4.3 Projects Eligible for Receipt of Stormwater Impact Fees**

A. The following types of projects, which have improved compliance with the applicable standard by at least 10% over existing conditions, are eligible for receipt of stormwater impact fees as follows:

1. Projects subject to Subpart 3.1.B.2 (impaired, no TMDL; redevelopment, renewal, three acre, residually designated) that comply with the water quality treatment or channel protection standards of the Vermont Stormwater Management Manual on 85% or more of a site shall be eligible to receive funds for the portions of the site exceeding 75% that are in compliance with the applicable standards;

2. Projects subject to Subpart 3.1.C.2 through 3.1.C.4 (impaired, with TMDL) as follows:

- a. Projects required to meet the redevelopment standard that achieve 60% or more of the water quality volume shall be eligible to receive funds for the portions of the site exceeding the redevelopment standard;

- b. Permit renewals that exceed the applicable standards shall be eligible to receive funds for the portions of the site exceeding the standards that are in compliance with the water quality treatment and channel protection standards;

- c. Projects required to comply with the channel protection standard that do so on 85% or more of a site shall be eligible to receive funds for the portions of the site exceeding 75% that are in compliance with the channel protection standard;

3. Projects in stormwater impaired waters or Lake Champlain or Lake Memphremagog or waters that contribute to the impairment of Lake Champlain or Lake Memphremagog not otherwise required to have permit coverage under Subpart 1.3 that comply with the water quality treatment or channel protection standards of the Vermont Stormwater Management Manual on any portion of the site shall be eligible to receive funds for the portions of the site in compliance with the water quality treatment and channel protection standards

4. Projects for which a municipality has assumed full legal control that are included under an approved TMDL implementation plan that comply with the water quality treatment or channel protection standards of the Vermont Stormwater Management Manual shall be eligible to receive funds for the portions of the site in compliance with the water quality treatment and channel protection standards of the Vermont Stormwater Management Manual.

- B. Projects eligible for receipt of stormwater impact fees that have been paid into the Stormwater Fund must apply to receive the funds. To apply for funds, a person shall:
1. Have a valid permit issued by the Secretary pursuant to the Stormwater Permitting Rule (Environmental Protection Rules, Chapter 22) for a project eligible for receipt of stormwater impact fees under this Subpart; and
  2. Provide a statement of compliance, on a form provided by the Secretary, certifying that the project has been completed in accordance with its permit issued pursuant to the Stormwater Permitting Rule (Environmental Protection Rules, Chapter 22). Such statement of compliance shall be subject to verification by the Secretary.
- C. Calculation of the amount of funding a project shall be eligible for. The Secretary shall calculate the amount of funding a project shall be eligible for based on the acreage of impervious surface meeting the requirements of Subpart 3.1 multiplied by the dollar value applicable to the standard or standards that the project complies with under Subpart 3.1. Areas shall be determined in square feet, with the total area converted to acres rounded to the nearest hundredth of an acre. The dollar values for the standards are as follows:
1. Redevelopment - \$25,000 per acre of impervious surface multiplied by the difference between the required water quality volume and the average water quality volume achieved;
  2. Water quality treatment - \$25,000.00 per acre of impervious surface. For projects that must comply with the groundwater recharge standard, compliance with that standard shall be counted towards compliance with the water quality treatment standard;
  3. Channel protection - \$25,000.00 per acre of impervious surface.
- D. Award of stormwater impact fees that have been previously paid into the Stormwater Fund.
1. Funds shall be awarded on an annual basis to projects eligible for receipt of stormwater impact fees that have applied pursuant to the requirements of Subpart 4.3.B.
  2. Funds may only be awarded to a project eligible for receipt of stormwater impact fees from the Stormwater Fund account for the stormwater-impaired water or phosphorus-impaired lake segment of Lake Champlain or Lake Memphremagog in which the project is located.
  3. Funds shall be awarded first to projects under Subparts 4.3.A.1-3 in order of which projects applied first.
  4. If funds remain after funds are awarded pursuant to Subpart 4.1.D.3, funds shall be awarded to projects under Subpart 4.3.A.4 in order of which projects applied first.

5. All balances remaining at the end of any fiscal year shall be carried forward and remain a part of the Stormwater Fund.
- E. Reservation of offset charge capacity. This Subpart is applicable when the standards under Subpart 3.1.B apply.
1. If an applicant plans to create an offset under Subpart 4.4 and wants to reserve offset charge capacity for itself or for another discharger, the applicant shall:
    - a. Provide modeling, acceptable to the Secretary, demonstrating the reduction in pollutant load that the project will generate; and
    - b. Clearly indicate on its permit application the discharger for which the offset charge capacity shall be reserved.
  2. A discharger for which offset charge capacity has been reserved may use such offset charge capacity once the offset project generating the capacity has been completed in compliance with a valid permit issued by the Secretary pursuant to the Stormwater Permitting Rule (Environmental Protection Rules, Chapter 22). Any reserved offset charge capacity may only be applied to projects in the same stormwater-impaired water or phosphorus-impaired lake segment of Lake Champlain or Lake Memphremagog in which the offset project is located; however, for these purposes the Main Lake, Burlington Bay, and Shelburne Bay segments may be considered one segment.
- F. Reservation of stormwater impact fees. If an applicant applies for a permit for a project eligible for receipt of stormwater impact fees and chooses to direct the impact fees that the project would be eligible for towards future projects requiring payment of stormwater impact fees, the applicant shall indicate that intent on its application under Subpart 4.3.B. Any reserved stormwater impact fees shall be in the form of a credit that may be applied to the calculation of the impact fees for the applicant's future project(s), allowing for an equivalent reduction in the impact fees due on applicant's future project(s). Any reserved stormwater impact fees may only be applied to projects located in the same stormwater-impaired water or phosphorus-impaired lake segment of Lake Champlain or Lake Memphremagog in which the project eligible for receipt of stormwater impact fees is located; however, for these purposes the Main Lake, Burlington Bay, and Shelburne Bay segments may be considered one segment. The Department will not hold reserved impact fees in the form of funds.
- If an applicant subsequently seeks to receive previously-reserved impact fees, either because the previously-reserved impact fees exceed the impact fees due from the applicant on another project or because the applicant no longer wishes to reserve the impact fees, the applicant shall apply under Subpart 4.3.B. The date of receipt of said application shall be used for purposes of Subpart 4.3.D.3.
- G. The Secretary's award of impact fees shall be subject to the Secretary's discretion and contingent on the availability of funds in the Stormwater Fund.

#### 4.4 Offsets

- A. A project requiring payment of stormwater impact fees or completion of an offset under Subpart 3.1.B and C shall complete an offset in accordance with this Subpart or pay a stormwater impact fee in accordance with Subpart 4.2 (impact fees).
- B. The following types of projects may be completed as offsets:
  - 1. For a project subject to Subpart 3.1.B.2 (impaired, no TMDL; redevelopment, renewal, three acre, residually designated), the part of the project, which exceeds 75% of the site, that complies with the applicable standards;
  - 2. For a project subject to Subpart 3.1.C.2 through 3.1.C.4 (impaired, with TMDL), as follows:
    - a. For projects required to meet the redevelopment standard the portion of the site exceeding the redevelopment standard;
    - b. For permit renewals the portion of the site exceeding the standards that are in compliance with the water quality treatment and channel protection standards;
    - c. For projects required to comply with the channel protection standard the portion of the site exceeding 75% that are in compliance with the channel protection standard;
  - 3. A project not otherwise required to have permit coverage under Subpart 1.3 that complies with the groundwater recharge, water quality treatment, or channel protection standards of the Vermont Stormwater Management Manual.
- C. Offset charge capacity shall be directed to the same stormwater-impaired water or phosphorus-impaired lake segment of Lake Champlain or Lake Memphremagog in which the offset project is located; however, for these purposes the Main Lake, Burlington Bay, and Shelburne Bay segments may be considered one segment.
- D. If a permittee is completing an offset to satisfy the requirements of Subpart 3.1.B for new development or expansions, the offset must be completed prior to initiation of the discharge. For all other projects for which a permittee is completing an offset, the offset must be completed prior to the end of the permit term or as otherwise required by the permit.
- E. When an applicant proposes to complete an offset to satisfy the requirements of Subpart 3.1.B or C the person shall:
  - 1. Apply for an authorization issued pursuant to this general permit for a project eligible as an offset under Subpart 4.4.B, unless the person is not the landowner, in which case the landowner shall apply;

2. Clearly indicate on the application for authorization the project for which the offset will be used to satisfy the requirements of Subpart 3.1.B or C; and
  3. Provide all information required by the Secretary on the required permit application form.
- F. If completing an offset to comply with Subpart 3.1.B, the applicant shall provide modeling, acceptable to the Secretary, demonstrating the reduction in pollutant load that the offset will generate. If the applicant must complete an offset under Subpart 3.1.B because sufficient offset charge capacity has not previously been created in the stormwater-impaired water or phosphorus-impaired lake segment of Lake Champlain or Lake Memphremagog in which the project is located, the applicant's modeling must demonstrate that the offset will generate sufficient offset charge capacity to ensure the discharge will not increase the pollutant load in the receiving water for the pollutant of concern.
- G. Offsets shall be assessed monetary value as follows. The Secretary shall calculate the monetary value of an offset based on the acreage of impervious surface meeting the requirements of Subpart 4.3.A multiplied by the dollar value applicable to the standard or standards that the project complies with under Subpart 4.3.A. Areas shall be determined in square feet, with the total area converted to acres rounded to the nearest hundredth of an acre. The dollar values for the standards are as follows:
1. Redevelopment - \$25,000 per acre of impervious surface multiplied by the percentage of water quality volume achieved that exceeds 50% of the water quality volume;
  2. Water quality treatment - \$25,000.00 per acre of impervious surface. For projects that must comply with the groundwater recharge standard, compliance with that standard shall be counted towards compliance with the water quality treatment standard;
  3. Channel protection - \$25,000.00 per acre of impervious surface.
- H. The monetary value of an offset shall be subtracted from the stormwater impact fees that a project must pay under Subpart 4.2.
- I. If a permittee creates an offset project with a monetary value, as determined by the Stormwater Permitting Rule (Ch. 22, Environmental Protection Rules), that exceeds the stormwater impact fee applicable to the project under Subpart 4.2, the permittee may apply for receipt of stormwater impact fees pursuant to the requirements of Subpart 4.3.

## **PART 5: PROHIBITION**

Discharges of any material other than stormwater are not authorized by this general permit. Stormwater does not include vehicle and equipment maintenance spills, fuels, wash water, construction debris, oil and other hazardous substances.

## **PART 6: GROUNDWATER PUBLIC TRUST**

Discharges of stormwater to groundwater authorized under this general permit are presumed to not adversely affect public trust uses of groundwater.

The technical standards, operational requirements and prohibitions required by this general permit constitute the best practical treatment and disposal practices for the discharge of stormwater to groundwater and reasonably assure that regulated discharges will not prevent the public's future use of groundwater as a public water source or source of water for a potable water supply.

Any activity that will result in an exceedance of the groundwater enforcement standards at points of compliance as defined in the Groundwater Protection Rule and Strategy is not authorized by this general permit.

## **PART 7: OPERATION & MAINTENANCE**

### **7.1 Operation and Maintenance of Stormwater Management System**

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control, BMPs, and related appurtenances, which are installed or used by the permittee to achieve compliance with the conditions of this permit.

### **7.2 Corrective Action and Duty to Mitigate**

Any deficiencies in the stormwater management system as described in 7.1 shall be corrected immediately. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

### **7.3 Twenty-Four Hour Reporting**

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A report shall also be provided within five days of the time the permittee becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

#### **7.4 Annual Inspection Report**

The permittee shall submit an annual inspection report on the operation, maintenance, and condition of the stormwater management system pursuant to the terms of their authorization under this general permit. The inspection shall occur when site conditions allow for visual observation of the stormwater system. The inspection report shall note all problem areas and all corrective measures taken.

#### **7.5 Proper Disposal of Solids**

Solids, sediments, and other pollutants collected, evaluated, and removed in the course of treatment or control of stormwater runoff shall be properly disposed.

#### **7.6 Duty to Retain Records and Provide Information**

- A. The permittee shall keep copies of all reports required by this permit and records of all data used to complete the application for an authorization under this permit, for a period of at least five years from the date of the report or application. This period may be extended by request of the Secretary at any time.
- B. The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for amending, revoking and reissuing, or terminating an authorization under this permit or to determine compliance with this permit. The permittee shall also furnish to the Secretary upon request, copies of records required to be kept by this permit.

#### **7.7 Notification of Expansion and of Planned Changes**

Expansions or changes may trigger the need for permit amendment, revocation and reissuance, termination, or coverage under a new or different permit. The permittee shall notify the Secretary as soon as possible in advance of any expansion or any planned changes that may result in new or increased discharges of regulated stormwater runoff and shall obtain any required amendment, reissuance, or permit coverage prior to commencing the expansion or changes. The Secretary may require the permittee to submit additional information on the expansion or planned changes.

### **PART 8: STANDARD CONDITIONS**

#### **8.1 Duty to Comply and Enforcement**

The permittee shall comply with all conditions of this general permit and the permittee's authorization to discharge issued hereunder. Any permit noncompliance constitutes a violation of 10 V.S.A. Chapter 47, and the Stormwater Permitting Rule (Ch. 22, Environmental

Protection Rules) and is cause for an enforcement action; for permit termination, revocation and reissuance, or amendment; or denial of a permit renewal application.

Any violation of the terms and conditions of this general permit or relevant state law are subject to civil and criminal penalties pursuant to 10 V.S.A. §§ 1274 and 1275 and administrative enforcement pursuant to 10 V.S.A. § 1272 and Chapters 201 and 211, and the United States Environmental Protection Agency retains the authority to enforce violations of the Clean Water Act pursuant to Section 309 of the act. Legal proceedings may also be instituted if a person knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method, in connection with this permit and any authorization to discharge issued under this permit.

## **8.2 Duty to Reapply**

If an authorized stormwater discharge is to continue after the expiration date of its authorization to discharge, the permittee shall submit an administratively complete application for coverage under this general permit prior to the expiration date of the authorization to discharge. If the discharge does not meet the eligibility requirements for coverage under this general permit, then the permittee shall submit an administratively complete application for coverage under an individual permit prior to the expiration date of the authorization to discharge.

## **8.3 Owners' Associations**

An owners' association, condominium association, other common association, or other legal entity accepting responsibility for a stormwater management system that applies for authorization under this general permit shall maintain responsibility for the stormwater management system or, prior to dissolution, shall transfer the authorization, pursuant to Subpart 8.4. of this permit, to another legal entity accepting responsibility for the stormwater management system.

## **8.4 Transfer of Authorization to Discharge and Addition of Co-Permittee**

- A. All landowners of impervious surface subject to subpart 1.3 must have permit coverage. A person acquiring ownership of all or a portion of a project subject to a previously-issued operational permit must obtain permit coverage.
- B. In the case of a property transfer, a permittee shall, prior to transfer of property subject to an authorization under this general permit, either transfer the authorization to the new owner, or add the new owner as a co-permittee if the existing permittee is retaining ownership or control of portions of the permitted project. Nothing in this requirement relieves a landowner from compliance with Subpart 8.4.A.

- C. A permittee shall remain responsible for compliance with all terms and conditions of its authorization until the authorization is transferred with approval by the Secretary.
- D. A permittee may add a co-permittee by submitting a notice of addition of co-permittee on a form provided by the Secretary. The form shall include, at a minimum, the information required by Subpart 8.4.E, except that rather than a date of transfer, the notice shall specify the date of addition of co-permittee.
- E. Provided all applicable fees under 3 V.S.A. § 2822 have been paid, an authorization to discharge issued pursuant to this general permit may be transferred. An authorization under this permit is not transferable to any person except after notice to and approval by the Secretary. The notice shall be submitted thirty (30) days prior to the proposed date of transfer and shall include the following:
  - 1. The name and address of the present permittee;
  - 2. The name and address of the proposed permittee;
  - 3. A specific date for transfer of authorization responsibility, coverage, and liability between the present permittee and proposed permittee; and
  - 4. A statement, signed by the prospective permittee, stating that:
    - a. The conditions of the facility operation that contribute to, or affect, the discharge will not be materially different under the new ownership;
    - b. He/she has read and is familiar with the terms of the authorization and agrees to comply with all the terms and conditions of the authorization; and
    - c. He/she has adequate funding or other means to effect compliance with all terms of the authorization.

## **8.5 Requiring an Individual Permit**

The Secretary may require any person who files an application for coverage or who is already covered under this general permit to apply for and obtain an individual permit. Any interested person may petition the Secretary to take action under this Subpart. Cases in which an individual permit may be required include:

- 1. The applicant or permittee is not in compliance with the terms and conditions of this permit;
- 2. The discharge is a significant contributor of pollutants. In making this determination, the Secretary may consider the following factors:
  - a. The location of the discharge with respect to waters of the State;

- b. The size of the discharge;
  - c. The quantity and nature of the pollutants discharged to waters of the State; or
  - d. Other relevant factors;
3. When necessary to implement an applicable TMDL or WQRP; or
  4. If an applicant proposes to use an alternative stormwater treatment practice pursuant to the Vermont Stormwater Management Manual.

### **8.6 Changes to Permitted Facility**

The permittee shall notify the Secretary as soon as possible in advance of any expansion or any planned changes that may result in new or increased discharges of regulated stormwater runoff and shall obtain any required amendment, reissuance, or permit coverage prior to commencing the expansion or changes. The Secretary may require the permittee to submit additional information on the expansion or planned changes.

### **8.7 Right of Entry**

The permittee shall allow the Secretary and his/her authorized representatives, at reasonable times and upon presentation of credentials, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable time any facilities; equipment, including monitoring and control equipment; practices; or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the federal Clean Water Act or state law, any substances or parameters, including BMP performance, at any location.

### **8.8 Duty to Retain Records and Provide Information**

The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for amending, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Secretary upon request, copies of records required to be kept

by this permit. The permittee shall keep copies of all reports required by this permit and records of all data used to complete the application for this permit, for a period of at least five years from the date of the report or application. This period may be extended by request of the Secretary at any time.

### **8.9 Operating Fees**

Pursuant to 3 V.S.A. § 2822, stormwater discharges authorized by this general permit are subject to operating fees. The permittee shall submit all operating fees in accordance with procedures provided by the Secretary.

### **8.10 Property Rights**

This permit does not convey any property rights of any sort, or any exclusive privilege.

### **8.11 Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this general permit.

### **8.12 Anticipated Noncompliance and Planned Changes**

The permittee shall give advance notice to the Secretary of any planned physical alterations or additions to the permitted facility or activity which may result in noncompliance with permit requirements.

### **8.13 Twenty-Four Hour Reporting**

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A report shall also be provided within five days of the time the permittee becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

### **8.14 Responsibilities and Liabilities Under Other Laws**

Nothing in this general permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under other laws.

### **8.15 Permit Actions & Revocation**

An authorization to discharge under this general permit may be amended, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

The Secretary may, after notice and opportunity for a hearing under 3 V.S.A. § 814, amend, terminate, or, alternatively, revoke and reissue an authorization to discharge under this general permit pursuant to Section 22-310 of the Ch. 22 Stormwater Permitting Rule.

### **8.16 Filing with Local Land Records**

The permittee shall record in the local land records, within 30 days of issuance of an authorization under this general permit, a one-page notice of permit coverage. A one-page notice form may be obtained from the Secretary. A copy of the recording shall be provided to the Secretary within 14 days of the permittee's receipt of a copy of the recording from the local land records. Permits for public linear transportation projects shall be exempt from the requirements of this Subpart provided the permit is retained by the permittee in the official project file.

### **8.17 Signatory Requirements**

A. All applications for authorization under this permit shall be signed as follows:

1. For a corporation. By a responsible corporate officer. For the purpose of this Subpart, a "responsible corporate officer" means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

2. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or
  3. For a municipality, state, federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this Subpart, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- B. All reports required by permits, and other information requested by the Secretary shall be signed by a person described in Subpart 8.17.A, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
1. The authorization is made in writing by a person described in Subpart 8.17.A and submitted to the Secretary; and
  2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, or an individual or position having overall responsibility for environmental matters for the company.
- C. If an authorization under Subpart 8.17.B is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Subpart 8.17.B must be submitted to the Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Any person signing a document under Subparts 8.17.A and 8.17.B shall make the following certification:
- a. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
- E. If documents described under Subparts 8.17.A through 8.17.D are submitted electronically, any person providing this electronic signature for such documents shall meet all relevant requirements of this Subpart.

## **8.18 Effect of Permit**

Authorizations issued pursuant to this general permit shall remain in effect for five years from the date of the authorization being signed.

### **8.19 Compliance with Other Laws**

This permit does not obviate the necessity to comply with other federal, state, and local laws and regulations nor does it obviate the necessity of obtaining other applicable federal, state, and local permits and approvals as may be required by law.

### **8.20 Conditions Incorporated by Reference**

To the extent not expressly set forth in Subparts 8.1 through 8.19, all conditions set forth in Section 22-1201 of the Stormwater Permitting Rule (Environmental Protection Rules, Ch. 22) are incorporated by reference into this general permit.

## **PART 9: APPEALS**

Pursuant to 10 V.S.A. Chapter 220, an aggrieved person shall not appeal this permit or an authorization under this permit unless the person submitted to the Secretary a written comment during the applicable public comment period or an oral comment at the public meeting conducted by the Secretary. Absent a determination of the Environmental judge to the contrary, an aggrieved person may only appeal issues related to the person's comments to the Secretary as prescribed by 10 V.S.A. § 8504(d)(2).

Pursuant to 10 V.S.A. Chapter 220 and the Vermont Rules for Environmental Court Proceedings, any appeal of this permit or an authorization made pursuant to this permit, except for an appeal of an authorization for a renewable energy plant, must be filed with the clerk of the Environmental Division of the Superior Court within 30 days of the date of the decision. The notice of appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Division; and must be signed by the appellant or the appellant's attorney. In addition, the appeal must give the address or location and description of the property, project, or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the notice of appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings.

If an authorization under this general permit relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. § 248, any appeal of such authorization must be filed with the clerk of the Public Utility Commission within 30 days of the date of such authorization; the appellant must file with the clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. § 8504(c)(2), and shall also serve a copy of the notice of appeal on the Vermont Public Service Department. For further information, see the Rules and General Orders of the Public

Utility Commission. This appeal process does not apply to a facility that is subject to 10 V.S.A. § 1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. § 1006 (certification of hydroelectric projects), or 10 V.S.A. Chapter 43 (dams).

**PART 10: TERM**

This permit is valid upon signing and shall remain in effect for five (5) years from the date of signing.

Dated at Montpelier, Vermont this      day of      2019

Emily Boedecker, Commissioner  
Department of Environmental Conservation

By  
Peter LaFlamme, Director  
Watershed Management Division

## **PART 11: APPENDIX - BMPS FOR EXISTING ISOLATED ROADS**

The following are the required treatment practices for isolated roads subject to Subpart 3.1.A.5. Compliance with these standards does not relieve new development and redevelopment from the need to comply with the standards in the Vermont Stormwater Management Manual.

Permittees shall meet the standards in 11.1 through 11.3 on all isolated road segments that are determined to be hydrologically connected per the criteria in Subpart 11.4. A permittee may elect to forego the evaluation described in Subpart 11.4 and meet the standards in Subparts 11.1 through 11.3 on all isolated road segments.

### **11.1 Standards for Gravel and Paved Roads With Open Drainage Systems**

Open drainage systems are those where the road is not served by curbs and catch basins. The following are the required standards for all existing gravel and paved roads with open drainage systems:

#### **A. Roadway/Travel Lane Standards**

1. Gravel roads shall be crowned, in or out-sloped: 2% minimum; 4% recommended 4%.
2. Paved/ditched roads shall be crowned during repaving where repaving involves removal of the existing paving: 1% minimum; 2% recommended.
3. For gravel roads: shoulder berms (also called Grader/Plow Berm/Windrows) shall be removed to allow precipitation to shed from the travel lane into the road drainage system. Roadway runoff shall flow in a distributed manner to the drainage ditch or filter area and there shall be no shoulder berms or evidence of a “secondary ditch”. Shoulder berms may remain in place if the road crown is in-sloped or out-sloped to the opposite side of the road from the berm side of road.

#### **B. Road Drainage Standards**

1. For roads without ditches, stormwater shall flow in a distributed manner to a vegetated area by lowering road shoulders or conversely by elevating the travel lane level above the shoulder. Road shoulders shall be lower than travel lane elevation.
2. Ditches shall be stabilized as follows:
  - a. For roads with slopes between 0% and 5%:
    - (i) Stabilize with grass. Geotextile and erosion matting may be used instead of seed and mulch. Alternatively, ditches may be stabilized using any of the practices identified for roads with slopes 5% or greater included in Subparts 11.1.B.2.b-d.

(ii) Recommended ditch shape: trapezoidal or parabolic cross section with mild side slopes; two foot horizontal per one foot vertical or flatter and 2-foot ditch depth.

b. For roads with slopes 5% or greater but less than 8%:

(i) Stone line with minimum 6"- 8" minus stone or the equivalent. Recommended 2-foot ditch depth from top of stone-lined bottom; or,

(ii) Stabilize with grass and stone check dams per the specifications in Subpart XX.

c. For slopes greater than or equal to 8% but less than 10%: stone line with minimum 6"-8" minus stone or the equivalent. Recommended 2-foot ditch depth from top of stone-lined bottom.

d. For slopes greater than 10%: minimum 6-8" minus stone. Recommended 12" minus stone or the equivalent. Recommended 2-foot ditch depth from top of stone-lined bottom.

### C. Drainage Outlets to Waters

Roadway drainage shall be disconnected from waterbodies and defined channels to waters and shall flow in a distributed manner to a vegetated area. Drainage outlets and conveyance areas shall meet the following standards:

1. All drainage ditches shall use a turn-out to direct stormwater into a vegetated area in a dispersed manner, where practicable.

2. Drainage outlets, including any ditch, catch basin outlet, or turn-out, shall be stabilized based upon the slope ranges below. Slopes shall be measured on the bank where the practice is located and not based on the road slope.

a. For areas with slopes of 0% or greater but less than 5%: stabilize with grass, at a minimum. Alternatively, stabilize using the practices identified in Subparts 11.1.C.2.b-d.

b. For slopes 5% or greater: stabilize with stone.

c. For slopes greater than 5% but less than 10%: minimum 6"-8" minus stone.

d. For slopes greater than 10%: minimum: 6-8" minus stone or equivalent. Recommended 12" minus stone or the equivalent.

#### D. Culvert Standards – Cross Culverts

The following are the required standards where rill or gully erosion is present at culverts and during culvert replacements. Be advised that drainage culverts conveying perennial waters are subject to coverage under the DEC Stream Alteration General Permit. The standards in this general permit do not apply to culverts conveying perennial waters.

1. Install culvert end treatment or headwall for areas with slopes 5% or greater, if erosion is due to absence of these structures.
2. Stabilize outlet such that there will be no scour erosion, if erosion is due to absence or inadequacy of outlet stabilization.
3. Upgrade to 18” culvert, at a minimum, if erosion is due to inadequate size or absence of structure. In some instances, intermittent streams enter the road drainage network, and in these cases, the Secretary recommends culvert sizing based on in-field and mapping techniques described in the Intermittent Stream Crossing Sizing Guidance, found on the Stormwater Program’s website, at:  
<http://dec.vermont.gov/watershed/stormwater/permit-information-applications-fees/-roads-program>.
4. A French Drain (also called an Under Drain) or French Mattress (also called a Rock Sandwich) sub-surface drainage practice may be substituted for a cross culvert.

#### E. Culvert Standards - Driveway Culverts

The following are the required standards where rill or gully erosion is present at driveway culverts and during culvert replacements.

1. Culvert end treatment or headwall required for areas with slopes of 5% or greater, if erosion is due to absence of these structures.
2. Stabilize outlet such that there will be no scour erosion, if erosion is due to absence or inadequacy of outlet stabilization.
3. Upgrade to minimum 15” culvert, 18” recommended, if erosion is due to inadequate size or absence of structure. In some instances, intermittent streams may enter the road drainage network, and in these cases, the Secretary recommends culvert sizing based on in-field and mapping techniques described on the Stormwater Program’s website:  
<http://dec.vermont.gov/watershed/stormwater/permit-information-applications-fees/-roads-program>.

### 11.2 Standards for Paved Roads with Closed Drainage Systems

Closed drainages systems are those where the road is served by curbs and catch basins. Catch basin outlets shall be stabilized to eliminate all rill and gully erosion. The acceptable practices for meeting this requirement are the following:

- A. Stone-lined ditch, constructed per the specifications in Subpart 11.1.B.2.b-d, substituting ditch slope for road slope;
- B. Stone apron, where constructed in a fan shape of 12” minus stone;
- C. Check dams, constructed per the specifications in Subpart 11.3; or
- D. Culvert headwall or header, where constructed of stone or concrete.

### **11.3 Check Dam Specifications**

Check dams used to meet the requirements of Subpart 11 shall be constructed as follows:

Height: no greater than 2 feet. Center of dam should be 9 inches lower than the side elevation

Side slopes: 2:1 or flatter

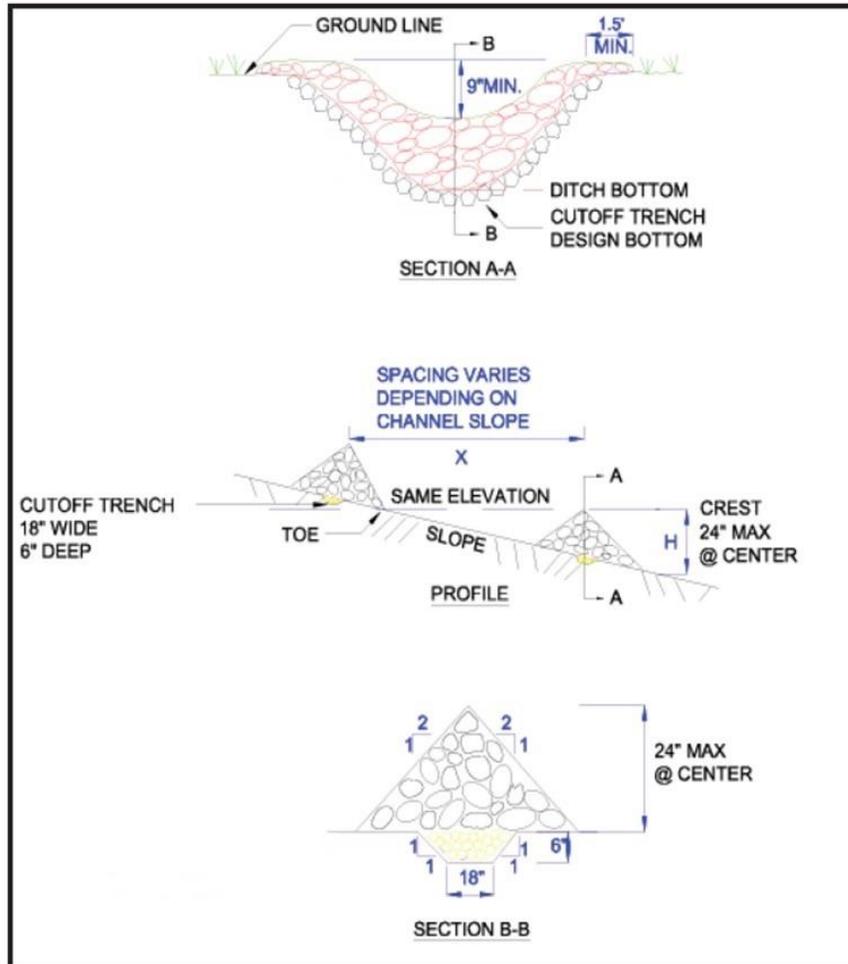
Stone size: use a mixture of 2 to 9 inch stone

Width: dams should span the width of the channel and extend up the sides of the banks

Spacing: space the dams so that the bottom (toe) of the upstream dam is at the elevation of the top (crest) of the downstream dam. This spacing is equal to the height of the check dam divided by the channel slope.

$$\text{Spacing (in feet)} = \frac{\text{height of check dam (in feet)}}{\text{slope in channel (ft/ft)}}$$

Maintenance: remove sediment accumulated behind the dam as needed to allow channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam. If significant erosion occurs between check dams, a liner of stone should be installed.



#### 11.4 Field Inventory Criteria For Evaluating Connectivity of Isolated Roads

A road segment shall be considered hydrologically connected if, based on a field evaluation, the road segment meets any of the criteria below. For these purposes, road segments shall be 100 meters in length except for the last segment, which when evaluated sequentially from one end of an isolated road to its terminus, may be less than 100 meters.

- A. 1. For paved roads with catch basins: the catch basin outfall pipe is within 500 feet of a water of the State or wetland.
- B. For all other roads:
  - 1. The road segment is within 100 feet of a water of the State or wetland;
  - 2. The road segment bisects any water of the State or wetland, or a defined channel;
  - 3. The road segment is uphill from, and drains to, a road that bisects a water of the State or wetland.