

EPA REGION 1 REVIEW OF VERMONT'S 2022 CWA SECTION 303(d) LIST

I. INTRODUCTION

EPA has conducted a complete review of Vermont's 2022 Section 303(d) list and supporting documentation and information. Based on this review, EPA has determined that Vermont's list of water quality limited segments (WQLSs) still requiring total maximum daily loads (TMDLs) meets the requirements of Section 303(d) of the Clean Water Act ("CWA" or "the Act") and EPA's implementing regulations. Therefore, EPA hereby approves Vermont's 2022 final CWA Section 303(d) list, submitted on August 23, 2022. The statutory and regulatory requirements, and EPA's review of Vermont's compliance with each requirement, are described in detail below.

II. STATUTORY AND REGULATORY BACKGROUND

Identification of WQLSs for Inclusion on 303(d) List

Section 303(d)(1) of the Act directs states to identify those waters within its jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters, considering the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of Section 303(d).

EPA regulations provide that states do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Act, (2) more stringent effluent limitations required by State or local authority, and (3) other pollution control requirements required by State, local, or federal authority. See 40 CFR Section 130.7(b)(1).

Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing Section 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the State's most recent Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any

Section 319 nonpoint assessment submitted to EPA. See 40 CFR §130.7(b)(5). In addition to these minimum categories, states are required to consider any other data and information that is existing and readily available. EPA's 2006 Integrated Report Guidance describes categories of water quality-related data and information that may be existing and readily available. See EPA's August 13, 2015, memorandum on *Information Concerning 2016 Clean Water Act Sections 303(d), 305 (b), and 314 Integrated Reporting and Listing Decisions*, (available at https://www.epa.gov/sites/production/files/2015-10/documents/2016-ir-memo-and-cover-memo-8_13_2015.pdf). This document recommended that the states' integrated water quality reports follow the *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* (2006 Integrated Report Guidance), issued July 29, 2005, (available at <https://www.epa.gov/sites/production/files/2015-10/documents/2006irg-report.pdf>), as supplemented by an October 12, 2006, memo and attachments; a May 5, 2009, memo and attachments; a March 21, 2011, memo and attachments; a September 3, 2013, memo and attachments; an August 13, 2015, memo and attachments; a December 22, 2017, memo and attachments; and the March 31, 2021, memo and attachments. All guidance, memoranda and attachments may be found at: <https://www.epa.gov/tmdl/integrated-reporting-guidance>. While states are required to evaluate all existing and readily available water quality-related data and information, states may decide to rely or not rely on particular data or information in determining whether to list particular waters.

In addition to requiring states to assemble and evaluate all existing and readily available water quality-related data and information, EPA regulations at 40 CFR §130.7(b)(6) require states to include as part of their submissions to EPA documentation to support decisions to rely on or not rely on particular data and information and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; and (3) any other reasonable information requested by the Region.

Priority Ranking

EPA regulations also codify and interpret the requirement in Section 303(d)(1)(A) of the Act that states establish a priority ranking for listed waters. The regulations at 40 CFR §130.7(b)(4) require states to prioritize waters on their Section 303(d) lists for TMDL development, and also to identify those WQLSs targeted for TMDL development in the next two years. In prioritizing and targeting waters, states must, at a minimum, consider the severity of the pollution and the uses to be made of such waters. See Section 303(d)(1)(A). As long as these factors are considered, the Act provides that states establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, and State or national policies and priorities. See 57 FR 33040, 33045 (July 24, 1992), and EPA's 2006 Integrated Report Guidance and the 2006, 2009, 2011, 2013, 2015, 2017 and 2021 memoranda and attachments.

III. REVIEW OF VERMONT'S SECTION 303(d) SUBMISSION

Waters listed by Vermont in Part A of the State's 2022 List of Priority Surface Waters corresponding to EPA's Category 5 (as defined below) represent the State's Section 303(d) list, which the State is required to submit to EPA for review and approval or disapproval. The waterbody segments Vermont placed into one of Parts B through F of the State's 2022 List of Priority Surface Waters corresponding to EPA's Category 4 (as defined below) fulfill the requirements of Section 305(b) of the CWA and are not a part of Vermont's Section 303(d) list. An integrated listing format allows states to provide the status of all assessed waters in a single multi-part list. States may list each waterbody or segment thereof into one or more of the following five categories, as appropriate:

- 1) All designated uses are supported, no use is threatened;
- 2) Available data and/or information indicate that some, but not all of the designated uses are supported;
- 3) There is insufficient available data and/or information to make a use support determination;
- 4) Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed;
 - 4a) A state-developed TMDL has been approved by EPA or a TMDL has been established by EPA for any segment-pollutant combination (VT Part D);
 - 4b) Other required control measures are expected to result in the attainment of an applicable water quality standard in a reasonable period of time (VT Part B);
 - 4c) The non-attainment of any applicable water quality standard for the segment is the result of pollution and is not caused by a pollutant (VT Parts E and F); and
- 5) Available data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed (VT Part A).

EPA reviewed Vermont's draft 2022 Section 303(d) list, dated April 2022. The Vermont Department of Environmental Conservation (VTDEC) then revised the list based on comments received during the public comment period. Vermont submitted its final 2022 Section 303(d) list (dated July 25, 2022) to EPA on August 23, 2022. The submittal package included the following components:

1. State of Vermont 2022 Section 303(d) List of Waters (August 2022). This submission included "Part A," the list of impaired surface waters needing total maximum daily loads (TMDLs).
2. State of Vermont 2022 List of Priority Surface Waters Outside the Scope of Clean Water Act Section 303(d). This submission included: Part B, impaired surface waters – no TMDL required; Part D, surface waters with completed and approved TMDLs; Part E, surface waters altered by exotic species; and Part F, surface waters altered by flow regulation.

3. VTDEC's Response to Public Comments on Vermont's April 2022 draft Section 303(d) list.

VTDEC conducted a public participation process, in which it provided the public the opportunity to review and comment on the State's 2022 draft Section 303(d) list. A public comment period was opened on April 18, 2022, and was closed on June 3, 2022. Comments were solicited from the public both through regional newspapers and the VTDEC website. EPA concludes that Vermont's public participation process was consistent with its Continuing Planning Process (CPP), and that Vermont provided sufficient public notice and opportunities for public involvement.

Vermont's final submittal took into account suggested changes to the State's draft 2022 Section 303(d) list from interested parties. VTDEC prepared a "Response to Comments" document which lists each comment and the State's response. EPA reviewed VTDEC's responses and concludes that Vermont adequately responded to the comments.

IV. IDENTIFICATION OF WATERS AND CONSIDERATION OF EXISTING AND READILY AVAILABLE WATER QUALITY-RELATED DATA AND INFORMATION

EPA has reviewed the State's submission and has concluded that the State developed its Section 303(d) list in compliance with Section 303(d) of the Act and 40 CFR §130.7. EPA's review is based on its analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed.

Vermont used the VTDEC Watershed Management Division assessment databases to develop its 2022 Section 303(d) list. The same databases are used to assist in the preparation of the biennial Section 305(b) report. These databases contain all reported water quality information. In the development of the 2022 Section 303(d) list, Vermont began with its existing EPA approved 2020 Section 303(d) list and relied on new water quality assessments (i.e., post-2020) to update the list accordingly. All data sources used to develop previous Section 303(d) lists were carefully reviewed. Where valid monitoring data, including recent data as well as data older than five years, and/or evaluative information were collected and determined to be sufficient to make Section 303(d) listing judgments, waterbodies that were assessed as impaired for one or more uses due to pollutants were added to the 2022 Section 303(d) list. Vermont believes that information pertaining to impairment status must be well substantiated, preferably with actual monitoring data, for it to be used for Section 303(d) listing.

EPA has reviewed Vermont's description of the data and information it considered, and its methodology for identifying waters. EPA concludes that the State properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 CFR §130.7(b)(5).

In addition, the State provided a rationale for not relying on particular and readily available water

quality-related data and information as a basis for listing waters. Beginning with the 1998 list and continuing through the 2022 listing process, Vermont chose not to list waters where the only information regarding water quality was unsubstantiated anecdotal information (e.g., citizen complaint). Vermont analyzed relevant data and information for each waterbody in the State in deciding whether there was sufficient, reliable data to support listing. The State's use of this listing methodology is reasonable and consistent with EPA's regulations. The regulations require states to "assemble and evaluate" all relevant water quality related data and information, and Vermont did so for each of its waterbodies. The regulations permit states to decide not to use any particular data and information as a basis for listing, provided they have a reasonable rationale in doing so. Vermont's decision not to use unsubstantiated anecdotal information is reasonable in light of the uncertainty about the reliability of such information. Moreover, it is reasonable for Vermont to decide to focus its listing and TMDL development resources on waters where water quality impairments are well-documented, rather than on waters with only unreliable water quality information. As additional waters are assessed, EPA expects Vermont would add waters to its list where such assessments show water quality standards are not being met.

Vermont does not add waters to the Section 303(d) list where the limited information available might indicate a possible impairment but the information was determined by VTDEC to be insufficient for the purpose of listing. For example, there have been instances in the past in which Vermont has not listed waterbody segments for pathogens, where questionable volunteer monitoring data (e.g., situations with few samples and data absent a QA/QC plan) indicated potential exceedances of the bacteria criterion. In those and similar cases, Vermont believes the information is too limited (for reasons discussed above), creating considerable uncertainty with respect to the assessment and whether uses are truly impaired.

In summary, Vermont considered the most recent Section 305(b) assessments, as required by EPA's regulations, and evaluated all existing and readily available water quality-related data and information, obtained primarily through monitoring, as the basis for adding water quality impairments to the 2022 Section 303(d) list. The State added seven (7) new impairments to the 2022 Section 303(d) list. The seven (7) new listings are comprised of a combination of five (5) newly impaired waterbody segments and the addition of two (2) new types of impairments to already impaired waters previously residing in other parts of Vermont's Integrated Report – segments previously in Category 4b (Vermont's Part B). EPA concludes that Vermont appropriately considered all relevant and appropriate information during the State's development of the 2022 Section 303(d) list.

Priority Ranking

As described in its methodology, Vermont established a priority ranking for listed waters by considering: 1) the presence of health issues, 2) the nature, extent, and severity of the pollutant(s) causing the impairment, 3) the use or uses that are impaired, 4) the availability of resources, and 5) the amount or degree of public interest in problem abatement. Additionally, Vermont also considered the merits of addressing – on a regional or statewide basis – waters with similar problems (e.g., pH impaired waters due to acid rain). Individual priority rankings for listed

waters are reflected in the list with indications of low, medium or high priority for TMDL development. Vermont defines its priorities in the following manner: H = high, 1-3 years; M = medium, 4-8 years; L = low, 8+ years.

EPA finds that the waterbody prioritization and targeting method used by Vermont is reasonable and sufficient for purposes of Section 303(d). The State properly considered the severity of pollution and the uses to be made of listed waters, as well as other relevant factors described above. EPA acknowledges that the schedule of TMDL completion establishes a meaningful priority ranking system.

New Listings

There are five (5) new listings identified in Table 1 and two (2) listings moved from Category 4b (VT Part B) to Category 5 (VT Part A) Section 303(d) list identified in Table 2.

Table 1 – Waters Newly Listed as Impaired on the 2022 Category 5 (VT Part A) Section 303(d) List		
<u>Waterbody Name</u>	<u>Waterbody ID</u>	<u>Cause of Impairment</u>
Walloomsac River from the New York State border to river mile 9.2	VT01-03.08	Nutrients
Jewett Brook from its mouth upstream to Fuller Road	VT01-03.09	Nutrients
Little Otter Creek from rm 4.2 (Route 7) to rm 7.0 (Echo Rd)	VT03-07.07	Sedimentation/siltation, Phosphorus
Jerome Pond	VT03-09L01	Total Phosphorus
Little Spruce Brook	VT08-12.10	Pollutants in urban stormwater

Table 2 – Water Impairments Moved From 2020 Category 4b (VT Part B) to the 2022 Category 5 (VT Part A) Section 303(d) List		
<u>Waterbody Name</u>	<u>Waterbody ID</u>	<u>Cause of Impairment</u>
Unnamed Trib to Winooski River	VT08-02.07	Iron, arsenic
Muddy Brook (0.1 Mile)	VT08-08.01	Cadmium

Vermont’s 2022 Category 5 (VT Part A) Section 303(d) list includes two entries whose continued presence in Category 4B had not been sufficiently warranted and were returned to the Category 5 (VT Part A) Section 303(d) List, including VT08-02-07 - Unnamed Tributary to Winooski River, impairments for arsenic and iron; and VT08-08-01 - Muddy Brook, impairments for cadmium. EPA guidance states that waters in Category 4b should “achieve applicable water quality standards within a reasonable period of time.” (Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act).

Unnamed Tributary to Winooski River (VT08-02-07) impairments for arsenic and iron were approved for inclusion in Category 4b in 2006, where it was stated that "Water quality standards are expected to be met this year. If this is found not to be the case, the court order specifies that more remediation will be required." Now 16 years later, this waterbody is still impaired for

arsenic and iron and there is no indication that restoration is imminent, or that additional remediation measures are being undertaken. Therefore, EPA concurs that Vermont return these impairments to the Category 5, Section 303(d) list (VT Part A) as this is not a reasonable amount of time to remain in 4B awaiting achievement of water quality standards.

Muddy Brook (VT08-08-01) impairment for cadmium has not been demonstrated to have met WQS for cadmium since remediation in 2001. EPA notes that this is not a reasonable amount of time to remain in Category 4b awaiting achievement of water quality standards and therefore concurs that Vermont return this impairment to the Category 5, Section 303(d) list (VT Part A).

Delistings

Water Impairments Not Listed on Vermont’s 2022 Section 303(d) List Because of Delisting

Vermont, on its 2022 Section 303(d) list, did not delist any waterbody impairments included on the State’s 2020 Section 303(d) list.

Water Impairments Removed from EPA Category 4b (VT Part B) (impaired but no TMDL needed)

EPA acknowledges that Vermont did not include in its 2022 Category 4b (VT Part B) two (2) water impairments included in the State’s 2020 Category 4b (VT Part B), shown in Table 4, and EPA asked the State to provide a rationale for its decision to remove these impairments from Category 4b. The State has fully demonstrated, to EPA’s satisfaction, good cause for not including these waters in its 2022 Category 4b (VT Part B). The specific basis for the removal of these Category 4b (VT Part B) water impairments is described below.

<u>Waterbody Name</u>	<u>Waterbody ID</u>	<u>Cause of Impairment</u>	<u>Reason for Removal from 4b</u>
Muddy Brook	VT08-08.01	Iron	Met WQS for Iron since 2017
Upper West Branch, West Branch Little River, rm 7.5 to 8.0	VT08-12.04	Unknown	Bicriteria met in lower extent since 2017, and in upper extent since 2020

Muddy Brook (VT08-08.01) impairment for iron has not exceeded the WQS since 2017, and therefore EPA concurs that since iron levels have not exceeded the WQS since 2017, DEC should remove this waterbody from Category 4b (VT Part B) for its iron impairment.

Upper West Branch, West Branch Little River, rm 7.5 to 8.0 (VT08-12.04) unknown impairment was removed from 4b this listing cycle. Based on the 2022 Vermont Surface Water Listing and Assessment Methodology, removal of a water impairment requires that the two most recent successive samples from sites associated with an impaired stream section meet the State’s B(2) criteria for the biological community used in the original impairment listing. In this case, the macroinvertebrate community at RM 7.4 has met B(2) criteria for 5 consecutive years, while the community at RM 8.0 has met criteria for the past two years. Therefore, EPA concurs that the

West Branch Little River segment from RM 7.5 to RM 8.0 be removed from Category 4b (VT Part B).

Water Impairments Removed from EPA Category 4a (VT Part D) (impaired but TMDL completed)

EPA acknowledges that Vermont did not include in its 2022 Category 4a (VT Part D) three (3) water impairments included in the State’s 2020 Category 4a (VT Part D), shown in Table 5, and EPA asked the State to provide a rationale for its decision. The State has demonstrated, to EPA’s satisfaction, good cause for not including these water impairments in its 2022 Category 4a (VT Part D). The specific basis for removing these water impairments from Category 4a is described below.

<u>Waterbody Name</u>	<u>Waterbody ID</u>	<u>Cause of Impairment</u>	<u>Reason for Removal from 4a</u>
Lye Brook-N	VT01-05L11	pH	Waterbody segment type no longer exists, data no longer pertains
Lye Brook-S	VT01-05L12	pH	Waterbody segment type no longer exists, data no longer pertains
Lost (Glasby)	VT12-04L02	pH	Waterbody segment type no longer exists, data no longer pertains

Lye Brook-N (VT01-05L11) and Lye Brook-S (VT01-05L12) impairments for pH were first included in 4b in 2006 relating to atmospheric deposition as critically acidified/chronic acidification after EPA approved the TMDLs September 30, 2003. Lye Brook-N and Lye Brook-S beaver dams are no longer creating lentic conditions, and therefore these sites are no longer lakes. No alkalinity data has been collected for these sites and therefore they are not included in the summary below. Vermont’s sampling protocols for streams are separate from that of lakes/ponds, so previously collected data on the lakes is not appropriate to assess these streams. Therefore, EPA concurs that because the “lake” waterbody segments have been deleted from the assessment database, these waterbody impairments also be removed from the State’s 2022 Category 4a (VT Part D).

Lost (Glasby) (VT12-04L02) impairment for pH was first listed in 4b in 2006 relating to atmospheric deposition as critically acidified/chronic acidification after EPA approved the TMDLs September 20, 2004. Lost Pond beaver dam in Glastenbury creating the lake failed this waterbody is no longer a lake, but now a wetland. No alkalinity data has been collected for these sites and therefore they are not included in the summary below. Vermont’s sampling protocols for wetlands are separate from that of lakes/ponds, so previously collected data on the lake is not appropriate to assess this wetland. Therefore, EPA concurs that because the “lake” waterbody segments have been deleted from the assessment database, these waterbody impairments also be removed from the State’s 2022 Category 4a (VT Part D).

Waters impaired by nonpoint sources of pollution

The State properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with Section 303(d) and EPA guidance. Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the source of the impairment is a point and/or nonpoint source. EPA's long-standing interpretation is that Section 303(d) applies to waters impacted by point and/or nonpoint sources. In "Pronsolino v. Marcus," the District Court for Northern District of California held that Section 303(d) of the Clean Water Act authorizes EPA to identify and establish TMDLs for waters impaired by nonpoint sources. Pronsolino v. Marcus, 91 F. Supp. 2d 1337, 1347 (N.D.Ca. 2000). This decision was affirmed by the 9th Circuit Court of Appeals in Pronsolino v. Natri, 291 F.3d 1123 (9th Cir. 2002). See also EPA's Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act – EPA Office of Water – July 29, 2005.