IN RE CITY OF RUIDOSO DOWNS & VILLAGE OF RUIDOSO WASTEWATER TREATMENT PLANT

NPDES Appeal No. 17-03

ORDER DENYING REVIEW

Decided March 12, 2019

Syllabus

Rio Hondo Land and Cattle Company ("Rio Hondo") petitioned the Environmental Appeals Board ("Board") to review a National Pollutant Discharge Elimination System Permit ("Permit") that the United States Environmental Protection Agency Region 6 ("Region") issued to the City of Ruidoso Downs and Village of Ruidoso Wastewater Treatment Plant (collectively "Ruidoso"). The Permit authorizes discharges from the Ruidoso wastewater treatment plant into the Rio Ruidoso in Lincoln County, New Mexico. Rio Hondo argues that the Region erred when it relied on an exception to the antibacksliding provision in the Clean Water Act to revise the nitrogen and phosphorus limits from those in the prior permit by removing the concentration limits for those nutrients and revising upward the mass-based nitrogen limit. More specifically, Rio Hondo contends that the Region could not rely on the antibacksliding exception because, Rio Hondo argues, the prior permit's concentration limits for nitrogen and phosphorous were not "based on" a total maximum daily load ("TMDL") and the Permit's limits will not assure attainment of the applicable water quality standards.

The relevant statutory language provides an exception to the antibacksliding provision for any "effluent limitation based on a total maximum daily load or other wasteload allocation established" if "the cumulative effect of all such revised effluent limitations based on such total maximum daily load or wasteload allocation will assure the attainment of [the applicable] water quality standard[.]" 33 U.S.C. § 1313(d)(4)(A)(i).

Held: The Board denies Rio Hondo's petition for review. The Region reasonably relied on an exception to the antibacksliding provision in the CWA when it removed the concentration limits for nitrogen and phosphorus from the Permit and revised upward the mass-based limit for nitrogen.

First, the entirety of the record and the relevant statutory and regulatory provisions support the Region's conclusion that the concentration limits for those nutrients in the prior permit were based on the applicable 2006 TMDL for the Rio Ruidoso. Thus, Rio Hondo

has not demonstrated that the Region clearly erred or abused its discretion in relying on the antibacksliding exception in CWA section 303(d)(4)(A) when removing the concentration limits for nitrogen and phosphorus in the current Permit.

Second, the Region acted reasonably in relying on the newly updated 2016 TMDL to revise the nutrient limits and conclude that the Permit would assure attainment of, and not result in a violation of, the applicable water quality standards. EPA had only recently reviewed and approved that TMDL and nothing in the record points to any new information that had come to light to suggest that the assumptions and requirements EPA had relied upon in approving the TMDL were inaccurate for any reason. As such, the whole of the record reflects that the Region reasonably exercised its judgment on these technical issues and Rio Hondo did not meet its burden to demonstrate that the Region clearly erred or abused its discretion.

Before Environmental Appeals Judges Mary Kay Lynch, Kathie A. Stein, and Mary Beth Ward.

Opinion of the Board by Judge Lynch:

I. *STATEMENT OF THE CASE*

In this matter, Rio Hondo Land and Cattle Company ("Rio Hondo") petitioned the Environmental Appeals Board ("Board") to review a National Pollutant Discharge Elimination System ("NPDES") Permit ("Permit") that the United States Environmental Protection Agency ("EPA" or "Agency") Region 6 ("Region") issued to the City of Ruidoso Downs and Village of Ruidoso Wastewater Treatment Plant (collectively "Ruidoso") on July 25, 2017.[1] The Permit authorizes Ruidoso to discharge effluent from its wastewater treatment plant (the "Ruidoso WWTP") into the Rio Ruidoso in Lincoln County, New Mexico. This Permit supersedes Ruidoso's existing 2012 NPDES permit.

Pursuant to a modified jointly proposed briefing schedule, the parties completed the briefing of this matter on March 5, 2018. Subsequently, the Board stayed the appeal through October 1, 2018, at the parties' request, to allow time to pursue settlement. Following notification that the parties were unable to resolve

[1] Some states administer their own NPDES permitting programs. EPA administers the NPDES programs in states that do not have their own NPDES permitting programs. For facilities in the State of New Mexico, the Region issues the NPDES permits.

the matter, the Board held oral argument on October 30, 2018. The final brief in this matter was filed on November 29, 2018.[2]

The primary issue for resolution in this appeal is whether the Region clearly erred or abused its discretion when, in revising the nutrient limits in the Permit, it relied on an exception to the antibacksliding provision in the Clean Water Act ("CWA"). For the reasons discussed below, the Board concludes that Rio Hondo has not met its burden to demonstrate that the Region clearly erred or abused its discretion in determining the nutrient limits.[3] As such, Rio Hondo's Petition for Review is denied.

II. *PRINCIPLES GOVERNING BOARD REVIEW*

Section 124.19 of Title 40 of the Code of Federal Regulations governs Board review of an NPDES permit. In any appeal from a permit decision issued under part 124, the petitioner bears the burden of demonstrating that review is warranted. *See* 40 C.F.R. § 124.19(a)(4). "[A] petition for review must identify the contested permit condition or other specific challenge to the permit decision and clearly set forth, with legal and factual support, petitioner's contentions for why the permit decision should be reviewed." *Id.* § 124.19(a)(4)(i).

The Board has discretion to grant or deny review of a permit decision. *Id.* § 124.19; *see In re Avenal Power Ctr., LLC*, 15 E.A.D. 384, 394-95 (EAB 2011) (citing Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980)), *vacated & remanded on other grounds sub nom. Sierra Club v. EPA*, 762 F.3d 971 (9th Cir. 2014). Ordinarily, the Board will deny a petition for review and thus not remand the permit unless the underlying permit decision either is based on a clearly erroneous finding of fact or conclusion of law, or involves a matter of policy or exercise of discretion that warrants review. 40 C.F.R. § 124.19(a)(4)(i)(A)-(B); *accord, e.g.*, *In re Prairie State Generating Co.*, 13 E.A.D. 1, 10 (EAB 2006), *pet. for review denied sub nom. Sierra Club v. EPA*, 499 F.3d 653 (7th Cir. 2007); *see also* Revisions to Procedural Rules Applicable in Permit Appeals, 78 Fed. Reg. 5281, 5282, 5284 (Jan. 25, 2013). In considering

[2] Due to a lapse in federal appropriations, EPA was shut down from December 29, 2018, to January 26, 2019. The Board was closed during this period.

[3] For ease, the Board uses the phrase "nutrient limits" to describe the limits for both nitrogen and phosphorus, except where it is necessary to identify the specific nutrient being addressed. Additionally, where the Board uses the terms nitrogen or phosphorus in discussing permit limits, the Board is referring to the limits for Total Nitrogen and Total Phosphorus, respectively.

whether to grant or deny a petition for review, the Board is guided by the preamble to the regulations authorizing appeal under part 124, in which the Agency stated that the Board's power to grant review "should be only sparingly exercised," and that "most permit conditions should be finally determined at the [permit issuer's] level." Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980).

When evaluating a challenged permit decision for clear error, the Board examines the administrative record that serves as the basis for the permit to determine whether the permit issuer exercised "considered judgment." *E.g.*, *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 191, 224-25 (EAB 2000); *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417-18 (EAB 1997). The permit issuer must articulate with reasonable clarity the reasons supporting its conclusion and the significance of the crucial facts it relied on when reaching its conclusion. *E.g.*, *In re Shell Offshore, Inc.*, 13 E.A.D. 357, 386 (EAB 2007). As a whole, the record must demonstrate that the permit issuer "duly considered the issues raised in the comments" and ultimately adopted an approach that "is rational in light of all information in the record." *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342 (EAB 2002); *accord In re City of Moscow*, 10 E.A.D. 135, 142 (EAB 2001); *In re NE Hub Partners, LP*, 7 E.A.D. 561, 567-68 (EAB 1998), *pet. for review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999). Similarly, the Board will uphold a permitting authority's reasonable exercise of discretion if that decision is cogently explained and supported in the record. *See, e.g.*, *In re Guam Waterworks Auth.*, 15 E.A.D. 437, 443 n.7 (EAB 2011) (discussing abuse of discretion standard); *Ash Grove*, 7 E.A.D. at 397 ("[A]cts of discretion must be adequately explained and justified.").

On matters that are fundamentally technical or scientific in nature, the Board typically defers to a permit issuer's technical expertise and experience, as long as the permit issuer adequately explains its rationale and supports its reasoning in the administrative record. *See In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 510, 560-62, 645-47, 668, 670-74 (EAB 2006); *see also, e.g.*, *In re Russell City Energy Ctr., LLC*, 15 E.A.D. 1, 12, 39-42, 66 (EAB 2010), *pet. for review denied sub nom. Chabot-Las Positas Cmty. Coll. Dist. v. EPA*, 482 F. App'x 219 (9th Cir. 2012); *NE Hub Partners*, 7 E.A.D. at 570-71.

III. *RELEVANT CWA PROVISIONS AND IMPLEMENTING REGULATIONS*

In 1972, Congress enacted the CWA "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a), 33 U.S.C. § 1251(a). To achieve this objective, the Act prohibits the discharge of pollutants into the waters of the United States, unless authorized by an NPDES or

other CWA permit. *See* CWA §§ 301(a), 402, 502(7), 33 U.S.C. §§ 1311(a), 1342, 1362(7). NPDES permits impose effluent limits and other conditions on the discharge of pollutants based on the water quality standards of the receiving waters and whether those standards are being met. Generally speaking, the CWA does not allow effluent limits in permits to become less stringent over time, but there are exceptions to that general prohibition. We explain each of these aspects of permitting further below.

A. *National Pollutant Discharge Elimination System Permits Generally*

NPDES permits use two statutory mechanisms to protect water quality: (1) water quality standards, and (2) effluent limitations. *See generally* CWA §§ 301, 303, 304(b), 33 U.S.C. §§ 1311, 1313, 1314(b); 40 C.F.R. pts. 122, 125, 131. Water quality standards are promulgated by states and approved by EPA. *See* CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.10-.12. The CWA and its implementing regulations require permitting authorities to ensure that any permit issued complies with the CWA and the water quality standards of all states affected by the discharge.[4] *See* CWA §§ 301(b)(1)(C), 401(a)(1)-(2), 33 U.S.C. §§ 1311(b)(1)(C), 1341(a)(1)-(2); 40 C.F.R. §§ 122.4(d), .44(d)(1).

Effluent limitations serve as the primary mechanism in NPDES permits for ensuring compliance with a state's water quality standards by imposing limits on the types and amounts of particular pollutants that a permitted entity may lawfully discharge. *See* CWA §§ 301(b)(1)(C), 401(a)(1)-(2), 33 U.S.C. §§ 1311(b)(1)(C), 1341(a)(1)-(2). Effluent limitations for pollutants are based on the control technology available or are based on achieving the water quality standards for the receiving water.[5] CWA § 301(b)(1)(a)-(c), 33 U.S.C. § 1311(b)(1)(a)-(c). The nutrient limits being challenged in this case are water quality based.

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[4] Water quality standards include the following three components: (1) the "designated uses" of a waterbody, such as public drinking supply, recreation, or wildlife habitat; (2) "water quality criteria," expressed in numeric or narrative form, specifying the amount of various pollutants that may be present in the waterbody without impairing the designated uses; and (3) an "antidegradation" provision that protects existing uses and high quality waters. *See* CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.10-.12.

[5] Technology-based effluent limitations generally are established on an industry-wide basis, whereas water quality-based effluent limitations are developed in the context

In states where the EPA issues the permits, such as New Mexico, the state certifies that the permit complies with the CWA, including the state's water quality standards, before EPA issues the permit.[6] *See* CWA § 401(a), 33 U.S.C. § 1341(a).

B. *Impaired Waters and Total Maximum Daily Loads*

The CWA establishes a process by which states identify and manage waters where the pollution control technologies alone are not stringent enough to achieve applicable water quality standards. CWA § 303(d), 33 U.S.C. § 1313(d). These identified waters, where the applicable water quality standards have not yet been attained, are commonly referred to as "impaired" waters or "nonattainment" waters and are prioritized by the states on a list that is commonly referred to as a "303(d) list." *Id.*

Once a water is identified on a 303(d) list, the state develops a management plan for bringing these waters into compliance with water quality standards. CWA § 303(d)(1)(C)-(D), 33 U.S.C. § 1313(d)(1)(C)-(D). This process includes setting priorities for establishing total maximum daily loads ("TMDLs") for individual pollutants in the impaired waters. *Id.* A TMDL defines the amount of a pollutant that a waterbody can assimilate without exceeding the state's water quality standard for that waterbody. CWA § 303(d)(1)(C), 33 U.S.C. § 1313(d)(1)(C). TMDLs are set at a level that incorporates seasonal variations of the waterbody and a margin of safety that takes into account gaps in knowledge. *Id.* The TMDL then allocates a portion of the receiving water's pollutant loading capacity among facilities discharging to the impaired waterbody. 40 C.F.R. §§ 130.2(h), .7. As explained further below, these wasteload allocations ("WLAs") for point sources, which are based on the underlying water quality standards, serve as a basis for water quality-based effluent limitations in permits. In addition to wasteload allocations for point sources, TMDLs include load allocations for background and nonpoint sources, a margin of safety, and possibly a reserve allocation (for example, for future growth). CWA § 303(d)(1)(C), 33 U.S.C. § 1313(d)(1)(C); *see also* 40 C.F.R. § 130.7; Office of Water, U.S. EPA, Doc. No. EPA-833-K-10-001, *NPDES Permit Writers'*

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of individual permit decisions to meet the applicable water quality standards. CWA § 301(b)(1)(a)-(c), 33 U.S.C. § 1311(b)(1)(a)-(c).

[6] Under CWA § 401(a), a state may waive certification by failing to act within a reasonable time (not to exceed one year) on a request for certification. *See* 33 U.S.C. § 1341(a). As noted below, however, New Mexico affirmatively certified that the Ruidoso Permit complies with its water quality standards.

Manual §§ 6.2.1.2, 6.4.1.1, at 6-14, -31 (Sept. 2010) ("*2010 Permit Writers' Manual*").

Although EPA initially approached the development of TMDLs one water segment at a time, EPA has long supported and encouraged states to develop TMDLs on a watershed-wide basis to more comprehensively assess and allocate pollutant loads across hydrologically linked water segments at the same time. *See* Office of Wetlands, Oceans & Watersheds, U.S. EPA, *Handbook for Developing Watershed TMDLs* 1, 6-8 (draft Dec. 15, 2008) ("*Watershed TMDL Handbook*"); *see also* CWA § 303(d)(1), 33 U.S.C. § 1313(d)(1); 40 C.F.R. §§ 130.7, 131.3(h). Watershed TMDLs follow the same general process as a "single-segment TMDL," but the watershed TMDL involves larger-scale considerations and "often provides greater flexibility in developing source allocations." *Watershed TMDL Handbook* at 69.

States are primarily responsible for establishing TMDLs, but EPA has approval authority. CWA § 303(d)(2), 33 U.S.C § 1313(d)(2). Review of a state's decision to issue a TMDL may be sought in state court under state law. A party dissatisfied with EPA's approval of a TMDL may seek review in federal court pursuant to the Administrative Procedure Act. *See* 5 U.S.C. §§ 701-706 (establishing provisions for judicial review); *see also In re City of Moscow*, 10 E.A.D. 135, 160 (EAB 2001).

C. *The Intersection of NPDES Permitting and TMDLs*

Where TMDLs have been established, the effluent limits included in NPDES permits must ensure consistency with the "assumptions and requirements" of the wasteload allocations established by those TMDLs. *See* CWA § 402(a), 33 USC § 1342(a); 40 C.F.R. § 122.44(d)(1)(vii)(A)-(B). This does not mean that permit limits must be identical to the wasteload allocation established by the TMDL. *See In re City of Homedale Wastewater Treatment Plant*, 16 E.A.D. 421, 432 (EAB 2014) (upholding as "consistent with the assumptions and requirements of the * * * TMDL" permitting authority's decision to include monthly and weekly average effluent limits for phosphorus, rather than daily maximum contained in applicable TMDL). Rather, permit issuers have flexibility to determine appropriate effluent limits for permits within the parameters of the statutory and regulatory scheme. *See* NPDES Surface Water Toxics Control Program, 54 Fed. Reg. 23,868, 23,879 (June 2, 1989) (clarifying in preamble to 40 C.F.R. § 122.44 that, in not imposing detailed procedures for establishing permit limits, EPA intended to "give[] the permitting authority the flexibility to determine the appropriate procedures for developing water quality-based effluent limits"); *see also City of Homedale*, 16 E.A.D. at 426-27; *In re City of Taunton Dep't of Pub. Works*,

17 E.A.D. 105, 144 (EAB 2016), *aff'd*, 895 F.3d 120 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 1240 (2019). Additionally, a permitting authority is not required to wait to issue a protective NPDES permit where TMDLs or wasteload allocations are not available. *See City of Taunton v. EPA*, 895 F.3d 120, 139-40 (1st Cir. 2018) (upholding Agency's decision to establish necessary permit limits to comply with water quality standards based on available information, even if CWA § 303(d) process lags behind (citing *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 26 (1st Cir. 2012), *cert. denied*, 569 U.S. 972 (2013))), *cert. denied*, 139 S. Ct. 1240 (2019).

D. *The Prohibition Against Backsliding and the Exceptions to That Prohibition*

Once an NPDES permit has been issued for a particular facility, the CWA also seeks to preserve improvements made to water quality by expressly prohibiting "backsliding" under CWA section 402(o). 33 U.S.C. § 1342(o). Backsliding "occurs when a renewed, reissued, or modified permit contains effluent limitations [that are] less stringent than those in the previous permit." *In re City of Tulsa*, 3 E.A.D. 505, 506 (CJO 1991) (citing CWA § 402(o), 33 U.S.C. § 1342(o)). The CWA's antibacksliding provision in section 402(o) consists of three main parts: (1) a prohibition on specific forms of backsliding; (2) exceptions to the prohibition; and (3) a safety clause that provides an absolute limitation (also referred to as a "backstop") on backsliding if the revised effluent limit would result in a violation of water quality standards. *2010 Permit Writers' Manual* § 7.2.1, at 7-2.

As to the first part of CWA section 402(o), the prohibition on backsliding, the statute generally provides that, except in certain specified circumstances, "a permit may not be renewed, reissued, or modified to contain effluent limitations [that] are less stringent than the comparable effluent limitations in the previous permit[.]" CWA § 402(o)(1), 33 U.S.C. § 1342(o)(1).

As to the second part of CWA section 402(o), which provides exceptions to the backsliding prohibition, the exception relevant to this proceeding is found under section 402(o)(1) and allows less stringent effluent limits if they comply with the provisions of CWA section 303(d)(4), which addresses the establishment and application of TMDLs. CWA § 402(o)(1), 33 U.S.C. § 1342(o)(1). Section 303(d)(4) provides, in relevant part, that "where the applicable water quality standard has not yet been attained, any effluent limitation based on a [TMDL] * * * may be revised" *so long as attainment of water quality standards is assured*. *See* CWA § 303(d)(4)(A)(i), 33 U.S.C. § 1313(d)(4)(A)(i). This exception to the backsliding prohibition is discussed in more detail in Part V.B, below.

The third part of CWA section 402(o) – the safety clause – provides that "[i]n no event may * * * a permit * * * be renewed, reissued, or modified to contain a less stringent effluent limitation *if the implementation of such limitation would result in a violation of a water quality standard* under section 1313 * * *." CWA § 402(o)(3), 33 U.S.C. § 1342(o)(3) (emphasis added). Therefore, even if one of the exceptions to the backsliding prohibition, such as that supplied by section 303(d)(4), is applicable and its conditions met, section 402(o)(3) acts as a floor on the extent to which effluent limits may be relaxed. Thus, under both CWA sections 303(d)(4) and 402(o)(3), a principal question when evaluating the permissibility of less stringent permit limits is whether the water quality standards will be met.

IV. *PROCEDURAL AND FACTUAL HISTORY*

A. *The Rio Ruidoso Waterbody and Permit Overview*

This case involves the Region's reissuance of an NPDES permit that authorizes discharges from the Ruidoso WWTP into a 20.5-mile segment of the Rio Ruidoso (or "river"), which is located within the Sacramento Mountains in south central New Mexico. N.M. Env't Dep't, *[Water Quality Control Commission or] WQCC Approved [TMDL] for the Rio Ruidoso* 2-3 (Nov. 15, 2016) ("2016 TMDL").[7] This waterbody is described as a perennial stream where the streambed cuts below the water table and so will have some flow even during periods of low precipitation. N.M. Env't Dep't, *Final Approved [TMDL] for the Rio Hondo Watershed (Lincoln County), Pecos River to Headwaters* 23 (Feb. 10, 2006) (A.R. 27) ("2006 TMDL"). Most of the land in the area (55%) is rangeland, forest, or agricultural and most is privately owned. *Id.* Wastewater from the Ruidoso WWTP flows into the Rio Ruidoso, which flows into the Rio Hondo and then into the Pecos River. Region 6, U.S. EPA, *NPDES Permit No. NM0029165 Fact Sheet* 3 (Apr. 24, 2017) (A.R. 4) ("2017 Fact Sheet"). The Ruidoso WWTP is the only existing point source located along the relevant water segment. 2006 TMDL at 44. Petitioner, the Rio Hondo Land and Cattle Company, owns a private hunting preserve along the Rio Ruidoso downstream from the Ruidoso WWTP. EPA Region 6's Response to Petition for Review 1 (Jan. 18, 2018) ("Region's Br.").

As discussed more fully in Part IV.B, below, the New Mexico Environment Department ("NMED"), carrying out its responsibilities under CWA section 303(d), has determined that the segment below the Ruidoso WWTP is marginally

[7] The WQCC is the New Mexico Water Quality Control Commission, a state body that, among other things, approves assessments such as TMDLs developed by NMED.

impaired for nutrients. Although nutrients such as phosphorus and nitrogen are essential for proper functioning of ecosystems, too much of these nutrients can induce overproduction of algae and other aquatic vegetation in aquatic ecosystems. 2006 TMDL at 34-35; 2016 TMDL at 13-14, 25-27. Excessive growth of algae, sometimes referred to as "cultural eutrophication," can reduce overall water clarity, make waters unappealing, and cause conditions unfavorable for the proper functioning of an aquatic ecosystem. 2006 TMDL at 34-35; 2016 TMDL at 13-14, 25-27; *see also In re City of Taunton Dep't of Pub. Works*, 17 E.A.D. 105, 116 (EAB 2016), *aff'd*, 895 F.3d 120 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 1240 (2019) (describing cultural eutrophication and nuisance algae in the context of coastal waters); *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 596-98 (EAB 2010) (describing effects of cultural eutrophication), *pet. for review dismissed for lack of juris. sub nom. Conserv. Law Found., Inc. v. EPA*, No. 10-2141 (1st Cir. Dec. 6, 2010). Algae and aquatic vegetation can reach nuisance levels quickly in response to nutrient enrichment when other factors, such as light, temperature, and oxygen levels, are conducive to such growth. 2006 TMDL at 34-35; 2016 TMDL at 13-14, 25-27.

Although the relationship between nutrient enrichment and algal growth is well documented, the precise levels of individual nutrients (i.e., phosphorus and nitrogen) that will induce excessive algal growth are difficult to determine and vary by ecoregion, as well as other external conditions such as season, water volume and flow rate. 2006 TMDL at 35; 2016 TMDL at 26. In the regulatory context, it is important to understand that, given the relationship between nutrients and algal growth, the overall nuisance level of nutrients is of a chronic nature and is not based on the acute toxicity of nutrients.

B. *Relevant New Mexico Water Quality Standards, Impairment Listings, and TMDLs*

Under New Mexico state law, the Rio Ruidoso water segment downstream from the Ruidoso WWTP is designated for the following beneficial uses: fish culture, irrigation, livestock watering, wildlife habitat, coldwater habitat, coldwater aquatic life, and primary contact.[8] N.M. Code R. § 20.6.4.208.A (2013); *see also* 2017 Fact Sheet at 6. The state's applicable water quality criteria for nutrients consists of a numeric limit for phosphorus of 0.1 milligrams per liter ("mg/L"), *see*

[8] Primary contact is defined under the New Mexico water quality standards to include "any recreational or other water use in which there is prolonged and intimate human contact with the water." N.M. Code R. § 20.6.4.7.P.

N.M. Code R. § 20.6.4.208.B, and a statewide narrative criterion for all plant nutrients (e.g., phosphorus and nitrogen) that requires that "[p]lant nutrients from other than natural causes shall not be present in concentrations [that] will produce undesirable aquatic life or result in a dominance of nuisance species in surface waters of the state." *Id*. § 20.6.4.13.E.[9]

As referenced above, NMED has identified the Rio Ruidoso water segment downstream from the Ruidoso WWTP's discharge point as impaired for nutrients. *See* 2006 TMDL at 25, 34-35; 2016 TMDL at 13-14, 25-27; *see also* N.M. Env't Dep't, *2016-2018 State of New Mexico Clean Water Act § 303(d) / § 305(b) Integrated List, Rio Ruidoso* (A.R. 23). As a result, NMED listed this segment of the Rio Ruidoso as impaired for nutrients on its CWA 303(d) list and subsequently issued a TMDL for nutrients in 2006. This was NMED's first TMDL to address nutrients on the Rio Ruidoso. 2006 TMDL at 25; Rio Hondo's Memorandum Brief in Support of Petition for Review 6 (Aug. 22, 2017) ("Petitioner's Br.").

The target loading capacity for plant nutrients in the 2006 TMDL was based on both the numeric criteria for phosphorus and the narrative criteria for all plant nutrients.[10] NMED observed that the intent of the standards for phosphorus and nitrogen "is to control the excessive growth of attached algae and higher aquatic plants that can result from the introduction of these plant nutrients into streams." 2006 TMDL at 36. Based on the EPA-recommended nutrient criteria for the area, as well as its analysis of the Rio Ruidoso's waters, NMED determined that maintaining a nitrogen-to-phosphorus ratio of 10:1 in receiving waters would be protective of water quality. Because the New Mexico state water quality criteria for phosphorus is 0.1 mg/L, the corresponding numeric nitrogen target for receiving waters based on a 10:1 ratio would be 1.0 mg/L. *Id.* at 39. From these numeric in-stream targets, NMED derived a TMDL for the Rio Ruidoso segment that takes into account critical conditions for streamflow (i.e., low-flow conditions when there is reduced stream capacity to assimilate nutrients) plus anticipated discharge from the Ruidoso WWTP[11] (collectively "critical flow"), as well as a "conversion

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[9] New Mexico water quality regulations do not contain a numeric limit for nitrogen.

[10] As noted in Part III.A, above, water quality standards include designated uses and water quality criteria to protect those uses. The criteria adopted and incorporated into the standards are the allowable concentrations of pollutants in state, territory, and authorized tribal waters.

[11] As noted previously, the Ruidoso WWTP is the only existing point source located along the relevant water segment. 2006 TMDL at 44.

factor." *Id.* The equation used to calculate the target loading capacity is represented below.

***TMDL = Critical Flow x WQS*[12] *(numeric [in-stream] target) x Conversion Factor*[13]**

See 2006 TMDL at 41; 2016 TMDL at 19.

NMED then determined the wasteload allocation by subtracting from the TMDL the background nitrogen load (consisting of both background and nonpoint sources) plus a margin of safety. 2006 TMDL at 41. The remaining load capacity was allocated to the Ruidoso WWTP, as the only point source for the river. The wasteload allocation for phosphorus was calculated as 2.16 pounds per day ("lbs/day") and the wasteload allocation for nitrogen was calculated as 18.9 lbs/day. 2006 TMDL at 45.

In 2011, after the issuance of the 2006 TMDL for nutrients, a new Ruidoso wastewater treatment facility was brought online. Region 6, U.S. EPA, *NPDES Permit No. NM0029165 Fact Sheet* 3, 14 (May 4, 2012) (A.R. 28) ("2012 Fact Sheet"). In 2012, NMED conducted water quality surveys that included nutrient assessments in waters in the Sacramento Mountains, including the Rio Ruidoso. 2016 TMDL at vi, 13. In 2016, based on those surveys and additional streamflow data (collected from 2004-2015), NMED found that the Rio Ruidoso remained "marginally" nutrient impaired. 2016 TMDL at 15. And with this updated data, as well as new nutrient and critical flow analyses, and a move to the watershed approach, NMED revised the 2006 TMDL for the Rio Ruidoso and reevaluated the wasteload allocation for the Ruidoso WWTP's NPDES permit.[14] *Id.* at 13.

The revised 2016 TMDL uses the same numeric in-stream targets as the 2006 TMDL for phosphorus and nitrogen (0.1 mg/L and 1.0 mg/L, respectively).

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[12] "WQS" in the above equation means "Water Quality Standard."

[13] As noted, the equation uses a conversion factor (here 8.34), the purpose of which is to convert the flow and in-stream target concentration figures from million gallons per day and milligrams per liter into the preferred unit for TMDLs of pounds of pollutant per day.

[14] With respect to the adoption of the watershed approach, NMED stated that it was "taking a watershed approach to this revised TMDL to account for upstream contributing areas. This type of approach allows for calculation of a watershed-wide TMDL and better accounting for the incoming nutrient loads and allowable loading in the impaired sub-watersheds." 2016 TMDL at 13.

But, with respect to nitrogen, NMED revised the method for determining the Rio Ruidoso's critical flow based on more recent streamflow data (collected from 2004-2015), as well as a better understanding of how nutrients interact to produce algae. *Id.* More specifically, the 2016 TMDL calculates the TMDL and wasteload allocation for nitrogen using the average annual median flow, *rather* than the method for calculating critical flow used in the 2006 TMDL.[15] NMED explained that the method it previously used to calculate critical flow when establishing the nitrogen limit is more appropriate when protecting for acute toxicity from pollutants, but the revised method, using average annual median flow, more appropriately reflects the long-term growth cycle of algae in response to excess nutrients. *Id.* at 13, 17. NMED also increased the critical flow volume it used for its calculation based in part on the increased design capacity of the new Ruidoso WWTP (from 2.5 to 2.7 million gallons per day ("mgd")). These changes resulted in a revised TMDL for nitrogen of 84.8 lbs/day (up from 27.2 lbs/day in 2006).

NMED did not change the method for determining critical flow for phosphorous,[16] but it did increase the critical flow volume based on the updated streamflow data NMED had collected between 2004 and 2015 and the increased design capacity of the Ruidoso WWTP. This increase in critical flow volume resulted in a revised TMDL for phosphorus of 3.39 lbs/day (up from 2.72 lbs/day in 2006).

Table 1, below, illustrates the TMDL calculation factors for nitrogen and phosphorus in both the 2006 and 2016 TMDLs.

[15] In the 2006 TMDL, NMED used the "4Q3 method," which calculates critical flow as "the minimum average four consecutive day flow that occurs with a frequency of at least once every three years." 2016 TMDL at 17 (citing N.M. Code R. § 20.6.4.11).

[16] NMED regulations specifically require that critical flow for pollutants that have numeric criteria, such as phosphorus, must be calculated using the "4Q3" method. 2016 TMDL at 17 (citing N.M. Code R. § 20.6.4.11).

		Combined Critical Flow (mgd)	Water Quality Standard (In-Stream Target) (mg/L)	TMDL (lbs/day)
2006	Phosphorus	3.265	0.1	2.72
	Nitrogen	3.265	1.0	27.2
2016	Phosphorus	4.07	0.1	3.39
	Nitrogen	10.2	1.0	84.8

Table 1. TMDL calculation factors for 2006 and 2016. The TMDL calculation is: Combined Critical Flow x Water Quality Standard (target) x Conversion Factor = TMDL. Combined Critical flow = the critical flow (mgd) + WWTP design capacity (2.5 mgd in 2006, 2.7 mgd in 2016). In each calculation, the conversion factor was 8.34.

See 2006 TMDL at 41; 2016 TMDL at 19.

The revised TMDL, based on the nutrient data and the revised critical flow volumes, resulted in revised wasteload allocations for the Ruidoso WWTP (based on the new design capacity of the WWTP) of 1.64 lbs/day of phosphorus and 37.1 lbs/day of nitrogen.[17] 2016 TMDL at 21. Table 2, below, illustrates the wasteload allocation calculations for both nitrogen and phosphorus in the 2006 and 2016 TMDLs.

[17] The 2016 wasteload allocations for both phosphorus and nitrogen are significantly smaller than those set out in the 2016 TMDL because NMED calculated the wasteload allocations for the Ruidoso WWTP based on the maximum design capacity of 2.7 mgd, but then allocated a portion of the wasteload allocations based on *current* maximum discharge (determined to be 1.88 mgd) for the current wasteload allocation and reserved the remaining portion (1.06 mgd) for future growth. 2016 TMDL at 21. Current and Future Growth wasteload allocations in the 2016 TMDL are illustrated below.

	Current WLA (lbs/day)	Future Growth WLA (lbs/day)	Total WLA Based on TMDL (lbs/day)
Phosphorus	1.64	0.72	2.36
Nitrogen	37.1	16.2	53.3

Table 3. Wasteload Allocation – distribution between current and future allocation depending on maximum discharge. 2016 TMDL at 21. Current WLA + Future Growth WLA = Total WLA.

		TMDL (lbs/day)	LA (lbs/day)	BLA (lbs/day)	MOS (lbs/day)	Ruidoso WWTP WLA (lbs/day)
2006	Phosphorus	2.72	0.34	0.09	0.13	2.16
	Nitrogen	27.2	5.28	1.66	1.36	18.9
2016	Phosphorus	3.39	0.44	0.25	0.34	1.64 (current)
	Nitrogen	84.8	14.0	9.06	8.48	37.1 (current)

Table 2. Wasteload Allocation (WLA) factors for 2006 and 2016. The WLA calculation is: TMDL – Load Allocation (LA) – Background Load Allocation (BLA) – Margin of Safety (MOS) = WLA. The Margin of Safety for 2006 was 5%; in 2016 it was 10%.

See 2006 TMDL at 47; 2016 TMDL at 21, 23.

In revising the wasteload allocations for the WWTP, NMED explicitly cautioned against comparing the 2006 TMDL with the 2016 TMDL for nutrients, as the updates to the critical flow volumes altered the wasteload allocations. 2016 TMDL at 13. NMED also recommended that the NPDES permitting authority not include concentration-based limits for either nutrient in future permits, explaining that "[d]ue to the chronic nature rather than acute nature of nutrient impairments * * * [the nutrient limits] should be implemented as a 30-day average, or longer averaging period, rather than a daily maximum limit" in future permits. *Id.* at 32, 33. Finally, as stated above, NMED explained that the revised TMDL used a "watershed approach" in order to better account for incoming nutrient loads from upstream areas and establish appropriate loading allocations in the impaired subwatersheds. *Id.* at 13.

The Region approved the 2016 TMDL in December 2016. *See* Letter from William K. Honker, Dir., Water Div., EPA Region 6, to Butch Tongate, Sec'y, NMED (Dec. 13, 2016) (A.R. 8) ("2016 TMDL Approval Letter"). Petitioner challenged the 2016 TMDL in the New Mexico Court of Appeals and, as of the date of this decision, that appeal remains pending. *See Rio Hondo Land & Cattle Co. v. N.M. Water Quality Ctrl. Comm'n*, No. a-1-CA-36039 (N.M. Ct. App. filed Dec. 12, 2016).

C. *Permit History*

Following NMED's issuance of the 2006 TMDL, which as described above was the first TMDL to address nutrient impairment in the Rio Ruidoso, EPA issued a revised Ruidoso WWTP NPDES permit in 2007 that included both mass-based

and concentration-based effluent limits for nitrogen and phosphorus.[18] Petitioner's Br. at 7-8, 17; Notice of Appearance by the Village of Ruidoso and the City of Ruidoso Downs and Response to the Petition for Review 2 (Jan. 18, 2018) ("Ruidoso's Br."). The mass-based limits for nitrogen and phosphorus were 21.7 lbs/day and 2.2 lbs/day, respectively. Petitioner's Br. at 11; 2012 Fact Sheet at 13. The concentration-based limits for nitrogen and phosphorus were 1.0 mg/L and 0.1 mg/L, respectively. Petitioner's Br. at 11; 2012 Fact Sheet at 14.

After the new wastewater treatment facility began operating in 2011, the 2007 permit was revised and reissued in 2012. 2012 Fact Sheet at 3. That 2012 permit included mass-based limits of 18.9 lbs/day for nitrogen and 2.16 lbs/day for phosphorus and concentration limits of 1.0 mg/L for nitrogen and 0.1 mg/L for phosphorus.[19] Region 6, U.S. EPA, *NPDES Permit No. NM0029165*, at 2 (July 17, 2012) (A.R. 19) ("2012 Permit"). That permit was set to expire in July 2017. *Id.*

In April 2017, the Region issued a draft permit for the Ruidoso WWTP, proposing to revise its effluent limits for nutrients based on the changes in the

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[18] The preceding 2001 NPDES permit included both a mass-based and a concentration limit for phosphorus, but no limits for nitrogen. *See* Region 6, U.S. EPA, *NPDES Permit No. NM0029165*, at 2 (Nov. 17, 2000) ("2001 Permit") (effective Jan. 1, 2001). The 2001 permit does not appear in the Index to the Administrative Record for this permit proceeding. Nevertheless, the Board takes "official notice" of this extra-record information, which is public information and non-controvertible. *See In re Russell City Energy Ctr., LLC*, 15 E.A.D. 1, 36 (EAB 2010), *pet. for review denied sub nom. Chabot-Las Positas Cmty. Coll. Dist. v. EPA*, 482 F. App'x 219 (9th Cir. 2012); 40 C.F.R. § 124.19(n) (Board may "do all acts and take all measures necessary for the efficient, fair, and impartial adjudication of issues arising in an appeal"); *see also Sykes v. Apfel*, 228 F.3d 259, 272 (3d Cir. 2000) (explaining that official notice allows agency adjudicators to take notice of commonly acknowledged facts, including technical or scientific facts that are within agency's area of expertise). We decline to supplement the record with the 2001 Permit, however, because the Region has not indicated that this document was considered in the course of the permit proceeding before us. *See* EPA Region 6's Notice of Filing of Copy of Final Permit Issued in 2000 for Ruidoso WWTP & Opposed Motion to Suppl. Record (Nov. 8, 2018).

[19] Interim limits were also established to give the new WWTP "sufficient time" to implement new technologies, as well as to give NMED time to continue studying the relationship between nitrogen and phosphorus in the Rio Ruidoso. For nitrogen, the interim mass-based limits were 135.2 lbs/day and 90.1 lbs/day, depending on the temperature, while the interim concentration limits were 6.0 mg/L and 4.0 mg/L, depending upon the temperature. There were no interim limits for phosphorus. 2012 Fact Sheet at 3.

approved 2016 TMDL. 2017 Fact Sheet at 9. The Region proposed to establish new mass-based limits of 37.1 lbs/day for nitrogen and 1.64 lbs/day for phosphorus. And based on the recommendation in the 2016 TMDL, the Region also proposed to remove the concentration limits for nitrogen and phosphorus. *Id.* at 3, 9-10. The Region explained that the revised 2016 TMDL was calculated using the same protective in-stream targets as the 2006 TMDL, and the new mass-based limits proposed in the draft permit were the same as the revised wasteload allocations assigned to this WWTP in the 2016 TMDL. *Id.* at 10. The Region concluded that "if the conditions in the TMDL (i.e., WLAs) are met, attainment of the water quality standard is assured." *Id.* The Region also explained that in basing the proposed new mass-based limits on the 2016 TMDL, it was relying on CWA section 303(d)(4)(A), which allows relaxation of permit limits in certain circumstances, so long as the revised permit also assures attainment of the water quality standards. *Id.* Pursuant to CWA section 401, NMED reviewed the permit and certified that the conditions of the permit comply with appropriate requirements of the CWA and New Mexico law. *See* 33 U.S.C. § 1341; Letter from Shelly Lemon, Chief, Surface Water Quality Bureau, NMED, to William K. Honker, Dir., Water Quality Prot. Div., EPA Region 6 (June 9, 2017) (A.R. 15).

In comments on the draft permit, Rio Hondo objected to these changes, arguing that the new permit limits for nutrients relied on a flawed 2016 TMDL and constituted impermissible backsliding under the CWA. Rio Hondo Land & Cattle Co., *Comments on Proposed NPDES Permit No. NM0029165*, *Village of Ruidoso & Ruidoso Downs WWTP* at 5-8 (June 4, 2017) (A.R. 13) ("Rio Hondo's Comments on Draft Permit"). The Region issued the final Ruidoso Permit and the response to comments document on July 25, 2017.[20] *See* Region 6, U.S. EPA, *NPDES Permit No. NM0029165*, at 1 (July 25, 2017) (A.R. 1) ("2017 Permit"); Letter from William K. Honker, Dir., Water Div., EPA Region 6, to Isaac Garcia, WWTP Dir., City of Ruidoso Downs & Village of Ruidoso WWTP (July 25, 2017) (A.R. 5) (transmitting final permit decision package, including response to comments); Region 6, U.S. EPA, *NPDES Permit No. NM00209165 Response to Comments* (July 11, 2017) (A.R. 5) ("Response to Comments"). In the final Permit, the mass-based limits were increased slightly for nitrogen from 37.1 lbs/day to 37.8 lbs/day

[20] As explained further in Part V.B.2.c, the mass-based limits were increased slightly in the final Permit because the addition of 200 customers to the sewer system is anticipated to significantly reduce the contribution of nutrients from nonpoint sources, and in doing so alter the calculation of the wasteload allocation. Region's Br. at 8 n.4; *see also* Molzen Corbin, *Report to EPA: Sewering of Onsite Systems* 1-3, 4-2 to -3 (May 2017) (A.R. 30); Oral Argument Transcript 83 (Oct. 30, 2018) ("Oral Arg. Tr.").

and for phosphorus from 1.64 lbs/day to 1.67 lbs/day based on Ruidoso's commitment to add an additional 200 customers to the sewer system by 2022. Response to Comments at 4; *see also* 2017 Permit, pt. I.G., at 6. This appeal followed.

V. *ANALYSIS*

Before turning to the substantive issue raised in this appeal, the Board first addresses several preliminary matters in Part A, below, including pending motions on the administrative record and identification of matters the Board will not address. The Board addresses the substantive issue raised in Rio Hondo's appeal in Part B below.

A. *Preliminary Matters*

1. *Pending Motions on Administrative Record*

In their respective briefs, the parties have relied on two different versions of New Mexico's 2016 TMDL for the Rio Ruidoso, only one of which appears on the Index to the Administrative Record that the Region submitted with its brief on January 18, 2018. Just prior to oral argument, the Region filed an opposed motion to supplement the record with a third version. *See* EPA Region 6 Opposed Motion to Supplement Administrative Record (Oct. 30, 2018) ("EPA Mot. to Suppl."). Rio Hondo opposed this motion. *See* Rio Hondo Brief in Opposition to EPA Motion to Supplement Administrative Record (Nov. 13, 2018) ("Opp'n to EPA Mot. to Suppl."). As will be discussed below, New Mexico's 2016 TMDL for the Rio Ruidoso was an important consideration in the Region's permit decision. Thus, as a preliminary matter, we first clarify which of these versions were part of the Administrative Record on the date the final Permit was issued, as contemplated by 40 C.F.R. § 124.18(c).

The earliest draft of the three TMDL versions is the "Final Draft" dated November 3, 2016. The Region submitted this version as an attachment to, and referenced it in, its response brief. *See* Region's Br. attach. 2. The "Final Draft" appears in the Index to the Administrative Record as number "7." None of the parties suggest that this version does not belong in the Administrative Record and thus we need not consider the status of this version any further.

The second TMDL version we consider is the "WQCC-Approved" version dated November 15, 2016. A comparison of this version with the "Final Draft" version reveals that the differences are minor and not material to the issues raised

in this appeal.[21] *See* Opp'n to EPA Mot. to Suppl. at 4 (stating that TMDL documents are "largely identical" in substance); Oral Argument Transcript 11 (Oct. 30, 2018) ("Oral Arg. Tr.") (counsel for Rio Hondo stating belief in accuracy of EPA's characterization of two TMDL documents as containing "only very, very, very minor * * * scrivener errors").

By motion to supplement, the Region seeks to add this second TMDL version – the WQCC-Approved version – to the Administrative Record, stating that EPA considered this document in its permit decision but inadvertently omitted it in compiling the record. *See* EPA Region 6 Reply to Rio Hondo's Brief in Opposition to EPA Motion to Supplement Administrative Record 3 (Nov. 29, 2018) ("Reply to Opp'n to EPA Mot. to Suppl."). The Region explains that the Final Draft version was a "document provided to EPA for technical review," and the WQCC-Approved version is the TMDL document that EPA approved. The Region also explains that the WQCC-Approved version is the TMDL document that is referred to in the Response to Comments document. *See* EPA Mot. to Suppl. at 2; Response to Comments at 5 ("Newly established limits for nutrients are consistent with the current TMDL, approved by the WQCC on November 15, 2016 and then approved by EPA on December 13, 2016."). To illustrate that it considered this version of the TMDL during the permitting process, the Region points to its letter approving the TMDL, dated December 13, 2016. Oral Arg. Tr. at 12 (referring to 2016 TMDL Approval Letter).

Rio Hondo argues in opposition that, because the 2016 TMDL that EPA approved (i.e., the WQCC-Approved version) was not listed in the certified Index to the Administrative Record, it is "apparent that the permit writer did not even consider [it]." Opp'n to EPA Mot. to Suppl. at 2; *accord* Oral Arg. Tr. at 10. Rio Hondo's supplemental briefing does not address the documents in the record that indicate that the Region considered this version of the TMDL (i.e., the Response to Comment document or the 2016 TMDL Approval Letter). Notwithstanding its opposition to adding this document to the record Index, Rio Hondo agrees that there are no material differences between these two versions and does not object to the

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[21] The Region describes the differences between the Final Draft TMDL and the WQCC-Approved TMDL as nonsubstantive "scrivener error[s]." EPA Mot. to Suppl. at 2. For example, "a sentence on page 3 * * * mistakenly lists land use numbers that differ from Figure 2.1 in that same document." *Id.* at 2-3; *see also* Reply to Opp'n to Mot. to Suppl. at 4 (stating that "there is no substantive difference between the two versions" and they contain an "identical technical analysis").

Board taking official notice of the WQCC-Approved version.[22] Oral Arg. Tr. at 9; Opp'n to EPA Mot. to Suppl. at 4.

The appropriate contents of an administrative record are set forth in 40 C.F.R. § 124.18(b). In relevant part, that provision specifies that "[t]he administrative record for any final permit shall consist of the administrative record for the draft permit and * * * [t]he response to comments required by § 124.17 and any new material placed in the record under that section[.]" 40 C.F.R. § 124.18(b)(4). Section 124.17 *requires* the Region to include "any documents cited in the response to comments." *Id*. § 124.17(b). The response to comments document in this permit proceeding specifically identifies the WQCC-Approved version of the 2016 TMDL, which the EPA approved. *See* Reply to Opp'n to EPA Mot. to Suppl. at 3 (quoting Response to Comments at 5 and referring to 2016 TMDL Approval Letter).

Based on the record before us, the Board determines that this document, inadvertently omitted from the Index to the Administrative Record, was *required* to be included in the administrative record per the permitting regulations. Additionally, although Rio Hondo seems to argue that it cannot be sure the Region was specifically considering the WQCC-Approved version when it considered the nutrient limits that are the subject of this appeal, all parties agree there is no difference between these two versions that is material to the issues that are raised on appeal. Given the above, the Board grants the Region's motion to supplement the administrative record and directs the Region to add the WQCC-Approved version of the 2016 TMDL for the Rio Ruidoso to the Index to the Administrative Record for this Permit. Additionally, because this WQCC-Approved version is the final version approved by EPA in the Administrative Record, all citations to the 2016 TMDL in this decision refer to the WQCC-Approved version of the TMDL, unless otherwise indicated.

The final version of the TMDL we consider is the "EPA-Approved" version dated December 13, 2018. A comparison of the EPA-Approved version to the

[22] As stated previously, the Board generally will take "official notice" of certain relevant extra-record information that is incontrovertible and publicly available, such as statutes, regulations, judicial proceedings, public records, and Agency documents. *See Russell City Energy Ctr.*, 15 E.A.D. at 36; 40 C.F.R. § 124.19(n) (the Board may "do all acts and take all measures necessary for the efficient, fair, and impartial adjudication of issues arising in an appeal"); *see also Sykes v. Apfel*, 228 F.3d at 272 (discussing the broad scope of official notice).

WQCC-Approved version reveals that the only differences are that the title page has been changed from "WQCC-Approved" to "EPA-Approved," the date is revised, and a copyright page has been added.[23] Otherwise, the content of the document is identical to the WQCC-Approved version. The EPA-Approved version appears on the NMED website as the 2016 TMDL for the Rio Ruidoso. *See* Surface Water Quality Bureau, NMED, *List of TMDLs*, https://www.env.nm.gov/swqb/TMDL/List/ (last updated Mar. 1, 2018) (scroll to Rio Ruidoso, Plant Nutrients TMDL). Both Rio Hondo and Ruidoso relied on this version in their briefs for this appeal. This version does not appear in the record, however, and no party has sought to make it a part of the record. During oral argument, counsel for Rio Hondo acknowledged that this document was not in the administrative record and requested that the Board take official notice of this document. Oral Arg. Tr. at 11. As noted above, the Board typically will take official notice of government documents that are incontrovertible and publicly available. *See Russell City Energy Ctr.,* 15 E.A.D. at 36; 40 C.F.R. § 124.19(n) (the Board may "do all acts and take all measures necessary for the efficient, fair, and impartial adjudication of issues arising in an appeal"); *see also Sykes v. Apfel*, 228 F.3d at 272 (discussing broad scope of official notice). As such, the Board takes official notice of the "EPA-Approved" TMDL for the Rio Ruidoso dated December 13, 2018.

2. *Identification of Issues the Board Will Not Address*

As stated in Part I, above, the primary issue for resolution in this appeal is whether the Region clearly erred or abused its discretion when it relied on an exception to the antibacksliding provision of the CWA to revise the nutrient limits in the 2017 Permit. Before turning to that question, however, we first identify what we will not be addressing in this decision, namely: (a) the validity of the 2016 TMDL; and (b) whether the nutrient limits constitute backsliding. As explained below, we do not address the first question because this is not the appropriate forum in which to challenge the validity of the 2016 TMDL. And we need not decide the latter question because we ultimately conclude that, even assuming the nutrient limits do constitute backsliding, Rio Hondo has not demonstrated that the Region clearly erred or abused its discretion in relying on an exception to the backsliding

[23] The Board observes also that the date change to the EPA-Approved version corresponds to the date of EPA Region 6's letter to NMED approving the 2016 TMDL. *See* 2016 TMDL Approval Letter.

provision or in determining that the Permit's limits assure that water quality standards will be met.

a. *Notwithstanding Rio Hondo's Underlying Objection to the 2016 TMDL, the Validity of That TMDL Is Not at Issue Before the Board*

It is clear from both Rio Hondo's comments on the draft permit and its briefs on appeal that Rio Hondo primarily objects to the 2016 TMDL for nutrients. *See* Rio Hondo's Comments on Draft Permit at 1, 2-5 (detailing numerous objections to 2016 TMDL for nutrients); Petitioner's Br. at 2 n.1 (referring to 2016 TMDL as "arbitrary and capricious"). Throughout its briefs on appeal, Rio Hondo argues that the nutrient limits in the Permit are clearly erroneous because those limits were incorporated into the Permit from the 2016 TMDL, which was calculated in an arbitrary and capricious manner and, thus, will result in a violation of applicable water quality standards. Petitioner's Br. at 2 n.1; *see also, e.g.*, *id.* at 20 (arguing that it "simply defies common sense and logic" that Permit's limits for nutrients "will assure attainment of water quality standards"); *id.* at 22 (arguing that nutrient limits in Permit "will contribute to a general *increase* in the amount of nutrients discharged"); *id.* at 23 (arguing that "increase in nutrient discharges authorized by the re-issued NPDES permit * * * will contribute to an overall elevation in the level of nutrients discharged into the Rio Ruidoso, which is already in non-attainment status for nutrients"). Because the mass-based limits in the Permit are essentially the same as the wasteload allocations in the 2016 TMDL, Rio Hondo's objection to the Permit's limits is difficult to separate from its objection to the underlying 2016 TMDL.

Rio Hondo acknowledges, however, that the Board is not the proper venue in which to raise objections to the 2016 TMDL. Petitioner's Br. at 2 n.1 (citing *In re City of Moscow*, 10 E.A.D. 135, 161 (EAB 2001) (explaining that NPDES permit appeal to Board is not proper venue for either challenge to state TMDL or EPA approval of that TMDL)). In fact, as noted above and as the Region points out, Rio Hondo is currently challenging the 2016 TMDL in the New Mexico state court system. Region's Br. at 18 n.13; *see also Rio Hondo Land & Cattle Co. v. N.M. Water Quality Control Comm'n*, No. a-1-CA-36039 (N.M. Ct. App. filed Dec. 12, 2016). As such, the Board does not consider the validity or substance of the 2016 TMDL to be at issue in this appeal, and instead evaluates for clear error and abuse of discretion the Region's decision to set the 2017 Permit's nutrient limits

consistent with the 2016 TMDL and, in particular, the Region's reliance on a backsliding exception under the CWA.[24]

b. *The Board Assumes Without Deciding That the Revised Nutrient Limits Constitute Backsliding*

Rio Hondo argues that the revised nutrient limits constitute "impermissible" or "illegal" backsliding because they are less stringent than the limits in the prior permit, based on the removal of concentration limits for both nitrogen and phosphorus and the increase of the mass-based limit for nitrogen from a 30-day average of 18.9 lbs/day to a 30-day average of 37.8 lbs/day.[25] The Region appears to concede that the mass-based limit for nitrogen is less stringent,[26] but argues that – even if less stringent – the revised limits are permissible under a statutory exception to the backsliding prohibition in the CWA. Oral Arg. Tr. at 60; Region's Br. at 9, 12; *see also* Response to Comments at 5 ("The limits[']relaxation in the final permit is consistent with * * * exceptions to Antibacksliding at CWA 303(d)(4)(A)[.]"); 2017 Fact Sheet at 10 ("These limits have been developed in accordance with the revised 2016 TMDL and are in compliance with CWA [s]ection 303(d)(4) for [a]nti-backsliding.").[27]

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[24] In the fact sheet, as well as in its response brief, the Region states that, if the New Mexico Court of Appeals were to invalidate the 2016 TMDL, the Ruidoso Permit contains a reopener provision that would allow the Permit to be modified as appropriate. *See* Region's Br. at 18; *see also* 2017 Fact Sheet at 10.

[25] Rio Hondo does not challenge the mass-based limit for phosphorus, which was revised downward from 2.16 lbs/day to 1.67 lbs/day, based on the "current" wasteload allocation in the TMDL, with an additional allocation reserved for future growth. *See* Petitioner's Br. at 1-2, 15-16 (challenging removal of both phosphorus and nitrogen concentration limits, but challenging revised mass-based limitation for nitrogen only); Oral Arg. Tr. at 24.

[26] At oral argument, counsel for the Region stated: "I think we would concede that the permit limit between the 2012 permit and the 2017 permit with respect to total nitrogen – the mass-based limit went from 18.9 to 37.8. I think we would concede that that limit is less stringent." Oral Arg. Tr. at 60-61. NMED also describes the revised nutrient limits as "less stringent" than the previous limits. 2016 TMDL at 32.

[27] Ruidoso, on the other hand, argues that the revised nutrient limits do not constitute a "relaxation" of prior effluent limits because the interim limits that have been in effect have become steadily more stringent. *See* Ruidoso's Br. at 1-3. Ruidoso's argument seems to ignore the final 2012 permit limits that were in place for the final month

From the administrative record before us, it is not entirely clear whether the concentration and mass-based limits for nutrients in the 2017 Permit are "less stringent" than the "comparable" effluent limits in the 2012 permit, within the meaning of the exception to the antibacksliding provision. *See* CWA § 402(o)(1), 33 U.S.C. § 1342(o)(1) (prohibiting revised permits from having effluent limits that are "*less stringent* than the *comparable* effluent limitations in the previous permit" (emphasis added)). Any conclusion that may be drawn from comparing the 2012 limits to the 2017 limits is complicated by the fact that the Permit no longer contains concentration limits for nutrients, and the mass-based limit for nitrogen is calculated using a numeric in-stream target identical to the one used in setting the 2012 limits but using more recent streamflow data and a revised method of determining critical flow of the receiving water.[28] Comparing the 2017 nutrient limits to those in the 2012 permit to determine if they are "less stringent" thus arguably involves more than a comparison of absolute numbers. At the very least, caution would seem prudent, as suggested by NMED in the 2016 TMDL. *See* 2016 TMDL at 13 (warning that any comparison should be done with caution due to updated parameters that have changed calculations and subsequent allocations).

Nevertheless, given the Region's apparent concession on this point with respect to nitrogen, the Board assumes without deciding that the revised limits constitute backsliding. In any event, it is not necessary for the Board to further consider whether the limits constitute backsliding because, as explained more fully below, the Board determines that the revised limits are permissible under an exception to the antibacksliding provision. *See In re City of Tulsa*, 3 E.A.D. 505, 508 (CJO 1991) (determining it was not necessary to determine whether permit's revised limits were comparable or constituted backsliding under CWA because antibacksliding exceptions were met). The Board's analysis of the antibacksliding provisions, the relevant exception, and its applicability to the nutrient limits for the Ruidoso Permit follows.

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of the 2012 permit (from July 31 to August 31, 2017). *See id*. at 2. At oral argument, however, Ruidoso conceded that this argument was more of a factual argument than a legal one. Oral Arg. Tr. at 79. Regardless, as explained below, the Board assumes without deciding that the 2017 Permit limits constitute backsliding and, for this reason, does not consider further Ruidoso's reliance on the interim limits to argue that backsliding is permissible.

[28] In contrast, as explained in Part IV.B, above, the mass-based limit for phosphorus is calculated using more recent streamflow data, but using the same method of determining flow of the receiving water as was used previously for phosphorus.

B. *The Region Reasonably Relied on an Exception in the CWA to the Antibacksliding Provision in Determining Nutrient Limits for the 2017 Ruidoso Permit*

As explained in Part III.D, above, the CWA seeks to preserve gains made in water quality by imposing a general prohibition on revising permit limits to be less stringent than the previous permit – called the antibacksliding provision. *See* CWA § 402(o), 33 U.S.C. § 1342(o). That provision, however, also contains exceptions to the prohibition that allow backsliding under certain defined circumstances.

One of those exceptions, found in CWA section 402(o)(1), is relevant to this case and provides as follows:

> [A] permit may not be renewed, reissued, or modified to contain effluent limitations [that] are less stringent than the comparable effluent limitations in the previous permit *except in compliance with [CWA] section [303](d)(4)*[.]

33 U.S.C. § 1342(o)(1) (emphasis added). In other words, the CWA allows subsequent permits to contain less stringent limits than the previous permit so long as the subsequent permit is in compliance with CWA section 303(d)(4).

CWA section 303(d)(4)(A), which is applicable here,[29] provides, in relevant part, that:

> [W]here the applicable water quality standard has not yet been attained, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section may be revised only if (i) the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard * * *.

33 U.S.C. § 1313(d)(4)(A)(i).

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[29] CWA § 303(d)(4)(A) applies to waters, such as the Rio Ruidoso, that have not yet attained the applicable water quality standards and are thus subject to the 303(d)-listing-and-TMDL process. Subsection (B) of CWA § 303(d)(4) applies to waters where the standards are attained (i.e., not impaired). *See* 33 U.S.C. § 1313(d)(4)(A)-(B).

The Region relied on compliance with section 303(d)(4)(A) when it revised the nutrient limits in the Ruidoso Permit. 2017 Fact Sheet at 10; Response to Comments at 5. Specifically, the Region revised the 2012 mass-based limits for nutrients and removed the concentration limits for nutrients based on the 2016 TMDL after concluding that to do so was appropriate and would assure attainment of the applicable water quality standards.[30]

Rio Hondo's arguments can be divided into two main assertions. The first is that the CWA requires that any effluent limit being revised (and, in this case, removed) must have been based on a TMDL or other wasteload allocation, and *the concentration limits* for nitrogen and phosphorus in the 2012 permit were not based on a TMDL or other wasteload allocation. The second is that, even if both the concentration limits and the mass-based limits in the 2012 permit were based on the 2006 TMDL and were revised in the 2017 Permit based on the 2016 TMDL, the 2017 Permit's limits for both nitrogen and phosphorus will not "assure" the attainment of the New Mexico water quality standards as required by CWA section 303(d)(4)(A).[31] As such, Rio Hondo also asserts that the revised limits will result in a violation of the applicable water quality standards as prohibited by the safety clause – the ultimate backstop to backsliding – in CWA section 403(o)(3). We address each of these arguments below.

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[30] CWA § 402(o)(2) contains additional exceptions to the antibacksliding provision. 33 U.S.C. § 1342(o)(2)(A)-(E). In the 2017 fact sheet issued with the draft permit, the Region also cited one of these other exceptions (the exception based on "new information"). Response to Comments at 5. On appeal, however, the Region dropped its reliance on § 402(o)(2) because the Region determined "the section 303(d)(4)(A) exception was better tailored to the Ruidoso Permit." Region's Br. at 9 n.5.

Because the Board determines that the Region did not err in relying on CWA § 303(d)(4), the Region's decision to forgo its reliance on § 1342(o)(2) does not alter the outcome of its permitting decision or this appeal. *See Am. Iron & Steel Inst. v. EPA*, 115 F.3d 979, 993 (D.C. Cir. 1997) ("[Section] 402(o) allows relaxation of water quality-based limits if the requirements of either § 402(o)(2) or § 303(d)(4) are met."); *In re City of Tulsa*, 3 E.A.D. 505, 512-13 (CJO 1991) (explaining that backsliding is allowed under the CWA if either §§ 402(o)(1) or 402(o)(2) are met; satisfaction of both sections is not required).

[31] As explained above, Rio Hondo does not challenge the mass-based limit for phosphorus on appeal.

1. *The Concentration Limits for Nutrients in the 2012 Permit Were Based on the 2006 TMDL*

As stated above, Rio Hondo argues that CWA section 303(d)(4)(A) applies only when a permitting authority revises an effluent limit that was "based on a [TMDL] or other waste load allocation established under [CWA section 303]." 33 U.S.C. § 1313(d)(4)(A)(i). Although Rio Hondo concedes that the *mass-based* limit for nitrogen in the 2012 permit was "based on" the 2006 TMDL, Rio Hondo argues that the *concentration limits* in the 2012 permit were not.[32] Petitioner's Br. at 16; Petitioner's Reply Br. at 12. Rather, Rio Hondo argues, the 2012 concentration limits were "brought forward * * * without modification" from the prior permits and were originally derived from the New Mexico water quality standards, and therefore cannot be said to have been "based on a TMDL or other [wasteload allocation]."[33] Petitioner's Br. at 17. The Region counter-argues that the concentration limits for nutrients in the 2007 and 2012 permits were indeed developed after and based on the 2006 TMDL and, thus, CWA section 303(d)(4) applies. For the reasons discussed below, the Board determines that the record supports the conclusion that the concentration nutrient limits (as well as the mass-based limits) in the 2012 permit were based on the 2006 TMDL.

At the outset, we observe that, under permitting regulations, the permit authority is *required* to impose effluent limits in permits that are "consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA." 40 C.F.R. § 122.44(d)(1)(vii)(B). Thus, the Region was required to consider the existing 2006 TMDL when developing permit limits for the 2012 permit and the propriety of that prior permit issuance has not been, nor can it be, challenged in this appeal.

In considering Rio Hondo's argument regarding the basis for the nutrient concentration limits in the 2012 permit, we look to the 2012 fact sheet that accompanied the draft 2012 permit. A permit's fact sheet provides a summary of the basis for the draft permit conditions and the factual, legal, methodological, and

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[32] As described in Part IV.B, above, the 2006 TMDL first identified and addressed nutrient impairment in the Rio Ruidoso. That TMDL was next revised in 2016. The Ruidoso permit is revised every five years, so we look to determine whether the previous 2012 permit was based on the 2006 TMDL.

[33] Specifically, Rio Hondo states that a concentration limit for phosphorus was included in the 2001 permit and agrees that the concentration limit for nitrogen was first introduced in the 2007 permit. Petitioner's Br. at 17.

policy questions that the permit issuer considered in preparing the permit. *See* 40 C.F.R. § 124.8. In the 2012 fact sheet, the Region explained the concentration limits for nutrients in the 2012 permit in the context of discussing the impacts of the 2006 TMDL on all of the permit's nutrient limits (this discussion occurs under the heading "*303(d) list impacts*"). 2012 Fact Sheet at 13. The Region stated:

> A TMDL for total nitrogen and total phosphorus for the Rio Ruidoso, from Rio Bonito to US [Highway] 70 Bridge, was approved by the EPA on February 10, 2006. Final concentration permit limits for total phosphorus and total nitrogen have been brought forward from the current permit. Final total phosphorous and final total nitrogen 30-day average mass limits were established in the [2007] permit as 2.2 lbs/day and 21.7 lbs/day, respectively. The draft permit modifies the final 30-day average mass limits to 2.16 lbs/day for total phosphorous and 18.9 lbs/day for total nitrogen. *This change has been made to ensure consistency with the waste load allocations (WLAs) established in the [2006] TMDL*.

Id. (emphasis added). The 2012 fact sheet went on to describe how the TMDL arrived at the concentration limits for nutrients:

> The * * * *[2006] TMDL establishes [in-stream] target concentration values* and [wasteload allocations] for both total nitrogen and total phosphorus based on both numeric and narrative standards. The [TMDL's] target concentration value for total phosphorus was established based on the New Mexico state standard * * *. The nitrogen standard utilized by the TMDL (1 mg/[L]) was based on projections of the ratio of [nitrogen to phosphorus] required for algal biomass of 10:1.

Id. at 14 (emphasis added). From the context of this discussion in the 2012 fact sheet, the Region clearly was focused on the 2006 TMDL (and the wasteload allocations that the 2006 TMDL established) when the Region determined *both* the mass-based and the concentration limits for nutrients in the 2012 permit. Further, the fact sheet supports the Region's position that it decided to impose the same concentration limits as in the 2007 permit (i.e., bring them forward) based on its consideration of the 2006 TMDL. Given the intertwined rationale in the fact sheet for determining both the mass-based limits and the concentration limits, Rio Hondo's concession that the mass-based limit for nitrogen in the 2012 permit was based on the 2006 TMDL undermines its assertion that the concentration limits were not.

Additionally, in the 2012 fact sheet's section on antibacksliding, the Region indicated that the permit "maintains" the phosphorous and certain other limits from the 2007 permit. Further, recognizing the nonstatic nature of the TMDL process and the potential need for additional evaluation in the future, the Region also explained that the permittee and NMED were analyzing nitrogen discharged by the Ruidoso WWTP and in the Rio Ruidoso to further evaluate, among other things, the appropriateness of the 2006 TMDL in-stream nitrogen target and wasteload allocations. *Id.* There is no indication in the 2012 fact sheet that the Region was not considering the 2006 TMDL in setting the 2012 permit's nutrient limits.

As stated above, Rio Hondo nevertheless maintains that because the 2012 permit's concentration limits were "brought forward * * * without modification" from the 2001 and 2007 permits, the 2012 concentration limits could not have been "based on" the 2006 TMDL. Petitioner's Br. at 17-18. Rio Hondo contends instead that the 2012 concentration limits were developed outside of (i.e., "exogenous to") the 2006 TMDL process, and were based on – and solely based on – New Mexico's water quality standards. Oral Arg. Tr. at 89-90. For multiple reasons, the Board disagrees.

First, the record does not support Rio Hondo's contention that the 2012 permit's concentration limits for nitrogen were developed outside of the 2006 TMDL. As noted, the regulations required the Region to consider the 2006 TMDL. And, as stated by Rio Hondo, the 2001 permit contained no concentration limits for nitrogen. Petitioner's Br. at 17. These were first imposed in the 2007 permit, *after* the 2006 TMDL was issued. *Id.* Rio Hondo has not pointed to any record evidence, nor have we found any record evidence, that suggests that the 2007 concentration limit was based on anything but the 2006 TMDL. Thus, Rio Hondo's assertion that the 2012 concentration limit for nitrogen – which was "brought forward" from the 2007 permit – was originally derived from something other than the 2006 TMDL is simply not supported by the record.[34]

Second, the fact that the phosphorus concentration limit in the 2012 permit remained unchanged from the 2001 permit, does not – by itself – demonstrate that the phosphorus and nitrogen concentration limits in the 2007 and 2012 permits were not based on the 2006 TMDL. The 2012 fact sheet further illustrates that the Region decided to impose the same concentration limits as in the 2007 permit (i.e., bring

[34] Further, as New Mexico has no numeric standard for nitrogen, the concentration limit for nitrogen cannot be a "mere recitation" of a water quality standard as Rio Hondo suggests. *See* Petitioner's Reply Br. at 9.

them forward) based on its consideration of the 2006 TMDL. Rio Hondo has not identified anything in the record that demonstrates otherwise.

Third, neither the CWA nor its implementing regulations provide a basis for concluding that a permitting authority cannot derive a concentration limit based on *both* a TMDL *and* the relevant water quality standard. On the contrary, TMDLs, wasteload allocations developed from TMDLs, and water quality-based effluent limits in permits are all required to take into account and assure that relevant water quality standards will be met. *See* Parts III.A & .B; *see also* NPDES Surface Water Toxics Control Program, 54 Fed. Reg. 23,868, 23,879 (June 2, 1989) (incorporating language into the regulations that requires water quality-based effluent limits to be derived from water quality standards because that "is the only reliable method for developing water quality-based effluent limits that protect aquatic life and human health"). And, where, as here, there is only one facility discharging into the Rio Ruidoso, it is as one would expect: the concentration limits in the 2007 and 2012 permits line up with New Mexico's water quality standard for phosphorus and in-stream target for nitrogen based on the phosphorus water quality standard. *See* Oral Arg. Tr. at 62.

Lastly, at oral argument, Rio Hondo acknowledged that a limit can be based on *both* a TMDL *and* the relevant water quality standard. *Id.* at 23. While arguing that this was not the case with respect to the Ruidoso permits, Rio Hondo provides no basis for concluding that the effluent limits in these permits originated *solely* from the water quality standards and were not *also* derived from the TMDL.

Here, the 2012 fact sheet states that the Region incorporated concentration limits into the 2012 permit that were consistent with the 2006 TMDL's "allowable [wastewater treatment plant] effluent concentration," which the Region observed was in turn based on both the numeric and narrative New Mexico water quality standards. *See* 2006 TMDL 45 tbls.5.7 & 5.8; 2012 Fact Sheet at 13-14. Moreover, the process that the Region followed for developing the TMDL wasteload allocation is the process that is outlined in EPA's guidelines for TMDLs. U.S. EPA, *Guidelines for Reviewing TMDLs Under Existing Regulations Issued in 1992* (May 20, 2002), https://www.epa.gov/tmdl/guidelines-reviewing-tmdls-under-existing-regulations-issued-1992. Based on the 2012 fact sheet, and on the entire record before us, the Board concludes that the concentration limits for nitrogen and phosphorus in the 2012 permit were based on the 2006 TMDL. None of Rio Hondo's arguments to the contrary are persuasive and, thus, it has not met its burden in this regard. Because the prior 2012 permit limits were based on the 2006 TMDL, the Region did not clearly err or abuse its discretion in relying on the

exception to the antibacksliding provision in CWA section 303(d)(4) when revising the Permit in 2017.[35]

Our determination that the antibacksliding exception in CWA section 303(d)(4)(A) applies to the 2017 permit revisions is consistent with the purpose and intent of the statutory program. Congress intended that permitting authorities make appropriate changes to wasteload allocation calculations from one TMDL to the next, consistent with the antibacksliding exception: "permits developed on the basis of water quality based effluent limitations * * * may be * * * reissued * * * on the basis of subsequently revised waste load allocation formulas * * *." H.R. Rep. No. 99-1004 (1986) (Conf. Rep.), *reprinted in* 132 Cong. Rec. 10,532, 10,576 (Oct. 15, 1986).

NMED has been clear in each of its TMDL revisions that it continues to evaluate the appropriateness of its nutrient limits. *See* 2006 TMDL at 2; 2016 TMDL at vi. The 2016 TMDL clearly explains the basis for its revised formula for calculating the nutrient TMDLs and makes suggestions to permitting authorities for revising future permits accordingly. The Region determined that incorporating these changes into the 2017 Permit was appropriate, precisely as Congress envisioned.

Moreover, as explained in *City of Tulsa*:

> The overarching concern of the backsliding provisions is protection of the relevant waters. If the characteristics of the "waters" change in some fundamental way – for example, * * * where the assimilative capacity of [the relevant waterbody] will increase as a result of flow augmentation – no violence is done to the intent of the anti-backsliding provisions if the previous TMDL (or [wasteload allocation]) is disregarded, provided the permit is based on the new TMDL (or [wasteload allocation]) and it ensures protection of water quality.

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[35] Because we determine that the concentration limits for nitrogen and phosphorus in the 2012 permit were "based on" the 2006 TMDL, we do not reach the Region's alternative arguments that: (a) the nitrogen concentration limit was based on an "other waste load allocation"; or (b) CWA § 303(d)(4)(A) applies to revised water quality-based effluent limits even when they are not based on a prior TMDL or other wasteload allocation. *See* Region's Br. at 13-14.

3 E.A.D. 505, 510 (CJO 1991) (footnote omitted). Here, the fundamental change is not the characteristics of the water, but the updated information and assumptions about how nitrogen and phosphorus contribute to chronic impairment through algal blooms and about how to properly calculate critical flow when applying narrative nutrient criteria. *See* 2016 TMDL at 13, 17-18, 32-33. More specifically, the 2016 TMDL substantially revised the critical flow assumptions used to calculate the TMDL and consequently the wasteload allocation, based on updated data and a better understanding of the chronic, rather than acute, nature of nutrient pollution in the Rio Ruidoso.[36] The same fundamental concern applies, however. In other words, the overarching concern is still the protection of water quality and no violence is done here by changing the way nutrient pollution is managed to attain the same water quality standards.

In sum, the entirety of the record and the relevant statutory and regulatory provisions support the conclusion that the concentration limits for nutrients in the 2012 permit were based on the 2006 TMDL within the meaning of CWA section 303(d)(4)(A). Thus, Rio Hondo has not demonstrated that the Region clearly erred in relying on the antibacksliding exception in CWA section 303(d)(4)(A) when removing the concentration limits for nitrogen and phosphorus consistent with the 2016 TMDL. We next evaluate whether the Region clearly erred or abused its discretion in determining that the 2017 Permit's nutrient limits assure attainment of New Mexico water quality standards.

2. *The Region Did Not Clearly Err or Abuse Its Discretion in Determining That the 2017 Permit Limits Would Assure Attainment of the New Mexico Water Quality Standards*

Ultimately, a permitting authority may only rely on an exception to the backsliding prohibition if to do so will not result in a violation of the applicable water quality standards. CWA § 402(o)(3), 33 U.S.C. § 1342(o)(3). In circumstances where a permitting authority has relied on the exception provided in CWA section 303(d)(4)(A)(i), as is the case here, the permitting authority must also ensure that "the cumulative effect of all such revised effluent limitations * * * will assure the attainment" of the applicable water quality standards. CWA

[36] As shown in Table 1 in Part IV.B, above, the 2006 TMDL calculated the nitrogen and phosphorus wasteload allocations for the Ruidoso WWTP based on a flow of the Rio Ruidoso above the facility of 0.765 mgd, with the Ruidoso WWTP contributing 2.5 mgd flow to the river. 2006 TMDL at 41, 45 tbl.5.8. The 2016 TMDL calculated the nitrogen wasteload allocation using a river flow above the Ruidoso WWTP of 7.46 mgd, with the Ruidoso WWTP contributing 2.7 mgd flow to the river. 2016 TMDL at 17, 20-21.

§ 303(d)(4)(A)(i), 33 U.S.C. § 1313(d)(4)(A)(i). In this Permit, the Region relied heavily on NMED's 2016 TMDL in both setting the 2017 Permit's limits and in determining that the Permit will assure attainment of, and will not result in a violation of, the New Mexico water quality standards.

As discussed further below, the Region's decision to rely on the 2016 TMDL in determining the nutrient limits in the 2017 Permit was reasonable. First, permitting regulations require the Permit's nutrient limits to be consistent with the assumptions and requirements of New Mexico's 2016 TMDL. Additionally, the Agency had only recently reviewed and approved the 2016 TMDL and nothing in the record points to any new information that had come to light to suggest that the assumptions and requirements relied upon were inaccurate for any reason. Thus, as explained further below, Rio Hondo has not met its burden to demonstrate that the Region clearly erred or abused its discretion in determining the 2017 Permit limits would assure attainment of (and not result in violation of) the New Mexico water quality standards.

a. *The Nutrient Limits Are Consistent with the Assumptions and Requirements of New Mexico's 2016 TMDL*

At a minimum, the effluent limits included in a permit must be "consistent with" the assumptions and requirements of the wasteload allocation established by the TMDL. *See In re City of Homedale Wastewater Treatment Plant*, 16 E.A.D. 421, 426 (EAB 2014) (citing *In re City of Moscow*, 10 E.A.D. 135, 146-48 (EAB 2001)); *see also* 40 C.F.R. § 122.44(d)(1)(vii)(B).[37] As set forth above, in 2016, NMED reevaluated the Rio Ruidoso's nutrient impairment, using a watershed approach, new streamflow and facility design capacity data, and a better understanding of how nutrients contribute to excessive algal growth (the nuisance that the narrative water quality standard was designed to protect against). *See* Part IV.B; *see also* 2016 TMDL at 13, 17, 25-28; 2006 TMDL at 34-35, 39-40; *see also* Nat'l Ass'n of Clean Water Agencies, *Review of USEPA Methods for Setting Water Quality-Based Effluent Limits for Nutrients* passim (June 2014) ("NACWA Document") (identifying crucial differences between regulating toxic pollutants versus regulating nutrients and proposing changes to way nutrients are regulated). Based on this more recent information, and on new assessments of the chronic,

[37] The TMDL represents a maximum daily load but, as we explained above, this does not mean that permit limits must be identical to the wasteload allocation established by the TMDL. *See* discussion *in* Part III.C (explaining the permitting authority's discretion in the context of determining appropriate effluent limits for permits within the parameters of the statutory and regulatory scheme).

rather than acute, nature of nutrient impairment, NMED revised the 2016 TMDL for nutrients and the corresponding wasteload allocation for the Ruidoso WWTP. 2016 TMDL at 13. As stated in Part IV.B, above, the Region approved the 2016 TMDL in December 2016. *See* 2016 TMDL Approval Letter.

Five months later, when the draft permit was issued, the Region relied on the rationale and assumptions from the 2016 TMDL when developing the 2017 Permit limits. 2017 Fact Sheet at 9-10. As the Region explained in the fact sheet that it issued with the draft permit, the Region relied on NMED's decision in the 2016 TMDL to use the same in-stream targets as were used in 2006: i.e., the numeric standard for phosphorus of 0.1 mg/L and the in-stream target based on a 10:1 nitrogen-to-phosphorus ratio to meet the narrative standard for nutrients, as described in Part IV.B, above. *Id.* at 10; *see also* 2017 Permit at 2. Based on NMED's rationale in the 2016 TMDL, the Region removed from the 2017 Permit the concentration limits for nitrogen and phosphorus. 2017 Permit at 1; 2017 Fact Sheet at 3, 9-10. And based on the wasteload allocations in the 2016 TMDL, the Region established new mass-based limits for both nitrogen (37.8 lbs/day) and phosphorus (1.67 lbs/day), which are both measured as 30-day averages. 2017 Permit at 1; 2017 Fact Sheet at 3, 9-10. As noted above, the final Permit limits were slightly more than the 2016 TMDL wasteload allocation (of 37.1 lbs/day for nitrogen and 1.64 lbs/day for phosphorus) taking into account Ruidoso's commitment to add an additional 200 customers to the sewer system by 2022.

In the 2016 TMDL, NMED explained that, given the chronic nature of nutrient impairments, the wasteload allocations for nitrogen and phosphorus assigned to the Ruidoso WWTP should be implemented as 30-day average limits (or longer) and should not be implemented as daily maximum limits. 2016 TMDL at 13-17, 25-28, 32-33. NMED supported the longer averaging period by citing to the June 2014 NACWA Document, which reviewed EPA's methods for setting water quality-based effluent limits for nutrients.[38] *Id.* at 32 n.3. Thus, for nitrogen,

[38] The NACWA Document cited by NMED in the 2016 TMDL further discusses the fundamental differences between nutrients and toxics and explains that, based on these differences, the use of toxics-based analytical methods is often inappropriate for nutrients. NACWA Document at viii-ix. According to NACWA, while nutrient concentrations can provide a measure of short-term algal growth potential, responses to nutrients can depend on a great many factors other than nutrient concentrations (such as light and temperature), and thus examining the linkages between nutrient loadings and the response variables may be more appropriate. *Id.* at 4-6. NACWA also explains that the expression of water quality-based effluent limitations for nutrients as daily limits is unnecessary and

NMED estimated critical flows of the river using the annual average median flow (as opposed to protecting for acute toxicity using a minimum low flow parameter), due to the long-term growth cycle of algae in response to excess nutrients. *Id.* at 13-19, 25-28, 32-33. Additionally, although the summer months are the primary time for nutrient growth, NMED found no significant difference between the summer and annual median flow values, so it used the average annual median flow from 2004-2015 to calculate the TMDL for nitrogen.[39] *Id.* at 17, 29. As a result, NMED calculated a larger nitrogen wasteload allocation for Ruidoso in 2016 than was set forth in the 2006 TMDL. Finally, NMED urged the permitting authority to include only mass-based limits (without maximum daily concentration limits) in future NPDES permits, as this approach would be more appropriate given the chronic nature of nutrient impairment. *Id.* at 33. Ultimately, NMED concluded that, because the 2016 TMDL is calculated using the same protective in-stream targets as the 2006 TMDL and because it used a watershed approach, if the conditions in the 2016 TMDL are met, attainment of state water quality standards is assured. *Id.* at 13, 32.

The Region relied on the 2016 TMDL's assessment that the wasteload allocations should be calculated "using the same protective, in-stream targets from the original TMDL" and the NMED's conclusion that the revised wasteload allocations are consistent with the revised TMDL. 2017 Fact Sheet at 10; *see also* 2017 Permit at 2. In doing so, the Region determined that the cumulative effect of the revised mass-based nutrient limits in the 2017 Permit – based on the revised wasteload allocations – will assure the attainment of the applicable water quality standards, as is required under the CWA.[40] *See* CWA § 303(d)(4)(A)(i), 33 U.S.C.

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inappropriate due to the lack of short-term/acute effects. *Id.* at 4-24 to -25. The same criticism applies to weekly limits. *Id.*

[39] Similarly, revised flow data was used to calculate a revised TMDL for phosphorus.

[40] Despite Rio Hondo's assertion that Ruidoso has at times acknowledged that it cannot meet the Permit limits, *see* Petitioner's Br. at 12, 21, the Board will not presume that the permittee will fail to comply with the Permit's enforceable limits. Rather, in accordance with the CWA, the Board looks to the permit requirements to determine whether those *limitations* assure compliance with the water quality standards. *See* CWA §§ 301(b)(1)(C), 401(a)(2), 33 U.S.C. §§ 1311(b)(1)(C), 1341(a)(2); 40 C.F.R. § 122.44(d)(1). In the event that noncompliance becomes an issue going forward, that would be an enforcement matter for the Region to address then, not an issue for the Board to address now. *See* Ruidoso's Br. at 3-4 (affirming Ruidoso's intent to do everything

§ 1313(d)(4)(A)(i). Additionally, because the Permit's mass-based limits will "assure attainment" with the applicable water quality standards, the Region also determined that compliance with those limits will not result in a violation of the applicable water quality standards. As such, the Region concluded, the ultimate backstop to backsliding in CWA section 402(o)(3) is also met.[41] *See* 2017 Fact Sheet at 6, 10; CWA § 402(o)(3), 33 U.S.C. § 1342(o)(3).

For the reasons stated above, the Board determines that the 2017 Permit's nutrient limits are entirely consistent with the assumptions and requirements of the 2016 TMDL, including New Mexico's determination that these limits will assure that the New Mexico water quality standards are met. 2017 Permit at 2; Response to Comments at 4.

b. *The Region Reasonably Relied on the Rationale in the 2016 TMDL to Determine That the Effluent Limits Assure Attainment with New Mexico's Water Quality Standards, Where No New Information Has Been Presented*

A permitting authority has discretion to determine appropriate effluent limits for a permit. *See* Part III.C. Moreover, as the Board has held and the First

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reasonably possible to reduce its nitrogen discharge level and to avoid enforcement action despite admitted difficulties involved).

[41] In its briefs filed in this case, Rio Hondo treated the two standards in CWA § 303(d)(4)(A)(i) and CWA § 402(o)(3) the same. At oral argument, however, Rio Hondo suggested that "assuring attainment of water quality standards" under CWA § 303(d)(4)(A)(i) is a distinct standard from determining that compliance with the permit will "not result in a violation of the applicable water quality standards" under CWA § 402(o)(3). Oral Arg. Tr. at 40. In support, Rio Hondo cited *Friends of Pinto Creek v. EPA*, 504 F.3d 1007 (9th Cir. 2007). The Region disagreed and argued that there is "no fundamental difference" between the standards. Oral Arg. Tr. at 54.

Rio Hondo's argument was not properly raised and preserved in the Petition and was not fully briefed before this Board. As such, the Board does not decide this issue. *See* 40 C.F.R. § 124.19(a)(4)(ii), (c)(2). Nevertheless, we observe that *Friends of Pinto Creek* did not involve construing the statutory antibacksliding exceptions that are at issue in this case – namely CWA §§ 303(d) and 402(o)(3). Rather, *Friends of Pinto Creek* primarily involved construing the regulatory provision found at 40 C.F.R § 122.4, which addresses the situation where a new source seeks a permit to discharge pollutants into a waterbody already exceeding its water quality standards for that pollutant. 504 F.3d at 1011-16. Thus, *Friends of Pinto Creek* would not be determinative of how to read CWA §§ 303(d) or 402(o)(3), or how to read those statutory provisions together.

Circuit recognized, the permitting authority has a significant amount of flexibility in determining whether a particular discharge has a reasonable potential to cause an excursion above a water quality criterion. *In re City of Taunton Dep't of Pub. Works*, 17 E.A.D. 105, 144 (EAB 2016), *aff'd*, 895 F.3d 120, 136 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 1240 (2019). Of course, the permitting authority's exercise of discretion must also be within the bounds of the CWA. Additionally, we have upheld the discretion of the permitting authority to regulate where a TMDL has not yet been revised or issued. *See In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 604-06 (EAB 2010) (expressly rejecting the notion that permit issuers must wait until a TMDL or wasteload allocation is developed before setting an effluent limit in a permit and reiterating that scientific uncertainty is not a basis for delay in issuing an NPDES permit), *pet. for review dismissed for lack of juris. sub nom. Conserv. Law Found., Inc. v. EPA*, No. 10-2141 (1st Cir. Dec. 6, 2010); *see also City of Taunton*, 17 E.A.D. at 143-44. We have also upheld the permit issuer's discretion to deviate from a wasteload allocation in a TMDL based on new information. *See In re City of Moscow*, 10 E.A.D. 135, 146-48 (EAB 2001) (holding that Region's use of facility's current, known design flow in developing effluent limits, rather than higher flow rate referenced in TMDL, was not abuse of discretion). Neither of those cases, however, *compel* the permit authority to deviate from a TMDL where there is no new information for the Region to consider.

Here, as stated above, the Region exercised its discretion to rely on the 2016 TMDL. The analysis that went into the 2016 TMDL was extensive, including technical, policy, and scientific judgments on a number of modeling and calculation issues. Counsel for Rio Hondo suggested at oral argument that the Region failed to do any of its own technical analysis in this case. Oral Arg. Tr. at 37. Rio Hondo, however, identified nothing that requires permit writers to supplant the analysis of a recently approved TMDL with their own analysis in the context of an individual permit issuance, especially where permit writers have no new information before them that was not already considered by EPA in the recently concluded TMDL.

And nothing in the record indicates that any new information had come to light to suggest that the assumptions and rationale relied on in issuing the 2016 TMDL were inaccurate for any reason, nor has Rio Hondo identified any such new information. *See id.* at 56; *see also id.* at 91 (counsel for Rio Hondo acknowledging

that he is not relying on any new information to support his arguments).[42] Thus, there was no new information for the permit writer to consider.[43]

Lastly, NMED certified that the terms and conditions of the EPA-issued Permit provide "reasonable assurance that the permitted activities will be conducted in a manner [that] will not violate applicable water quality standards and the water quality management plan." Letter from Shelly Lemon, Chief, Surface Water Quality Bureau, NMED, to William K. Honker, Dir., Water Quality Prot. Div., EPA Region 6 (June 9, 2017) (A.R. 15). Based on the record before us, it was reasonable and within the Region's discretion to rely on NMED's rationale in incorporating nutrient limits that were consistent with the 2016 TMDL and that assure attainment with New Mexico's water quality standards.

c. *Rio Hondo Has Not Met Its Burden to Demonstrate the Region Clearly Erred or Abused Its Discretion in Determining That Water Quality Standards Will Be Met*

Rio Hondo rests a large part of its argument on its position that the Permit has "doubled" the amount of nitrogen allowed to be discharged even when the Rio Ruidoso is in nonattainment status. Thus, Rio Hondo argues, the nutrient limits imposed cannot assure that the relevant water quality standards will be met. *See, e.g.*, Petitioner's Br. at 12; Petitioner's Reply Br. at 1, 2, 14. As explained below, however, Rio Hondo's arguments concerning the increase in the nitrogen mass-

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[42] Rio Hondo argued that the Region did not do its own analysis but acknowledged that Rio Hondo was not relying on any new information. Oral Arg. Tr. at 37, 51, 91. The Region argued that where there was no new information, no new analysis was required. *Id.* at 56, 57-58, 64, 69-71.

[43] At oral argument, Rio Hondo argued that it would not make any difference whether there was new information if that "information [did] not find its way in[to] the considered judgment of the permit writer." Oral Arg. Tr. at 91. Rather than point to any information that the Region did not consider, however, Rio Hondo explained that it had pointed the Region to the facts as set out in the TMDL. *Id.* And, in fact, in its comments to EPA on the draft permit, Rio Hondo essentially reiterated its comments to NMED on the draft TMDL. *See* Rio Hondo's Comments on Draft Permit at 2-5 (directing EPA's attention to Rio Hondo's comments on TMDL, incorporating those comments by reference, and summarizing its TMDL comments in its comments on draft permit). Based on our review of the record, the Region relied on the analysis in the TMDL, which EPA had only recently considered and approved, because that analysis was recent and there was no new information to consider.

based limit do not take into account the changed considerations in calculating the wasteload allocation for nitrogen in the 2017 Permit.[44] For this and all of the reasons explained below, Rio Hondo does not satisfy its burden to demonstrate that the Region clearly erred.

As the Region noted in its response to comments, nitrogen concentration is not "the only factor to control the load limit (concentration * flow = load)."[45] Response to Comments at 4. The in-stream target concentration of nitrogen used to calculate the nitrogen TMDL did not change between the 2006 and 2016 TMDLs. Rather, it remained at 1.0 mg/L. *Compare* 2016 TMDL at 19 *with* 2006 TMDL at 41. What did change is the calculation of critical flow, which modified the TMDL from 27.2 lbs/day using the 4Q3 method to 84.8 lbs/day using the average annual median flow. As discussed, this revised method of calculating flow recognizes the chronic rather than acute nature of nutrient impairments and the more appropriate use of longer term averaging in regulating nitrogen discharges. 2016 TMDL at 32-33. The use of an annual median flow also recognizes that as the volume of wastewater discharge changes daily, nutrient concentrations also change, and a monthly average based on an annual median flow is necessary to maintain the assigned wasteload allocation. Response to Comments at 4. The rationale for using the average annual median flow for calculating the nitrogen TMDL is well documented and supported in the record. Rio Hondo's arguments do not consider this rationale or the fact that the revised mass-based limits in the

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[44] Rio Hondo focuses on its assertion that the "effective" concentration-based limit for nitrogen is 2.41 mg/L, Petitioner's Br. at 12, because the Region did not include a concentration limit in the Permit. While NMED did identify 2.41 mg/L as the "effective" concentration level of nitrogen with the wasteload allocation, NMED also encouraged the Region not to include a concentration-based limit in the 2017 Permit, for all of the reasons previously discussed. *See* 2016 TMDL at 33, app. E, cmt. set D at 13. While the increase in the nitrogen mass-based limit from 18.9 to 37.8 lbs/day does, numerically at least, appear to double, such a characterization fails to take into account the other factors considered in the TMDL and Permit.

[45] During oral argument, Rio Hondo asserted that the Region failed to respond to its comments regarding the removal of the concentration limit. Oral Arg. Tr. at 92. The response to comments document, however, demonstrates otherwise. *See* Response to Comments at 4-5 (summarizing both Rio Hondo's comment and Region's response). In any case, this was not an issue that Rio Hondo raised in its petition and it is therefore waived. *See* 40 C.F.R. § 124.19(a)(4) (requiring petition to identify all issues being raised); *id*. § 124.19(c)(2) (prohibiting petitioners from raising new issues or arguments in reply brief).

2017 Permit were calculated to meet the same water quality standards that served as the basis for setting limits in prior permits. As such, Rio Hondo's argument that the 2017 Permit does not ensure water quality standards will be attained because it "doubles" the level of nitrogen allowed to be discharged is unpersuasive.

Rio Hondo argues that it "defies common sense and logic" that relaxing permit limits for nutrients will assure attainment of water quality standards, "when the more stringent effluent limitations" in the previous permits "did not have that effect," as evidenced by the fact that the Rio Ruidoso has remained impaired. *See* Petitioner's Br. at 20. This argument, however, does not take into account the fact that the interim effluent limits in effect at the Ruidoso WWTP have been steadily getting more stringent. While the question of whether the backsliding exceptions are met in this case cannot be determined without examining the *final* permit limits, the interim limits that have been in effect at the WWTP are relevant to rebut Rio Hondo's "common sense" argument with respect to any potential effect new limits may have. For example, under the interim limits that have been in effect at the Ruidoso WWTP, the mass-based limit for nitrogen discharges has gone from 130.1 lbs/day[46] (during the 2007 permit term) to 90.1 lbs/day (during the 2012 permit term) to 37.8 lbs/day (in the 2017 Permit).[47] Thus, contrary to Rio Hondo's argument, the total point source loadings from the Ruidoso WWTP have been decreasing over the years. *See* Oral Arg. Tr. at 67. Additionally, Ruidoso has already connected at least 60 additional users to the WWTP and is committed to connecting an additional 140 customers by the end of the 2017 Permit's term, which is anticipated to reduce the number of pounds per day of nitrogen entering the Rio Ruidoso by around 12.75 pounds per day, comprising a significant portion of the 37.8 lbs/day TMDL allowance. *Id.* at 83-84; Response to Comments at 4; *see also* Molzen Corbin, *Report to EPA: Sewering of Onsite Systems* 1-3, 4-2 to -3

[46] For the purpose of this illustration, we look only at the mass-based limit for nitrogen in warmer temperatures. For both the 2007 and 2012 permits, the mass-based limits were based in part on influent temperatures. The limits applicable in colder temperatures are less stringent.

[47] For the month of August 2017, when the 2012 permit was administratively continued while the 2017 Permit was being drafted, the final mass-based limit for nitrogen of 18.9 lbs/day applied. Notwithstanding this one month of a tighter limit, the Ruidoso WWTP has operated under much less stringent mass-based limits for the entire decade preceding the limits imposed by the 2017 Permit. Ruidoso's Br. at 1-2; *see also* 2012 Permit at 4 (specifying that final permit limits for nitrogen are effective on last day of permit term).

(May 2017) (A.R. 30). Moreover, the 2016 TMDL characterizes the Rio Ruidoso as "marginally" nutrient impaired. 2016 TMDL at 15; *see* Oral Arg. Tr. at 66. Taking into account the interim limits in effect during the prior decade, Rio Hondo's argument (that the 37.8 lbs/day limit cannot logically be expected to result in attainment of water quality standards) loses its "common sense" appeal.[48]

Additionally, Rio Hondo's reliance on the 1996 Permit Writers' Manual to argue that it is EPA's practice to incorporate both mass-based and concentration limits is misplaced. Petitioner's Br. at 8-9 (citing Office of Water, U.S. EPA, Doc. No. EPA-833-B-96-003, *NPDES Permit Writers' Manual* § 5.1.3, at 66-67 (1996)). First, the passage Rio Hondo quotes is from the section of the manual devoted to technology-based effluent limits, which the Ruidoso limits are not, rather than water quality based-effluent limits, which are relevant here. Second, the revised 2010 Permit Writers' Manual no longer includes that quoted passage, and – even if it did – the 1996 passage quoted makes clear that the decision to include concentration limits in addition to mass-based limits is at the permit writer's discretion. *See 2010 Permit Writers' Manual* §§ 6.1 to 6.4, at 6-2 to 6-35. Third, the guidance relied upon by Rio Hondo addresses toxic pollutants and does not acknowledge or account for the differences between toxic pollutants and nutrients. Thus, Rio Hondo's reliance on the Permit Writers' Manual is not persuasive. On the contrary, the Region's permitting process for Ruidoso followed the approach laid out in the 2010 Permit Writers' Manual. *See id.* § 7.2, at 7-2 (explaining the permitting process as beginning with determining applicable water quality standards, determining whether applicable TMDL exists, and, where TMDL does exist, calculating effluent limits consistent with that TMDL); *see also id.* (providing that "*after* selecting the calculated effluent limitations for a pollutant that ensure that all CWA standards are met, the permit writer [then] applies anti-backsliding requirements, as necessary" (emphasis added)).

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[48] Similarly, the 2017 Permit requirement to connect 200 homes to the sewer system by 2022, replacing their onsite sewage systems, will significantly reduce the nonpoint source contribution of nutrients to the river. Oral Arg. Tr. at 83-84 (counsel for Ruidoso, stating that when all 200 onsite units are taken out of service and replaced with WWTP connections, there will be an anticipated 12.75 pound reduction of total nitrogen to the river, the equivalent of about one-third of the TMDL); *see also* Response to Comments at 4; 2017 Permit pt. I.G, at 6 (requiring permittee to submit annual progress report on design completion, construction start, and completion of 200 sewer connections throughout permit period); Molzen Corbin, *Report to EPA: Sewering of Onsite Systems* 1-3, 4-2 to -3 (May 2017) (A.R. 30).

Finally, as Rio Hondo acknowledges, petitioners must overcome a high bar to successfully challenge the Region's technical decision. Petitioner's Reply Br. at 5 (citing *In re City of Moscow*, 10 E.A.D. 135, 141-42 (EAB 2001)); *see also In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 510, 560-62, 645-47, 668, 670-74 (EAB 2006) (articulating long-held Board principle that, on matters fundamentally technical or scientific in nature, Board will defer to permit issuer's technical expertise and experience, as long as permit issuer adequately explains its rationale and supports its reasoning in administrative record); *see also, e.g.*, *In re Russell City Energy Ctr., LLC*, 15 E.A.D. 1, 12, 39-42, 66 (EAB 2010), *pet. for review denied sub nom. Chabot-Las Positas Cmty. Coll. Dist. v. EPA*, 482 F. App'x 219 (9th Cir. 2012); *In re NE Hub Partners, LP*, 7 E.A.D. 561, 570-71 (EAB 1998), *pet. for review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999).

The determination to set nutrient limits in the 2017 Permit based on the 2016 TMDL requires judgment in matters that are highly technical. The whole of the record before us reflects that the Region exercised its considered judgment in relying on NMED's rationale in the 2016 TMDL and the Region's approval of that TMDL. Rio Hondo has not provided any grounds on which the Board will second guess the Region's decision to rely on the 2016 TMDL when determining Ruidoso's 2017 Permit limits. The Board concludes that Rio Hondo has not met its burden to demonstrate that the Region erred in relying on the 2016 TMDL in setting the nutrient limits for the 2017 Permit or in determining that the revised nutrient limits "assure attainment" with (and thus do not violate) New Mexico's water quality standards. As such, Rio Hondo has not demonstrated that the Region erred in concluding that the Permit's nutrient limits satisfied an exception to the CWA's antibacksliding requirement. *See* CWA §§ 303(d)(4)(A), 402(o), 33 U.S.C. §§ 1313(d)(4)(A), 1342(o).

VI. *CONCLUSION AND ORDER*

In considering the 2017 Permit for the Ruidoso WWTP, the Region reasonably relied on an exception to the antibacksliding provision under the CWA when establishing the effluent limits for nutrients in the Permit. Given the permitting history, the revisions embodied in the 2016 TMDL, the overarching concern of the backsliding prohibition of the CWA, and the exceptions to that prohibition, the Board concludes that the Region ultimately adopted an approach that is rational in light of all information in the record. Having fully considered Rio Hondo's Petition, the Administrative Record of this permitting decision, and the applicable statutory and regulatory provisions, the Board finds no clear error or

abuse of discretion with respect to any of the issues that Rio Hondo has raised. As such, and for all of the reasons articulated above, the Petition for Review is denied.

So ordered.