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# Swimming Away from the Zone of Reasonableness: *Upper Blackstone* and the Need for Numeric Water Quality Criteria

Colleen Maker

*Boston College Law School*, [colleen.maker@bc.edu](mailto:colleen.maker@bc.edu)

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# SWIMMING AWAY FROM THE ZONE OF REASONABLENESS: *UPPER BLACKSTONE* AND THE NEED FOR NUMERIC WATER QUALITY CRITERIA

COLLEEN MAKER\*

**Abstract:** In *Upper Blackstone Water Pollution Abatement District v. U.S. Environmental Protection Agency*, the U.S. Court of Appeals for the First Circuit upheld NPDES permit pollution limits for Massachusetts's Blackstone River. The court deferred to the EPA's permit limits under the Administrative Procedure Act's arbitrary and capricious standard. Courts usually defer to an agency's permit limits unless a court finds that the limits are outside a zone of reasonableness. States have an option of creating specific numeric water quality criteria for bodies of water within the state, vague narrative criteria, or both. This Comment argues that states should create numeric water quality criteria. Numeric criteria will communicate the state's water quality goals more clearly to EPA permit writers. With the relevant information, permit writers will be able to create appropriate effluent limits in the first instance, which is important because courts rarely overturn the EPA's permit limits.

## INTRODUCTION

The Blackstone River (the "River"), the birthplace of the American Industrial Revolution, was once known as "America's Hardest Working River."<sup>1</sup> Today, the River has become polluted and is listed as "impaired."<sup>2</sup> The River originates in Worcester, Massachusetts, travels into Rhode Island through Pawtucket Falls, becomes the Seekonk River, flows into the Providence River, and eventually empties into Narragansett Bay.<sup>3</sup> Any pollution that enters the River impacts several communi-

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\* Staff Writer, BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW, 2013–2014.

<sup>1</sup> BLACKSTONE RIVER COAL., *THE BLACKSTONE RIVER—CLEAN BY 2015*, at 2 (2008), available at [http://www.zaptheblackstone.org/whatyoushouldknow/Publications/State\\_of\\_River.pdf](http://www.zaptheblackstone.org/whatyoushouldknow/Publications/State_of_River.pdf) and <http://perma.cc/U824-AZ8P>.

<sup>2</sup> See *Upper Blackstone Water Pollution Abatement Dist. v. U.S. Env'tl. Prot. Agency*, 690 F.3d 9, 15 (1st Cir. 2012), cert. denied, 133 S. Ct. 2382 (2013). Massachusetts has designated the River for "primary and secondary contact uses, including swimming, fishing, and boating, and as habitat for fish and other wildlife" and listed the River as "impaired." *Id.*

<sup>3</sup> *Id.* at 11.

ties throughout Massachusetts and Rhode Island.<sup>4</sup> As a result, the Seekonk River, Providence River, Narragansett Bay are also listed as “impaired,” and Rhode Island has shut down numerous beaches and commercial fisheries.<sup>5</sup>

The River is home to many aquatic species, from “tiny microscopic plants (plankton) to fish, amphibians and reptiles.”<sup>6</sup> Thirty-seven species of fish live in the River, which represents a drastic increase from the two species that lived in the River’s polluted water before the Clean Water Act (CWA) of 1972.<sup>7</sup> This increase has expanded opportunities for fishermen.<sup>8</sup> As pollution has decreased, local residents have also increased recreational activities, including kayaking and canoeing.<sup>9</sup>

Despite the improvements, neither citizens nor wildlife enjoy the River to its full potential because of the River’s high levels of nitrogen and phosphorus.<sup>10</sup> These elements enter the River through wastewater effluent, often from wastewater treatment plants.<sup>11</sup> The Upper Blackstone Water Pollution Abatement District (the “District”), in Millbury, Massachusetts, is significantly larger than other treatment plants in Massachusetts and contributes the largest percentage of effluent to the River.<sup>12</sup> Fish and invertebrates have difficulty breathing in the River because high levels of phosphorus and nitrogen cause cultural eutrophication, a process whereby algae quickly accumulate, decompose, and cause dissolved oxygen levels in the water to drop to dangerously low

<sup>4</sup> See *id.* at 12.

<sup>5</sup> *Id.* at 12, 15.

<sup>6</sup> BLACKSTONE RIVER COAL., *supra* note 1, at 12.

<sup>7</sup> *Id.* at 13.

<sup>8</sup> *Id.* at 15. Fishermen on the River receive advisories, however, that eating their catch from specific areas might be unsafe. *Id.*

<sup>9</sup> See *id.*

<sup>10</sup> See *Upper Blackstone*, 690 F.3d at 15; BLACKSTONE RIVER COAL., *supra* note 1, at 15. Massachusetts aims to preserve the River for recreational uses such as “swimming, fishing, and boating, and as a habitat for fish and other wildlife.” *Upper Blackstone*, 690 F.3d at 15. Considering the current state of pollution, the Massachusetts legislature determined that the River is unsuitable for these designated uses. See *id.* at 15, 16. In Rhode Island, other rivers have suffered the same fate, at least partly because of pollution allowed in the River. See *id.*

<sup>11</sup> See BLACKSTONE RIVER COAL., *supra* note 1, at 5.

<sup>12</sup> *Id.*; see *Upper Blackstone*, 690 F.3d at 17 (“The District’s discharge represents approximately seventy percent of the total municipal wastewater flow into the Blackstone River, making it the dominant discharger of both nitrogen and phosphorus into the River’s waters.”). Additionally, the River receives effluent from six other wastewater treatment plants: Grafton, Northbridge, Uxbridge, Upton, Hopedale, and Douglas. BLACKSTONE RIVER COAL., *supra* note 1, at 5.

levels.<sup>13</sup> Eutrophication threatens human health because it causes fish kills, red tides, and shellfish poisonings.<sup>14</sup>

In 2008, the District challenged the effluent limits contained in its National Pollution Discharge Elimination System (NPDES) permit in *Upper Blackstone Water Pollution Abatement District v. U.S. Environmental Protection Agency*.<sup>15</sup> The District claimed that the EPA was arbitrary in setting the limits, and environmental groups intervened and claimed that the limits were too lenient.<sup>16</sup> The U.S. Court of Appeals for the First Circuit held that the limits were within a “zone of reasonableness” and deferred to the EPA without making a specific determination about the limits.<sup>17</sup> This Comment argues that because courts will likely uphold effluent limits in NPDES permits unless they fall outside the zone of reasonableness, states should create numeric, rather than narrative, water quality criteria to communicate their environmental goals to permit writers.<sup>18</sup>

## I. FACTS AND PROCEDURAL HISTORY

The District opened in 1976 and continued operating without any major upgrades until 2001, when the EPA forced the District to implement a \$180 million upgrade in response to NPDES permit violations.<sup>19</sup> During the permitting process in 2001, the EPA suggested that “more stringent phosphorus limits might be necessary in future permits to ad-

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<sup>13</sup> *Upper Blackstone*, 690 F.3d at 11–12. The Narragansett Bay also suffers from severe cultural eutrophication. *Id.* at 12.

<sup>14</sup> *Id.* A fish kill is a dying off of a large population of fish. See *Water Questions & Answers: What Causes Fish Kills?*, U.S. GEOLOGICAL SURV., <http://ga.water.usgs.gov/edu/qa-chemical-fishkills.html> (last modified Feb. 4, 2013), available at <http://perma.cc/N9UL-JB7B>. A red tide refers to a “harmful algal bloom,” which occurs when fast-growing colonies of algae produce toxins. A “Red Tide” Is a Common Term Used for a Harmful Algal Bloom, NAT’L OCEANIC & ATMOSPHERIC ADMIN., <http://oceanservice.noaa.gov/facts/redtide.html> (last updated Nov. 8, 2013), available at <http://perma.cc/FHB9-EKQV>. Shellfish poisoning is food poisoning from consumption of contaminated shellfish. See *Paralytic Shellfish Poisoning*, MERRIAM-WEBSTER, <http://merriam-webster.com/medical/paralytic%20shellfish%20poisoning> (last visited Jan. 7, 2014), available at <http://perma.cc/44QE-QBD6>. Symptoms include “paresthesia, nausea, vomiting, abdominal cramping, muscle weakness, and sometimes paralysis which may lead to respiratory failure.” *Id.*

<sup>15</sup> *Upper Blackstone*, 690 F.3d at 20.

<sup>16</sup> *Id.* at 24–25.

<sup>17</sup> *Id.* at 32.

<sup>18</sup> See *id.*; *Am. Paper Inst. v. U.S. Envtl. Prot. Agency*, 996 F.2d 346, 350 (D.C. Cir. 1993); *infra* note 59 and accompanying text.

<sup>19</sup> *Upper Blackstone*, 690 F.3d at 17; *Petition for Writ of Certiorari, Upper Blackstone*, 690 F.3d 9 (No. 12–797), at 4.

dress cultural eutrophication impacts in the [River].”<sup>20</sup> Additionally, the Rhode Island Department of Environmental Management (RIDEM) requested that the EPA create stricter nitrogen limits for Massachusetts dischargers into the River.<sup>21</sup> The District applied for a timely renewal of its 2001 NPDES permit on November 8, 2005.<sup>22</sup> Both Massachusetts and Rhode Island use narrative water quality criteria instead of numerical criteria for the relevant pollutants.<sup>23</sup> The EPA eventually had to translate these narrative criteria into numeric limits for the permit.<sup>24</sup>

In line with the EPA’s earlier suggestion,<sup>25</sup> the EPA’s 2007 draft permit limited total phosphorus discharges significantly.<sup>26</sup> The EPA accepted public comments and held a public hearing regarding the permit.<sup>27</sup> The EPA received and responded at length to thirty-four sets of written comments from the District, Massachusetts, Rhode Island, several municipalities and organizations, and other researchers and interested parties.<sup>28</sup> On August 22, 2008, the EPA issued the final permit, which contained the same phosphorus and nitrogen limits as the draft permit.<sup>29</sup>

In response to the final permit, on September 15, 2008, the District filed a petition for review by the Environmental Appeals Board (EAB).<sup>30</sup> The Conservation Law Foundation (CLF) opposed the District and argued that the nitrogen and phosphorus limits in the permit were too lenient.<sup>31</sup> In a lengthy decision, the EAB upheld the permit and denied further review.<sup>32</sup>

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<sup>20</sup> *Upper Blackstone*, 690 F.3d at 30–31.

<sup>21</sup> *Id.* at 17.

<sup>22</sup> *Id.*

<sup>23</sup> *See id.* at 15–16.

<sup>24</sup> *Id.* at 18. “Narrative criteria’ are verbal descriptions of water quality and other conditions of aquatic ecosystems, such as ‘no toxics in toxic amounts,’ ‘no floatable wastes,’ or no ‘putrescible wastes.’” Robert W. Adler, *Integrated Approaches to Water Pollution: Lessons from the Clean Air Act*, 23 HARV. ENVTL. L. REV. 203, 211 (1999). In contrast, “[m]ore precise ‘numeric criteria’ establish limits on the concentrations of specific chemical pollutants or other quantitative indicators of water quality, such as temperature or level of dissolved oxygen.” *Id.*

<sup>25</sup> *Upper Blackstone*, 690 F.3d at 30–31.

<sup>26</sup> *See id.* at 18. The 2001 permit allowed 0.75 mg/L of phosphorus. *Id.* at 17. The draft permit in 2007 set the phosphorus limit at 0.1 mg/L from April 1 through October 31, and 1.0 mg/L from November through March. *Id.* at 18.

<sup>27</sup> *Id.*; see Public Notice of Permit Actions and Public Comment Period, 40 C.F.R. § 124.10 (2006).

<sup>28</sup> *Upper Blackstone*, 690 F.3d at 18.

<sup>29</sup> *Id.*

<sup>30</sup> *Id.* The EAB is the EPA’s highest adjudicative body. *Id.*

<sup>31</sup> *See id.*

<sup>32</sup> *Id.* at 19; Petition for Writ of Certiorari, *supra* note 19, at 8.

On April 29, 2011, the District filed a petition with the First Circuit that challenged the permit's effluent limitations for nitrogen, phosphorus, and aluminum.<sup>33</sup> The District claimed that the EPA based the permit limits on flawed data, and that the EPA should have delayed the permit until upgrades to its facility were complete.<sup>34</sup> The petition claimed that the phosphorus limit was arbitrary because the guidance and studies that the EPA used when setting the limit did not focus specifically on the conditions of the River.<sup>35</sup> The EPA claimed that it used site-specific data from MassDEP, EPA New England, and the U.S. Army Corps of Engineers.<sup>36</sup> The District also filed an emergency motion for a stay of the new permit, which the court granted.<sup>37</sup> The CLF filed a petition for review of the permit, which the First Circuit consolidated with the District's action.<sup>38</sup>

A primary concern for the First Circuit was whether the EPA was arbitrary or capricious when setting the permit limits, in violation of the Administrative Procedure Act (APA).<sup>39</sup> Courts usually will not choose specific numeric values but will only analyze whether the EPA's limits are within a "zone of reasonableness."<sup>40</sup> Because the First Circuit determined that the permit's nitrogen and phosphorus limits were within the zone of reasonableness, the court affirmed the EPA's decisions.<sup>41</sup> The court also held that the EPA properly issued the permit without waiting for the District to complete upgrades to its facility.<sup>42</sup> In response, the District filed a petition for writ of certiorari to the Supreme Court.<sup>43</sup> The Supreme Court denied certiorari without opinion.<sup>44</sup>

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<sup>33</sup> *Upper Blackstone*, 690 F.3d at 19–20.

<sup>34</sup> *Id.* at 20–21.

<sup>35</sup> *Id.* at 31; Petition for Writ of Certiorari, *supra* note 19, at 4.

<sup>36</sup> *Upper Blackstone*, 690 F.3d at 31–32.

<sup>37</sup> *Id.* at 19.

<sup>38</sup> *Id.*

<sup>39</sup> *See id.* at 24; *see also* 5 U.S.C. § 706 (2012) ("The reviewing court shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law . . .").

<sup>40</sup> *Upper Blackstone*, 690 F.3d at 32; *see infra* note 59 and accompanying text.

<sup>41</sup> *Upper Blackstone*, 690 F.3d at 32–33.

<sup>42</sup> *Id.* at 21.

<sup>43</sup> Petition for Writ of Certiorari, *supra* note 19, at 1. According to the District, the First Circuit's decision conflicted with a decision of the U.S. Court of Appeals for the D.C. Circuit. *Id.* at 3. The District also argued that another upgrade would be necessary to meet the new effluent limits at a cost of an additional \$180 million to \$200 million to the District, in addition to the \$180 million spent to upgrade the facility for compliance with the EPA's order. *Id.* at 4. The EPA filed an opposition brief and argued that there were no inconsistencies between the circuit courts because the EPA used site-specific criteria when

## II. LEGAL BACKGROUND

Congress enacted the Clean Water Act (CWA) in 1972 to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>45</sup> Under the CWA, states receive an opportunity to set water quality standards for bodies of water within their borders.<sup>46</sup> States must determine “designated uses” of the water, such as recreational uses, public water supply, or fish and wildlife habitats.<sup>47</sup> States are also responsible for establishing numeric or narrative “criteria” (or both) that set limits on the amount of pollutants that may be present in the water without “impairing” the designated uses.<sup>48</sup>

The CWA authorizes the EPA to create criteria, which overrides the state’s authority to create narrative criteria, if the EPA determines that the state failed to meet the requirements of the Act.<sup>49</sup> The EPA may reject a state’s criteria, narrative or numeric, if it finds the criteria to be insufficient, and in turn it may implement federal standard criteria.<sup>50</sup> The EPA rarely uses this power, however, and generally takes a “hands-off” approach.<sup>51</sup> The EPA finds that working collaboratively with states to establish the criteria is the most effective approach.<sup>52</sup>

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determining the effluent limits of the 2008 permit. Brief for the Respondent in Opposition at 7, 12, *Upper Blackstone*, 690 F.3d 9 (No. 12–797). According to the EPA, the federal “Gold Book” standard, which was ultimately used for the effluent limits by the permit writers, was the least stringent recommendation that the agency considered. *Id.* at 7.

<sup>44</sup> See *Upper Blackstone*, 133 S. Ct. at 2382.

<sup>45</sup> 33 U.S.C. § 1251 (a) (2006); see Adler, *supra* note 24, at 203.

<sup>46</sup> Brief for the Respondent in Opposition, *supra* note 43, at 2; see 33 U.S.C. § 1313(a).

<sup>47</sup> Brief for the Respondent in Opposition, *supra* note 43, at 2; see 33 U.S.C. § 1313(c)(2)(A).

<sup>48</sup> 33 U.S.C. § 1313(c)(2)(A); Brief for the Respondent in Opposition, *supra* note 43, at 2. Despite the option to set both narrative and numeric criteria, most states have only created narrative criteria as part of their water quality standards. See *EPA Launches Novel Effort to Impose Strict Numeric Nutrient Limits in States*, DELTA F.A.R.M. (Feb. 25, 2011), [deltafarm.org/news/epa\\_nutrient\\_limits](http://deltafarm.org/news/epa_nutrient_limits) [hereinafter DELTA F.A.R.M.], available at <http://perma.cc/S6FG-R4ZJ>. For example, Massachusetts has a narrative water quality standard that requires bodies of water to be “free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses.” *Upper Blackstone Water Pollution Abatement Dist. v. U.S. Envtl. Prot. Agency*, 690 F.3d 9, 15 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013).

<sup>49</sup> 33 U.S.C. § 1313(c)(3); see Adler, *supra* note 24, at 213 (“The CWA affords states the initial opportunity to adopt standards that apply to their waters. . . . If a state fails to promulgate the requisite standards, or if EPA deems those standards inadequate in whole or in part, EPA must establish the requisite [water quality standards].”).

<sup>50</sup> 33 U.S.C. § 1313(c)(3).

<sup>51</sup> See *Gulf Restoration Network v. Jackson*, No. 12–677, 2013 WL 5328547, at \*1, \*3 (E.D. La. Sept. 20, 2013).

<sup>52</sup> See *id.*

National Pollution Discharge Elimination System (NPDES) permits, authorized by the CWA, regulate water pollution from point sources that discharge pollutants into U.S. waters.<sup>53</sup> If a state is not authorized to issue its own NPDES permits, the EPA issues the permits and sets appropriate effluent limits while taking the state's narrative and numeric criteria into consideration.<sup>54</sup> Based on federal regulations, permit writers may choose from three methods in order to translate a state's narrative criteria into NPDES permit standards.<sup>55</sup> One particular option, "Option B," involves examining the state's water quality criteria, site-specific information, and any other relevant information to determine appropriate effluent limits.<sup>56</sup>

Adjudicative procedures exist within the EPA for parties to challenge effluent limits in NPDES permits, and courts have a limited role in such matters.<sup>57</sup> Under the Administrative Procedure Act (APA), courts defer to agency decisions unless the agency is acting arbitrarily or capriciously.<sup>58</sup> Courts generally overturn permit limits set by the EPA only when those limits are outside a "zone of reasonableness."<sup>59</sup> There-

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<sup>53</sup> *National Pollutant Discharge Elimination System (NPDES)*, ENVTL. PROT. AGENCY, [cfpub.epa.gov/npdes/](http://cfpub.epa.gov/npdes/) (last updated Mar. 12, 2009), available at <http://perma.cc/9KXW-NKZS> ("Point sources are discrete conveyances such as pipes or man-made ditches. . . . [I]ndustrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.").

<sup>54</sup> 40 C.F.R. § 122.44(d) (2012); see *Upper Blackstone*, 690 F.3d at 14. States and Indian tribes may apply for authorization to administer NPDES permits themselves. See *Upper Blackstone*, 690 F.3d at 14. As of 2012, forty-six states, including Rhode Island, administered their own NPDES permits. See *id.* For example, the Rhode Island Department of Environmental Management (RIDEM) is authorized to issue NPDES permits for the state. See *id.* at 16. Massachusetts is not authorized to issue NPDES permits. See *id.* at 14.; Brief for the Respondent in Opposition, *supra* note 43, at 2 n.1.

<sup>55</sup> See 40 C.F.R. § 122.44(d)(1)(vi)(A)-(C). Permit writers may (1) establish effluent limits using calculated criterion for the pollutant, including proposed state criterion, explicit state policy and regulations, and other relevant information, (2) "[e]stablish effluent limits on a case-by-case basis using EPA's water quality criteria . . . supplemented where necessary by other relevant information," or (3) "[e]stablish effluent limits on an indicator parameter for the pollutant of concern." *Id.*; see Brief for the Respondent in Opposition, *supra* note 43, at 3.

<sup>56</sup> 40 C.F.R. § 122.44(d)(1)(vi)(B); Brief for the Respondent in Opposition, *supra* note 43, at 3.

<sup>57</sup> See *Upper Blackstone*, 690 F.3d at 18, 32. Unsatisfied parties may appeal permit limits to the Environmental Appeals Board. See *id.* at 18.

<sup>58</sup> See 5 U.S.C. § 706 (2012); *Citizens to Pres. Overton Park v. Volpe*, 401 U.S. 402, 416 (1971) ("Although this inquiry into the facts is to be searching and careful, the ultimate standard of review is a narrow one. The court is not empowered to substitute its judgment for that of the agency.").

<sup>59</sup> See *Upper Blackstone*, 690 F.3d at 32; *Nat'l Mar. Safety Ass'n v. Occupational Safety & Health Admin.*, 649 F.3d 743, 751-52 (D.C. Cir. 2011) (explaining that the court's "task is not to 'second-guess an agency decision that falls within a zone of reasonableness'").



fore, the APA imposes a high bar on applicants seeking to challenge and overturn NPDES permits.<sup>60</sup>

Not all environmental statutes provide such deference to the states.<sup>61</sup> The Clean Air Act (CAA), for example, requires the EPA to create and publish a list of pollutants that endanger public health.<sup>62</sup> The EPA must then set numeric limits for air quality criteria.<sup>63</sup> In contrast, the CWA allows states to create water quality criteria instead of requiring federal criteria.<sup>64</sup>

In 1998, after finding that forty percent of waters tested in various states did not meet water quality goals, the EPA created a Clean Water Action Plan.<sup>65</sup> To implement this plan, the EPA ordered states “to adopt and implement numerical nutrient criteria” to replace narrative standards by December 31, 2003.<sup>66</sup>

By 2001, Florida’s Department of Environmental Protection began to develop numeric nutrient standards for maximum daily loads in specific bodies of water but did not propose or adopt state-wide standards.<sup>67</sup> In response, environmentalists sued the EPA in *Florida Wildlife Federation v. South Florida Water Management District* in 2008 for not taking the promised action of creating numeric criteria if Florida failed to do

Courts commonly use the zone of reasonableness standard in administrative law cases. *See, e.g.,* Fed. Power Comm’n v. Conway Corp., 426 U.S. 271, 278 (1976); Permian Basin Area Rate Cases, 390 U.S. 747, 797 (1968); Hercules, Inc. v. Envtl. Prot. Agency, 598 F.2d 91, 106–07 (D.C. Cir. 1978). As the court in *Hercules* stated:

In reviewing a numerical standard, we must ask whether the agency’s numbers are within a “zone of reasonableness,” not whether its numbers are precisely right. . . . A principal rationale for the “zone of reasonableness” concept is that it frees the court from the minutiae of particular calculations, and . . . allows an agency discretion to adapt a general formula or methodology to the aspects of a particular case.

*Hercules*, 598 F.2d at 106–07.

<sup>60</sup> *See* 5 U.S.C. § 706; *Overton Park*, 401 U.S. at 416; *Upper Blackstone*, 690 F.3d at 32; *Hercules*, 598 F.2d at 106–07.

<sup>61</sup> *See* Adler, *supra* note 24, at 230–31.

<sup>62</sup> *See* 42 U.S.C. § 7409 (2006); Adler, *supra* note 24, at 230–31.

<sup>63</sup> *See* 42 U.S.C. § 7409; Adler, *supra* note 24 at 230–31 (“Within one year after identification of any such pollutants, EPA is required to issue air quality criteria that ‘accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health and welfare.’”).

<sup>64</sup> *Gulf Restoration Network*, 2013 WL 5328547, at \*1, \*3.

<sup>65</sup> Fla. Wildlife Fed’n v. S. Fla. Water Mgmt. Dist., 647 F.3d 1296, 1299 (11th Cir. 2011).

<sup>66</sup> *Id.* at 1299–1300; ENVTL. PROT. AGENCY, NATIONAL STRATEGY FOR THE DEVELOPMENT OF REGIONAL NUTRIENT CRITERIA 9 (1998), available at <http://nepis.epa.gov/Exec/ZyPDF.cgi?Dockey=20003NOU.PDF> and <http://perma.cc/Y8GX-IVN8>.

<sup>67</sup> Fla. Wildlife Fed’n, 647 F.3d at 1300. Florida was one of the many states that used narrative rather than numeric criteria for nitrogen and phosphorus limits. *Id.* at 1299.

so on its own.<sup>68</sup> Thirteen parties, including the Water Management District and the Utility Council, intervened as defendants.<sup>69</sup> The plaintiffs and EPA settled by creating a consent decree, approved by the district court in 2009, which developed a schedule for the EPA to create numeric standards for Florida.<sup>70</sup>

In 2011, the EPA began to expand its effort in Florida to the Midwestern states.<sup>71</sup> This initiative attempted to force other states to adopt strict numeric limits to protect their waters, especially the Mississippi River and Gulf of Mexico.<sup>72</sup> This effort was met with significant resistance from industry groups, which complained about the difficulty that states would face when translating narrative criteria into numeric limits.<sup>73</sup>

Environmentalists have continued pushing the EPA to create numeric water quality criteria.<sup>74</sup> For example, in *Gulf Restoration Network v. Jackson*, the Gulf Restoration Network sued to compel the EPA to use its power under the CWA by taking power away from the states to create their own criteria.<sup>75</sup> The U.S. District Court for the Eastern District of Louisiana remanded to the EPA for further proceedings.<sup>76</sup>

Despite the EPA's unwillingness to impose numeric criteria on states,<sup>77</sup> and the general practice of judicial deference to agency decisions,<sup>78</sup> courts have expressed some concern regarding the use of narrative criteria.<sup>79</sup> In *American Paper Institute v. U.S. Environmental Protection Agency*, the U.S. Court of Appeals for the D.C. Circuit denied a petition to review pollution limits in a NPDES permit based on narrative criteria.<sup>80</sup> The court suggested that the use of narrative criteria leaves permit writers in the unenviable position of drafting permit limits without clear guidance.<sup>81</sup> Straightforward numeric criteria would minimize

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<sup>68</sup> See *id.* at 1300.

<sup>69</sup> See *id.* at 1300–01.

<sup>70</sup> See *id.* The Water Management District and the Utility Council appealed the decision, but their appeal was dismissed for lack of standing. See *id.* at 1301–02.

<sup>71</sup> See DELTA F.A.R.M., *supra* note 48.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> See *Gulf Restoration Network*, 2013 WL 5328547, at \*2.

<sup>75</sup> See *id.*

<sup>76</sup> *Id.* at \*8.

<sup>77</sup> See *id.* at \*1, \*3.

<sup>78</sup> See *Upper Blackstone*, 690 F.3d at 32.

<sup>79</sup> See, e.g., *Am. Paper Inst. v. U.S. Envtl. Prot. Agency*, 996 F.2d 346, 350 (D.C. Cir. 1993).

<sup>80</sup> See *id.* at 351–52, 356.

<sup>81</sup> See *id.* at 350.

frustration for the permit writers, whereas narrative criteria can cause difficulty.<sup>82</sup>

### III. ANALYSIS

In *Upper Blackstone Water Pollution Abatement District v. U.S. Environmental Protection Agency*, the Upper Blackstone Water Pollution Abatement District (the “District”) argued that the regional EPA should be required to wait until the District’s \$180 million upgrade of its facility was complete before issuing a new National Pollutant Discharge Elimination System (NPDES) permit.<sup>83</sup> The District argued that by waiting, the EPA could observe benefits from the upgrade and potentially agree that no further upgrades or tighter restrictions were necessary.<sup>84</sup> The U.S. Court of Appeals for the First Circuit disagreed, however, and in 2012 held that the EPA properly issued the 2008 permit before waiting for the District to complete its upgrade.<sup>85</sup> The court held that the EPA was following the requirements of the CWA by responding to permit requests in a timely manner.<sup>86</sup>

The District also challenged the effluent limits in the NPDES permit for aluminum, nitrogen, and phosphorus.<sup>87</sup> The default standard of review under the Administrative Procedure Act (APA) for courts examining agency decisions is the arbitrary or capricious standard, which requires courts to defer to agencies after ensuring that the agency decision was based on a consideration of the relevant factors, and that there was no clear error of judgment.<sup>88</sup> Under this reasonableness test, a court must not substitute its own judgment for that of an agency.<sup>89</sup> The First Circuit upheld the EPA’s effluent limits because they were within a “zone of reasonableness.”<sup>90</sup>

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<sup>82</sup> *See id.* (“How is a state or federal NPDES permit writer to divine what limitations on effluent discharges are necessary to assure that the waterway contains, for example, ‘no toxics in toxic amounts?’”).

<sup>83</sup> *Upper Blackstone Water Pollution Abatement Dist. v. U.S. Env’t. Prot. Agency*, 690 F.3d 9, 21 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013).

<sup>84</sup> *Id.*

<sup>85</sup> *Id.* at 21–22.

<sup>86</sup> *See id.*

<sup>87</sup> *Id.* at 20.

<sup>88</sup> *See* 5 U.S.C. § 706 (2012); *Citizens to Pres. Overton Park v. Volpe*, 401 U.S. 402, 416 (1977).

<sup>89</sup> *Overton Park*, 401 U.S. at 416.

<sup>90</sup> *Upper Blackstone*, 690 F.3d at 32.

In *Upper Blackstone*, the court acted to the full extent of its abilities under the APA.<sup>91</sup> Regardless of the effect on the environment, the First Circuit correctly decided that the permit limits could not be overturned because they were within the zone of reasonableness.<sup>92</sup> The EPA is responsible for any detrimental environmental consequences that might occur because it failed to use its authority under the Clean Water Act (CWA) to implement federal standards if state standards are insufficient.<sup>93</sup>

The court's holding in *Upper Blackstone* demonstrates that states should establish numeric criteria to assist permit writers in setting effluent limits.<sup>94</sup> Once the EPA issues a permit, options are limited for unsatisfied parties.<sup>95</sup> Interested parties may appeal permit limits to the Environmental Appeals Board (EAB), and then the controlling circuit court.<sup>96</sup> Unless the effluent limits fall outside the zone of reasonableness, though, a court will probably not overturn the permit because the APA constrains the court's review.<sup>97</sup> Therefore, successfully challenging NPDES permits is extremely difficult.<sup>98</sup> Permit writers considering narrative criteria share in the frustration because they receive minimal guidance and can face adjudicative challenges of their permit limits.<sup>99</sup>

For these reasons, states should give permit writers all the necessary and relevant information so that permit limits are set appropriately in the first instance.<sup>100</sup> Many states use narrative criteria, and when they do, permit writers have difficulty in determining effluent limits that will meet the state's environmental goals.<sup>101</sup> Because states create their own

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<sup>91</sup> See 5 U.S.C. § 706; *Upper Blackstone*, 690 F.3d at 20, 32.

<sup>92</sup> *Upper Blackstone*, 690 F.3d at 32; see *supra* note 59 and accompanying text.

<sup>93</sup> See 33 U.S.C. § 1313(c)(3) (2006) (requiring the EPA Administrator to review proposed water quality standards and promulgate new standards if the proposed standards are insufficient and the state fails to revise the standards after notice); *Gulf Restoration Network v. Jackson*, No. 12-677, 2013 WL 5328547, at \*1, \*3 (E.D. La. Sept. 20, 2013).

<sup>94</sup> See *Upper Blackstone*, 690 F.3d at 32; *Am. Paper Inst. v. U.S. Envtl. Prot. Agency*, 996 F.2d 346, 350 (D.C. Cir. 1993).

<sup>95</sup> See *Upper Blackstone*, 690 F.3d at 18-19, 32.

<sup>96</sup> See *id.* at 18-19.

<sup>97</sup> See *id.* at 32. Courts usually defer to agencies regarding specific numerical standards. See *supra* note 59 and accompanying text.

<sup>98</sup> See 5 U.S.C. § 706 (2012); *Upper Blackstone*, 690 F.3d at 32.

<sup>99</sup> See *Am. Paper*, 996 F.2d at 350 ("Faced with this conundrum, some permit writers threw up their hands and, contrary to the Act, simply ignored water quality standards including narrative criteria altogether when deciding upon permit limitations.").

<sup>100</sup> See *Upper Blackstone*, 690 F.3d at 32; *Am. Paper*, 996 F.2d at 350.

<sup>101</sup> See *Fla. Wildlife Fed'n v. S. Fla. Water Mgmt. Dist.*, 647 F.3d 1296, 1299 (11th Cir. 2011); *Am. Paper*, 996 F.2d at 350. For example, Massachusetts has a narrative water quality standard that requires bodies of water to be "free from nutrients in concentrations that

designated uses, states are in a better position to translate their criteria than outside permit writers.<sup>102</sup> Many states prefer that the EPA translate their vague narrative criteria, however, and if necessary affected parties will challenge the translation when the EPA issues the permit.<sup>103</sup> Industry leaders complain that translating narrative criteria into numeric standards is nearly impossible for states.<sup>104</sup> As a result, by leaving the task of translating to the EPA, states and industries leave themselves susceptible to unnecessary problems that were avoidable.<sup>105</sup>

The CWA grants the EPA authority to reject a state's proposed water quality criteria and replace that criteria with "specific numeric standards."<sup>106</sup> The EPA rarely uses this power, however, and prefers to work collaboratively with states to create the criteria.<sup>107</sup> Because courts possess only limited authority to overturn effluent limits in NPDES permits, many environmental groups are frustrated by the EPA's failure to protect the environment to the full extent of its authority.<sup>108</sup> The CWA explicitly gives the EPA the power to create numeric standards for each state, and though this task might seem cumbersome, it is fully within the scope of the EPA's authority.<sup>109</sup>

The EPA has taken some initiative to improve its control over water quality by urging states to switch to numeric criteria.<sup>110</sup> For example, as discussed in *Florida Wildlife Federation v. South Florida Water Management District*, the EPA required Florida to create numeric criteria but took on the task itself when Florida did not implement the criteria.<sup>111</sup> The EPA also encouraged Midwestern states to create numeric criteria to protect the Mississippi River and Gulf of Mexico.<sup>112</sup>

If the EPA continues to take a "hands-off" approach regarding the CWA, Congress should apply principles from the Clean Air Act (CAA)

would cause or contribute to impairment of existing or designated uses," among other similarly vague narrative standards. *Upper Blackstone*, 690 F.3d at 15.

<sup>102</sup> See *Am. Paper*, 996 F.2d at 350; Brief for the Respondent in Opposition, *supra* note 43, at 2.

<sup>103</sup> See *Upper Blackstone*, 690 F.3d at 20; DELTA F.A.R.M., *supra* note 48.

<sup>104</sup> See DELTA F.A.R.M., *supra* note 48. Narrative criteria allow for flexibility in enforcement and are appealing to businesses. See *id.*

<sup>105</sup> See *Upper Blackstone*, 690 F.3d at 32; *Am. Paper*, 996 F.2d at 350.

<sup>106</sup> 33 U.S.C. § 1313(c)(3) (2006).

<sup>107</sup> See *Gulf Restoration Network*, 2013 WL 5328547, at \*1, \*3.

<sup>108</sup> See *id.* at \*1, \*2 ("The crux of the Petition is Plaintiffs' dissatisfaction with what they characterize as EPA's 'hands-off approach' to dealing with the problem of nitrogen and phosphorous pollution in the United States.").

<sup>109</sup> See 33 U.S.C. § 1313(c)(3).

<sup>110</sup> See Petition for Writ of Certiorari, *supra* note 19, at 10.

<sup>111</sup> 647 F.3d at 1299–1301.

<sup>112</sup> See DELTA F.A.R.M., *supra* note 48.

to the CWA and strip authority from the states by mandating federal standards.<sup>113</sup> Some scholars have suggested that the CWA is the “sister statute” of the CAA,<sup>114</sup> which is arguably the “most successful piece of environmental legislation ever drafted.”<sup>115</sup> In the CAA, the EPA is responsible for naming air pollutants that pose a risk to public health and setting numeric limits for those pollutants.<sup>116</sup> By making the CWA mirror the CAA’s requirement of federal standards, the EPA would ensure that CWA permit writers have the necessary information to translate criteria into permit limits.<sup>117</sup> As a result, states would lose the authority to set flexible narrative criteria, which would result in NPDES permits that reflect strict numeric criteria that will help to protect the integrity of the nation’s waters.<sup>118</sup>

### CONCLUSION

*Upper Blackstone Water Pollution Abatement District v. U.S. Environmental Protection Agency* demonstrates the frequent problems that occur when states use narrative criteria for their water quality standards. When parties challenge effluent limits in National Pollution Discharge Elimination System (NPDES) permits, courts lack authority to overturn those limits if the limits are within the highly deferential “zone of reasonableness.” States should issue their own numeric criteria, or the EPA should use its authority under the Clean Water Act (CWA) to implement specific numeric criteria. If the EPA fails to use this authority, however, Congress should consider making the CWA mirror the Clean Air Act by mandating federal numeric standards. Ultimately, states should use numeric criteria instead of narrative criteria to ease the translation process into NPDES permits and help protect the nation’s waters.

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<sup>113</sup> See Adler, *supra* note 24, at 213, 230–31.

<sup>114</sup> See, e.g., *id.* at 206.

<sup>115</sup> ZYGMUNT PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 465 (Vicki Been et al. eds., 4th ed. 2010).

<sup>116</sup> See 42 U.S.C. § 7409(a)(1)–(2) (2006); Adler, *supra* note 24, at 230–31.

<sup>117</sup> See 42 U.S.C. § 7409(a)(1)–(2); Adler, *supra* note 24, at 230–31.

<sup>118</sup> See *Am. Paper*, 996 F.2d at 350; DELTA F.A.R.M., *supra* note 48.