

Protection of High Quality Biological Waters

*Regulatory and Non-Regulatory Water Quality Management
Tools to Protect High Quality Waters in Vermont*

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VT Regulatory Management Tools to Protect High Quality Waters

Vermont Statutes Annotated (10 VSA 1250)

Vermont Water Quality Standards (2000)

- Surface Water Quality Classification System
- Anti-Degradation Policy
 - Existing and Designated Uses
 - Outstanding Resource Waters

Vermont Consolidated Assessment & Listing Methodology

Vermont Wetland Classification and Rules

Act 250 Land Use Permit Procedure

FERC – Re-licensing, 401 Certifications, NPDES

Stream Alterations and Shoreland Encroachment Permits²

VT Regulatory Management Tools to Protect High Quality Waters

Vermont Statutes Annotated – 10 VSA 1250 – State Water Quality Policy

- “It is the policy of the state of Vermont to:
- (1) protect and enhance the quality, character and usefulness of its surface waters and to assure the public health;
- (2) maintain the purity of drinking water;
- (3) control the discharge of wastes to the waters of the state, prevent degradation of high quality waters and prevent, abate or control all activities harmful to water quality;
- (4) assure the maintenance of water quality necessary to sustain existing aquatic communities;
- (5) provide clear, consistent and enforceable standards for the permitting and management of discharges;
- (6) protect from risk and preserve in their natural state certain high quality waters, including fragile high-altitude waters, and the ecosystems they sustain;
- (7) manage the waters of the state to promote a healthy and prosperous agricultural community, to increase the opportunities for use of the state's forest, park and recreational facilities, and to allow beneficial and environmentally sound development.
- It is further the policy of the state to seek over the long term to upgrade the quality of waters and to reduce existing risks to water quality. (Added 1985, No. 199 (Adj. Sess.), § 1, eff. May 17, 1986.)”

VT Regulatory Management Tools to Protect High Quality Waters

Vermont Water Quality Standards (2000)

- Surface Water Quality Classification System
 - Class A1, A2, and B
- Anti-Degradation Policy
 - Existing and Designated Uses
 - Outstanding Resource Waters

“The Water Resources Panel may under 10 V.S.A. § 1424a designate certain waters as Outstanding Resource Waters. Where the Panel so designates such waters because of their water quality values, their existing quality shall, at a minimum, be protected and maintained.”

VT Regulatory Management Tools to Protect High Quality Waters

Anti-Degradation Implementation Procedure

- Determination and Protection of Designated and Existing Uses
- Protection and Maintenance of Water Quality in High Quality Waters
- Protection of Water Quality for Outstanding Resource Water

VT Regulatory Management Tools to Protect High Quality Waters

Vermont Consolidated Assessment and Listing

- Assessment of biological integrity is conducted on the state's rivers and streams for the purpose of trend detection and site-specific impact evaluation.
- The biological potential for various sites is established through statewide reference site monitoring. Information from this program element also serves to refine existing biocriteria and detect trends in baseline biological integrity. The long-term goal of reference site monitoring is to gather information on a set of known reference sites on a 5-year rotating basis, so as to generate five years of continuous data for each site. Sites are stratified across stream ecotypes differing in drainage area size, elevation, and alkalinity. Human activity in reference site drainages is considered to be minimal relative to other streams in the ecoregion.

VT Regulatory Management Tools to Protect High Quality Waters

Other Permitting Programs

- Stormwater
- Stream Alterations
- Shoreland Encroachments
- Wetland Conditional Use Determinations
- Act 250 Land Use Permits
- 410 Certification
 - FERC re-licensing
 - NPDES

VT Non-Regulatory Management Tools to Protect High Quality Waters

Vermont Watershed Management – “Basin Plans”

Aquatic Community Classification

Long Range Management Plans for State Lands

Regional Planning and Stewardship Initiatives

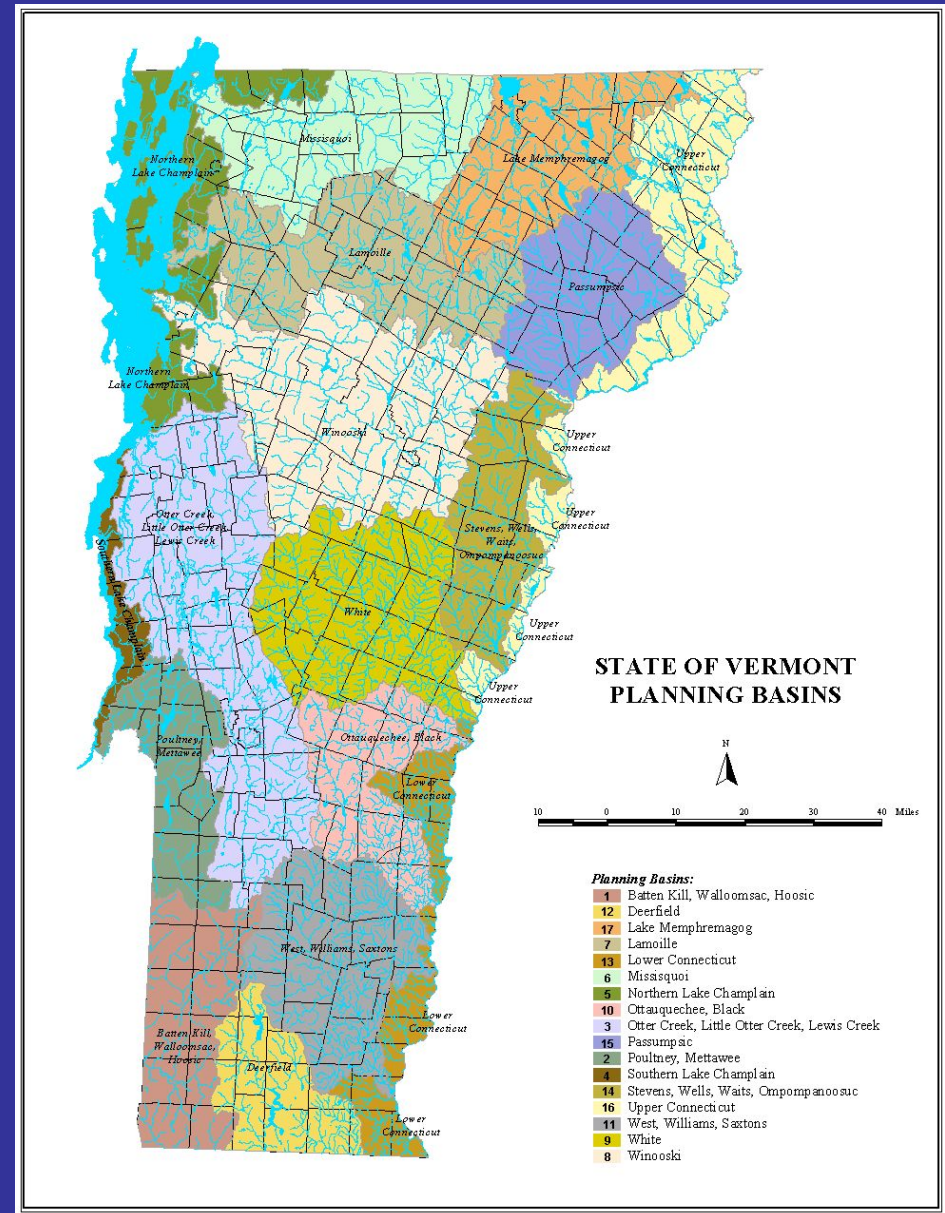
Vermont River Management Program

- Stream Geomorphic Assessments (SGA)
- Rapid Habitat Assessments (RHA)

Vermont Watershed Planning Initiative

Basin Plans Developed for

- 17 Major River Basins
- Non-Point Source Pollution
- Public Participation
- Prioritize Issues and Concerns
- Monitoring and Assessment
- Goals, Objectives, Strategies
- 303(d) List – Impaired
- Water Management Typing - High Quality Waters



Classes

A1

Ecological Waters

A2

Public Water Supplies

B

Suitable for Boating, Swimming and Drinking with Treatment

Types

B1

Almost natural conditions

B2

- Moderate change in biota
- Minor change in habitat

B3

- Moderate change in biota
- Moderate change in habitat

Adopted 2000

Pending 2007

VT Non-Regulatory Management Tools to Protect High Quality Waters

The Classification of Aquatic Communities in Vermont

The Conservation Goal of this program is to protect all priority aquatic features from degradation and changes in species composition through water quality protection and other means, and to encourage careful stewardship of all remaining aquatic features.

VT Non-Regulatory Management Tools to Protect High Quality Waters

Long Range Management Plans for State Lands

Identify important high-quality aquatic resources within state lands that require additional protection and stewardship strategies.

VT Non-Regulatory Management Tools to Protect High Quality Waters

Regional Planning and Stewardship Initiatives

- Watershed Organizations, NRCDDs, Land Trusts, NGOs, and other Non-Profits
- RPC - PDM-C (FEMA) – Hazard Mitigation Planning and Management
- FEH (VT DEC River Management) Fluvial Hazard Mitigation Planning

VT Non-Regulatory Management Tools to Protect High Quality Waters

VT DEC – River Management Program

- Stream Geomorphic Assessments
 - Identify reference streams in “stable” dynamic equilibrium
- Rapid Habitat Assessments
 - Determine if a stream is supporting or not supporting aquatic life
 - Characterize the existence and severity of habitat degradation
 - Help to identify sources and causes of habitat degradation
 - Evaluate the effectiveness of control actions and restoration activities



Water Management Types (WMT)

WMT1 Or B1	Minor changes from reference conditions for aquatic macroinvertebrate and fish assemblages.
WMT2 Or B2	Moderate changes from reference conditions for aquatic macroinvertebrate and fish assemblages.
WMT3 Or B3	Changes for aquatic macroinvertebrate and fish assemblages shall be limited to moderate changes in relative proportions to tolerance. When such changes are a result of hydro-electric modification or water level fluctuation, compliance based on aquatic habitat studies.

US EPA Administers Clean Water Act

Approval and Certification

Vermont Administers state waters by
delegation

Set by statute	Designated uses	Water quality goals for the water body
Adopted by basin	Classifications (Water Mgmt Type)	Grouping of designated uses
Adopted 2000	Water Quality Criteria	Narrative Criteria (descriptive) Numeric Criteria (quantitative)

Criteria	WMT B1	WMT B2	WMT B3
Aquatic Biota			
Aquatic Habitat	Flows not diminished more than 5 % of 7Q10 when natural flows are equal or less than 7Q10	Small change in width of wetted area of stream and in physical characteristics of the stream such as water depth	Moderate change as measured by ... wetted area, depth, velocity...
Recreation (boating & fishing) (swimming)			
Aesthetics	Consistently ... excellent	Consistently ... good	Seasonal and temporal variability allowed
Specific Restrictions	Not permitted: Dams or artificial impediments		

Development of Water Management Types

- 1997-1999 Draft revisions to Vermont Water Quality Standards
- 1996 Lamoille River Hydroelectric Project
- 2000 Water Quality Standards, including WMT categories, approved and adopted

Pending

Basin Plan Developed by ANR



Basin Plan
adopted by
Secretary of ANR



Petition for classification
and WMT to Vermont
Water Resources Panel

Legal Issue #1

Who has authority to type?

Statute designates A1, A2, B, but no sub-B types.

10 V.S.A. 1252

“The State adopts for the purposes of classifying its waters, the following classes and definitions thereof:

Class A (1) Suitable for public water supply with disinfection when necessary; character uniformly excellent; or (2) High quality waters which have significant ecological value

Class B Suitable for bathing and recreation, irrigation and agricultural uses; good fish habitat; good aesthetic value; acceptable for public water supply with filtration and treatment.

Legal Issue #1

Who has authority to type?

Argument

Legal implications

- State law: WMT void as a matter of law for failure to meet plain meaning of statute
- Federal law: EPA certification, or lack thereof, challenged

Any time a state fails to follow its procedure for setting or revising water quality standards, EPA has a mandatory, nondiscretionary duty to review state action. *Florida Public Interest Research Group (FPIRG) v. EPA* 386 F.3d 1070 (11th Cir. 2004).