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**State of Vermont**

**Administrative Rule 87-46**  
**WASTELOAD ALLOCATION PROCESS**

**AGENCY OF NATURAL RESOURCES**

**September, 1987**



## PURPOSE

The State of Vermont has established Water Quality Standards as a means of guiding the management of water quality to ensure the use and enjoyment of Vermont's lakes and streams. Typical uses may include fishing, swimming, boating, hydroelectric power generation and waste disposal. When a use such as waste disposal threatens to degrade water quality to the extent that other uses are impaired, a limit must be placed upon the quantity of waste that may be discharged. This limit, referred to as the assimilative capacity, is defined as the maximum quantity of waste the water body can accept, without water quality being degraded below established standards.

In the case of multiple waste discharges to the same water body, a process is needed by which the available capacity which exists to assimilate wastes can be divided among the various dischargers.

To stipulate how Federal and State mandated wasteload allocations should be made, the Department of Environmental Conservation first developed a Wasteload Allocation Process in 1978. This revised Wasteload Allocation Process describes how the Department makes such wasteload allocations among competing dischargers and how the allocation is implemented in the State and Federal wastewater discharge programs.

## WASTELOAD ALLOCATION PROCESS

### DEFINITIONS

As used in this rule, the following definitions shall apply:

ASSIMILATIVE CAPACITY - The measure of a water body's ability to accept wasteloads without degrading water quality below established water quality standards.

DEPARTMENT - The Department of Environmental Conservation.

EFFLUENT LIMITED - Rivers, streams and lakes which will meet applicable water quality standards when minimum waste discharge effluent limitations are applied to all dischargers.

EXISTING DISCHARGE - Any discharge or activity to the extent authorized by a valid permit issued under the provisions of 10 V.S.A. Section 1263 or Section 1265 as of the date of adoption of these rules.

NEW DISCHARGE - Any discharge not authorized under the provisions of 10 V.S.A. Section 1263 as of the date of adoption of these rules, or any increased pollutant loading or demand on the assimilative capacity of the receiving waters from an existing discharge which requires the issuance of a new or amended permit.

NONPOINT SOURCE POLLUTION - Pollution resulting not from a point source, such as an outfall pipe of a sewage treatment plant, but rather from diffuse or distributed sources such as overland runoff from construction areas, agricultural lands, forest lands, or groundwater-borne pollutants, such as leachate from sanitary landfills.

PUBLICLY OWNED TREATMENT WORKS (POTW) - Any government-owned device or system used in the storage, treatment, disposal or recycling of wastes.

SECONDARY TREATMENT - A wastewater treatment process, usually biological, which is designed to reduce oxygen demanding materials in the effluent.

SECRETARY - The Secretary of the Agency of Natural Resources or his authorized representative.

SEVEN-DAY LOW FLOW, TEN-YEAR RETURN PERIOD (7Q10) - A statistical measure of the magnitude and frequency of low flow in a river. It is the lowest mean flow for seven consecutive days, which has a 10% chance of occurring in any given year.



SUBALLOCATION - The redistribution of a discharger's wasteload allocation by that discharger to another discharger.

TOTAL MAXIMUM DAILY LOAD (TMDL) - The total allowable amount of pollutant which a discharger is allowed to discharge to a water body per day which will ensure water quality standards are met.

WASTELOAD ALLOCATION - The distribution of maximum allowable daily loads to dischargers, the sum of which will meet the assimilative capacity of a particular reach of river or stream.

WATER QUALITY LIMITED - Rivers, streams, and lakes, or portions of them, where existing or proposed discharge loads exceed the assimilative capacity of the water body even after all discharges meet minimum effluent standards. These minimum standards specify best practicable treatment by private discharges and secondary treatment by municipalities.

WATER QUALITY STANDARDS - Rules titled "Vermont Water Quality Standards", adopted by the Water Resources Board.

## WASTELOAD ALLOCATION PROCESS

### Procedures for Estimating Assimilative Capacity

To provide a fair distribution of waste assimilation capacity among all dischargers in a water segment, the use of mathematical simulation modeling should first be employed to determine the assimilative capacity of the receiving water.

All discharges that significantly impact the resource, based on considerations of frequency and/or magnitude, shall be included in such assimilative capacity determinations. These discharges shall include, but not be limited to, municipal and industrial discharges, nonpoint sources, stormwater runoff and combined sewer overflows. All discharges used in the modeling process will be characterized by total maximum daily loads.

It is recognized that seasonal variations in temperature and biological activity occur, and the waste assimilation capacity of water segments may be calculated on a seasonal basis. This should be based upon temperature, reaction rates, aquatic plant photosynthesis and respiration, 7Q10 flow, and non-point source inputs that are consistent with the season in question.

### Development and Adoption of a Wasteload Allocation

The process for allocating the assimilative capacity of a particular water segment to a discharger or among competing dischargers in the segment shall be based upon the following guiding priorities:

- I. Providing maximum protection of the water resource.
- II. Ensuring equity among existing dischargers.
- III. Allowing comparable capacity for future growth.
- IV. Maximizing the benefit/cost ratio of the allocation.
- V. Minimizing the number of Wastewater Treatment Facilities discharging to the State's waters.

1. The process for making a wasteload allocation, as set forth in the following paragraphs, shall not commence prior to notification by the Secretary of the initiation of such action. The Secretary shall cause such notice to be published in a newspaper having general circulation in the affected area and shall notify by direct mailing all affected municipalities, industries, dischargers, regional planning commissions, and other interested parties.



2. Wasteload allocations will be developed using the provisions of this process and adopted by the Secretary for all affected segments, when the Department estimates that existing or projected wasteloads exceed the assimilative capacity of the water segment, or when deemed necessary by the Secretary. Wasteload allocations may be made whether or not the water segment has been formally designated as water quality limited.

3. When the Secretary determines particular conditions warrant its consideration, any water quality parameter may be the subject of a wasteload allocation.

4. Based upon assimilative capacity modeling, a minimum of three wasteload allocation alternatives will be prepared by the Department. Alternatives will include:

a. Uniform effluent concentration limitations for all dischargers within the segment, with total maximum daily loads (TMDL) based on treatment plant design flow projections.

b. TMDL allocations for each discharger based on existing and projected populations or population equivalents.

c. Requiring best practical wastewater treatment for all dischargers within the reach. Then selectively increasing the required treatment level for facilities with the greatest impact on the receiving water due to size or location, until water quality standards are attained.

5. To develop wasteload allocation alternatives and determine projected populations and wastewater flows, town officials, regional planning commissions, private dischargers and the State Office of Policy Research and Coordination will be consulted. Town plans, zoning ordinances, capital investment plans and regional plans will also be considered in developing alternative wasteload allocations.

6. Other wasteload allocations which appear to be reasonable in the judgement of the Secretary for the situation under consideration may be prepared, including seasonal wasteload allocations.

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

8. Where proposed discharges or projected growth precipitates the need for a wasteload allocation, the Secretary may require an assimilative capacity determination to be prepared by those proposing to discharge.

9. Informational materials to explain each of the alternatives will be prepared for use at public meetings and hearings and for the interested public at large. This material will also provide information on the rationale for and implication of each of the alternatives with a statement specifying which one is preferred by the Department and why.

10. A minimum of one public meeting will be held for each wasteload allocation at a convenient location in the river basin. It will be a public informational meeting to explain the wasteload allocation proposed by the Department and the other alternatives. Comments and concerns regarding the proposed wasteload allocation will be recorded and considered by the Department their resolution will be presented to the Secretary of the Agency. If deemed necessary, additional public meetings will be scheduled.

11. Suballocation of assimilative capacity by an endowed party to either new dischargers or other existing dischargers will not be allowed. The Secretary may reallocate the assimilative capacity at the request of an endowed party through the use of this Process. This will not affect a discharger's ability to control connections onto their permitted treatment facility, but will prevent the creation of new discharges or increasing of other existing discharges through redistribution of an allocation.

12. The wasteload allocation is included as part of the State Water Quality Management Plan and will be implemented through the NPDES permit process, using maximum daily effluent limits, as determined by the assimilative capacity analysis and set forth in the wasteload allocation.



13. The Secretary will initiate a review of adopted wasteload allocations whenever such a review becomes necessary. The Secretary will also consider petitions requesting amendment of a wasteload allocation. Whether an amendment is considered upon the initiative of the Secretary or by petition, the disposition of the proposal shall be within the sound judgement of the Secretary.

14. Appeals of the wasteload allocation will be to the Water Resources Board per 10 V.S.A. 1269. Affected parties may appeal an allocation within thirty (30) days of its adoption.

