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Tenth Circuit

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PUBLISH

UNITED STATES COURT OF APPEALS

FOR THE TENTH CIRCUIT

RIO HONDO LAND & CATTLE COMPANY, L.P.,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

VILLAGE OF RUIDOSO; CITY OF RUIDOSO DOWNS,

Intervenors.

No. 19-9531

On Petition for Review of Final Action by the Environmental Protection Administration
(EPA No. 17-03)

Steven Sugarman, Cerrillos, New Mexico, appearing for Petitioner.

Phillip R. Dupré, Attorney (Jeffery Bossert Clark, Assistant Attorney General, Jonathan D. Brightbill, Principal Deputy Assistant Attorney General; Pooja Parikh and David Gillespie, Attorneys, United States Environmental Protection Agency, with him on the briefs), United States Department of Justice, Environment and Natural Resources Division, Washington, DC, appearing for Respondent.

Louis W. Rose and Kari E. Olson, Montgomery & Andrews, P.A., Santa Fe, New Mexico, on the briefs for Intervenors Village of Ruidoso and City of Ruidoso Downs.

Before **BACHARACH, BRISCOE**, and **EID**, Circuit Judges.

BRISCOE, Circuit Judge.

In this petition for review, Petitioner-Appellant Rio Hondo asks us to review a decision of the EPA's Environmental Appeals Board ("EAB"). Rio Hondo seeks to vacate relaxed pollutant limitations in a 2017 permit issued by the EPA to an upstream waste water treatment plant. The waste water treatment plant serves the Village of Ruidoso and City of Ruidoso Downs and is an identified point source of pollutants into the Rio Ruidoso river. The Rio Ruidoso is classified under the Clean Water Act ("CWA") as marginally impaired for nutrients, such as nitrogen and phosphorus. The Rio Hondo river is downstream from the Rio Ruidoso river, and the Rio Hondo river flows adjacent to the Rio Hondo ranch. Rio Hondo has long contended that reduced river water quality, including algae blooms, have harmed its ability to make critical use of the river water.

Rio Hondo contends that two aspects of the EPA's 2017 permit constitute impermissible backsliding under the CWA. First, Rio Hondo objects to the 2017 permit because it does not include concentration-based limitations that prior permits included. Second, Rio Hondo objects because the 2017 permit increases the mass-based limitation on nitrogen discharges. The 2017 permit relied on a 2016 Total Maximum Daily Load ("TMDL") report prepared by the New Mexico Environment Department and adopted by the EPA. Rio Hondo previously challenged the 2016 TMDL in New Mexico state court

and lost. Rio Hondo presents no new information which would cast doubt on the 2016 TMDL, and its challenge to the 2017 permit boils down to a challenge of that underlying 2016 TMDL. The record demonstrates that the EPA reasonably relied on the 2016 TMDL in issuing the 2017 permit, did not abuse its discretion in creating the permit limits, and appropriately applied a statutory exception to the anti-backsliding provisions of the CWA. Accordingly, we deny Rio Hondo's petition.

We have jurisdiction to consider this petition under 33 U.S.C. § 1369(b)(1). Our review of the EAB's final ruling is governed by the Administrative Procedure Act ("APA"). 5 U.S.C. § 706(2)(A).

I

a. **Standing**

As an initial matter, we address whether Rio Hondo has standing to seek review of the EAB's ruling. Rio Hondo has briefed this issue, Aplt. Br. at 37–38, and the EPA does not challenge Rio Hondo's standing. In support of its claimed standing, Rio Hondo submitted an affidavit signed by Rio Hondo's ranch manager, Kiley McComb, explaining Rio Hondo's interest in the water quality of the Rio Ruidoso. Aplt. Br. Att. A.

The CWA provides that "any interested person" may seek review of a final decision "approving or promulgating any effluent limitation." 33 U.S.C. § 1369(b). Even with this provision, "a plaintiff must nevertheless satisfy the standing requirements of Article III of the U.S. Constitution to bring such an action." *Am. Forest & Paper Ass'n v. U.S. E.P.A.*, 154 F.3d 1155, 1158 (10th Cir. 1998). This test requires that plaintiffs show

(1) that they have suffered an injury in fact, (2) that the conduct complained of caused their injury, and (3) that a favorable decision is likely to redress the injury. *Id*.

The affidavit of Rio Hondo's ranch manager adequately demonstrates that Rio Hondo has standing to file this petition. The affidavit explains that the Rio Hondo ranch is adjacent to the Rio Hondo river, which is downstream from the Rio Ruidoso. Aplt. Br. Att. A. at ¶ 1, 2. Rio Hondo owns surface water rights to the river and relies on clean water from that river for use in its ranching operations. *Id.* at ¶ 3. The affidavit explains that algal blooms, caused by increased nutrients in the Rio Ruidoso, can clog Rio Hondo's equipment and "injure [Rio Hondo's] ability to make critical use of the water." *Id.* at ¶ 5, 6. Both the affidavit and Rio Hondo's opening brief explain that Rio Hondo has struggled with algae levels in the river for years and has sued the Village of Ruidoso and the City of Ruidoso Downs (as owners of the Ruidoso Waste Water Treatment Plant "WWTP") concerning compliance with past permits. Aplt. Br. at 38.

Rio Hondo has satisfied the constitutional test for standing. It has suffered an injury, which is the impairment of its ability to use water from the Rio Hondo river in its ranching operations. Rio Hondo's alleged injury is traceable to the EPA's conduct (the issuance of the 2017 permit), and a favorable decision would redress Rio Hondo's injury and improve its water access. *Id.* at 39.

b. **Statutory Background**

The CWA, passed in 1972, establishes a comprehensive regulatory program to "maintain the chemical, physical, and biological integrity of the Nation's waters" by reducing and eliminating the discharge of pollutants. 33 U.S.C. § 1251(a). Under the

CWA, discharges of pollutants into navigable waters are prohibited unless the discharge is authorized by permit. *Id.* § 1311(a). To this end, the CWA establishes the National Pollutant Discharge Elimination System ("NPDES") permitting program. *Id.* § 1342(a); 40 C.F.R. § 122.44(a). Although some states are authorized to administer their own NPDES programs, the State of New Mexico has not received such authorization and as a result the EPA issues NPDES permits for waterways in New Mexico.

Permits issued under NPDES control water pollution by employing two distinct strategies: technology-based limits and water quality standards ("WQS"). It is the latter strategy, water quality standard permitting, which is at issue in this petition. Under the WQS system, states develop water quality standards for specific bodies of water. 33 U.S.C. § 1313. These standards, which are subject to federal approval, identify the "designated uses" for a body of water (water supply, aquatic life environment, recreational use, etc.) and create "water quality criteria" that must be met in order for the body of water to fulfill its designated uses. *Id.* Water quality criterion can be expressed either as a level of a pollutant-specific concentration (e.g. limiting the body of water to no more than 1.0 milligram of nitrogen per liter) or a more general narrative statement (e.g. "no pollutants in toxic amounts").

Once a state has adopted and approved water quality standards, the state identifies water-quality-limited segments ("WQLSs"), which are individual portions of a body of water that are not expected to meet water quality standards even after technology-based

permit limitations have been implemented. 33 U.S.C. § 1313(d)(1).[1] For each WQLS, states must develop a Total Maximum Daily Load ("TMDL") for every pollutant which impairs that waterway. *Id.* To create a TMDL, states must identify the maximum amount of a pollutant that a body of water can receive and still meet the applicable water quality standard. *Id.* § 1313(d)(1)(C). Per EPA regulation, TMDLs are required to include pollutant allocations for both point and non-point sources.[2] When developing a TMDL, states are to consider the impacts of background pollutants and seasonal variations, and must also include a safety margin for pollutant levels. 40 C.F.R. § 130.7. The TMDL drafting process also involves public participation through public comment. *Id.* States submit finalized TMDLs to the EPA for approval.

Neither WQSs nor TMDLs are self-executing, and they have no regulatory force on their own. *Id.* §§ 130.3, 130.7. Instead, TMDLs and WQSs are used by EPA permit writers in the NPDES process to create allowable discharge levels, which are enforceable limits on the amounts of discharge. 33 U.S.C. § 1342. The final NPDES permit must be consistent with the assumptions and requirements of the applicable TMDL. 40 C.F.R. § 122.44(d)(1)(vii)(B) (requiring that permit levels "are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the

[1] The Rio Ruidoso river has not met the standards outlined in its WQS and has been identified by the state as a WQLS.

[2] A point source refers to a single, identifiable place where pollutants enter a body of water, such as the Ruidoso waste water treatment plant at issue in this petition. A non-point source refers to diffuse release of chemicals into a body of water, such as runoff from agricultural operations seeping into a nearby river. *See* 40 C.F.R. § 122.2.

State"). The final permit must also include pollutant limitations sufficiently stringent to meet applicable WQSs. *Id.* § 122.4(d).

NPDES permits lay out "effluent limitations, standards, [and] prohibitions," *id.* § 124.6, and are accompanied by a fact sheet that provides "the principal facts and the significant factual, legal, methodological and policy questions considered" in the permit. *Id.* § 124.8. Draft permits are open to public comment for at least thirty days. *Id.* § 124.10. Based on comments received, the EPA might alter the permit, extend the comment period, or prepare a new draft permit or fact sheet altogether. *Id.* § 124.14. After the draft period closes, the EPA issues a final permit, which includes a section responding to significant public comments. *Id.* §§ 124.15, 124.17. Once issued, NPDES permits are valid for up to five years. 33 U.S.C. §§ 1342(a)(3), (b)(1)(B). A party can appeal a final permit decision to the EPA's Environmental Appeals Board ("EAB"). 40 C.F.R. § 124.19.

The CWA contains an "anti-backsliding" provision that prohibits the EPA from issuing a permit with less stringent pollutant limitations than the prior permit. 33 U.S.C. § 1342(o)(1). This "anti-backsliding" rule is laid out in 33 U.S.C. § 1342(o), and that section contains three sub-sections.

First, § 1342(o)(1), titled "General prohibition," announces the general rule that "a permit may not be renewed, reissued, or modified . . . to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit . . . *except [for permits issued] in compliance with section 1313(d)(4) of this title*." (emphasis added). Key to our ruling here is this exclusion from the anti-backsliding rule

for permits issued in compliance with § 1313(d)(4)(A), which governs permits reissued for waterways that have failed to meet their standards or WQLSs. *Id.* In those cases, § 1313(d)(4) provides that pollutant limits "may be revised only if (i) the cumulative effect of all such revised effluent limitations based on such [TMDL] or waste load allocation will assure the attainment of such [WQS], or (ii) the designated use which is not being attained is removed in accordance with regulations established under this section." *Id.* § 1313(d)(4)(A).

The second sub-part of the anti-backsliding rule, titled "Exceptions," lists situations where a permit may be issued notwithstanding the section's general prohibition. These exceptions apply to permits involving new information, the use of new technology by the permittee, or the discovery of a technical error in the permitting process. *Id.* § 1342(o)(2).

The third sub-part of the anti-backsliding rule, § 1342(o)(3), titled "Limitations," is a safety clause that limits the use of the exceptions mentioned in the previous sub-section. The safety clause requires that if the general prohibition mentioned in § 1342(o)(1) applies to a permit, that permit may not "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 [WQS.]" *Id.* § 1342(o)(3). Or, put another way: when all of the provisions of § 1342(o) are read together, if a permit is issued in compliance with § 1313(d)(4)(A), which is an exclusion from the backsliding rule found in § 1342(o)(1), neither the exceptions in § 1342(o)(2) nor the safety clause in § 1342(o)(3) have any applicability.

c. **Factual Background**

The Rio Ruidoso is a thirty-mile stretch of river located in central New Mexico. Aplt. App. at 32. The Rio Ruidoso flows into the Rio Hondo. In 1998, the New Mexico Environment Department ("NMED") determined that the Rio Ruidoso had higher-than-desirable levels of nitrogen and phosphorous. *Id.* at 397. Before NMED developed a full TMDL to address nutrient levels in the Rio Ruidoso, the EPA issued an NPDES permit for the Rio Ruidoso in 2001.[3]

NMED developed a TMDL for the Rio Ruidoso in 2006. The research for that TMDL showed that a surplus of nitrogen and phosphorous allows algae to grow in a waterway, and NMED sought to limit the amount of those pollutants to limit algal growth by setting target values for each nutrient load. *Id.* at 32–38. Numeric standards were set not only to limit algal growth but were also "necessary to establish targets for total maximum daily loads (TMDLs) to develop water quality-based permit limits and source control plans, and to support designated uses within the Rio Ruidoso." *Id.* at 35. NMED developed a TMDL for the Rio Ruidoso which included mass-based limitations for both nutrients. *Id.* at 13 (setting a limit of 2.72 lbs/day for phosphorous and 27.2 lbs/day for nitrogen). The TMDL explained that the nitrogen limit was set at ten times the phosphorous limit, on the belief that "nitrogen is . . . driving the productivity of algae" in

[3] The 2001 permit does not appear in the administrative record. However, the EAB took "official notice" of this public information in its administrative hearing. Aplt. App. at 548. The 2001 permit contained a concentration-based phosphorous limit of 0.1 mg/L and a mass-based phosphorous limit of 2.2 lbs/day.

the Rio Ruidoso. *Id.* at 37. The TMDL recommended that limiting the ratio of nitrogen to phosphorous to no more than 10:1 would therefore limit algal growth. *Id.* at 36–38.

In determining nutrient limits for the TMDL, NMED needed to determine the rate at which water flows through the river. *Id.* at 38 ("The presence of plant nutrients in a stream can vary as a function of flow."). This analysis focuses on the "critical flow" of a river, which identifies a worst-case scenario of river flow and calculates the concentration of pollutant discharge which would allow the waterway to meet WQSs at this low flow level. *Id.*

The 2006 TMDL used a technique called a "4Q3 regression model" to estimate the lowest river flow rate. *Id.* "The 4Q3 is the minimum average four consecutive day flow that occurs with a frequency of at least once every 3 years." *Id.* The 2006 TMDL incorporated this flow rate and other environmental information to create a "loading capacity," defined as "the maximum amount of pollutant loading that a waterbody can receive while meeting its water quality objectives." *Id.* at 40–44. NMED then subtracted background levels of nitrogen and phosphorous, along with a margin of safety, from the instream loading capacity. The remaining balance, called the waste load allocation (WLA) was assigned to the WWTP, which is the sole point source discharging into this portion of the river. The WLA assigned to WWTP is the amount of pollutant the WWTP was permitted to discharge.

Following NMED's creation of the TMDL, the EPA issued a revised NPDES permit in 2007 for the WWTP. *Id.* at 579. The new permit included two types of limits—mass-based limits and concentration-based limits—for both phosphorous and nitrogen.

The mass-based limits were 21.7 lbs/day for nitrogen and 2.2 lbs/day for phosphorous. *Id.* The concentration-based limits were 1.0 mg/L for nitrogen and 0.1 mg/L for phosphorus. *Id.* Both limits were in line with the limits issued in NMED's 2006 TMDL and accorded with the 10:1 nitrogen to phosphorous ratio in the TMDL.

In 2012 the EPA issued a revised permit for the WWTP. *Id.* at 159. The 2012 permit considered the fact that Ruidoso's new waste water treatment facility had recently come online in 2011. *Id.* at 161. Like the 2007 permit, the 2012 permit relied on the 2006 TMDL. *Id.* at 171–72. The 2012 permit included mass-based limitations of 18.9 lbs/day for nitrogen and 2.16 lbs/day for phosphorous. *Id.* at 171. The permit included concentration-based limits of 1.0 mg/L for nitrogen and 0.1 mg/L for phosphorous. *Id.* at 172.

In addition to these final limits, the 2012 permit also created interim limits for nitrogen (but not for phosphorous) that gave the new waste water treatment facility more leeway as it ramped up and implemented new technologies. *Id.* The 2012 interim limits were much higher than the final limits and, unlike the final limits, varied based on water temperature. *Id.* The interim mass-based nitrogen limits were 90.1 lbs/day (for warm temperatures) and 135.2 lbs/day (for cool temperatures). *Id.* The corresponding concentration-based nitrogen limits were 4.0 mg/L (warm) and 6.0 mg/L (cool). *Id.* The interim nitrogen limits were effective from the day the permit issued through "one day prior to the expiration date" of the permit. *Id.* at 182–84. The 2012 permit was valid until 2017.

In 2016, NMED issued a revised TMDL for the Rio Ruidoso. This new TMDL incorporated data from a 2012 water quality survey and streamflow data collected from 2004–2015. *Id.* at 352–54. The underlying data used, and methods used to create that data, varied in several ways from the 2006 TMDL. First, the 2016 TMDL used new streamflow data to calculate the instream loading capacity for both nitrogen and phosphorous. *Id.* at 350. Second, the 2016 TMDL used a new methodology for calculating the critical flow of the Rio Ruidoso relating to nitrogen.[4] Instead of the 4Q3 model (used in the 2006 TMDL), the 2016 TMDL used a measure called annual median flow, which was calculated by averaging the median flow rates for each year from 2004 through 2015. *Id.* at 354. "The use of the median flow, rather than a 4Q3 flow, is appropriate because of the long term growth cycle of algae in response to excess nutrients, in contrast to protecting for acute toxicity." *Id.* Third, the 2016 TMDL adopted a "watershed approach" to managing the Rio Ruidoso. *Id.* at 350. This approach "allows for calculation of a watershed-wide TMDL" and allows NMED to "account for upstream" pollutants that flow into the Rio Ruidoso. *Id.* Because of these many changes, the 2016 TMDL advised that any "comparison of the 2006 TMDL with this revised TMDL should be done with caution." *Id.* at 350.

In light of these methodological changes, NMED made an upward revision to the instream loading capacity for nitrogen. Even though NMED used the same concentration-based targets (1.0 mg/L for nitrogen and 0.1 mg/L for phosphorous) as the 2006 TMDL,

[4] The 2016 TMDL continued to use the 4Q3 methodology to calculate the critical flow for phosphorous. Aplt. App. at 354.

the increased flow numbers resulting from using annual median flow as opposed to the 4Q3 flow meant that the Rio Ruidoso could accommodate a higher amount of pollutants and still meet that concentration-based target. *Id.* at 352 (noting "a 10:1 ratio of TN:TP was determined to be appropriate"). Accordingly, the new maximum daily load for nitrogen was calculated at 84.8 lbs/day (up from 27.2 lbs/day in the 2006 TMDL) and the maximum load for phosphorous was calculated at 3.39 lbs/day (up from 2.72 lbs/day in the 2006 TMDL). *Id.* at 356. The new TMDL explained that even though it "allocates a larger waste load allocation and assigns less stringent permit limits," it was "calculated using the same protective, in-stream [pollutant concentration] targets from the original [2006] TMDL." *Id.* at 369. Therefore, "if the conditions in the TMDL are met, attainment of the water quality standard is assured" because protective in-stream pollutant targets would be met. *Id.* NMED also explained that in basing the proposed mass-based limits on the 2016 TMDL it was relying on 33 U.S.C. § 1313(d)(4)(A) (section 303(d)(4)(A) of the CWA) which allows relaxation of permit limits in certain circumstances so long as the revised permit assures attainment of WQS. *Id*. The new TMDL also asked the EPA permit writers to omit concentration-based limitations because those limitations would necessarily vary based on how much water the WWTP discharged. *Id.* at 370.

The EPA approved NMED's new TMDL in December 2016. *Id.* at 385. Rio Hondo challenged the new TMDL in state court in New Mexico, arguing that the new critical flow methodology used in the 2016 TMDL (annual median flow versus 4Q3 flow) violated New Mexico's Administrative Code. *Rio Hondo Land & Cattle Co v. N.M. Water Quality Control Comm'n*, No. A-1-CA-36039, 2019 WL 6728255 (N.M. Ct. App.

2019).[5] The New Mexico Court of Appeals rejected the challenge and approved NMED's adoption of the 2016 TMDL, concluding that NMED "did not err as a matter of law in approving the 2016 TMDL that calculated the daily nitrogen load based on annual median flow, and not the 4Q3 flow." *Id.* at *3. The court explained that while state regulations required 4Q3 flow calculations for some nutrients, nitrogen was not one of them. *Id.* The court ruled that NMED adequately explained "that using the median flow to calculate total nitrogen was appropriate . . . given the long-term growth cycle of algae." *Id.* The New Mexico Supreme Court denied Rio Hondo's request for certiorari on the matter. *Rio Hondo Land & Cattle Co. v. N.M. Water Quality Ctrl. Comm'n.*, No. A-1-CA-36039 (N.M. Sup. Ct. Mar 19, 2020).

While Rio Hondo's state court action challenging the 2016 TMDL was pending, the Village of Ruidoso and the City of Ruidoso Downs applied to the EPA for an updated NPDES permit for the WWTP. Aplt. App. at 308. Rio Hondo submitted a comment on the draft permit, objecting to the permit's "incorporation of the [2016] TMDL's mass loading limits for nutrients" as arbitrary and capricious because "the TMDLs themselves are arbitrary and capricious and present a purely fictional account of the receiving stream's assimilative capacity." *Id.* at 456–57. Rio Hondo's comment raised the same objection about river flow calculation (annual median flow versus 4Q3 flow) raised in its

[5] New Mexico's Water Quality Act provides that individuals may challenge water regulations by filing an appeal directly with the New Mexico Court of Appeals. N.M. Stat. Ann. § 74-6-7 (West) ("[A] person who is adversely affected by a regulation adopted by the commission. . . may appeal to the court of appeals for further relief.").

state court action. *Id.* ("Rio Hondo's primary objections to the 2016 nutrient TMDLs are that the TMDLs were calculated using an erroneous critical low flow value."). Rio Hondo also alleged that the new permit violated the CWA's anti-backsliding provisions. *Id.* at 460.

The EPA responded to Rio Hondo's comments, writing that applicable regulations required the agency to implement the current TMDL in the new permit. *Id.* at 472 (citing 40 C.F.R. § 122.44(d)(1)(vii)(B) (requiring that permit limits "be consistent with the assumptions and requirements of any available [wasteload allocation]" in a TMDL)). The EPA noted that nothing in the draft permit was changed as a result of Rio Hondo's comment. *Id.*

The EPA issued a final permit on July 25, 2017 with an effective date of September 1, 2017. That 2017 permit, which is valid for up to five years, is the subject of this petition. The 2017 permit did not include concentration-based limits for either nitrogen or phosphorous. *Id.* at 476. The new permit did, however, include mass-based limits for nitrogen (37.8 lbs/day) and phosphorous (1.67 lbs/day) in accordance with the revised TMDL. *Id.* The fact sheet accompanying the draft permit explained that the CWA's anti-backsliding provision did not apply because the permit was issued pursuant to a TMDL. *Id.* at 409 ("For non-attainment waters, 303(d)(4) [of the CWA] allows backsliding only where the existing permit limit sought to be revised is based on a TMDL or other WLA, and the revised permit limit assures attainment of the water quality standard at issue.").

d. **Procedural History**

Rio Hondo filed a petition for review of the final permit with the EAB in August 2017. Rio Hondo argued (1) that the 2017 permit constituted backsliding under the CWA, particularly because of the removal of concentration-based limits for both nitrogen and phosphorous and revising upward the mass-based nitrogen limit, (2) that the EPA could not rely on any exclusion from the anti-backsliding rule, and (3) that the 2017 permit limits "will not assure attainment of the applicable water quality standards." *Id.* at 533. In ruling on Rio Hondo's petition, the EAB noted that the EPA made a "highly technical" judgment in setting pollutant levels in the 2017 permit and that Rio Hondo "must overcome a high bar to successfully challenge the [EPA's] technical decision." *Id.* at 574. The EAB also observed that although Rio Hondo framed its petition as a challenge to the 2017 permit, it was really seeking review of the 2016 TMDL. *Id.* at 554 ("Rio Hondo's objection to the Permit's limits is difficult to separate from its objection to the underlying 2016 TMDL."). The EAB denied the petition for review after concluding that the EPA's reliance on the 2016 TMDL was rational and that the EPA did not clearly err or abuse its discretion in issuing the 2017 permit. *Id.* at 574–75. Specifically, the EAB concluded that Rio Hondo had not met its burden to demonstrate that the EPA clearly erred or abused its discretion in relying on the 2016 TMDL in determining the nutrient limits for both nitrogen and phosphorous for the 2017 permit, or in determining that those limits "assure attainment" and do not violate New Mexico's water quality standards. *Id*. at 574.

In May 2019, Rio Hondo filed a petition for review of the EAB's decision with this court.[6] On June 6, 2019, the Village of Ruidoso and the City of Ruidoso Downs intervened in this case.[7]

II

a. Standard of review

The EPA's decision to issue a permit is subject to the "arbitrary and capricious" standard of review established by the APA. 5 U.S.C. § 706(2)(A). Under that standard, we are required to set aside an agency action where that action is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.*; *New Mexico Health Connections v. U.S. Dep't of Health & Human Servs.*, 946 F.3d 1138, 1161 (10th Cir. 2019). "Our inquiry under the APA must be thorough, but the standard of review is very deferential to the agency." *W. Watersheds Project v. Bureau of Land Mgmt.*, 721 F.3d 1264, 1273 (10th Cir. 2013). When reviewing agency action under the APA, we will generally uphold the agency action unless the agency

> (1) entirely fails to consider an important aspect of the problem,
> (2) offers an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view of the product of agency expertise,

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[6] The panel's delay in addressing this case is the result, in large part, of attempted but unsuccessful mediation efforts by the parties.

[7] The Village and City intervened to defend the EPA's decision to issue the 2017 permit. Intervenor's Br. at 10. Intervenors argue, inter alia, that the 2017 permit does not constitute backsliding due to the 2012 permit's higher interim limits, that the EPA appropriately relied on the exclusion to the anti-backsliding rule, and that the City and Village are committed to reducing non-point source pollution in the Rio Ruidoso. *Id.* at 12–20.

(3) fails to base its decision on consideration of the relevant factors, or (4) makes a clear error of judgment.

New Mexico Health Connections, 946 F.3d at 1162 (alterations omitted).

b. **Merits Analysis**

Rio Hondo objects to two aspects of the 2017 permit which it contends violate the CWA's anti-backsliding rule: (1) the increased mass-based nitrogen limit and (2) the elimination of concentration-based limits for both nitrogen and phosphorous.[8] Although these are distinct challenges, both objections involve the same basic question: Does the EPA's reliance on the 2016 TMDL in issuing the 2017 permit exclude the 2017 permit from the CWA's anti-backsliding rule?

i. **The increased mass-based limit for nitrogen does not violate the CWA.**

Rio Hondo's first argument is that the increased mass-based nitrogen limit in the 2017 permit violates the CWA's anti-backsliding rule. Aplt. Br. at 44.

As discussed above, the CWA's anti-backsliding rule includes a general prohibition on issuing permits that "contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." 33 U.S.C. § 1342(o)(1). But this prohibition does not apply to permits issued in compliance with § 1313(d)(4),

[8] In its opening brief, Rio Hondo also includes a brief section explaining that the anti-backsliding rule's exception for "new information" does not apply in this case. Aplt. Br. at 55–56. The EPA dropped its reliance on this theory before the EAB and does not pursue that theory here. Because this theory is neither relied on by the EPA nor necessary to decide this case, we do not address it.

which governs CWA permits issued for waterways which have not met applicable water quality standards. Section 1313(d)(1)(A) and 1313(d)(4)(A) provide:

> (d) Identification of areas with insufficient controls; maximum daily load; certain effluent limitations revision.
>
> (1)(A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.
>
> . . .
>
> (4) Limitations on revision of certain effluent limitations.
> (A) Standard not attained. For waters identified under paragraph (1)(A) where 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, or (ii) the designated use which is not being attained is removed in accordance with regulations established under this section.

33 U.S.C. §§ 1313(d)(1)(A), 1313(d)(4)(A).

Because the Rio Ruidoso river, which flows into the Rio Hondo river, has not met the standards outlined in its WQS, the exclusion from the backsliding rule in § 1313(d)(4)(A) applies. Pursuant to that section, the EPA can issue a revised permit (and escape application of the anti-backsliding rule's general prohibition) if the revised pollutant limitations are (1) based on a TMDL or WLA, and (2) if those revised limitations will assure the attainment of the applicable WQS by requiring that protective

in-stream pollutant targets are met. *Id.* § 1313(d)(4)(A). The 2017 permit satisfies both of these criteria.

First, the 2017 permit was based on a TMDL. The fact sheet accompanying the permit explained that the permit relied on the 2016 TMDL and adopted the assumptions and requirements for plant nutrients contained in that TMDL. Aplt. App. at 408–09 (explaining that "[a] revised TMDL for nutrients was approved by the EPA on December 12, 2016" and recounting the waste load allocations for phosphorous and nitrogen contained in that TMDL). The fact sheet explained that the limits in the 2017 permit were "consistent with the TMDL" and provide that "if the conditions in the TMDL (i.e., WLAs) are met, attainment of the water quality standard is assured." *Id.* at 409.[9] Rio Hondo acknowledges that the 2017 permit adopted the 2016 TMDL. Aplt. Br. at 33, n.8. Thus, the 2017 permit contained revised effluent limitations that were based on a TMDL, in accordance with the requirements of § 1313(d)(4)(A).[10]

The 2017 permit also satisfied § 1313(d)(4)(A)'s second requirement, because the permit assures attainment of the applicable water quality standards. The 2017 permit adopted the limitations in the 2016 TMDL. The 2016 TMDL acknowledged that it contained "less stringent permit limits for plant nutrients than the original 2006 TMDL." Aplt. App. at 369. But the 2016 TMDL explained that these limits reflected "revised

[9] Indeed, as noted earlier, the 2017 permit was required to be "consistent with the assumptions and requirements of" the TMDL. 40 C.F.R. § 122.44(d)(1)(vii)(B).

[10] The parties appear to agree that the limitations must be based on any TMDL, not necessarily the original TMDL on which the limitations were based. We therefore do not address this issue.

waste load allocations" based on new data and a change in nitrogen modeling. *Id.* Thus, the 2016 TMDL explained, "if the [new, less stringent] conditions in the TMDL are met, attainment of the water quality standard is assured" because the TMDL used protective in-stream pollutant targets designed to meet those water quality standards, and those were the same in-stream targets used in the prior TMDL. *Id.* The permit limits were "developed in accordance with the revised 2016 TMDL" and therefore assured attainment of the applicable water quality standards. *Id.* at 409.

Both of the requirements of § 1313(d)(4)(A)(i) are met by the 2017 permit (and the 2016 TMDL). As a result, the general prohibition on backsliding in § 1342(o)(1) does not apply. The 2017 permit therefore does not violate the anti-backsliding rule.[11] The parties dispute, however, whether the permit nonetheless violates the safety clause contained in § 1342(o)(3). Aplt. Br. at 53 (arguing that this "backsliding would still be prohibited because of the safety clause").

The 2017 permit does not violate the safety clause for the simple reason that the § 1342(o)(3) safety clause does not apply to the 2017 permit. First, because the 2017 permit was issued pursuant to an exclusion to the general prohibition on backsliding [specifically § 1313(d)(4)], the safety clause does not apply to the 2017 permit. Second, even if the safety clause were to apply to the 2017 permit, the permit does not violate the

[11] This conclusion applies with equal force to the permit's increased mass-based nitrogen limitation as well as its removal of concentration-based limitations for both nitrogen and phosphorous. However, the removal of the concentration-based limitations raises some additional issues which we proceed to address.

clause because the permit would not "result in a violation of a water quality standard." 33 U.S.C. § 1342(o)(3).

The safety clause does not apply to permits issued pursuant to § 1313(d)(4) because such permits do not come within § 1342(o)(1)'s general prohibition on backsliding. As discussed previously, § 1342(o) contains three parts: a general prohibition on backsliding, exceptions to that prohibition, and a safety clause that limits applications of those exceptions. On its face, the general prohibition in § 1342(o)(1) does not apply to permits issued in compliance with § 1313(d)(4): the general prohibition applies "*except* [for permits issued] in compliance with section 1313(d)(4) of this title." 33 U.S.C. § 1342(o)(1) (emphasis added). The safety clause, in turn, applies only to permits "to which paragraph (1) [the general prohibition] applies." *Id.* § 1342(o)(3).[12]

Even if the safety clause were to apply, the 2017 permit still satisfies its strictures. The safety clause requires that a permit may not be issued "if the implementation of such limitation would result in a violation of a water quality standard." *Id.* In this case, the permit writer concluded that the limits contained in the permit would assure the Rio Ruidoso would meet its WQS. Aplt. App. at 409. This conclusion was consistent with the

[12] The EAB noted that any comparison of the 2012 limits to the 2017 limits is complicated by the fact that the 2017 permit no longer contains concentration limits for nutrients, and the mass-based limit for nitrogen is calculated using the same numeric in-stream target, but is based on more recent streamflow data and a revised method of determining critical flow. Aplt. App. at 556. The EAB assumed, without deciding, that the 2017 permit constituted backsliding, but concluded that even if backsliding is assumed the 2017 permit falls within the § 1313(d)(4) exclusion. *Id*. at 555–56, n. 27. After reaching that conclusion, the EAB did not proceed to consider the applicability of the safety clause. *Id.*

2016 TMDL, which the EPA relied on in drafting the 2017 permit. *Id.* at 369 ("[T]he revised TMDL is calculated using the same protective, in-stream targets from the original TMDL."). EPA regulations require that permits be "consistent with the assumptions and requirements" of applicable TMDLs. 40 C.F.R. § 122.44(d)(1)(vii)(B). And there is little argument here that the EPA's reliance on NMED's TMDL was unreasonable or represented an abuse of discretion.

In support of its claim that the permit violates the safety clause (and thus the anti-backsliding rule), Rio Hondo points to a Ninth Circuit decision that concerned a separate question involving the issuance of a permit for a new polluter. *Friends of Pinto Creek v. U.S. E.P.A.*, 504 F.3d 1007 (9th Cir. 2007). Rio Hondo cites *Friends of Pinto Creek* to argue that a TMDL cannot serve as the basis for an NPDES permit if "there are no plans or compliance schedules" to effectuate the changes contemplated in the TMDL. *Id.* at 1014. But that case involved EPA regulations applicable to a permit sought by a new point source, 40 C.F.R. § 122.4(i), and not the anti-backsliding provisions at issue in this case. *Id.* That regulation requires that before a permit is issued to a new point source, "existing dischargers . . . are subject to compliance schedules" that will assure WQS attainment. 40 C.F.R. § 122.4(i)(2). It was this separate requirement, which is not at issue in this petition, that led the court in *Friends of Pinto Creek* to vacate the EPA's permit. 504 F.3d at 1014 (finding "there are no plans or compliance schedules to bring the Pinto Creek segment 'into compliance with applicable water quality standards,' as required by § 122.4(i)(2)"). *Friends of Pinto Creek* therefore does not bear on the questions presented here.

Rio Hondo also contends that the permit writer's statement in the fact sheet for the 2017 permit that "[t]he revised 2016 nutrient TMDL is calculated using the same protective, in-stream targets from the original TMDL" was in error. Aplt. Br. at 46 (quoting Aplt. App. at 409). This must be so, Rio Hondo reasons, because the original TMDL required in-stream concentrations of nitrogen and phosphorous be maintained at a 10:1 level and the revised TMDL includes a discharge limit for the nutrients at a 25:1 ratio. *Id.* at 46–47. This argument confuses in-stream targets with discharge limits. The 2016 TMDL, as the 2017 permit writer notes, does indeed contemplate a 10:1 ratio as an in-stream target for the nutrients. Aplt. App. at 356 (2016 TMDL noting in-stream target of 1.0 mg/L for nitrogen and 0.1 mg/L for phosphorous). But the 2016 TMDL, unlike the 2006 TMDL, used a new critical flow calculation for nitrogen, meaning that (under the assumptions in the TMDL), nitrogen and phosphorous did not need to be discharged at the 10:1 ratio in order to achieve the 10:1 ratio designated as the in-stream target. *Id.* at 356–57 (showing that the difference in critical flow for the two nutrients corresponds to a different waste load allocation for each). The 2016 TMDL *did* use the same in-stream targets, and the 2017 permit writer's statement to that effect was not erroneous.

Rio Hondo argues that, as "a simple matter of common sense and the laws of physics," the 2017 permit cannot possibly hope to attain water quality standards. Aplt. Br. at 48, 51 (faulting the EPA's permit writer for failing to "consider[] the physics of how an increase in the discharge of a pollutant into a receiving water . . . can conceivably decrease the concentration of the pollutant"). This is so, Rio Hondo contends, because the river is already in non-attainment status and the 2017 permit represents an increase in

nutrient flow into the river. *Id.* But Rio Hondo fails to mention in its opening brief that 2012 interim limits, and not the final limits in the 2012 permit, were in effect prior to the 2017 permit. Aplt. App. at 172. The interim 2012 limits, as seen in the chart below, contained much higher mass-based limitations for nitrogen than the 2017 permit. Rio Hondo's argument that the 2017 permit levels increased the discharge of pollutants is based on a comparison with the 2012 permit limits and not the 2012 interim limits. Rio Hondo therefore relies on the wrong comparator when arguing the 2017 permit increased nitrogen limits.

The following chart captures the pollutant levels allowed by various iterations of permits in this case.

Permit Year	**Phosphorous Limits**		**Nitrogen Limits**	
	Concentration	**Mass**	**Concentration**	**Mass**
2001	0.1 mg/L	2.2 lbs/day	none	none
2007	0.1 mg/L	2.2 lbs/day	1.0 mg/L	21.7 lbs/day
2012	0.1 mg/L	2.16 lbs/day	1.0 mg/L	18.9 lbs/day
2012 (interim)	0.1 mg/L	2.16 lbs/day	4 – 6 mg/L	90 – 135 lbs/day
2017	none	1.67 lbs/day	none	37.8 lbs/day

Even setting aside the issue of the interim 2012 limits, neither the CWA nor applicable EPA regulations require the agency to conduct the detailed reconsideration of a state's TMDL that Rio Hondo urges. As the EAB explained, "the 2016 TMDL was extensive, including technical, policy, and scientific judgments on a number of modeling and calculation issues." Aplt. App. at 569. The EAB also explained that Rio Hondo "identified nothing that requires [EPA] permit writers to supplant the analysis of a recently approved TMDL with their own analysis." *Id.* Rio Hondo's challenge takes issue with the facts, assumptions, and analysis in the 2016 TMDL, not with the EPA's reliance

on that TMDL in issuing the 2017 permit. But it is the 2017 permit, and not the 2016 TMDL, that Rio Hondo is challenging in the petition before us.

As previously stated, Rio Hondo has already sought judicial review of the 2016 TMDL and lost in New Mexico state court. *Rio Hondo,* No. A-1-CA-36039. Rio Hondo acknowledged before the EAB that "the Board is not the proper venue in which to raise objections to the 2016 TMDL." Aplt. App. at 554. But its attacks on the 2017 permit are in substance attacks on the science underlying the 2016 TMDL. And as the EAB noted in its order, Rio Hondo has presented no new evidence or information which would cast doubt on the facts and assumptions included in the 2016 TMDL. *Id.* at 569–75.

ii. **The elimination of concentration-based limitations for nitrogen and phosphorous does not violate the CWA.**

Rio Hondo also contends that the omission of concentration-based limitations for nitrogen and phosphorous constituted impermissible backsliding under the CWA. As with the increased nitrogen limit in the 2017 permit, however, the omission of these limitations was in line with the 2016 TMDL. Rio Hondo acknowledges that its argument about the concentration-based limitations relies on many of the same grounds as its arguments about the mass-based limitation for nitrogen. Aplt. Br. at 54 (noting that the omission of concentration-based limitations violates the anti-backsliding rule "for the reasons set out above"). Its argument regarding concentration-based limitations therefore fares no better and fails for the same reasons.

The 2016 TMDL explicitly encouraged the EPA "to include only loading [i.e. mass] (and not concentrations) in future permits." Aplt. App at 370. The TMDL made

this request because concentration-based limitations would necessarily vary as the WWTP varied its daily discharge amount. *Id.* ("For example, as discharge volume [from the WWTP] increases, the effluent concentrations would need to decrease in order to meet the WLA."). Again, the 2016 TMDL focused on the resulting water quality and concluded that "if the conditions in the TMDL are met, attainment of the water quality standard is assured" because protective in-stream pollutant targets would be met. *Id.* at 369. Thus, the EPA's reliance on the 2016 TMDL was reasonable and the exclusion to the CWA's anti-backsliding rule found in 33 U.S.C. § 1313(d)(4) applies.

Rio Hondo raises one additional argument specific to the omission of concentration-based limitations. Aplt. Br. at 54–55. Rio Hondo notes that the exclusion to the anti-backsliding rule outlined in § 1313(d)(4)(A) requires that the relaxed limitations be "based on a [TMDL] or [WLA]." *Id.* at 54. Rio Hondo argues that because the concentration-based limitations first appeared in the 2001 permit, which was issued prior to any TMDL, the 2017 permit limitations were not based on a TMDL and are not covered by § 1313(d)(4)(A). Rio Hondo notes that the concentration-based limits from the 2001 permit were copied in the 2008 and 2012 permits, suggesting that neither of these permits relied on a TMDL to create the concentration-based limits. *Id.*

Rio Hondo is correct that the concentration-based phosphorous limit in the 2001 permit was not based on a TMDL[13]. But the present petition concerns the 2012 and 2017

[13] Rio Hondo contends that the 2001 permit also included a concentration-based nitrogen limit, Aplt. Br. at 54, but the record shows that the 2001 permit did not contain any nitrogen limits. Aplt. App. at 548, n.18. The 2012 permit's concentration-based nitrogen limit could not possibly have originated from the 2001

permits, not the 2001 permit. The record shows that the concentration-based limits in the 2012 permit were based on information from NMED's 2006 TMDL. The fact sheet accompanying the 2012 permit explicitly refers to the 2006 TMDL and relied on that TMDL in setting concentration-based limits for nitrogen and phosphorous. Aplt. App. at 172 ("The aforementioned TMDL establishes target concentration values and WLAs for both total nitrogen and total phosphorus based on both numeric and narrative standards."). EPA regulations required the EPA to impose concentration-based limits consistent with the 2006 TMDL when the agency issued the 2012 permit. *See* 40 C.F.R. § 122.44(d)(1)(vii)(B). There is ample evidence to conclude that the 2012 permit *did* rely on the 2006 TMDL in determining the concentration-based limitations for nitrogen and phosphorous. The EPA's decision to omit those concentration-based limitations from the 2017 permit, which relied in turn on the 2016 TMDL, fell squarely within the exclusion outlined in § 1313(d)(4)(A). The EPA therefore did not abuse its discretion in omitting the concentration-based limitations from the 2017 permit.

III

For the foregoing reasons, we DENY Rio Hondo's petition for review.

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permit. Rio Hondo's argument that the concentration-based nitrogen limit stems from the 2001 permit is therefore mistaken.