

Vermont 2020 Clean Water Act Section 303(d) Approval Documentation September 17, 2020

I. INTRODUCTION

EPA has conducted a complete review of Vermont's 2020 Section 303(d) list and supporting documentation and information and, based on this review, EPA has determined that Vermont's list of water quality limited segments (WQLSs) still requiring TMDLs meets the requirements of Section 303(d) of the Clean Water Act ("CWA" or "the Act") and EPA's implementing regulations. Therefore, by this order, EPA hereby approves Vermont's 2020 Section 303(d) list. 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*, which recommended that the 2016 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 (IRG) issued July 29, 2005, 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, and the December 22, 2017 memo. All guidance, memoranda and attachments may be found at:

<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/guidance.cfm>. 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 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 and 2017 memoranda and attachments.

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

Waters listed by Vermont in Part A of the State's 2020 Integrated Report (which corresponds to EPA's Category 5 (as defined below)) represent the State's §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 2020 Integrated Report (which correspond to EPA's Categories 3 through 4 (as defined below)) fulfill the requirements of §305(b) of the CWA and are not a part of Vermont's §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 2020 Section 303(d) list, dated June 2020. The Vermont Department of Environmental Conservation (VTDEC) then revised the list based on comments received during the public comment period. Vermont submitted its final 2020 §303(d) list (dated August 2020) to EPA-New England on August 18, 2020. The submittal package included the following components:

1. State of Vermont 2020 §303(d) List of Waters (August 2020). This submission included "Part A," the list of impaired surface waters needing total maximum daily loads (TMDLs).
2. State of Vermont 2020 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 June 2020 draft §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 2020 draft §303(d) list. A public comment period was opened on July 5, 2020 and was closed on August 5, 2020. 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 2020 §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 §303(d) list in compliance with §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 2020 §303(d) list. The same databases are used to assist in the preparation of the biennial §305(b) report. These databases contain all reported water quality information. In the development of the 2020 §303(d) list, Vermont began with its existing EPA approved 2018 §303(d) list and relied on new water quality assessments (i.e., post-2018) to update the list accordingly. All data sources used to develop previous §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 §303(d) listing judgments, waterbodies that were assessed as impaired for one or more uses due to pollutants were added to the 2020 §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 §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 2020 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 did in certain cases include waters on the 2020 §303(d) list based solely on evaluative information, i.e., information the evaluation of which requires the use of judgment, in contrast to information consisting of straightforward numerical sampling results. Vermont based a listing decision on evaluative information when the State had confidence that an impairment existed. For example, some critically and chronically acidified waters, for which only limited measurements of pH and alkalinity exist, are listed based on the "evaluative" relationship between aquatic biota, pH and alkalinity, rather than on actual measurements of biological integrity.

Another example of Vermont's use of evaluative information includes waters based on data older than five years of age (i.e., "evaluated" waters under EPA's §305(b) guidance) where such data showed exceedances of one or more criteria of Vermont water quality standards. Although data older than five years is considered "evaluative" information under EPA's Section 305(b) guidance, Vermont chose to use such data as a basis for listing. The State concluded that the use of such data is reasonable because, without specific information to the contrary, there is no reason to believe that data older than five years are no longer representative of the water quality of the waterbody in question. EPA believes this conclusion is reasonable, and it is consistent with EPA regulations for states to decide to list waters based on data older than five years. The regulations require states to consider all available data and to use it unless the state provides a reasonable rationale for not doing so.

Vermont does not add waters to the §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 §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 2020 §303(d) list. The State added 16 new impairments to the 2020 §303(d) list. The 16 new listings are comprised of a combination of four newly impaired waterbody segments and the addition of 12 new types of impairments to already impaired waters previously residing in other parts of Vermont’s Integrated Report – mostly segments previously in Category 4a (Vermont’s Part D). EPA concludes that Vermont appropriately considered all relevant and appropriate information during the State’s development of the 2020 §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.

Water impairments Not Listed on Vermont’s 2020 §303(d) List Because of Delisting

Vermont did not include on its 2020 §303(d) list four waterbody impairments included on the State’s 2018 §303(d) list, and EPA asked the State to provide rationales for its decision to “delist” these previously listed waters. The State has demonstrated, to EPA’s satisfaction, good cause for not listing these waters on its 2020 §303(d) list, consistent with 40 CFR §130.7(b)(6)(iv). The specific bases for delisting these water impairments are described below.

Ball Mountain Brook, above North Branch confluence (VT11-15-03) was originally listed in 1996 for aquatic life support due to acidity caused by atmospheric deposition. Reductions in oxidized nitrogen and sulfur deposition across the northeast (following gradual implementation of the 1990 Clean Air Act Amendments) improved the brook’s acidity. The most recent monitoring year data (from 2019) indicated a pH of 6.83, within the pH criteria range specified in Vermont’s Water Quality Standards. And the two most recent biological monitoring year

results (“excellent” for both 2018 and 2019) indicated the segment is now in compliance with Vermont’s water quality standards for aquatic life. EPA approves this delisting for the aquatic life impairment.

Black River from its mouth to Fellows Dam (VT10-11-01) was originally included on the 1996 303(d) list for contact recreation due to presumed E. coli discharges from 29 Springfield CSOs. All 29 CSOs have now been eliminated (the last two in 2019). The segment was listed based solely on the known presence of the CSOs – no E. coli data were collected prior to the listing. There are no other known sources of E. coli to this segment. Now that all sources of the presumed impairment have been removed, and there are no data indicating impairment, VTDEC is proposing to delist this segment. Given that the reason for the original listing is no longer present, and there is no other information indicating impairment, EPA approves this delisting for the contact recreation impairment.

Castleton River in Fair Haven (VT02-03-01) was listed for contact recreation in 1996 due to presumed E. coli discharges from two CSOs. No E. coli data or other evidence of actual impairment were ever collected. One of the two CSOs has now been eliminated and the other CSO was renovated such that there has not been an overflow event since 2012. Given that the reason for the original listing is no longer present, and there are no other known sources of the E. coli to this segment, EPA approves this delisting for the contact recreation impairment.

The North Branch of the Deerfield River (VT12-05-01) from Tannery Brook Road upstream to 0.2 miles above Snow Lake was listed in 2008 for aquatic life impairments caused by stormwater and temperature impacts. Biological monitoring data from 2015 and 2016 indicate that elevated temperature rather than stormwater is now the cause of the aquatic life impairment. In addition, these monitoring data indicate that the uppermost 0.2 mi portion of the segment (above Snow Lake) is now meeting standards for aquatic life. Accordingly, VTDEC is proposing to shorten the length of this impaired segment (such that it now ends at the upstream end of Snow Lake) and list temperature as the cause of the impairment. EPA approves the removal of the stormwater cause of impairment and the shortening of the segment. The segment remains listed for the aquatic life impairment, but the cause of the impairment is now elevated temperature only. Note that the 2018 list indicated that this segment was impaired for aesthetics. However, VTDEC explained in subsequent correspondence to EPA (9/16/20 email from Tim Clear, VTDEC to Eric Perkins, EPA) that the 2018 aesthetics listing was an error – there was never any information indicating that this segment was impaired for aesthetics. So VTDEC is proposing that the accidental aesthetics listing be removed. EPA approves this correction.

Water Impairments Removed from EPA Category 4b and Vermont’s Part B (impaired but no TMDL needed) due to delisting

Vermont did not include on its 2020 4b list one water impairment included on the State’s 2018 4b list, and EPA asked the State to provide a rationale for its decision to “delist” this previously listed water. The State has demonstrated, to EPA’s satisfaction, good cause for not listing this water on its 2020 4b list. The specific basis for delisting this water impairment is described

below.

Trib #23 to Stephens Branch, 0.5 mi segment below the Williamstown WWTF (VT08-16-02) was added to the 4b list (Vermont's Part B list) in 2006 for aquatic life impairment caused by nutrient discharges from the Williamstown WWTF outfall. Improvements to the lagoon and aeration system were complete in 2010. Biological monitoring in 2015 documented improvement in the stream (the overall rating was "Good"). In 2016, the WWTF outfall was relocated to the main stem of Stephens Branch -- a larger receiving water that was determined to be able to still meet water quality standards even with the outfall discharges. The two most recent biological monitoring year results for Trib #23 ("Good" in 2015 and "Good" again in 2018) indicate the segment is now in compliance with Vermont's water quality standards. EPA approves this delisting of the aquatic life impairment from Part B of Vermont's list of waters.

Water Impairments Removed from EPA Category 4a and Vermont's Part D (impaired but TMDL completed) due to delisting

Vermont did not include on its 2020 4a list one water impairment included on the State's 2018 4a list, and EPA asked the State to provide a rationale for its decision to "delist" this previously listed water. The State has demonstrated, to EPA's satisfaction, good cause for not listing this water on its 2020 4a list. The specific bases for delisting this water impairment is described below.

Ticklenaked Pond (VT14-07-L02) was first listed in 1996 due to the presence of nuisance algae blooms (impairing both the aquatic life and secondary contact recreation uses) caused by elevated phosphorus concentrations. A TMDL for phosphorus was completed in 2009. A pre-TMDL analysis established a phosphorus criterion of 24 ug/l, mean summer concentration. Following a variety of phosphorus reduction actions (which included improved agricultural practices as well as an in-lake alum treatment in 2015) water quality has improved and summer phosphorus levels have been below the 24 ug/l standard for five years now (2015-2019), indicating the pond is now in compliance with Vermont's water quality standards. EPA approves this delisting of the aquatic life and contact recreation impairments from Part D of Vermont's list of waters.

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. Nastri, 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.