



State of Vermont

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

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Department of Environmental Conservation
State Geologist
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MEMORANDUM

TO: Jeff Wennberg, Commissioner

THROUGH: Christine Thompson, Director, WWMD *CT*

FROM: John Akielaszek, Chief, Indirect Discharge Permit Section *JJA*

DATE: May 12, 2006

SUBJECT: Interpretive Procedure for Section 1-04 (Discharge Policy) of the Vermont Water Quality Standards As It Relates To Indirect Discharge Permits for New Indirect Discharges of Sewage

The attached procedure is submitted for your review and signature. It formalizes the approach the Indirect Discharge Permit Section has been using when reviewing applications for permits authorizing new indirect discharges of sewage. The procedure has been prepared with the assistance of Anne Whiteley and has been reviewed and approved by Warren Coleman. Thank you.

**Interpretive Procedure for Section 1-04 (Discharge Policy) of the
Vermont Water Quality Standards As It Relates To Indirect
Discharge Permits for New Indirect Discharges of Sewage
[Section 1-04 Discharge Policy in italics]**

A. Discharge Criteria

In addition to the other provisions of these rules, new discharges of wastes may be allowed only when all the following criteria are met:

- 1. The proposed discharge is in conformance with all applicable provisions of these rules including the classification of the receiving waters adopted by the Board as set forth in Chapter 4 of these rules.*

As part of the review of a new indirect discharge of sewage, the Secretary shall check the existing classification of the receiving waters for the proposed indirect discharge and verify that an indirect discharge of sewage is allowed to those waters.

Approved new indirect discharges of sewage are deemed to be in compliance with the applicable Water Quality Criteria of the Water Quality Standards because the discharge:

- 1. Must meet the Aquatic Permitting Criteria of the Indirect Discharge Rules; and because**
- 2. The Aquatic Permitting Criteria of the Indirect Discharge Rules are as stringent or more stringent than the Water Quality Criteria in the Vermont Water Quality Standards; and**
- 3. Other Water Quality Criteria in the Vermont Water Quality Standards for which there are no counterparts in the Aquatic Permitting Criteria of the Indirect Discharge Rules are met due to the fact that passage through soils results in a discharge indistinguishable from natural groundwater flow.**

- 2. There is neither an alternative method of waste disposal, nor an alternative location for waste disposal, that would have a lesser impact on water quality including the quality of groundwater, or if there is such an alternative method or location, it would be clearly unreasonable to require its use.*

This section of the discharge policy is interpreted to mean that the potential for an indirect discharge must be examined before a direct discharge can be authorized. A new or increased indirect discharge of sewage must meet a more stringent requirement (no significant alteration of the aquatic biota) or (NSAAB) when compared to a direct discharge to the same waters and thus has a lesser impact on water quality of the surface waters while having an acceptable impact on the quality of groundwater. Therefore, when a proposed indirect discharge system meets the applicable provisions of the Indirect Discharge Rules, the alternative methods requirement of the Vermont Water Quality Standards is considered to have been satisfied.

All new indirect discharges of sewage must meet a standard in the receiving waters of NSAAB. Therefore, because the same standard must be met, no one indirect discharge location can be proven to be superior to any other location without constructing, operating and monitoring all such locations. This would be clearly unreasonable. If compliance with the Aquatic Permitting Criteria of the Indirect Discharge Rules is demonstrated using the methods in Subchapter 9 of the Indirect Discharge Rules, the proposed location for the indirect discharge must be considered equal to any other proposed location in terms of impacts on water quality. Therefore, for an approved indirect discharging system, the alternative location requirement is considered to have been satisfied.

3. *The design and operation of any waste treatment or disposal facility is adequate and sufficiently reliable to ensure the full support of uses and to ensure compliance with these rules and with all applicable state and federal treatment requirements and effluent limitations.*

All systems involving new indirect discharges of sewage must meet the technical design standards contained in the Indirect Discharge Rules as well as the Operational Reliability requirements contained therein. These standards and requirements are considered to be sufficient to show compliance with this provision of the Discharge Policy.

4. *Except as provided for in 10 V.S.A. §1259(d) and (f), the discharge of wastes other than nonpolluting wastes and stormwater runoff is prohibited in Class A waters regardless of the degree of treatment provided.*

Indirect discharges of sewage to Class A waters are prohibited by statute.

5. *Except as provided for in 10 V.S.A. §1259, the discharge of wastes that, prior to treatment, contained organisms pathogenic to human beings into waters is prohibited.*

10 V.S.A. §1259 (e) does allow for the on-site disposal of sewage with a discharge to a Class B waters under certain conditions. The conditions, listed below, must be met for an indirect discharge permit:

The discharge:

- (1) **will not significantly alter the aquatic biota in the receiving waters,**
- (2) **will not pose more than a negligible risk to public health**
- (3) **will be consistent with existing and potential beneficial uses of the waters, and**
- (4) **will not cause a violation of water quality standards.**

Condition (1) is met when the new or expanded indirect discharge of sewage meets the Aquatic Permitting Criteria of the Indirect Discharge Rules. Condition (2) is met when the new or expanded indirect discharge of sewage meets the Reliability Permitting Criteria (technical design standards) of the Indirect Discharge Rules. Condition (3) is met when the new or expanded indirect discharge of sewage is compatible with the existing classification of the receiving waters and when the discharge meets the Aquatic Permitting Criteria of the Indirect Discharge Rules. Because such a discharge will only cause an insignificant impact on the aquatic biota of the stream, the existing and beneficial uses of the receiving waters are maintained. Condition (4) is met as outlined under Section A(1) above.

6. *The receiving waters will have sufficient assimilative capacity to accommodate the proposed discharge.*

The Indirect Discharge Rules require that a new indirect discharge of sewage meet a standard of NSAAB in the receiving waters. The receiving waters must be able to assimilate the indirect discharge without significantly changing the aquatic biota. The methods for determining compliance with the Aquatic Permitting Criteria (APC) of the Indirect Discharge Rules (IDRs) have been established to ensure that a new indirect discharge of sewage will not cause a significant alteration of the aquatic biota in the receiving waters due to chemical water quality changes. Based on chemical and biological monitoring data collected on indirect discharges of sewage, the increase in the stream nutrient chemical parameters allowed under the IDRs results in the loss of a minor, and possibly insignificant, portion of the available assimilative capacity of the receiving water. The bulk of the receiving water's assimilative capacity for accommodating additional discharges remains available with the indirect discharge of sewage in place. Therefore, due to the requirements of the IDRs, it is assured that there will be sufficient assimilative capacity to accommodate the proposed discharge.

7. *Assimilative capacity has been allocated to the proposed discharge consistent with the classification set forth in Chapter 4 of these rules.*

No allocation is necessary because new indirect discharges of sewage have, by definition, only an insignificant impact on the aquatic biota and therefore do not require allocation of available assimilative capacity. Therefore, new indirect discharges of sewage will be in compliance with all established classifications set forth in Chapter 4 of the Vermont Water Quality Standards.

8. *The discharge of wastes to the thermocline or hypolimnion of any lake in a manner that may prevent the full support of uses is prohibited.*

No indirect discharge will discharge wastes to the thermocline or hypolimnion of any lake. Such discharges would only be direct discharges.

9. *The discharge of sewage into Class B waters shall not pose more than a negligible risk to public health. Compliance with this criterion shall include an assessment of both the level and reliability of treatment achieved and the impact of the discharge on the water quality of the receiving waters.*

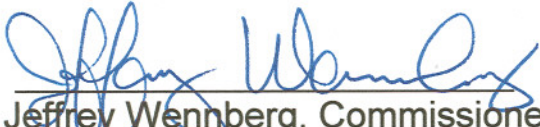
All systems involving new indirect discharges of sewage must meet the technical design standards contained in the Indirect Discharge Rules as well as the Operational Reliability requirements contained therein. These standards and requirements are considered to be sufficient to show compliance with this provision of the Discharge Policy.

B. Assimilative Capacity

The capacity of waters to assimilate both the discharge of wastes and the impact of other activities that may adversely affect water quality, and at the same time to be maintained at a level of water quality that is compatible with their classification, is finite. The Secretary may hold a portion of the assimilative capacity in reserve to provide for future needs, including the abatement of future sources of pollution and future social and economic development.

Accordingly, the assimilative capacity of waters shall be carefully allocated in accordance with the "Wasteload Allocation Process" as adopted by the Secretary.

As noted earlier, new approved indirect discharges of sewage have, by definition, only an insignificant impact on the aquatic biota and therefore do not require allocation of available assimilative capacity.

Signed: 
Jeffrey Wennberg, Commissioner
Department of Environmental Conservation

Date: 5/22/06