STATE OF VERMONT

2018

LIST OF PRIORITY SURFACE WATERS

PART B. IMPAIRED SURFACE WATERS - NO TOTAL MAXIMUM DAILY LOAD DETERMINATION REQUIRED

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Overview

All waters listed in **Part B** are assessed as "impaired" and do not require development of a TMDL as described in 40 CFR 130.7. Impaired waters that do not need a TMDL are those where other pollution control requirements (such as best management practices) required by local, state or federal authority are expected to address all water-pollutant combinations and the Water Quality Standards are expected to be attained in a reasonable period of time. These waters correspond to Category 4b of EPA's Consolidated Assessment Listing Methodology.

Explanation of Column Headings

Waterbody ID - An alphanumeric code used to spatially locate designated surface waterbodies. For example, VT01-02 and VT01-03L05 represent a river and a lake waterbody, respectively, which are located in Vermont river basin #01. River basin #01 includes the Batten Kill, Hoosic and Walloomsac rivers; there are 17 river basins for planning purposes identified in Vermont. A statewide map has been included that names these 17 river basins and identifies their approximate boundaries.

ADB Code(s) – Assessment Database segment code used for EPA tracking purposes. If blank, Waterbody ID represents entire ADB code.

Segment Name/Description - The name of the river/stream segment or lake/pond.

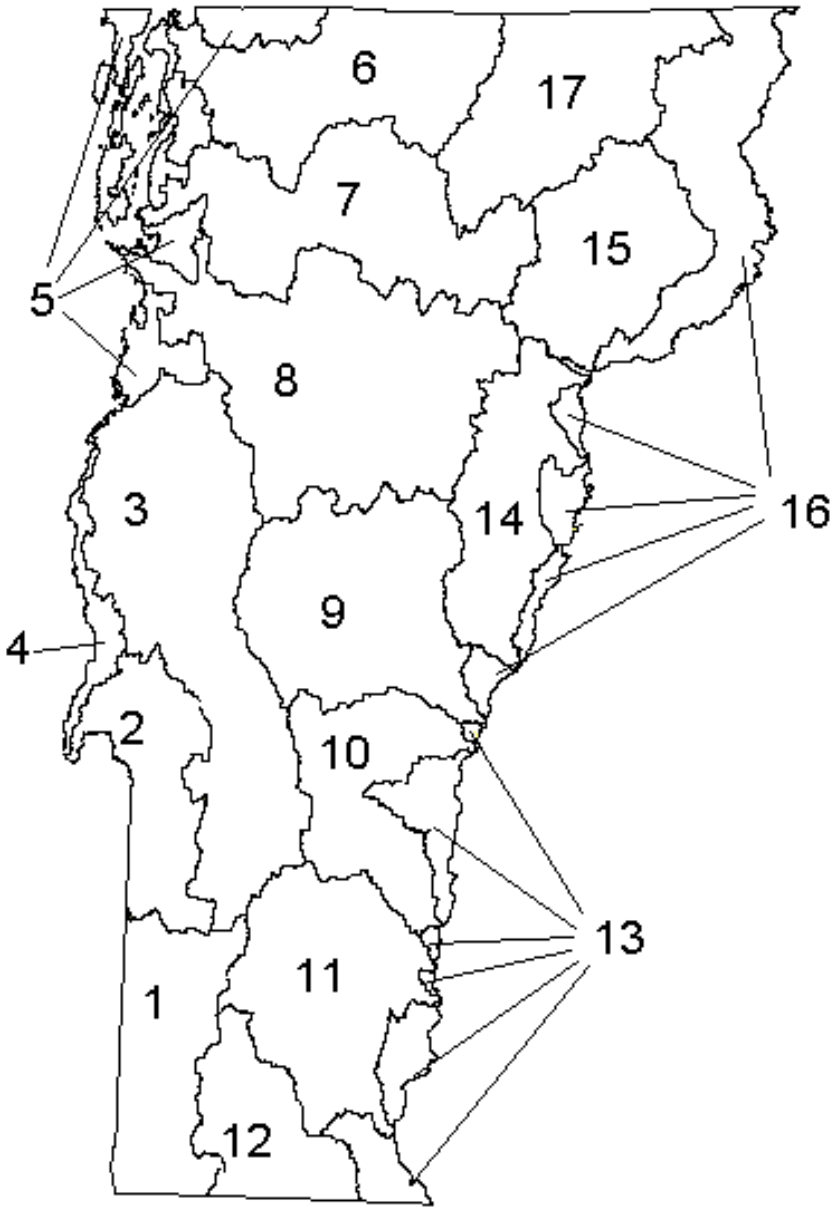
Pollutant(s) - The pollutant or pollutants that cause a violation of the Vermont Water Quality Standards (VTWQS).

Use(s) Impaired - An indication of which designated or existing uses are impaired. The following conventions are used to represent a specific use:

AES - aesthetics
ALS or AH - aquatic life (biota and/or habitat) support
AWS - agricultural water supply
2CR - secondary contact recreation (fishing, boating)
FC - fish consumption
DWS - drinking water supply
CR - contact recreation (i.e. swimming)

Surface Water Quality Problem(s) - A brief description of the problem found in the particular segment.

Rationale - A narrative summary explaining why a TMDL determination is not needed to correct the specific impairment



Major Vermont River Basins

1. Battenkill
2. Poultney-Mettawee
3. Otter Creek
4. Lower Lake Champlain
5. Upper Lake Champlain
6. Missisquoi
7. Lamoille
8. Winooski
9. White
10. Ottauquechee
11. West
12. Deerfield
13. Lower Connecticut
14. Wells, Waits, Ompompanoosic
15. Passumpsic
16. Upper Connecticut
17. Lake Memphremagog

Part B. Waters appearing below have documentation and data indicating impairment and do not meet VT Water Quality Standards. However, according to USEPA Listing Guidance, these waters do not require a TMDL because other pollution control requirements required by local, state, or federal authority are stringent enough to implement any water quality standard (WQS) applicable to such waters.

Waterbody ID	ADB Code(s)	Segment Name/ Description	Pollutant(s)	Use(s) Impaired	Surface Water Quality Problem(s)
VT05-10L01	04	BURLINGTON BAY - LAKE CHAMPLAIN - PINE STREET BARGE CANAL (Burlington)	PRIORITY & NONPRIORITY ORGANICS, METALS, OIL, GREASE, PCBs	ALS, CR, 2CR	CONTAM'N FROM COAL TAR IN SEDIMENTS OF PINE ST BARGE CANAL (SITE #770042)

No TMDL is necessary for this impairment as authority and legal means are available and in place to address the source of impairment. The authority and legal means that are available to DEC and the US EPA are considered sufficient to attain Water Quality Standards in the future. DEC authority is under 10 VSA 6603 and 6610a. US EPA authority is CERCLA (42 USC section 9601 - 9675).

The Pine Street Barge Canal Coordinating Council (PSBC Council) is overseeing implementation of the May 1998 Cleanup Plan. Cleanup Plan was reviewed and approved by EPA. Personnel from DEC's Hazardous Materials Division participate with and serve on the Council.

This is an EPA Superfund site designated under CERCLA. There are legal requirements in place that apply to the source of the pollutants contributing to the impairment. The performance standards identified in the Statement of Work are sufficient to remediate the problem and are consistent with VT Water Quality Standards when implementation of the remediation/clean-up plan is complete.

An extensive water quality monitoring plan is in-place to track effectiveness of pollution controls implemented and compliance with VT Water Quality Standards.

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Waterbody ID	ADB Code(s)	Segment Name/ Description	Pollutant(s)	Use(s) Impaired	Surface Water Quality Problem(s)
VT06-08	07	SOUTH MOUNTAIN BRANCH, TRIBUTARY #3 (MOUTH TO RM 0.5)	SEDIMENT	ALS	EROSION FROM PARKING AREAS AND ON-MOUNTAIN ACTIVITIES

No TMDL is necessary as DEC has the authority and legal means available to eliminate the sources causing this impairment. The authority and legal means that are available to DEC are sufficient to attain WQS and enable DEC to utilize enforcement authority as it exists under 10 VSA 1272.

The South Mountain Branch is a tributary Jay Branch and is located in the town of Jay. The streams within the watershed are managed as Class B waters, with cold water fishery. South Mountain Branch, Tributary #3 enters the South Mountain Branch at about RM 2.3, and drains the south side of Jay Peak mountain and portions of the Stateside lodge and parking area.

Based on biomonitoring conducted by Jay Peak Resort (JPR) and VTDEC that was initiated in 2011, Tributary #3 to South Mountain Branch shows noncompliance with VTWQS biocriteria. Indications from habitat assessments and water quality monitoring, impacts due to sediment appear to be the primary stressor. As reported in the 2012 update of the water quality remediation plan prepared for JPR, multiple problematic sediment sources have been identified as potential sites for remedial measures.

VTDEC issued a follow-up §1272 Order in 2014 to have JPR revisit the original WQRP and identify, prioritize and implement an additional suite of remedial actions to be completed in two years. Additionally, as a result of private party appeals of several stormwater permits in 2014, JPR entered into a settlement agreement that establishes WQS compliance dates with interim targets, a mechanism by which additional BMPs are implemented and a monitoring plan.

Watershed BMP implementation has continued in this watershed over the past several years, but the biomonitoring conducted in 2016 and 2017 failed to show compliance with the VTWQS. Tributary #3 to South Mountain Branch continues to remain impaired. According to the WQRP, large-scale BMPs will be scheduled to be implemented in the watershed and biomonitoring will continue for the next several years to track the stream condition.

VT07-01	01	LOWER LAMOILLE RIVER FROM CLARKS FALLS DAM TO ROUTE 2 BRIDGE (6 MILES)	LOW D.O.	ALS	3 DAMS (CLARKS, MILTON, PETERSON) CREATE D.O. PROBLEMS DOWNSTREAM

No TMDL is necessary for this impaired segment as DEC has the authority and legal means available to address the dissolved oxygen (D.O.) problem found below the Clarks Falls hydroelectric facility. The authority and legal means that are available to DEC are sufficient to attain Water Quality Standards in the near future.

A new federal license for the Lamoille River Hydroelectric Project was issued in June 2005. Articles 407 and 408 address post-licensing water quality monitoring and D.O. enhancement, respectively. The new license provides for conservation flows that may improve the D.O. regime sufficiently to obviate the need for specific mechanical enhancements, such as turbine aspiration. FERC approved the licensee's water quality monitoring and dissolved oxygen enhancement plan on December 5, 2006, although the licensee elected to initiate sampling in Summer 2006. Because of higher than normal flows in 2006, sampling continued in 2007. Conditions were again somewhat atypical in 2007 because the Milton Station was off line, resulting in highly reoxygenated flows entering Peterson impoundment. Consequently, the Department has asked CVPS to continue sampling in summer 2008 before it determines whether there is sufficient data to conclude that the post-licensing operational changes have achieved compliance with the Water Quality Standards. If the data indicates that standards are not being met, the licensee must propose and implement enhancement measures.

Currently, sufficient data has not been collected to make a final WQS determination; however, the operational changes have occurred to address the potential low dissolved oxygen condition.

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Waterbody ID	ADB Code(s)	Segment Name/ Description	Pollutant(s)	Use(s) Impaired	Surface Water Quality Problem(s)
VT08-02	07	UNNAMED TRIB TO WINOOSKI RIVER	METALS (Fe)	ALS	SO. BURLINGTON LANDFILL LEACHATE ENTERING SURFACE WATER

No TMDL is necessary for this impairment as DEC has the authority and legal means available to address the source causing this particular impairment. The authority and legal means that are available to DEC are sufficient to attain Water Quality Standards.

This is a small stream that is pumped around the South Burlington Landfill. Leachate-contaminated seeps at the base of the landfill have in the past drained into a wetland area connected to the stream. Currently, curtain drains are in place and leachate is pumped, collected and transported to a permitted wastewater treatment facility. The landfill facility was ordered by DEC to be closed with capping. Capping occurred in 1992. The facility has a post-closure court order requiring water quality monitoring and maintenance of the site. Water quality sampling is conducted semiannually to determine effectiveness of treatment. Water quality improvement is expected over time as water quality treatment and site management continues. Through 2017, surface water quality sampling locations indicate that iron concentrations remain above the VTWQS for the protection of aquatic biota.

VT08-08	01	MUDDY BROOK (0.1 MILE)	METALS (Fe)	ALS	CV LANDFILL: LEACHATE ENTERING SURFACE WATER

No TMDL is necessary for this impairment as DEC has the authority and legal means available to address the source causing this particular impairment. The authority and legal means available to DEC are sufficient to attain Water Quality Standards and have been implemented.

This is a small stream that flows around the Central Vermont Landfill. Until summer 2001, leachate had entered the stream from seeps located along the side slopes of the landfill. The Landfill was ordered by DEC to be closed and capped in 1993. Due to the slumping of the capping soils in 2001, the original clay cap was removed, the landfill was re-graded and a synthetic cap was installed along with a new toe drain and gas collection system. The landfill facility has a post-closure court order requiring water quality monitoring and maintenance of the site. Currently the amount of water collected in the drains is significantly less than previously reported. Through October 2015. monitoring data continues to show sporadic but inconsistent compliance with the VTWQS. However, of the four samples collected in 2016 and 2017, iron only exceed the WQS criteria once.

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Waterbody ID	ADB Code(s)	Segment Name/ Description	Pollutant(s)	Use(s) Impaired	Surface Water Quality Problem(s)
VT08-12	04	WEST BRANCH LITTLE RIVER, RM 7.5 TO 8.0	UNDEFINED	ALS	IMPACTS TO MACROINVERT. COMMUNITY; POTENTIAL SOURCES INCLUDE HYDROLOGIC MODIFICATION, SEDIMENT, LOW pH

No TMDL is necessary for this impairment as VTDEC has the authority and legal means available to address the source causing this particular impairment. The authority and legal means that are available to DEC are sufficient to attain Water Quality Standards.

The mid-upper reaches of the West Branch Little River, located in the town of Stowe, Vermont, is a small, cold water, Class B stream and drains the eastern reaches of Mt Mansfield. Much of the mid-upper reaches of the stream receive, either directly or through tributaries, runoff from the developed areas of the Stowe Mountain Resort (SMR).

The Agency placed the reach between rivermile (RM) 7.5 and 8.0 of West Branch Little River on Part C of the 2002 Vermont List of Priority Waters, thereby identifying it as in need of further assessment to determine compliance with the VTWQS. The site has been re-evaluated with each subsequent biennial listing cycle, with consistently marginal attainment. In 2012, based on biomonitoring data collected between 2008 - 2011, the Agency determined that the West Branch Little River from RM7.5 to RM8.0 was no longer in compliance with the VTWQS for aquatic life support due to undefined stresses.

Through comments submitted during the draft 303(d) List comment period, SMR proposed it take a series of steps to: 1) investigate potential sources contributing to the impairment, 2) develop and prioritize actions to remediate the problematic areas, and 3) implement the necessary actions to remediate the water quality impairment. On May 3, 2012, DEC issued an order pursuant to 10 V.S.A. §1272 ordering SMR to: 1) by May 30, 2012, conduct a field investigation, develop or improve existing hydrologic models and submit recommendations to eliminate the identified impairment, and 2) by September 30, 2012, complete approved remediation measures and submit proposed monitoring plan for approval.

In late 2012, all agreed upon BMP measures were completed by SMR and biomonitoring results from 2012 also indicated compliance with the VTWQS for a single year. However, subsequent biomonitoring in 2014 reveled a slight decrease in water quality from 2012 to just below levels of compliance. Monitoring continued in 2015 and 2016 with similar results at both RM 7.5 and RM 8.0 and that sediment and possibly hydrologic stress (high flows) continue to limit the aquatic biota from attaining compliance. Additional assessments to identify potential new BMPs should be considered in light of the most recent monitoring results.

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Waterbody ID	ADB Code(s)	Segment Name/ Description	Pollutant(s)	Use(s) Impaired	Surface Water Quality Problem(s)
VT08-16	02	TRIB (#23) TO STEVENS BR, BELOW WIILIAMSTOWN WWTF OUTFALL (0.5 MI)	NUTRIENTS	ALS	TREATED EFFLUENT DISCHARGE TO SMALL RECV'ING WATER

No TMDL is necessary as DEC has the authority and legal means available to address the municipal source causing this impairment. The authority and legal means that are available to DEC are sufficient to attain WQS. DEC has NPDES discharge permitting authority under the delegation agreement with EPA. Delegation of NPDES permitting authority means that DEC has adequate authority and legal mechanisms to execute enforcement. Authority to order correction resides within 10 VSA 1272.

Recent biological monitoring downstream of the discharge in 2002 and 2005 indicates considerably improved invertebrate and fish communities, at times exceeding minimum criteria. Sampling in 2010 showed a slight decline in macroinvertebrate community composition as compared to immediately upstream. However, as a result of a VTDEC wastewater facility inspection in 2009, a project to remove sludge in the lagoon and completely replace the aerations systems was scheduled. The project work was completed after the 2010 biomonitoring.
Future biomonitoring will indicate the effectiveness of the lagoon upgrade work.

In 2015 and 2016, planning at the Williamstown WWTF proposes to move the discharge outfall out of the small tributary (#23) to the larger Stevens Branch directly. This redirection of the outfall should eliminate the impairment in the tributary while maintaining water quality in the Stevens Branch. The outfall relocation occurred in December 2016. Follow-up monitoring will need to be conducted to verify that the impairment has been eliminated; however, biomonitoring conducted in 2015 (pre-outfall relocation) showed compliance with the biocriteria so there is high confidence that post-relocation monitoring will show consistently improving water quality and compliance with the WQS.

VT11-15	06	NO. BRANCH, BALL MTN BROOK, STRATTON LAKE TO KIDDER BROOK	MANGANESE	AES	CONTRIBUTIONS/RELEASES OF REDUCED Mn FROM RESERVOIR SEDIMENT COATING STREAM SUBSTRATE ("BLACK ROCKS")

Conditions created by the installed diversion around the pond have resulted in an elimination of the problematic Mn discharge. Staining of the substrate is no longer occurring. Historical staining from previous Mn discharge remains but no further remediation actions are necessary or planned.
