State of Tennessee
Department of Environment and Conservation

Columbia STP
NPDES Permit No. TN0056103

Tennessee Clean Water Network,  
*Petitioner*

v.

Tennessee Department of Environment and Conservation,  
*Respondent*

Before the Board of Water Quality, Oil & Gas

Case No.

Docket No.

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**Columbia STP Final Modified 2017 NPDES Permit (TN0056103) Appeal Petition**

**Summary**

This petition for statutory appeal concerns National Pollutant Discharge Elimination System (“NPDES”) Permit Number TN0056103, which authorizes the City of Columbia Sewage Treatment Plant (“STP”) to discharge treated municipal wastewater to the Duck River (the “River”).

For reasons explained in this petition, the Final Modified 2017 Permit violates state and federal authority by failing to include a reasonable potential analysis and a site-specific water quality based effluent limit (“WQBEL”) for total phosphorus. The permit also violates state regulations by failing to set a concentration limit for total phosphorus.
I. Legal Issues

1. Federal law, state law, and state regulations require the Tennessee Department of Environment and Conservation ("TDEC") to perform a reasonable potential analysis for the Columbia STP NPDES permit.

2. Federal authority requires the imposition of a Water Quality Based Effluent Limitation ("WQBEL") for total phosphorus at the Columbia STP to protect the Duck River.

3. Tennessee regulatory authority mandates concentration limits for total phosphorus in the Columbia STP NPDES permit.

II. Parties

4. Petitioner Tennessee Clean Water Network ("TCWN") is a nonprofit corporation organized under the laws of the State of Tennessee. Its principal office is located at 625 Market Street, 8th Floor, Knoxville, Tennessee. TCWN empowers Tennesseans to exercise their right to clean water and healthy communities by fostering civic engagement, building partnerships and enforcing water policy for a sustainable future. TCWN is a membership organization with member(s) who are injured by Columbia STP discharges.

5. Respondent is the Tennessee Department of Environment and Conservation ("TDEC") Division of Water Resources. The Division is the entity responsible for administering the Clean Water Act NPDES program in the State of Tennessee.

* TCWN’s mailing address is P.O. Box 1521, Knoxville, TN 37901.
III. Jurisdiction

6. TCWN appeals the Final Modified 2017 Permit under Tenn. Code Ann. § 69-3-105(i). As described in the Tennessee Water Quality Control Act (“TWQCA”), a petition for permit appeal may be filed by any aggrieved person who participated in the public comment period and whose appeal is based upon any issues that were presented to TDEC during the comment period. *Id.* On May 31, 2017, TCWN submitted written comments on the draft permit modification during the public comment period. In those comments, TCWN specifically addressed the legal issues of concern in this appeal.

7. Tenn. Code Ann. § 69-3-105(i) requires petitioners seeking a permit appeal to file within thirty days of being notified of the Commissioner’s decision to issue or deny the permit. TDEC issued the final, modified permit for Columbia STP on September 8, 2017. TCWN received notice via email on September 8, 2017. This appeal petition is timely filed within thirty days from notification of issuance to Petitioner.†

IV. Legal Background

8. *Clean water law purposes.* The Clean Water Act exists “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The Tennessee Water Quality Control Act (“TWQCA”) recognizes that waters of the state “are held in public trust for the use of the people of the

†, Under Tennessee Rule of Civil Procedure 6.01 and Tenn. Comp. R. & Regs. 1360-04-01-.04(1), the last day of the 30-day period is October 10. Thirty days from September 8 is October which is a Sunday. The following day was a legal holiday, Columbus Day.
state” and “the people of Tennessee, as beneficiaries of this trust, have a right to unpolluted waters.” Tenn. Code Ann. § 69-3-102(a).


Under this arrangement, TDEC must comply with applicable federal statutes and regulations. Tenn. Code Ann. § 69-3-108(g)(1); Tenn. Comp. R. & Regs. 0400-40-05-.04(1)(f) & (g); see also 40 C.F.R. § 123.25 (listing specific federal NPDES regulations applicable to delegated permitting authorities, including Tennessee).

10. **Reasonable potential analysis.** When developing NPDES permit limits to protect water quality, TDEC must first “determine[] whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard” following specific procedures. 40 C.F.R. §§ 122.44(d)(1)(ii) and 123.25; Tenn. Code Ann § 69-3-108(g)(1); Tenn. Comp. R. and Regs. 0400-40-05-.04(1)(f). These procedures, commonly referred to as a “reasonable potential analysis,” must “account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, … and where appropriate, the dilution of the effluent in the receiving water.” 40 C.F.R. § 122.44(d)(ii). Tennessee has adopted the TDEC Reasonable Potential Procedures (6/1/2004) to fulfill this obligation. When TDEC follows these
procedures, and determines there is a reasonable potential for a discharge to cause or contribute to excursions above state narrative criteria, it must impose WQBELs derived from these procedures. 40 C.F.R. §§ 122.44(d)(1)(vi) and 123.25; Tenn. Code Ann § 69-3-108(g)(1); Tenn. Comp. R. and Regs. 0400-40-05-.04(1)(f); see generally RPA Procedures.

11. *Water quality based effluent limitations (WQBELs).* Both the CWA and the TWQCA require NPDES permits to include effluent limits that are sufficiently stringent to protect water quality. 33 U.S.C. §§ 1342(b)(1)(A) and 1312; 40 C.F.R. §§ 122.44(d)(1) and 123.25; Tenn. Code Ann § 69-3-108(g); Tenn. Comp. R. & Regs. 0400-40-05-.04(1)(f). Such WQBELs are necessary to ensure that discharges do not “interfere with the attainment or maintenance of” applicable water quality standards. 33 U.S.C. § 1312(a).

12. *Total Maximum Daily Loads are necessary for WQBEL development.* To ensure existing impairments are identified and remedied, the Clean Water Act requires that impaired water bodies be listed under § 303(d) of the Clean Water Act. See 33 U.S.C. § 1313(d). Once a stream is included on the 303(d) list, TDEC must establish a total maximum daily load ("TMDL") for all pollutants that violate water quality criteria. See 33 U.S.C. § 1313(d)(1)(D). TMDLs are used in determining the necessary WQBELs for discharge of the 303(d)-listed pollutants in NPDES permits. Until a TMDL is issued for the 303(d)-listed pollutants, a state permitting agency either must prohibit discharges or establish WQBELs on a case-by-case basis to prevent continued pollution of the impaired stream. See 33
U.S.C. § 1312(a); 40 C.F.R. §§ 122.44(d) & 123.25(15) (listing 40 C.F.R. § 122.44 as an EPA regulation with which delegated states must comply).

13. *Nutrient Translator and regulatory basis.* TDEC developed a Regionally-based Interpretations of Tennessee’s Narrative Nutrient Criterion (“Nutrient Translator”). The Nutrient Translator assists TDEC in examining impaired water bodies. Setting concentration limits for phosphorus is a regulatory requirement. See Tenn. Comp. R. & Regs. 0400-40-03-.03(k) (providing that “[t]he waters shall not contain nutrients in concentrations that stimulate aquatic plant and/or algae growth to the extent that aquatic habitat is substantially reduced and/or the biological integrity fails to meet regional goal… [e]xamples of parameters associated with the criterion include… phosphorus…”) (emphasis added).

V. Factual Background

14. The Columbia STP is a publicly owned and operated treatment works that serves over 34,000 people.

15. The current design flow of the Columbia STP is 14 million gallons per day (“MGD”).

16. The Columbia STP is located in the Lower Duck River Watershed and discharges into the Duck River.

17. TDEC has assessed the Duck River waters receiving Columbia STP effluent as not supporting its designated uses due to low dissolved oxygen and elevated levels of phosphorus.
18. TDEC issued a Final Permit for the Columbia STP on August 31, 2016 and provided a response to TCWN’s October 2014 comments on Final Permit pages AD-3 to AD-4. TDEC “considered [TCWN’s comments] but [did] not [incorporate] them specifically into the permit.” Id. at AD-3.

19. TDEC did not conduct a reasonable potential analysis for the Columbia STP. Id. at AD-4 (explaining that “the division’s assessment of the river having unavailable conditions for phosphorus is not itself a reasonable potential determination that any individual activity within the watershed has the potential to cause or contribute to violation of a water quality criterion.”).

20. In the Final Permit issued August 31, 2016, the phosphorus limit for the facility was an annual rolling average (reported monthly) of 114 lb/day.

21. TCWN filed an appeal of the August 2016 Final Permit (Docket Number 04.30-142865J). The City of Columbia also appealed the permit.

22. On May 10, 2017, TDEC released a draft modified permit for the Columbia STP to revise nutrient limits.

23. TCWN submitted written comments in response to the draft modification to TDEC on May 31, 2017. TCWN reiterated that under state and federal authority, TDEC had to establish a WQBEL for total phosphorus in the Columbia permit. TCWN also indicated that the permit should have total phosphorus limits as a loading limit and a monthly average concentration.


25. On page AM-2 of the “Addendum to the Modification Rationale at Permit Issue,” TDEC notes that “the division’s assessment of the river having
unavailable conditions for phosphorus is not itself a reasonable potential
determination that any individual activity within the watershed has the potential
to cause or contribute to violation of a water quality criterion.”

26. The Final Modified Permit does not include a WQBEL for total phosphorus.

27. The current phosphorus limit for the facility is an annual rolling average
   (reported monthly) of 150 lbs/day.

VI. Claims

By issuing the Final Modified Permit without conducting a reasonable potential
analysis and without imposing a site-specific concentration WQBEL on total phosphorus,
TDEC has violated the Clean Water Act (“CWA”), the Tennessee Water Quality
Control Act (“TWQCA”), and implementing regulations.

28. The Final Modified Permit unlawfully fails to include a reasonable potential
   analysis. The Final Permit violates Sections 402 and 302 of the Clean Water Act,
   33 U.S.C. §§ 1342(b)(1)(A) and 1312(a), and Tenn. Comp. R. & Regs. 0400-40-
   05-04(1)(f) because TDEC has not made a determination of whether the total
   phosphorus to be discharged from Columbia STP will cause, or have the
   reasonable potential to cause or contribute to, an excursion above state water
   quality standards for nutrients using the procedures mandated by the
   Environmental Protection Agency, including procedures that account for the
   variability of phosphorus in the effluent. 40 C.F.R. §§ 122.44(d)(1)(i) & (ii), and
   123.25.
29. **The permit fails to include a water quality based effluent limitation for total phosphorus.** The permit modification violates Sections 402 and 302 of the CWA, 33 U.S.C. §§ 1342(b)(1)(A) and 1312(a), Tenn. Code Ann. § 69-3-108(g), and Tenn. Comp. R. and Regs. 0400-40-05-.04(1)(f) by failing to impose an effluent limit sufficiently stringent to attain and maintain the applicable water quality criterion for total phosphorus. *See also* 40 C.F.R. §§ 122.44(d)(1)(vii)(A), and 123.25(15).

30. **The permit modification violates state regulatory authority concerning nutrient concentration limits.** The Final Modified Permit violates Tenn. Comp. R. & Regs. 0400-40-03. Specifically, Tenn. Comp. R. & Regs. 0400-40-03-.03(k) provides that Tennessee waters shall not contain phosphorus in concentrations that impede biological integrity and other ecological outcomes. *See id.* TDEC did not set a concentration limit for phosphorus in the Final Permit for Columbia STP. The Duck River is already assessed as not meeting the state’s narrative water quality criterion for total phosphorus, so phosphorus discharges would be lawfully subject to this concentration provision of Tennessee regulations.

**VII. Request for Relief**

TCWN respectfully requests that the Board, by and through an administrative law judge according to the procedures established by Tenn. Code Ann. § 69-3-110(a), provide the following relief:

31. **Take jurisdiction over this appeal as a contested case according to Tenn. Code Ann. § 4-5-301 *et seq.*;**
32. Issue an order declaring that the Final Permit violates Tenn. Code Ann. § 69-3-108(g) because TDEC did not conduct the required reasonable potential analysis;

33. Issue an order declaring that the permit violates Tenn. Code Ann. § 69-3-108(g) because its effluent limitations for total phosphorus are insufficiently stringent to protect water quality;

34. Issue an order declaring that the Final Permit violates Tennessee regulations by failing to include concentration limits for phosphorus;

35. Remand the permit to TDEC with directions to conduct a proper reasonable potential analysis and establish a proper concentration WQBEL subject to whatever compliance schedule or other terms that are allowed by law; and

36. Grant such additional just and proper relief.

Respectfully submitted this 10th day of October, 2017.

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