

**VERMONT AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ANTIDegradation IMPLEMENTATION RULE**

I. Authority and Purpose

- a. Pursuant to 40 C.F.R. 131.12, a state must develop and adopt a statewide anti-degradation policy and identify the methods for implementing the policy.
- b. Section 29A-105, Antidegradation Policy (Policy), of the Vermont Water Quality Standards is adopted under the authority of 10 V.S.A. Chapter 47. The primary goal of the Policy is to protect and maintain water quality and existing and designated uses. The Policy consists of three main elements:
 1. Protection of water quality in outstanding resource waters (“Tier 3”);
 2. Protection and maintenance of water quality in high quality waters (“Tier 2”); and
 3. Determination and protection of existing uses (“Tier 1”).
- c. The Antidegradation Implementation Rule (Rule) describes the methods the Agency will use to implement the Policy.

II. Definitions

- a. As used in this Rule, the following terms shall have the specified meaning. If a term is not defined, it shall have the meaning specified in the Vermont Water Quality Standards or, in the absence of a definition in the Standards, it shall have its common meaning.
 1. “Agency” means the Vermont Agency of Natural Resources.
 2. “Application” means any request for a permit required by state or federal law when filed with, and deemed complete, by the reviewing authority.
 3. “Assimilative capacity” means a measure of the capacity of the receiving waters to assimilate wastes without lowering their quality below the applicable water quality criteria.
 4. “Cumulative impact” means the collective impact of all past and present legal discharges within the watershed, upstream of the proposed point of discharge and evaluated on an individual parameter basis.
 5. “Designated use” means any value or use, whether presently occurring or not, that is specified in the management objectives for each class of water as set forth in § 29A-104 of the Vermont Water Quality Standards.

6. “Discharge” means the placing, depositing, or emissions of wastes, directly or indirectly, into an injection well or into waters.
7. “Equilibrium conditions” represents a balance between the water flow, sediment and woody debris supplied to the stream system, and the stream capacity to transport the sediment and debris loads. Equilibrium exists when the stream maintains its dimension, pattern, and profile without unnaturally aggrading or degrading at the river reach or valley segment scales.
8. “Existing discharge” means any discharge to the extent authorized by a valid permit issued under the provisions of 10 V.S.A. § 1263 or § 1265 before January 7, 1985.
9. “Existing use” means a use which has actually occurred on or after November 28, 1975, in or on waters, whether or not the use is included in the standard for classification of the waters, and whether or not the use is presently occurring.
10. “High quality waters” means those waters defined as high quality by the Secretary as specified in this Rule.
11. “New discharge” means any discharge not authorized under the provisions of 10 V.S.A. § 1263 as of January 7, 1985 or any increased pollutant loading or demand on the assimilative capacity of the receiving waters from an existing discharge that requires the issuance of a new or amended permit.
12. “NPDES” means the National Pollutant Discharge Elimination System Program established by the federal Clean Water Act to permit certain discharges of pollutants to surface waters.
13. “Outstanding Resource Waters” means those waters designated pursuant to 10 V.S.A. § 1424a.
14. “Permit” means a certification, order, or other authorization in which during the application review process, compliance with the Vermont Water Quality Standards is evaluated pursuant to applicable state or federal law.
15. “Policy” means Vermont’s antidegradation policy set forth in § 29A-105 of the Vermont Water Quality Standards.
16. “Parameter” means a chemical, physical, or biological characteristic that is used to assess conditions and which is contained as narrative or numeric criteria in Vermont’s Water Quality Standards.
17. “Practicable” means an alternative is available and capable of being completed after taking into consideration cost, existing technology, and logistics in light of overall purposes of the proposed activity.

18. “Run-of-river” means flow downstream from a project or activity that is equal to inflow on an instantaneous basis. The project or activity does not operate out of storage and, therefore, does not artificially regulate flows downstream.
19. “Secretary” means the Secretary of the Vermont Agency of Natural Resources or the Secretary’s duly authorized representative.
20. “Standards” means the Vermont Water Quality Standards adopted by the Agency of Natural Resources through rulemaking.
21. “Waste” means effluent, sewage, or any substance or material, liquid, gaseous, solid or radioactive, including heated liquids, whether or not harmful or deleterious to waters; provided however, the term “sewage” as used in 10 V.S.A. Chapter 47 shall not include the rinse or process water from a cheese manufacturing process.

III. Applicability

- a. The Secretary will apply this Rule during the review of applications for any permit for a new discharge in which compliance with the Standards is evaluated.
- b. Discharges that do not require a permit are not subject to this Rule.
- c. Activities authorized by the following permits are subject to review under this Rule:
 1. NPDES direct discharge permits issued pursuant to 10 V.S.A. § 1263 and the Vermont Water Pollution Control Regulations;
 2. NPDES Concentrated Animal Feeding Operation (CAFO) permits;
 3. NPDES stormwater permits;
 4. stormwater permits pursuant to 10 V.S.A. § 1264;
 5. wetland permits pursuant to 10 V.S.A. Chapter 37;
 6. water quality certifications pursuant to § 401 of the federal Clean Water Act for a federal license or permit, including shoreland activities, lake encroachments, and stream alterations;
 7. dam orders pursuant to 10 V.S.A. § 1082;
 8. indirect discharge permits pursuant to 10 V.S.A. § 1263;
 9. groundwater withdrawal permits pursuant to 10 V.S.A. § 1418; and
 10. any other NPDES permit issued by the Agency.
- d. The following permits are exempt from review under this Rule:

1. permits for response actions taken pursuant to 10 V.S.A. §§ 1283, 1941, 6615, or 6615b or 10 V.S.A. Chapter 159, Subchapter 3 taken in response to a release of hazardous materials which may be hazardous to human health or which caused an existing water quality impairment;
 2. orders issued pursuant to 10 V.S.A. § 1272;
 3. permits for discharges from wastewater treatment facilities that are designed to eliminate unpermitted discharges that pose a threat to public health, or which caused an existing water quality impairment;
 4. permits for stormwater remediation projects installed to mitigate the impact of existing stormwater discharges to receiving waters; and
 5. dam orders issued pursuant to 10 V.S.A. § 1095 that authorize actions necessary to abate a threat to human life or property.
- e. Authorizations issued under a general permit subject to this Rule are exempt from subsequent review under this Rule unless the Secretary determines based on credible and relevant information and best professional judgment that the proposed activity, due to its potential impact, requires a site-specific Tier 2 analysis through the use of an individual permit.

II. Information Required from Applicant

- a. The Secretary shall require the applicant to provide the necessary information to make a determination under this rule.
- b. When the Secretary determines there is insufficient information to make a determination under this rule and the applicant fails to provide the required information, the Secretary shall deny the application.
- c. All technical, scientific, social, and economic data and analyses provided to the Secretary shall be developed by qualified professionals.
- d. The Secretary may require an applicant to provide the following information, as appropriate:
 1. an analysis of alternatives to the proposed discharge;
 2. description of the proposed activity, discharge, and facility operations, and their locations;
 3. physical, chemical, and biological data for the receiving waters and the characteristics of any proposed discharge;
 4. water quality modeling analyses;

5. the presence of existing uses;
6. the level of treatment and control necessary to maintain and protect existing and designated uses;
7. the magnitude, duration, and extent of any lowering of water quality due to the proposed discharge by itself and in combination with other presently occurring legal discharges;
8. the potential impacts, including cumulative impacts, on designated and existing uses and high quality water due to the proposed discharge; and
9. social and economic data and analyses, including:
 - (A) median household income of affected community;
 - (B) comparison of existing and expected economic conditions and social services when the proposed activity is fully implemented;
 - (C) economic gains or losses attributable to the proposed activity;
 - (D) contribution to social services;
 - (E) prevention/remediation of environmental or public health threats;
 - (F) value of the water resources;
 - (G) effect on environmental justice focus populations as defined in 3 V.S.A. § 6002; and
 - (H) other relevant environmental, social, and economic impacts of the proposed activity.
- e. In reviewing an application for a new discharge, the Secretary will utilize all credible and relevant information and the best professional judgment of Agency staff.

III. Public Participation Requirements

The Secretary shall provide an opportunity for meaningful participation for all individuals in accordance with the applicable permit or rulemaking notice requirements and civil rights requirements. The fact sheet, if any, and the public notice for the permit or rule shall include a statement that the permit or rule is consistent with the Policy and shall describe how the public can obtain materials used in the determination.

IV. Antidegradation Analysis

- a. Tier 3 – Protection of Outstanding Resource Waters

1. For Outstanding Resource Waters designated for their specific exceptional natural, recreational, cultural, or scenic values, their existing water quality associated with the values for which they have been designated shall be maintained and protected.
2. The impact of the proposed discharge to an Outstanding Resource Water's existing water quality will be evaluated on a parameter-by-parameter basis necessary to protect the values for which the Outstanding Resource Water was designated.
3. The Secretary will evaluate applications for proposed discharges, and only those that meet the following criteria shall be eligible for permitting:
 - (A) the proposed discharge will improve water quality or is necessary for the maintenance of current environmental conditions; or
 - (B) the proposed discharge is temporary and it is expected that water quality in the receiving water will be equal to or better than that which existed prior to commencement of the discharge. In order to be considered temporary, the duration of the discharge must typically occur over a period of days or months, not years.
4. A discharge that results in no measurable reduction in the physical, chemical, or biological quality of the Outstanding Resource Water shall not be subject to review under Tier 3.

b. Tier 2 – Protection of High Quality Waters

1. Waters the existing quality of which exceeds any applicable water quality criteria provide important environmental, economic, social, and other benefits to the people of the State.
2. A limited reduction in the existing quality of high quality waters may be allowed only when it is shown that:
 - (A) through the applicable permitting or approval process, the Secretary has provided public notice of the draft decision and an opportunity for public comment on the decision;
 - (B) after an analysis of alternatives, allowing lower water quality is necessary to prevent substantial adverse economic or social impacts on the people of the State; and
 - (C) there shall be achieved the highest statutory and regulatory requirements for all new or existing point sources, and all cost effective and reasonable best management practices for nonpoint source control, consistent with state law.

3. The Secretary shall evaluate alternatives to the proposed activity, including the location and method of discharge, that would have the least adverse impact on waters and wetlands of the State, and provided that any proposed alternative shall not have other significant adverse human health, safety, or environmental consequences.
4. In evaluating the impact of a proposed discharge, and considering the nature, persistence, and potential effects of pollutants contained within the discharge, the Secretary may determine that the following are not subject to Tier 2 analysis:
 - (A) A discharge that results in no measurable reduction in the physical, chemical, or biological quality of a surface water;
 - (B) The portion of a discharge that consists of a specific pollutant when such pollutant is not capable of being detected in the applicable receiving water;
 - (C) Flow modifying activities that meet one or more of the following criteria:
 - i. no impoundment of water or none that would alter the riverine characteristics of the aquatic habitat; and
 - ii. bypass flows that meet or exceed U.S. Fish and Wildlife seasonal conservation flows (0.5/1.0/4.0); and
 - iii. instantaneous run-of-river mode of operation; or
 - iv. surface water withdrawals that qualify as de minimis under the Agency Procedure for Determining Acceptable Minimum Streamflows; or
 - v. Snowmaking water withdrawals that meet the general standard in § 16-03(2) or the de minimis standard in §16-06(5) in the ANR Environmental Protection Rules – Chapter 16: Water Withdrawals for Snowmaking.
 - (D) Stream alteration activities resulting in channel geometry and fluvial processes where bed and bank erosion are neither increased nor transferred to other stream locations, and where floodplain function is maintained or restored over time; or
 - (E) Activities in waters of the United States (U.S.), including navigable waters, within the boundaries of the State of Vermont subject to the United States Army Corps of Engineers General Permits.

5. Determination of Receiving Water Quality

- (A) Waters whose existing ambient water quality exceeds (i.e., is better than) the applicable minimum water quality criteria and indices for the class to which the waterbody is assigned shall be considered high quality water.
- (B) A waterbody will be assessed as high quality on a parameter-by-parameter basis.
- (C) The Secretary will presume that all waters are high quality for at least one criterion and/or index for some portion of the year. This presumption may be rebutted by credible and relevant information obtained by or provided to the Secretary.
- (D) Cumulative Impacts. Any determination of receiving water quality shall include a consideration of cumulative impacts.
- (E) Depending on the nature of the proposed discharge, factors that may be considered in the evaluation of receiving water quality and assessment of cumulative impacts include:
- i. existing physical, chemical, and biological data for the receiving water;
 - ii. nature of resource impacted – e.g., stream, lake, river, wetland, watershed;
 - iii. class of the water;
 - iv. presence of rare, threatened, or endangered species;
 - v. presence of salmonid spawning areas;
 - vi. current legally authorized activities and discharges in the affected receiving water or watershed;
 - vii. effect of the proposed activity or discharge;
 - viii. percent impervious cover in the associated watershed;
 - ix. percent of wetland impacted;
 - x. stream equilibrium condition, including geomorphic condition, channel adjustment processes, and sensitivity, at the reach and valley segment scales;
 - xi. degree of flow or water level regulation;
 - xii. change in land cover relative to natural cover;

- xiii. percent cover of jurisdictional lake surface area with docks and other encroachments;
- xiv. riparian conditions: existing riparian conditions, % of lake shoreline length with structural stabilizations and development within 50 feet of the shore;
- xv. number and type of activities and extent of development in stream/river corridors, floodplains, and watershed;
- xvi. program-specific activities (e.g., river corridor planning, offset programs) intended to reduce current cumulative impacts and create assimilative capacity; and
- xvii. biomonitoring data including results from targeted monitoring plans for at risk watersheds (e.g., monitoring of sub-jurisdictional projects, highly developed watersheds, high elevation streams).

6. Determination of Reduction of Receiving Water Quality Resulting from the Proposed Activity

(A) In the course of reviewing an application for an individual permit or in the development of a general permit, the Secretary shall determine the extent to which a proposed discharge will result in a reduction in receiving water quality by utilizing all credible and relevant information and the best professional judgment of Agency staff.

- i. For discharges subject to this part, the Secretary may consider, when appropriate, one or more of the following factors when determining if a proposed new discharge will result in a reduction in water quality:
 - a. the predicted change in ambient water quality criteria at the appropriate critical conditions;
 - b. percent and total change in loadings;
 - c. nature, persistence and potential effects of the pollutant;
 - d. ratio of stream flow to discharge flow (dilution ratio);
 - e. duration of discharge;
 - f. measurable impacts to aquatic biota or habitat;
 - g. existing physical, chemical and biological data for the receiving water;

- h. degree of hydrologic or sediment regime modifications;
and
- i. any other flow modifications.

7. Determination of Socioeconomic Impact

(A) The Secretary shall consider the following factors as appropriate in determining the anticipated economic or social changes resulting from the proposed activity:

- i. measurable changes in economic and social conditions, specifically tax base, number and types of jobs created or impacted;
- ii. measurable direct and indirect economic benefits;
- iii. correction of an environmental, public health, or public safety problem;
- iv. consistency with the Environmental Justice State Policy as set forth in 3 V.S.A. § 6003;
- v. environmental, economic, and other benefits of maintaining the higher water quality;
- vi. value of the water resources;
- vii. reduction of aquatic biota, aquatic habitat, aesthetic, and recreational value that may result from lower water quality;
- viii. information provided by other government agencies and public participation;
- ix. public use or accessibility of a resource; and
- x. proposed mitigating measures that reduce the impact of the resulting lower water quality and or increase the economic and social benefits.

8. Determination of Allowable Reduction of Water Quality

(A) In determining if the reduction of water quality is allowable, the Secretary shall consider:

- i. reduction of water quality resulting from the proposed activity;
- ii. the importance of the anticipated socioeconomic impacts; and

- iii. the availability of funding programs to alleviate potential financial burdens resulting from the maintenance of higher water quality in environmental justice focus populations as defined in 3 V.S.A. § 6002.

(B) The Secretary will allow a limited reduction in the existing water quality only to the extent necessary to prevent substantial adverse socioeconomic impacts on the people of the State.

9. For proposed activities discharging to Class A(1) or B(1) waters and those waters as described in C.4., in consideration the location, size, and scale of the proposed activities, the Secretary shall require a site-specific Tier 2 analysis through the use of individual permits to ensure protection of these waters.
10. For proposed activities discharging to Class A(2) waters, in consideration of the location, size, and scale of the proposed activities, the Secretary shall require a site-specific Tier 2 analysis through the use of individual permits to ensure protection of the water quality necessary to support its designated use as a public water source.
11. For activities discharging to Class B(2) waters, the Secretary shall consider the effectiveness of best management practices or permitting criteria relative to their socioeconomic impacts and adopt those that are cost-effective and reasonable, which will then satisfy the Tier 2 review for the following permits:
 - (A) NPDES Concentrated Animal Feeding Operation (CAFO) permits;
 - (B) NPDES stormwater permits;
 - (C) stormwater permits pursuant to 10 V.S.A. § 1264;
 - (D) wetland permits pursuant to 10 V.S.A. Chapter 37;
 - (E) groundwater withdrawals that meet the no undue adverse effect criteria pursuant to the Groundwater Withdrawal Reporting and Permitting Rules;
 - (F) indirect discharge permits for sewage systems equal to or greater than 6,500 gallons per day design flow that meet the aquatic permitting criteria pursuant to the Indirect Discharge Rules;
 - (G) indirect discharge permits for non-sewage systems that meet the Vermont Water Quality Standards pursuant to the Indirect Discharge Rules;
 - (H) wastewater system and potable water supply permits for wastewater systems less than 6,500 gallons per day design flow that meet the

technical standards pursuant to the Wastewater System and Potable Water Supply Rules;

- (I) any other NPDES or state permits that depend on best management practices issued by the Agency for waters of the State.

c. Tier 1 – Protection of Existing Uses

1. The existing uses of waters, and the level of water quality necessary to protect those existing uses, shall be maintained and protected. Existing uses are a confirmation of the set of designated uses in the Standards regardless of the class of the water.

2. In making a determination of existing uses to be protected and maintained under the Policy, the Secretary shall consider the designated uses and at least the following factors:

- (A) Aquatic biota and wildlife that utilize or are present in the waters;

- (B) Habitat that supports existing aquatic biota, wildlife; or plant life;

- (C) The use of the waters for recreation or fishing;

- (D) The use of the water for water supply, or commercial activity that depends directly on the preservation of an existing high level of water quality; and

- (E) With regard to the factors considered under paragraphs 2(a) and 2(b) above, evidence of the uses' ecological significance in the functioning of the ecosystem or evidence of the uses' rarity.

3. In identifying existing uses, the Secretary will:

- (A) for contact and non-contact recreation, fishing and public surface water supplies consider the information that the applicant submitted in accordance with the *Agency's Process for Determining Recreational Uses*; information gathered in accordance with the *DEC 2008 Basin Planning Procedure for Determination of Existing Uses* during the development of basin plans; any relevant information from an applicable basin plan; and any other relevant information regarding use of the receiving waters for contact and non-contact recreation, fishing and public surface water supplies; and

- (B) for all other uses, including but not limited to, aquatic habitat and aquatic biota and wildlife, presume that if the designated uses of the receiving waters are currently being achieved and will continue to be achieved after evaluation of the proposed activity, then any identified existing uses will also be maintained and protected.

4. For waters where the Secretary determines water quality data meets or exceeds the minimum criteria for a higher class for one or more designated uses, or the Secretary has received an administratively and technically complete petition to reclassify waters, any permit issued by the Secretary must ensure the maintenance of water quality necessary to protect that existing use.

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