



February 22, 2022

Department of Environment and Conservation
Division of Water Resources
Watershed Planning Unit
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243

Re: PUBLIC NOTICE OF AVAILABILITY OF PROPOSED TOTAL
MAXIMUM DAILY LOAD (TMDL) FOR *E. COLI* IN CHEATHAM LAKE
WATERSHED (HUC 051310202), TENNESSEE

Dear Sir or Madam:

Thank you for the opportunity to comment on the proposed TMDL. Harpeth Conservancy (“HC”) is a science-based conservation organization dedicated to clean water and healthy ecosystems for rivers in Tennessee. Since 1999, the Harpeth Conservancy’s mission is to restore and protect clean water and healthy ecosystems for rivers in Tennessee. We employ scientific expertise and collaborative relationships to develop, promote and support broad community stewardship and action. HC’s areas of concern include the Richland Creek and Mill Creek watersheds in the Nashville area.

We offer these comments because it is important to note the purposes of a TMDL, and the uses to which a TMDL is supposed to be put – cleaning up an impaired waterway.¹ Unfortunately, the TMDL falls considerably short of its statutory goals, and we must respectfully request that the Department strengthen this proposed TMDL or “start over.” Our principal concern is that the TMDL does NOT offer any realistic plan for attaining the statutory goals of a TMDL – cleaning up the impaired waterways – in any timeframe whatsoever -- so that they can be removed from the state’s list of impaired waters under Tennessee law or the federal Clean Water Act (CWA) section 303(d).² **A principal issue with the TMDL is that the so-called implementation plan (Section 9 of the TMDL) does not propose any realistic way – including any credible monitoring plan – to assure improvement in the waterways of Cheatham Lake sufficient to restore these waterbodies.**

Cleaning up Nashville’s urban waterways is critically important for the next stage of the City’s development – a massive turn toward the Cumberland River and Cheatham Lake.

¹ See the Tennessee Water Quality Control Act (“TNWQCA”), T.C.A. § 69-3-101 *et seq.*, incl. § 69-3-102(c).

² 33 U.S. Code § 1313(d).

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Given the example such river-facing development can provide for the entire state, TDEC must take this opportunity to “get it right.”

With Nashville’s Growth Turning to the Cumberland River and Cheatham Lake, the Need to Improve Water Quality is Urgent

As was recently observed in *The Tennessean*:

Nashville’s urban core is on the verge of a historic blitz of riverfront development meant to hoist the city into the future with a new look and feel, laying crucial groundwork for entire new neighborhoods built to grow up and sprawl out for decades.

In the initial surge, downtown’s footprint will more than double as new bridges and other connections bring it across the river that now divides the state’s most lucrative urban tourism center.

The Cumberland River's downtown bend is the centerpiece of the vision, which is largely shared by city leaders and developers sinking billions into a series of massive projects along the river.

In an unprecedented boom period that has seen shimmering glass office towers, high-end condo buildings and elegant hotels rise in nearly every corner of the city, the Cumberland has remained an afterthought, skirted by industrial land traveled mostly by barges.

Now, Nashville is turning to face the river.³

With such increased river-focused development, more people will actually be using and will be *in* the waters in the Cheatham Lake area, and clean water will be an important economic asset to the area. Conversely, failing to have clean, healthful water will detract from that development and the economic benefits it promises to all.

Indeed, it is questionable whether any source that might substantially contribute to failure to meet water quality standards (“WQS”)⁴ for *E. coli* can be permitted. Under settled law, a permit cannot be issued for any new or increased source of a pollutant for which a waterbody is already listed if it would result in measurable degradation.⁵ Thus, Nashville’s ability to develop its riverfront should not be imperiled by failing to clean up waterbodies surrounding Cheatham Lake.

³ Sandy Mazza, Cassandra Stephenson and Arcelia Martin, *Nashville's next chapter is being written on the banks of the Cumberland*, THE TENNESSEAN, Jan. 2, 2022, available at <https://www.tennessean.com/in-depth/news/2022/01/02/nashville-downtown-riverfront-development-along-cumberland-new-neighborhoods/8911596002/> (accessed Feb. 15, 2022)

⁴ The CWA requires states to establish WQS. See generally 40 C.F.R. § 131.

⁵ TDEC’s rules provide that when a water is impaired by a particular pollutant (it has an “unavailable parameter”) new or increased discharges are NOT allowed if measurable degradation would result: “In waters with unavailable parameters, new or increased discharges that would cause measurable degradation of the parameter that is unavailable shall not be authorized....” TN Comp. R. & Regs., Rule § 0400-40-03-.06(2)(a). Note also that general antidegradation and anti-backsliding rules must also be complied with. “TN Comp. R. & Regs., Rule § 0400-40-03-.06 and Rule § 0400-40-05-.08(1)(j).

The Purposes of the Tennessee Water Quality Control Act and CWA

The purposes of the Tennessee Water Quality Control Act (“TNWQCA”) are well-known and consistent with those of the CWA⁶:

(a) Recognizing that the waters of Tennessee are the property of the state and are **held in public trust for the use of the people of the state**, it is declared to be the public policy of Tennessee that the people of Tennessee, as beneficiaries of this trust, **have a right to unpolluted waters**. In the exercise of its public trust over the waters of the state, the government of Tennessee has an obligation to take all prudent steps to secure, protect, and preserve this right.

(b) It is further declared that the **purpose of this part is to abate existing pollution of the waters of Tennessee, to reclaim polluted waters, to prevent the future pollution of the waters**, and to plan for the future use of the waters so that the water resources of Tennessee might be used and enjoyed to the fullest extent consistent with the maintenance of unpolluted waters.⁷

TMDLs are supposed to be part of a robust and vigorous effort to clean up and restore our waterways, and not a mechanistic exercise. Every two (2) years, states are required to assess their waters and report to the US Environmental Protection Agency (“USEPA”) those waters which do not meet water quality standards (“WQS”) that the states themselves set.⁸

Waters that do not meet state WQS even after the using “end-of-pipe” discharge controls⁹ are supposed to go through the process of preparing a “total maximum daily load” or “TMDL.”

The goal of a TMDL is to clean up the affected waterway by achieving the applicable WQS:

Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation. **Such load shall be established at a level necessary to implement the applicable water quality standards** with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.¹⁰

Federal regulations further amplify this goal – that TMDLs **must be designed to achieve WSQ**:

Each State shall establish TMDLs for the water quality limited segments identified in paragraph (b)(1) of this section, and in accordance with the priority ranking. For pollutants other than heat, **TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS** with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water

⁶ 33 U.S. Code § 1251(a).

⁷ T.C. A. § 69-3-102 (emphasis added).

⁸ 33 U.S. Code § 1313(a)-(d).

⁹ Formally “technology-based effluent limits” or “TBELS” under, e.g., 40 C.F.R. § 125.3(a).

¹⁰ 33 U.S. Code § 1313(d)(1)(c) (emphasis added).

quality. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters.¹¹

Simply put, if a TMDL does not comply with these requirements, USEPA is not supposed to approve it, and thus, by definition, it will not meet WQS, and the waterway cannot be removed from the 303(d) list.

The TMDL's Treatment of Point Source Issues Raises Questions about Tennessee's Commitment to Improving Water Quality

The TMDL's treatment of point source issues raises questions about Tennessee's commitment to improving water quality. First, Section 8.7 of the TMDL ("Determination of WLAs & LAs") provides that:

WLAs for MS4s and LAs for precipitation induced sources of *E. coli* loading were determined according to the procedures in Appendix C. These allocations represent the available loading after application of the explicit MOS. WLAs for existing WWTPs are equal to their existing NPDES permit limits.

Section 9.2.1 of the TMDL ("NPDES Regulated Municipal Wastewater Treatment Facilities") similarly states that:

All present and future discharges from industrial and municipal wastewater treatment facilities are required to be in compliance with the conditions of their NPDES permits at all times, including elimination of bypasses and overflows. With few exceptions, in Tennessee, permit limits for treated sanitary wastewater require compliance with coliform water quality standards (ref: Section 5.0) prior to discharge. No additional reduction is required. WLAs for WWTPs are derived from mean daily facility flows and permitted *E. coli* limits and are expressed as daily loads in CFU per day. (Emphasis added.)

Thus, the TMDL is effectively ignoring its statutory place and purpose. TMDLs are required when existing controls such as TBELS are unable to cause the waterbody to come into compliance with WQS. In the case of the waterbodies in the Cheatham Lake watershed subject to the TMDL, by definition, the existing controls such as TBELS are simply "not doing the job."¹² The existing controls are not improving water quality even though the applicable WWTPs are meeting permit requirements and presumably the TBELS on which those permits rely. Yet, the TMDL says that "no additional reduction is required." This flies in the face of accepted law and practice about how improvements in water quality are supposed to be achieved.¹³ Such improvements can be done through a TMDL,¹⁴ but regulators cannot wait for a

¹¹ 40 C.F.R. § 130.7(c)(1) (emphasis added).

¹² This is without even reaching the issue of the number of unassessed streams in the Cheatham Lake area.

¹³ 33 USC §§ 1311(b)(1)(C), 1312(a), 1313(e)(3)(A), 40 CFR § 122.44(d).

¹⁴ See 33 USC § 1313(d)(1)(C), 40 CFR § 130.7(c)(1).

TMDL to be completed.¹⁵ Permits are required to include “any more stringent limitation, including those necessary to meet water quality standards.”¹⁶

The TMDL Wrongfully Rejects the First and Perhaps Most Effective Tool for Improving Water Quality

The TMDL wrongfully rejects the first and perhaps most effective tool for improving water quality – the reduction in permit discharge limits from point sources. The TMDL offers no specific assurances that WQS will be met, or any timetable for attaining WQS. It is well settled that the first step a regulatory agency must take to improve water quality when confronted with such a situation, is to reduce the permitted waste load allocations of contributing point sources (such as publicly-owned treatment works or “POTWs”). As a leading authority in the field notes:

“[W]here a state reduces the WLAs in a TMDL based upon anticipated future reductions in nonpoint source loading, the state should provide specific assurances that the reductions will in fact occur. Absent such assurances, the state must allocate the entire load reduction necessary to attain water quality standards to point sources.”¹⁷

The TMDL not only declines to provide such “specific assurances” it also refuses to consider any further load reductions for point sources. AND, on top of this, it refuses to consider what WQBELs may be necessary to attain WQS.

TDEC’s Treatment of Nonpoint Source Pollution Shows it is Not Serious About Implementing Measures to Improve Water Quality

The TMDL’s treatment of nonpoint source pollution is further evidence that it is not serious about implementing measures to meet its own water quality standards. For example, section 9.3 (“Nonpoint Sources (NPS)”) of the TMDL states that:

The Tennessee Department of Environment & Conservation (TDEC) has no direct regulatory authority over most NPS discharges. Reductions of *E. coli* loading from NPS will be achieved using a phased approach. Voluntary, incentive-based mechanisms will be used to implement NPS management measures in order to assure that measurable reductions in pollutant loadings can be achieved for the targeted impaired waters. Cooperation and active participation by the

¹⁵ See, e.g., *Upper Blackstone Water Pollution Abatement District v. U.S. EPA*, 690 F.3d 9, n 8. (1st Cir. 2012); *City of Taunton Dept. of Public Works*, 17 EAB (Env. Appeals Board 5/3/2016), *aff’d*, *City of Taunton v. United States Environmental Protection Agency*, 895 F.3d 120 (1st Cir. 2018). 40 CFR § 122.44(d); *American Paper Institute v. U.S. EPA*, 996 F.2d 346, 350 (D.C. Cir. 1993). *Prairie Rivers Network v. Illinois Pollution Control Board*, 2016 IL App (1st) 150971 ¶¶29-33, 38 (Ill. App. Ct. 2016); *Ala. Dept. of Env. Mgt. v. Ala. Rivers Alliance, Inc.* 14 So. 3d 853, 866-68 (Ala. Civ. App. 2007).

¹⁶ 33 USC § 1311(b)(1)(C).

¹⁷ Mark A. Ryan, Editor, *THE CLEAN WATER ACT HANDBOOK* (3rd EDITION) (American Bar Ass’n, 2011), Ch. 11 *citing* EPA, *GUIDANCE FOR WATER QUALITY-BASED DECISIONS: THE TMDL PROCESS*, ch.1 at 2, ch.2 at 8, ch.3 at 5 (Apr. 1991).

general public and various industry, business, and environmental groups is critical to successful implementation of TMDLs. There are links to a number of publications and information resources on EPA's NPS web page relating to the implementation and evaluation of NPS pollution control measures.

The statement that TDEC has no direct regulatory authority over most NPS discharges is simply incorrect. TMDLs that deal only with nonpoint sources – not the case here -- are clearly allowed.¹⁸

The voluntary measures that TDEC suggests may help improve water quality cannot be considered as even a part of a program to improve water quality. Including programs like “Creek Critters, What’s Up with Water Pollution, Get to Know Trees, and Career Chats” in TDEC’s list of voluntary programs belie any intent to actually improve water quality. In fact, such programs originated not to directly improve water quality but as part of a Civil Penalty (the “State Project”) under the Consent Decree for improvements to Nashville’s sewer system.¹⁹

To similar effect are the “measures” provided in sections 9.3.1 (“Urban NPS”) and 9.3.2 (“Agricultural NPS”) of the TMDL. These sections are a *pro forma* catalog of pre-existing or potentially available “best management practices” (BMPs) which are already ineffective in achieving WQS. The TMDL makes no effort show how these BMPs will achieve WQS, or how existing BMPs might be tailored or improved, or what additional BMPs are required and how they will help, to achieve the statutory goal of removing the waterbodies from the 303(d) list.

The TMDL’s Treatment of Stormwater Controls and Monitoring is Deficient

The portions of the TMDL’s implementation plan dealing with stormwater controls and monitoring are also deficient and do not help assure attainment of WQS.

The most recent annual report (November 2021) on Metro Nashville’s Municipal Separate Storm Sewer System (MS4) permit and TDEC’s most recent compliance review of that program, finds Metro’s program in compliance with permit requirements.²⁰ And yet, the waterbodies of Cheatham Lake subject to the TMDL are still coliform impaired. The TMDL does not make clear on what basis TDEC expects compliance with the present MS4 permit to allow WQS to be met.

¹⁸ See, e.g., *Pronsolino v. Marcus*, 91 F. Supp. 2d 1337 (N.D. Cal. 2000), *aff’d sub nom. Pronsolino v. Nastro*, 291 F.3d 1123 (9th Cir. 2002); *Am. Farm Bur. Fed. v. USEPA*, 984 F.Supp.2d 289 (M.D. PA 2013).

¹⁹ Section IX.A.2. and Appendix F to the Consent Decree lodged October 24, 2007, in *United States of America and the State of Tennessee v. Metropolitan Government of Nashville and Davidson County, Tennessee*, US District Court, Middle District of Tennessee, Case 3-07-1056, available at <https://www.epa.gov/enforcement/consent-decree-metropolitan-government-nashville-and-davidson-county-tenn-agree> (accessed Feb. 9, 2022).

²⁰ 2021 Annual Report, Metro Nashville Municipal Separate Stormwater Permit TNS068047, and TDEC’s review of same are both available at https://dataviewers.tdec.tn.gov/pls/enf_reports/f?p=9034:34051:::34051:P34051_PERMIT_NUMBER:TNS068047 (accessed Feb. 22, 2022).

For example, Section 9.2.2 of the TMDL at page 53 of 73, states that the TMDL depends on stormwater controls.²¹ Yet, just a page away, at Section 9.3.1 of the TMDL at page 54 of 73, second paragraph, the TMDL does not express confidence in stormwater controls.²²

The TMDL's treatment of monitoring (in Section 9.4.1) is also grossly deficient. The TMDL speaks of monitoring for "not less than one year." Monitoring is likely to be required for considerably longer than one year, particularly in light of the failure of the TMDL to require measures that are likely to attain applicable WQS.

Conclusion

We very much appreciate the opportunity to comment on the *E. coli* TMDL for Cheatham Lake. We do not believe that the TMDL is designed, nor does it offer any realistic pathway or timetable, to attain Tennessee's WQS. As such, it fails to advance or achieve the basic purposes of the CWA or of Tennessee's Water Quality Control Act, namely, to "abate existing pollution of the waters of Tennessee, to reclaim polluted waters, to prevent the future pollution of the waters,...."

We are particularly concerned about these issues in light of the substantial increase in river-facing developments expected in the Nashville area. If we do not make a good start now on improving water quality in the Cheatham Lake area, that goal will be ever harder to achieve, with concomitant deleterious economic, public health, and environmental effects.

We respectfully request that TDEC substantially modify the TMDL so that it can achieve these purposes in a reasonable timeframe, or "start over" so that it can.

Sincerely yours,

Harpeth Conservancy



By: _____
James M. Redwine, Esq.
Senior Policy Advisor

²¹ "Regulated MS4s that maintain compliance with the provisions of their NPDES permits are considered to be consistent with the assumptions and requirements of the WLAs of this TMDL."

²² "Stormwater: Most mitigation measures for stormwater are not designed specifically to reduce bacteria concentrations (ENSR, 2005, p. 3-6). Instead, BMPs are typically designed to remove sediment and other pollutants. Bacteria in stormwater runoff are, however, often attached to particulate matter. Therefore, treatment systems that remove sediment may also provide reductions in bacteria concentrations."

cc: Dorene Bolze
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Ryan Jackwood, Ph.D.
Tennessee Water Groups

Hon. John Cooper, Mayor, Metropolitan Government of Nashville & Davidson County,
Tennessee
TDEC Commissioner David Salyers
TDEC Deputy Commissioner Gregory Young, Esq.
Director Jeaneanne Gettle, Water Division, USEPA Region 4