

September 2019

## Pain in the Ash: How Coal-Fired Power Plants Are Polluting Our Nation's Waters Without Consequences

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### Recommended Citation

Amanda P. Demmerle, *Pain in the Ash: How Coal-Fired Power Plants Are Polluting Our Nation's Waters Without Consequences*, 122 W. Va. L. Rev. (2019).

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**PAIN IN THE ASH: HOW COAL-FIRED POWER  
PLANTS ARE POLLUTING OUR NATION’S WATERS  
WITHOUT CONSEQUENCES**

I.	INTRODUCTION.....	290
II.	STATUTORY BACKGROUND .....	291
	A. <i>The Clean Water Act</i> .....	291
	B. <i>The Resource Conservation and Recovery Act</i> .....	294
III.	BACKGROUND ON COAL ASH.....	295
	A. <i>What is coal ash and what are the risks associated with it?</i> . 295	
	B. <i>What do utilities do with the coal ash they generate?</i> .....	297
	C. <i>How is coal ash regulated?</i> .....	298
	D. <i>Recent court cases regarding coal ash impoundments</i> .....	300
	1. <i>Sierra Club v. Virginia Electric &amp; Power Co.</i> .....	300
	2. <i>Kentucky Waterways Alliance v. Kentucky Utilities Co.</i> . 302	
	3. <i>Tennessee Clean Water Network</i> <i>v. Tennessee Valley Authority</i> .....	303
	4. <i>Prairie Rivers Network</i> <i>v. Dynegy Midwest Generation, L.L.C.</i> .....	305
IV.	THE PITFALLS OF THE CURRENT RCRA REGULATIONS GOVERNING COAL ASH .....	306
V.	SOLUTIONS: HOW THE CWA COULD COVER COAL ASH IMPOUNDMENTS .....	308
	A. <i>Coal ash ponds as WOTUS</i> .....	309
	B. <i>Groundwater as a point source</i> .....	309
	C. <i>Coal ash ponds as point sources</i> .....	310
	1. <i>Groundwater connection theories</i> .....	313
	2. <i>Groundwater as WOTUS</i> .....	319
VI.	CONCLUSION .....	320

## I. INTRODUCTION

Public utilities like Dominion, Duke Energy, and the Tennessee Valley Authority (“TVA”) are the reason why most of us can flip a light switch, store our food, or dry our hair without having to worry if the electricity will work that day. But these public utilities are also the reason why we might not be able to go swimming in a lake we played in as a child, eat the fish we catch from a river, or let our dogs drink from a running stream.<sup>1</sup>

Specifically, the TVA is the reason why some families did not have a home to go back to in 2008 after an earthen dike, holding in one of TVA’s coal ash impoundments, at its Kingston facility suddenly gave way.<sup>2</sup> Luckily, no one was killed, but three people were injured, 15 homes were damaged or destroyed, and more than one billion gallons of toxic coal ash sludge were released into the Emory River in Tennessee.<sup>3</sup> That one billion gallons of coal ash could fill 1,660 Olympic-size swimming pools<sup>4</sup> or 20 million bathtubs.<sup>5</sup> This spill also “ruptured a natural gas line, disrupted power in the area, . . . and resulted in elevated levels of arsenic and lead in the Emory River,” which caused the complete destruction of “more than 80 acres of aquatic ecosystems.”<sup>6</sup> This event was “the largest industrial spill in the nation’s history—nearly ten times the size of the Deepwater Horizon oil spill two years later in the Gulf of Mexico.”<sup>7</sup> And it was costly, as TVA “took four years and spent more than \$1.2 billion to remove Coal Residuals and contaminated sediment from the river and adjoining areas, to monitor and repair associated damage, and to construct a new disposal unit.”<sup>8</sup>

Six years later, coal ash slurry again poured into the environment, this time into the Dan River in North Carolina. Instead of a broken dike, this case was one of a 48-inch broken pipe.<sup>9</sup> While not as devastating as the TVA spill in 2008, this large leak of coal ash lasted for nearly a week until the pipe was

<sup>1</sup> See *infra* Part III.

<sup>2</sup> *Tennessee Sludge Spill Estimate Grows to 1 Billion Gallons*, CNN (Dec. 28, 2008, 5:58 PM), <http://www.cnn.com/2008/US/12/26/tennessee.sludge/>; see also Joel K. Bourne Jr., *Coal’s Other Dark Side: Toxic Ash that Can Poison Water and People*, NAT’L GEOGRAPHIC (Feb. 19, 2019), <https://www.nationalgeographic.com/environment/2019/02/coal-other-dark-side-toxic-ash/>.

<sup>3</sup> *Tennessee Sludge Spill Estimate Grows to 1 Billion Gallons*, *supra* note 2.

<sup>4</sup> *Id.*

<sup>5</sup> This calculation assumes that the average bathtub holds 50 gallons of water. See *What Does 2 Billion Gallons of Water Look Like?*, WATER SMART, <https://www.watersmart.com/what-does-2-billion-gallons-of-water-look-like/> (last visited Aug. 27, 2019).

<sup>6</sup> *Util. Solid Waste Activities Grp. v. EPA*, 901 F.3d 414, 423 (D.C. Cir. 2018).

<sup>7</sup> Bourne, *supra* note 2.

<sup>8</sup> *Util. Solid Waste Activities Grp.*, 901 F.3d at 423.

<sup>9</sup> Catherine E. Shoichet, *Spill Spews Tons of Coal Ash into North Carolina River*, CNN (Feb. 9, 2014, 6:29 PM), <https://www.cnn.com/2014/02/09/us/north-carolina-coal-ash-spill/index.html>.

plugged with cement.<sup>10</sup> By then, “39,000 tons of coal ash and 27 million gallons of wastewater” had flowed into the Dan River.<sup>11</sup> Duke Energy, the utility responsible for this impoundment and North Carolina’s largest utility, “pleaded guilty [in May 2015] . . . to nine violations of the federal Clean Water Act and will pay \$102 million in fines and restitution.”<sup>12</sup> This has been characterized as “the largest federal criminal fine in North Carolina history.”<sup>13</sup>

While certainly tragic, the TVA and Duke cases are “easy” in terms of liability under federal law. When millions of tons of coal ash slurry are suddenly released into the environment, there is no question the utility will be on the hook and the environment will be cleaned up. However, what if you cannot see the damage being done? Such a case is inherently more difficult, but nonetheless it is just as important, because even coal ash impoundments that never breach still leach toxic heavy metals like arsenic and selenium into the groundwater, contaminating both drinking water supplies and surface waters. In fact, “[a]lmost all [coal ash impoundments] are contaminating groundwater with toxins above levels that the U.S. Environmental Protection Agency deems safe for drinking water.”<sup>14</sup>

Naturally, much of the recent controversy over coal ash is centered on this unseen contamination. Part II of this Article will briefly lay out the relevant parts of two federal statutes that currently impact coal ash impoundments—the Clean Water Act (“CWA”) and the Resources Conservation and Recovery Act (“RCRA”). Part III will then discuss the basics of coal ash, how it is currently regulated, and some recent court cases regarding coal ash impoundments. Part IV will discuss how the current regulations under RCRA are insufficient and why the CWA would be a better avenue, at least until RCRA regulations with actual force are established, to regulate the pollution that discharges from coal ash impoundments. Finally, Part V will examine the various ways the CWA could be utilized to regulate coal ash impoundments and what other steps would be necessary to make that a reality.

## II. STATUTORY BACKGROUND

### A. *The Clean Water Act*

The CWA was enacted in 1972 with the stated objective “to restore and maintain the chemical, physical, and biological integrity of the Nation’s

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<sup>10</sup> *Id.*

<sup>11</sup> *Util. Solid Waste Activities Grp.*, 901 F.3d at 433.

<sup>12</sup> *Duke Energy Fined \$102 Million in Coal Ash Spill*, CBS NEWS (May 14, 2015, 5:53 PM), <https://www.cbsnews.com/news/duke-energy-fined-102-million-in-coal-ash-spill/>.

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

<sup>14</sup> *Mapping the Coal Ash Contamination*, EARTHJUSTICE (July 23, 2019), <https://earthjustice.org/features/map-coal-ash-contaminated-sites>.

waters.”<sup>15</sup> To those ends, the Act prohibits the “discharge of any pollutant by any person” to navigable waters without a permit, unless otherwise authorized by the Act.<sup>16</sup> Such permits are issued pursuant to the CWA’s National Pollutant Discharge Elimination System (“NPDES”).<sup>17</sup> The CWA defines “discharge of a pollutant” as “any addition of any pollutant to navigable waters from any point source.”<sup>18</sup> Thus, essentially every discharge of a pollutant from a point source into navigable waters requires an NPDES permit to comply with the CWA.

“Navigable waters” is defined broadly in the CWA as waters of the United States (“WOTUS”).<sup>19</sup> According to the Supreme Court, WOTUS does not just include navigable-in-fact waters, but can also include other non-navigable waters, such as wetlands with a significant nexus to WOTUS.<sup>20</sup> This broad reading of WOTUS is also found in the Army Corps of Engineers’ (“Corps”) regulations, as the Corps defines WOTUS “to include not only actually navigable waters but also tributaries of such waters as well as adjacent wetlands.”<sup>21</sup>

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<sup>15</sup> 33 U.S.C.A. § 1251(a) (West 2019).

<sup>16</sup> *Id.* § 1311(a).

<sup>17</sup> *Id.* § 1342.

<sup>18</sup> *Id.* § 1362(12).

<sup>19</sup> *Id.* § 1362(7).

<sup>20</sup> *Rapanos v. United States*, 547 U.S. 715, 767 (2006) (Kennedy, J., concurring). While Justice Anthony Kennedy’s opinion is only a concurrence, most circuits agree that his opinion is the controlling one. *See, e.g., United States v. Robinson*, 505 F.3d 1208, 1221 (11th Cir. 2007) (concluding that Justice Kennedy’s concurrence controls and thus adopting the “significant nexus” test); *River Watch v. City of Healdsburg (River Watch II)*, 496 F.3d 993, 999–1000 (9th Cir. 2007) (same); *United States v. Gerke Excavating, Inc.*, 464 F.3d 723, 724–25 (7th Cir. 2006), *cert. denied*, 128 S. Ct. 45 (2007) (same). *But see United States v. Johnson*, 467 F.3d 56, 64 (1st Cir. 2006), *cert. denied*, 128 S. Ct. 375 (2007) (concluding that “the United States may elect to prove jurisdiction under either” Justice Kennedy’s or Justice Scalia’s test (citation omitted)).

<sup>21</sup> *Cape Fear River Watch v. Duke Energy Progress*, 25 F. Supp. 3d 798 (E.D.N.C. 2014) (citing 33 C.F.R. § 328.3(a)). The relevant text of the Corps’ definition of WOTUS reads as follows:

(a) For purposes of the Clean Water Act, 33 U.S.C. 1251 et seq., and its implementing regulations, subject to the exclusions in paragraph (b) of this section, the term “waters of the United States” means:

- (1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters, including interstate wetlands;
- (3) The territorial seas;
- (4) All impoundments of waters otherwise identified as waters of the United States under this section;
- (5) All tributaries, as defined in paragraph (c)(3) of this section, of waters identified in paragraphs (a)(1) through (3) of this section;

The term “point source” means “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, [or] container . . . from which pollutants are or may be discharged.”<sup>22</sup> However, nonpoint sources<sup>23</sup> are not covered by the CWA, and thus do not require an NPDES permit.

At the time of its enactment, the CWA was viewed as a major overhaul of its predecessor statutes.<sup>24</sup> Per the prior federal laws governing water pollution, enforcement agencies waited until water pollution was detected and then attempted to trace back the pollution to its source.<sup>25</sup> This proved to be a difficult, if not impossible, task for enforcement agencies. The CWA attempted to remedy this by focusing on the discharges into WOTUS before the discharges occurred, rather than “search[ing] for a precise link between pollution and water quality” after-the-fact.<sup>26</sup>

The CWA is an example of cooperative federalism at work because states are given the ability to “administer the federal NPDES permitting program, provided their regulations are at least as stringent as the federal limitations.”<sup>27</sup> Forty-six states currently administer NPDES permits for their states, rather than letting the EPA do it for them.<sup>28</sup>

The CWA gives the Environmental Protection Agency (“EPA”) the power to file civil and criminal actions against those who violate the CWA.<sup>29</sup> These enforcement actions are typically against those who pollute from a point source to WOTUS without an NPDES permit. The CWA also authorizes citizen

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(6) All waters adjacent to a water identified in paragraphs (a)(1) through (5) of this section, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters;

(7) All waters in paragraphs (a)(7)(i) through (v) of this section where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (a)(1) through (3) of this section.

33 C.F.R. § 328.3(a).

<sup>22</sup> 33 U.S.C.A. § 1362(14) (West 2019).

<sup>23</sup> “Nonpoint source” means “any source of water pollution that does not meet the legal definition of ‘point source’” as defined by the CWA. *Basic Information About Nonpoint Source (NPS) Pollution*, EPA, <https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution> (last visited Oct. 19, 2019). Examples of nonpoint sources include runoff from roads, eroding stream banks, and excess chemicals from agricultural or residential land. *Id.*

<sup>24</sup> *Ky. Waterways All. v. Ky. Utils. Co.*, 905 F.3d 925, 928 (6th Cir. 2018).

<sup>25</sup> *Id.* at 928.

<sup>26</sup> *Id.* (quoting S. REP. NO. 92-414 (1971), as reprinted in 1972 U.S.C.C.A.N. 3668, 3675).

<sup>27</sup> *Id.* at 929 (citing 33 U.S.C.A. § 1342(b)–(d) (West 2019)).

<sup>28</sup> See Definition of “Waters of the United States,” 80 Fed. Reg. 37,054, 37,059 (June 29, 2015).

<sup>29</sup> 33 U.S.C.A. § 1319(a)–(c) (West 2019).

suit provisions, provided that the citizen notifies the EPA, the pertinent state, and the alleged wrongdoer 60 days in advance of bringing the action.<sup>30</sup>

### B. *The Resource Conservation and Recovery Act*

RCRA was designed to “promote the protection of health and the environment and to conserve valuable material and energy resources.”<sup>31</sup> RCRA regulates solid wastes, which includes “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations.”<sup>32</sup> However, Congress has explicitly exempted, among other things, industrial wastewater discharges that are subject to regulation as point sources under section 402 of the CWA from the definition of solid waste.<sup>33</sup> Thus, “when a discharge requires an NPDES permit, it is expressly excluded from RCRA’s coverage.”<sup>34</sup> To put it another way, a discharge is either covered by the CWA or by RCRA, but it cannot be covered by both.

RCRA splits solid wastes into two categories—hazardous and non-hazardous.<sup>35</sup> Hazardous wastes are strictly regulated and monitored by the EPA under Subtitle C of RCRA.<sup>36</sup> Nonhazardous wastes fall under Subtitle D of RCRA, where regulation is left mainly to the states.<sup>37</sup> For Subtitle D wastes, RCRA “encourages states to develop plans to manage solid waste.”<sup>38</sup> “Specifically, RCRA requires the EPA to promulgate guidelines for solid waste disposal facilities that would help ‘protect[] . . . the quality of ground waters and surface waters from leachates.’”<sup>39</sup>

RCRA gives the EPA or relevant state agencies the ability to pursue civil or criminal actions for enforcement purposes.<sup>40</sup> Citizen suits are also permitted under RCRA, provided that the citizen gives 60-days notice to the EPA, the alleged wrongdoer, and the relevant state<sup>41</sup> and provided that the alleged wrongdoing “present[s] an imminent and substantial endangerment to health or

<sup>30</sup> *Id.* § 1365(a)–(b).

<sup>31</sup> 42 U.S.C.A. § 6902(a) (West 2019).

<sup>32</sup> *Id.* §§ 1004(27), 6903(27).

<sup>33</sup> *Id.* § 6903(27).

<sup>34</sup> *Ky. Waterways All. v. Ky. Utils. Co.*, 905 F.3d 925, 929 (6th Cir. 2018).

<sup>35</sup> *See Appalachian Voices v. McCarthy*, 989 F. Supp. 2d 30, 38 (D.D.C. 2013).

<sup>36</sup> 42 U.S.C.A. §§ 6922–28 (West 2019).

<sup>37</sup> *Env'tl. Def. Fund v. EPA*, 852 F.2d 1309, 1310 (D.C. Cir. 1988).

<sup>38</sup> *Ky. Waterways All.*, 905 F.3d at 929 (citing 42 U.S.C.A. § 6907 (West 2019)).

<sup>39</sup> *Id.* (citing 42 U.S.C.A. § 6907(a)(2) (West 2019)).

<sup>40</sup> *See* 42 U.S.C.A. §§ 6928(a), (d), (g), 6296(b) (West 2019).

<sup>41</sup> *Id.* § 6972(b)(2)(A).

the environment.”<sup>42</sup> Citizens are also allowed to file a “civil action against any party in violation of a RCRA regulation or permit issued under RCRA,”<sup>43</sup> which is another way of saying that citizen suit provisions are also authorized under RCRA.

### III. BACKGROUND ON COAL ASH

Before going further, it is important to know what coal ash is, what makes it dangerous, and how it is stored and regulated. It is also important to be aware of recent litigation involving coal ash impoundments so that one can understand how citizens are trying to use the CWA to hold companies responsible for pollution leaching from their coal ash impoundments and what the courts have said about it. Each of these will be discussed in turn below.

#### A. *What is coal ash and what are the risks associated with it?*

Coal ash<sup>44</sup> is a waste product of coal-fired power plants.<sup>45</sup> The term “coal ash” encompasses several different types of materials, including fly ash,<sup>46</sup> bottom ash,<sup>47</sup> boiler slag,<sup>48</sup> and flue gas desulfurization material<sup>49</sup> (see *Figure 1* below). Considering that 10% of the coal burned at coal-fired power plants becomes coal ash,<sup>50</sup> and the United States uses coal for one-third of its electricity generation,<sup>51</sup> the amount of coal ash generated is significant—in fact, coal ash is “one of the largest industrial waste streams generated in the United States.”<sup>52</sup>

<sup>42</sup> *Id.* § 6972(a)(1)(B).

<sup>43</sup> *Ky. Waterways All.*, 905 F.3d at 930 n.2 (citing 42 U.S.C.A. § 6972(a)(1)(A) (West 2019)).

<sup>44</sup> Coal combustion residuals (“CCRs”) is another name for coal ash. *Frequent Questions About the 2015 Coal Ash Disposal Rule*, EPA, <https://www.epa.gov/coalash/frequent-questions-about-2015-coal-ash-disposal-rule#1> (last visited Aug. 27, 2019).

<sup>45</sup> *Id.*

<sup>46</sup> Fly ash is “a very fine, powdery material composed mostly of silica made from the burning of finely ground coal in a boiler.” *Id.*

<sup>47</sup> Bottom ash is “a coarse, angular ash particle that is too large to be carried up into the smoke stacks so it forms in the bottom of the coal furnace.” *Id.*

<sup>48</sup> Boiler slag is “molten bottom ash from slag tap and cyclone type furnaces that turns into pellets that have a smooth glassy appearance after it is cooled with water.” *Id.*

<sup>49</sup> Flue gas desulfurization material is “a material leftover from the process of reducing sulfur dioxide emissions from a coal-fired boiler that can be a wet sludge consisting of calcium sulfite or calcium sulfate or a dry powdered material that is a mixture of sulfites and sulfates.” *Id.*

<sup>50</sup> Bourne, *supra* note 2.

<sup>51</sup> *Coal Ash Recycling Reaches Record 64 Percent Amid Shifting Production and Use Patterns*, AM. COAL ASH ASS’N 3 (Nov. 13, 2018), <https://www.aaa-usa.org/Portals/9/Files/PDFs/Coal-Ash-Production-and-Use-2017.pdf>.

<sup>52</sup> *Frequent Questions About the 2015 Coal Ash Disposal Rule*, *supra* note 44 (“In 2012, more than 470 coal-fired electric utilities burned over 800 million tons of coal, generating approximately



Coal ash is dangerous if it ends up in the wrong place, as it “contains contaminants like mercury, cadmium, and arsenic,” which are “associated with cancer and various other serious health effects.”<sup>53</sup> The contaminants associated with coal ash can also have serious impacts on fish and wildlife if the coal ash contaminants end up in a nearby waterway.<sup>54</sup> For instance, arsenic alone “has been shown to cause lung cancer, bladder cancer, and skin cancer.”<sup>55</sup> Selenium, another contaminant associated with coal ash, can kill off an entire fishery if the concentration reaches a certain level in the environment.<sup>56</sup> Selenium also bioaccumulates up the food chain, putting higher trophic level species at risk, including humans.<sup>57</sup>

The 900 people who helped clean up the 2008 TVA spill know just how dangerous coal ash can be. Thirty-six of these workers have “died from brain cancer, lung cancer, leukemia, and other diseases.”<sup>58</sup> Two hundred of the workers sued Jacobs Engineering (“Jacobs”), the contractor TVA hired to do the cleanup work, because Jacobs failed to provide adequate protective equipment—“[t]he manager for Jacobs told people not even to wear dust masks.”<sup>59</sup> This is problematic because “[s]ome coal ash particles are so fine—less than 2.5 microns in diameter, a 30th the width of a human hair—that they can be sucked deep into the lungs and become a health hazard even without toxic hitchhikers.”<sup>60</sup>

A jury found that Jacobs failed to provide the workers with adequate protection, but the next phase of the trial must link the diseases the workers have contracted to the coal ash they were handling.<sup>61</sup> Based on the stories of these workers and the known risks of coal ash, Jacobs likely will be on the hook—at least one can only hope. Ansol Clark, one of the cleanup workers, got

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110 million tons of CCRs in 47 states and Puerto Rico.”); see also Sean Reilly, *Coal Ash: D.C. Circuit Upends EPA’s Plan to Undercut Obama Rule*, E&E NEWS (Aug. 29, 2018), <https://www.eenews.net/stories/1060095417>.

<sup>53</sup> *Frequent Questions About the 2015 Coal Ash Disposal Rule*, supra note 44; see also *Coal Ash: Hazardous to Human Health*, PHYSICIANS FOR SOC. RESP., <https://www.psr.org/wp-content/uploads/2018/05/coal-ash-hazardous-to-human-health.pdf> (last visited Sept. 7, 2019) (“If eaten, drunk or inhaled, these toxicants can cause cancer and nervous system impacts such as cognitive deficits, developmental delays and behavioral problems. They can also cause heart damage, lung disease, respiratory distress, kidney disease, reproductive problems, gastrointestinal illness, birth defects, and impaired bone growth in children.”).

<sup>54</sup> *Frequent Questions About the 2015 Coal Ash Disposal Rule*, supra note 44.

<sup>55</sup> Bourne, supra note 2.

<sup>56</sup> *Cape Fear River Watch v. Duke Energy Progress*, 25 F. Supp. 3d 798, 802 (E.D.N.C. 2014).

<sup>57</sup> *Id.*

<sup>58</sup> Bourne, supra note 2.

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

a clean bill of health in his physical just before coming to work for Jacobs.<sup>62</sup> After a few years working, he started having breathing problems, then dizzy spells, and eventually total black outs.<sup>63</sup> He contracted arrhythmia and congestive heart failure, and then he suffered from a stroke.<sup>64</sup> His doctors also diagnosed him with “polycythemia vera, a rare blood cancer,” which his doctors believe “was likely caused by radiation from the ash.”<sup>65</sup> This is just one story, but many others are just as tragic, and 36 cases were fatal.<sup>66</sup>

*B. What do utilities do with the coal ash they generate?*

Coal ash is either recycled or stored in impoundment ponds or landfills (see *Figure 1* below). Forty percent of generated coal ash was recycled in 2012.<sup>67</sup> That number is now 64% as of 2017 according to the American Coal Ash Association,<sup>68</sup> and recycled coal ash generates “about \$23 billion in revenue each year for utilities.”<sup>69</sup> Most of the coal ash that is recycled “goes into concrete and cement, but ash has also been used in roadbeds, as fill under housing developments and golf courses, even for snow control or as fertilizer on agricultural land.”<sup>70</sup> “In many cases, products made with [coal ash] perform better than products made without it. For instance, coal fly ash makes concrete stronger and more durable. It also reduces the need to manufacture cement, resulting in significant reductions in greenhouse gas emissions—about 14 million tons in 2017 alone.”<sup>71</sup> Even environmental groups, such as the Natural Resources Defense Council, Inc. (“NRDC”), support coal ash recycling because, as long as it is recycled properly, the products made with coal ash pose no threat to human health.<sup>72</sup>

The coal ash that is not recycled ends up in landfills or impoundments, of which almost 80% is stored on-site.<sup>73</sup> According to the EPA, there are more

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<sup>62</sup> *Id.*

<sup>63</sup> *Id.*

<sup>64</sup> *Id.*

<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

<sup>67</sup> *Frequent Questions About the 2015 Coal Ash Disposal Rule*, *supra* note 44.

<sup>68</sup> *Coal Ash Recycling Reaches Record 64 Percent Amid Shifting Production and Use Patterns*, *supra* note 51, at 1.

<sup>69</sup> Bourne, *supra* note 2.

<sup>70</sup> *Id.*

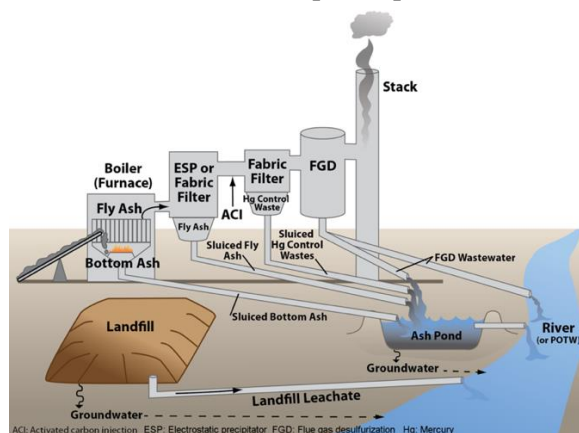
<sup>71</sup> *Coal Ash Recycling Reaches Record 64 Percent Amid Shifting Production and Use Patterns*, *supra* note 51, at 1.

<sup>72</sup> Scott Slesinger, *Coal Ash: Why It Is Better Recycled Than as a Waste*, NRDC (Feb. 13, 2014), <https://www.nrdc.org/experts/scott-slesinger/coal-ash-why-it-better-recycled-waste>.

<sup>73</sup> *Frequent Questions About the 2015 Coal Ash Disposal Rule*, *supra* note 44.

than 310 active on-site coal ash landfills and more than 735 active on-site coal ash surface impoundments.<sup>74</sup> Coal ash landfills store the coal ash in dry form, while coal ash impoundments are wet storage where the coal ash is mixed with water.<sup>75</sup> The landfills average “120 acres in size with an average depth of over 40 feet,” while the impoundments average 50 acres in size and have “an average depth of 20 feet.”<sup>76</sup> The largest coal ash surface impoundment, known as the Little Blue Run, is a staggering 420 feet deep and almost 1,000 acres in size.<sup>77</sup>

*Figure 1.*<sup>78</sup> The EPA’s illustration of the key waste streams associated with coal-fired power plants.



### C. How is coal ash regulated?

With how large, numerous, and dangerous these coal ash impoundments are, and how toxic coal ash can be to both humans and the environment, you would probably think that coal ash has been highly regulated for years. Think again.

Soon after RCRA was enacted, Congress instructed the EPA to study whether mining wastes, which included coal ash, should be regulated under Subtitle C of RCRA.<sup>79</sup> The EPA concluded in 1993 and again in 2000 “that

<sup>74</sup> *Id.*

<sup>75</sup> See *Coal Ash Storage*, SOUTHEASTCOALASH.ORG, <http://www.southeastcoalash.org/about-coal-ash/coal-ash-storage/> (last visited Oct. 19, 2019).

<sup>76</sup> *Id.*

<sup>77</sup> Daniel Moore, *Little Blue Run*, PITT. POST-GAZETTE (Sept. 24, 2018), [https://newsinteractive.post-gazette.com/little\\_blue\\_run/](https://newsinteractive.post-gazette.com/little_blue_run/).

<sup>78</sup> *Steam Electric Power Generating Effluent Guidelines – 2015 Final Rule*, EPA, <https://www.epa.gov/eg/steam-electric-power-generating-effluent-guidelines-2015-final-rule> (last visited Mar. 12, 2019).

<sup>79</sup> *Appalachian Voices v. McCarthy*, 989 F. Supp. 2d 30, 39 (D.D.C. 2013).

regulation of coal ash as hazardous waste under Subtitle C was inappropriate, but . . . it would continue to assess whether increased regulation of coal ash under Subtitle D [wa]s appropriate.”<sup>80</sup>

It took ten more years for the EPA to consider regulating coal ash.<sup>81</sup> The EPA was largely pressured by public outrage after the 2008 TVA coal ash impoundment failure in Tennessee.<sup>82</sup> In 2010, two years after this disaster, the EPA issued two proposed rules—one that would regulate coal ash under Subtitle C and one that would regulate coal ash under Subtitle D “by issuing national minimum criteria.”<sup>83</sup> In 2015, “[n]early four decades after Congress enacted RCRA, the EPA finally promulgated its first Final Rule regulating Coal Residuals.”<sup>84</sup> This Final Rule, known as the CCR Rule, “formally deferred deciding whether Subtitle C regulation is warranted,<sup>85</sup> and used its Subtitle D authority to set forth guidelines on where and how disposal sites for Coal Residuals are to be built, maintained, and monitored.”<sup>86</sup>

The CCR Rule “sets criteria designed to ensure that human health and the environment face ‘no reasonable probability’ of harm from Coal Residuals spilling, leaking, or seeping from their storage units and harming humans and the environment.”<sup>87</sup> More specifically, the CCR Rule “sets minimum criteria for the disposal of Coal Residuals in landfills and surface impoundments,” which include “location restrictions,” “requirements pertaining to lining, structural integrity, and groundwater monitoring, and criteria for recycling Coal Residuals for beneficial uses.”<sup>88</sup> The CCR Rule also “sets compliance deadlines, procedures for closing non-complying landfills and surface impoundments, and

<sup>80</sup> *Id.* (citing Notice of Regulatory Determination on Wastes from the Combustion of Fossil Fuels, 58 Fed. Reg. 42,466–01, 42,466 (Aug. 9, 1993); Final Regulatory Determination on Four Large-Volume Wastes from the Combustion of Coal by Electric Utility Power Plants, 65 Fed. Reg. 32,214 (May 22, 2000)).

<sup>81</sup> *Id.* (citing Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. 35,128–01, 35,128 (June 21, 2010)).

<sup>82</sup> *See supra* Part I.

<sup>83</sup> *Appalachian Voices*, 989 F. Supp. 2d at 40 (citing 75 Fed. Reg. 35,128–01, 35,128 (June 21, 2010)).

<sup>84</sup> *Util. Solid Waste Activities Grp. v. EPA*, 901 F.3d 414, 420 (D.C. Cir. 2018).

<sup>85</sup> *See Bourne*, *supra* note 2 (“After the Kingston spill, environmental groups advocated regulating coal ash as hazardous waste. But the utilities and ACAA lobbied hard against the move, arguing that it would dry up the market for recycling and just create more coal ash.”).

<sup>86</sup> *Util. Solid Waste Activities Grp.*, 901 F.3d at 424 (citing Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. at 21,302 (Apr. 17, 2015)).

<sup>87</sup> *Id.* at 420 (citation omitted).

<sup>88</sup> *Id.* at 424 (citing Criteria for Classification of Solid Waste Disposal Facilities and Practices, 40 C.F.R. §§ 257.60–257.74 (2016)).

requirements that operators of these disposal sites make records of their compliance with the Final Rule publicly available.”<sup>89</sup>

*D. Recent court cases regarding coal ash impoundments*

The 2008 TVA coal ash impoundment breach and the 2012 Duke Energy spill were just the beginning. There have been many other noteworthy controversies revolving around coal ash since those events occurred. While the following discussion of recent court cases is certainly not extensive, it underscores how prevalent these controversies are and how courts have not been eager to help protect the environment from the pollution emanating from coal ash ponds.

1. *Sierra Club v. Virginia Electric & Power Co.*<sup>90</sup>

Virginia Electric & Power Co., also known as Dominion Energy Virginia (“Dominion”), is one of Virginia’s largest utilities. For 60 years, Dominion operated a coal-fired power plant in Chesapeake, Virginia, near the Virginia-North Carolina border.<sup>91</sup> Dominion stored its coal ash in a landfill and settling ponds on site.<sup>92</sup> In 2002, groundwater monitoring revealed arsenic at higher than acceptable levels.<sup>93</sup> Because of these elevated levels of arsenic, Dominion was required to develop a mitigation plan, which the Virginia Department of Environmental Quality approved in 2008, and the coal-fired power plant ceased operations in 2014.<sup>94</sup> The Sierra Club filed suit in 2015 using the CWA’s citizens suit provisions, alleging that Dominion had been discharging pollutants from a point source into WOTUS without a permit, in violation of 33 U.S.C. section 1311(a).<sup>95</sup>

The district court found that Dominion had violated section 1311(a) of the CWA because the landfills and settling ponds where Dominion stored its coal ash were point sources, and those point sources were polluting “the groundwater, which carried the arsenic into navigable waters.”<sup>96</sup> However, the Fourth Circuit

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<sup>89</sup> *Id.* (citing Criteria for Classification of Solid Waste Disposal Facilities and Practices, 40 C.F.R. §§ 257.100–257.07 (2016)).

<sup>90</sup> 903 F.3d 403 (4th Cir. 2018).

<sup>91</sup> *Id.* at 405.

<sup>92</sup> *Id.* at 406.

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*

<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

reversed the district court and held that coal ash impoundments are not point sources.<sup>97</sup>

A point source must be a (1) discernible, (2) confined, and (3) discrete (4) conveyance.<sup>98</sup> While acknowledging that coal ash ponds are discernible, confined, and discrete, the Fourth Circuit emphasized that coal ash ponds are not conveyances. A “conveyance” is “a channel or medium . . . for the movement of something from one place to another.”<sup>99</sup> “Regardless of whether a source is a pond or some other type of container, the source must still be functioning *as a conveyance* of the pollutant into navigable waters to qualify as a point source.”<sup>100</sup>

According to the Fourth Circuit, coal ash ponds “were not created to convey anything and did not function in that manner; they certainly were not discrete conveyances, such as would be a pipe or channel.”<sup>101</sup> Rather, the pollution coming from the coal ash ponds was due to “rainwater and groundwater flowing *diffusely* through the soil.”<sup>102</sup> “[T]he diffuse seepage of water through the ponds into the soil and groundwater does not make the pond a conveyance any more than it makes the landfill or soil generally a conveyance.”<sup>103</sup>

The Fourth Circuit also reasoned that the CWA’s regulation of point sources is “intended to target the *measurable* discharge of pollutants.”<sup>104</sup> NPDES permits “rely on ‘effluent limitations,’” which are “restrictions on the ‘quantities, rates, and concentrations’ of pollutants discharged into navigable waters.”<sup>105</sup> “When a source works affirmatively to *convey* a pollutant, the concentration of the pollutant and the rate at which it is discharged by that conveyance *can be measured*. But when the alleged discharge is diffuse and not the product of a discrete conveyance, that task is virtually impossible.”<sup>106</sup>

The Fourth Circuit emphasized that RCRA is better suited to cover pollution emanating from coal ash ponds. Coal ash is classified as nonhazardous waste covered by RCRA.<sup>107</sup> The EPA has also issued regulations under RCRA covering coal ash storage and treatment, “including, notably, obligations to

<sup>97</sup> *Id.*

<sup>98</sup> 33 U.S.C.A. § 1362(14) (West 2019).

<sup>99</sup> *Sierra Club*, 903 F.3d at 410.

<sup>100</sup> *See id.* at 412.

<sup>101</sup> *Id.* at 411.

<sup>102</sup> *Id.*

<sup>103</sup> *See id.* at 412.

<sup>104</sup> *Id.* at 411.

<sup>105</sup> *Id.* (quoting 33 U.S.C.A. § 1362(11) (West 2019)).

<sup>106</sup> *Id.*

<sup>107</sup> *See* Criteria for Classification of Solid Waste Disposal Facilities and Practices, 40 C.F.R. §§ 257.50, 257.53 (2015).

monitor groundwater quality and undertake any necessary corrective action.”<sup>108</sup> RCRA was amended by Congress in 2016 “specifically to require that operators of coal ash landfills, surface impoundments, and similar facilities obtain permits incorporating the EPA’s regulations pertaining to the disposal of coal ash combustion residuals.”<sup>109</sup> RCRA and the CWA are mutually exclusive, in that RCRA will not apply if the CWA has jurisdiction.<sup>110</sup> Thus, according to the Fourth Circuit, if coal ash ponds are considered point sources under the CWA, these regulations of coal ash under RCRA would become meaningless.<sup>111</sup>

## 2. *Kentucky Waterways Alliance v. Kentucky Utilities Co.*<sup>112</sup>

The Kentucky Waterways Alliance and the Sierra Club sued the Kentucky Utilities Co. (“KU”) because two coal ash impoundments at KU’s E.W. Brown Generating Station were contaminating the groundwater and nearby navigable waters.<sup>113</sup> One of these coal ash impoundments was 114 acres in size, holding “six million cubic yards of coal ash,” while the other covered 29.9 acres.<sup>114</sup>

The Kentucky Waterways Alliance and the Sierra Club filed suit because their ecotoxicology expert discovered elevated selenium levels in the groundwater and in the nearby Herrington Lake, a “popular recreation destination for Kentucky residents.”<sup>115</sup> Their ecotoxicology expert also found that the fish in Herrington Lake were already suffering from such elevated levels of selenium.<sup>116</sup> Selenium is toxic to fish in high quantities, can cause lethal birth defects, and bioaccumulates.<sup>117</sup> Naturally, these environmental groups were quite concerned.

In 2011, KU decided to convert the larger coal ash pond into a dry landfill.<sup>118</sup> The state agency in charge of administering the requisite permit would not allow this conversion until KU could submit a plan to treat the contaminated groundwater and prevent further contamination.<sup>119</sup> KU did so in February of

<sup>108</sup> *Sierra Club*, 903 F.3d at 412 (citing Criteria for Classification of Solid Waste Disposal Facilities and Practices, 40 C.F.R. §§ 257.90–257.98 (2015)).

<sup>109</sup> *Id.* (citing 42 U.S.C.A. § 6945(d) (West 2019)).

<sup>110</sup> 42 U.S.C.A. § 6903(27) (West 2019).

<sup>111</sup> *See Ky. Waterways All. v. Ky. Utils. Co.*, 905 F.3d 925, 938 (6th Cir. 2018).

<sup>112</sup> 905 F.3d 925 (6th Cir. 2018).

<sup>113</sup> *Id.* at 931.

<sup>114</sup> *Id.*

<sup>115</sup> *Id.* at 930.

<sup>116</sup> *Id.* at 931.

<sup>117</sup> *Id.*

<sup>118</sup> *Id.*

<sup>119</sup> *Id.* at 931–32.

2015; thus, they were granted the requisite permit, over the Kentucky Waterways Alliance's and Sierra Club's objections.<sup>120</sup> These organizations then filed suit in federal court in July of 2017, asserting claims under the CWA and RCRA.<sup>121</sup>

The district court dismissed both claims.<sup>122</sup> While the district court found that these coal ash ponds were point sources, it held that this type of indirect pollution was not actionable under the CWA.<sup>123</sup> The district court also held that the RCRA claim could not be heard because the plaintiffs lacked standing.<sup>124</sup> The Sixth Circuit affirmed the district court regarding the CWA claim, holding that pollution through hydrologically connected groundwater is not actionable under the CWA.<sup>125</sup> Rather, pollution must go directly from a point source into WOTUS for the CWA to apply, and groundwater is not a point source.<sup>126</sup> The Sixth Circuit did not overturn the district court's finding that the coal ash pond was a point source, but indicated its disagreement in a footnote.<sup>127</sup> The Sixth Circuit, however, reversed the lower court on the RCRA claim, finding that the plaintiffs' claims were redressable; thus, the district court had jurisdiction to hear the case.<sup>128</sup> The Sixth Circuit then remanded the RCRA portion of the case to the district court.<sup>129</sup> The environmental groups did not petition the Supreme Court for review.<sup>130</sup>

### 3. *Tennessee Clean Water Network v. Tennessee Valley Authority*<sup>131</sup>

This case involved the Tennessee Valley Authority's ("TVA") Gallatin Fossil Plant, a power plant that supplies electricity to the greater Nashville area.<sup>132</sup> The TVA's coal ash ponds at the Gallatin Plant were contaminating nearby groundwater and a "nearby recreation spot," Old Hickory Lake, which is part of the Cumberland River.<sup>133</sup>

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<sup>120</sup> *Id.* at 932.

<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> *Id.* at 932, 940.

<sup>125</sup> *Id.* at 934.

<sup>126</sup> *Id.*

<sup>127</sup> *Id.* at 934 n.8.

<sup>128</sup> *Id.* at 938–40.

<sup>129</sup> *Id.* at 940.

<sup>130</sup> Juan Carlos Rodriguez, *Enviros Drop High Court Groundwater Case After Settlement*, LAW360 (Sept. 5, 2019, 11:46 AM), <https://www.law360.com/articles/1195719/enviros-drop-high-court-groundwater-case-after-settlement>.

<sup>131</sup> 905 F.3d 436 (6th Cir. 2018).

<sup>132</sup> *Id.* at 438.

<sup>133</sup> *Id.*



One of the TVA coal ash impoundments in question was opened in 1956, dewatered in 1973, and closed in 1998.<sup>134</sup> Unbiased expert testimony concluded that the site historically leaked into the water table and was likely still leaking even though the pond was officially closed.<sup>135</sup> The other site in question was a “series of unlined ponds.”<sup>136</sup> These ponds were established in 1970 and covered 476 acres.<sup>137</sup> This site was directly atop a karst aquifer, which means that “sinkholes, fissures, and caves” are common.<sup>138</sup> These features make it so that groundwater easily flows through the terrain.<sup>139</sup> Because of this underground terrain, “[b]etween 1970 and 1978, approximately 27 billion gallons of coal ash wastewater flowed directly from” this site into the Cumberland River.<sup>140</sup>

The Tennessee Clean Water Network and the Tennessee Scenic Rivers Association filed suit, alleging violations of the CWA.<sup>141</sup> The district court found for the plaintiffs, holding that the CWA does cover “discharges of pollutants from a point source through hydrologically connected groundwater to navigable waters where the connection is ‘direct, immediate, and can generally be traced,’” and that the pollution in question fit within that framework.<sup>142</sup> “As a remedy, the court ordered TVA to ‘fully excavate’ the coal ash . . . and relocate it to a lined facility, rejecting TVA’s proposal to dewater and put a cap on the unlined impoundments.”<sup>143</sup> While the court recognized such a penalty was harsh, the court “felt that it was ‘the only adequate resolution to an untenable situation that has gone on for far too long.’”<sup>144</sup> The Sixth Circuit, while acknowledging this was an unfortunate environmental problem, reversed the district court for the same reasons it articulated in *Kentucky Waterways Alliance*.<sup>145</sup>

The environmental groups appealed to the Supreme Court, but while certiorari was still pending, the TVA settled the case.<sup>146</sup> The TVA “agreed to close [the] active coal ash storage compound by removing millions of cubic yards

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<sup>134</sup> *Id.* at 439.

<sup>135</sup> *Id.* at 439–40.

<sup>136</sup> *Id.* at 440.

<sup>137</sup> *Id.*

<sup>138</sup> *Id.*

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> *Id.* at 441.

<sup>142</sup> *Id.*

<sup>143</sup> *Id.* at 442.

<sup>144</sup> *Id.*

<sup>145</sup> *Id.* at 447.

<sup>146</sup> Rodriguez, *supra* note 130.

of coal ash from the pits to ‘an appropriate permitted landfill or for beneficial use.’”<sup>147</sup>

4. *Prairie Rivers Network v. Dynegy Midwest Generation, L.L.C.*<sup>148</sup>

The Prairie Rivers Network filed a complaint against Dynegy Midwest Generation (“DMG”), alleging violations of the CWA.<sup>149</sup> DMG operated the Vermillion Power Station in Vermillion County, Illinois.<sup>150</sup> This coal-fired power plant had three unlined coal ash impoundments on site for coal ash storage.<sup>151</sup> The power plant ceased operations in 2011, but DMG still owned the coal ash impoundments and was responsible for them.<sup>152</sup> Altogether, the coal ash impoundments held “3.33 million cubic yards of coal ash.”<sup>153</sup> Groundwater monitoring revealed that “concentrations of boron and sulfate—primary indicators of coal ash contamination—consistently exceeded Illinois’ groundwater protection standards and, on numerous occasions also exceeded . . . EPA drinking water health advisories for those contaminants.”<sup>154</sup> Additionally, DMG’s “own reports and information have concluded that the coal ash contaminated groundwater flows right into the adjacent Middle Fork,” a nearby river.<sup>155</sup>

DMG filed a motion to dismiss because it believed Seventh Circuit precedent conclusively established that the CWA cannot cover groundwater contamination, whether or not the groundwater was hydrologically connected to navigable waters.<sup>156</sup> The District Court of Illinois agreed with DMG, dismissing the complaint in full.<sup>157</sup> Prairie River Network filed an appeal with the Seventh Circuit on December 14, 2018, and that appeal is still ongoing.<sup>158</sup>

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<sup>147</sup> *Id.*

<sup>148</sup> 350 F. Supp. 3d 697 (C.D. Ill. 2018).

<sup>149</sup> *Id.* at 698.

<sup>150</sup> *Id.*

<sup>151</sup> *Id.* at 699.

<sup>152</sup> *Id.* at 699–700.

<sup>153</sup> *Id.* at 700.

<sup>154</sup> *Id.* at 701.

<sup>155</sup> *Id.*

<sup>156</sup> *Id.* at 702. The defendant here was relying on *Village of Oconomowoc Lake v. Dayton Hudson Corp.*, 24 F.3d 962 (7th Cir. 1994).

<sup>157</sup> *Prairie Rivers Network*, 350 F. Supp. 3d at 704, 707.

<sup>158</sup> *Prairie Rivers Network v. Dynegy Midwest Generation, L.L.C.*, 350 F. Supp. 3d 697 (C.D. Ill. 2018), *appeal docketed*, No. 18-3633 (7th Cir. Dec. 14, 2018).

#### IV. THE PITFALLS OF THE CURRENT RCRA REGULATIONS GOVERNING COAL ASH

With how long it took to enact coal ash regulations and how willing courts are to point to the coal ash regulations under RCRA when environmental groups assert CWA claims in coal ash cases, one would think that these RCRA regulations are stringent and comprehensive. Unfortunately, the RCRA regulations governing coal ash (known as the CCR Rule) are neither stringent nor comprehensive, at least not as much as they should be seeing as how dangerous coal ash is. Indeed, the D.C. Circuit said as much in August of 2018 when it vacated parts of the CCR Rule for the EPA to reconsider.<sup>159</sup>

The D.C. Circuit first criticized the part of the CCR Rule that allowed existing, unlined surface impoundments to continue operation until groundwater contamination is detected.<sup>160</sup> The D.C. Circuit pointed to the EPA's own findings that "unlined impoundments are dangerous," presenting "the greatest risks to human health and the environment."<sup>161</sup> The D.C. Circuit held that the CCR Rule's "approach of relying on leak detection followed by closure is arbitrary and contrary to RCRA."<sup>162</sup> The D.C. Circuit was concerned that once groundwater contamination was detected, the coal ash impoundment might not be retrofitted or closed for another 15 years.<sup>163</sup> Not only that, but the current regulations also did "not contemplate that contamination will be detected as soon as it appears in groundwater" because "the required groundwater sampling need only occur 'at least semi-annual[ly],' or perhaps less frequently under certain geological conditions."<sup>164</sup> If this part of the rule was not bad enough already, the D.C. Circuit then points out how the CCR Rule only requires groundwater monitoring and "only for levels of contamination that would harm human health," but "RCRA requires the EPA to set minimum criteria for sanitary landfills that prevent harm to either 'health *or* the environment.'"<sup>165</sup> Thus, the CCR Rule did meet RCRA's statutory requirements.

<sup>159</sup> See *Util. Solid Waste Activities Grp. v. EPA*, 901 F.3d 414 (D.C. Cir. 2018).

<sup>160</sup> *Id.* at 426–27.

<sup>161</sup> *Id.* at 427 (“[U]nlined impoundments have a 36.2 to 57 percent chance of leakage at a harmfully contaminating level during their foreseeable use.”).

<sup>162</sup> *Id.* at 429.

<sup>163</sup> *Id.* at 427, 429 (“Neither retrofitting nor closure occurs immediately under the Rule; the timeline contemplates a process that takes from five to fifteen years. The EPA understates the harm its own record evidences by emphasizing that ‘leaking unlined impoundments must cease receiving [Coal Residuals] and initiate closure or retrofit activities within six months.’ What it neglects to account for is that the Rule gives the operator a further five years to complete retrofitting or closure activities. The Rule also allows the operators of surface impoundments to extend that window, by up to two years for smaller units and, for units larger than 40 acres—which most are—for up to ten years.”).

<sup>164</sup> *Id.* at 429.

<sup>165</sup> *Id.* at 430 (quoting 42 U.S.C.A. § 6944(a) (West 2019) (emphasis added)).

The D.C. Circuit then moved to the provision of the CCR Rule that “treats existing impoundments constructed with . . . compacted soil and no geomembrane as if they were ‘lined,’” even though new impoundments could not be built that way because these clay-lined impoundments are prone to leakage.<sup>166</sup> Further, these clay-lined impoundments were not required to close once contamination was detected, but could first attempt to repair the liner, even though the EPA failed to provide any evidence that such clay liners could be repaired.<sup>167</sup> Thus, clay-lined impoundments would be able to contaminate groundwater for even longer than unlined impoundments because the regulations gave additional time to attempt to repair an impoundment that likely cannot be repaired before initiating the closure proceedings that take five to 15 years.<sup>168</sup>

Finally, the D.C. Circuit reviewed the “legacy pond” provisions, i.e., the provisions that regulate impoundments that no longer receive coal ash deposits because they are at sites that no longer generate electricity.<sup>169</sup> For these sites, the “EPA considered it sufficient instead just (i) to wait to intervene until a substantial environmental or human harm is ‘imminent,’ or (ii) to attempt to remediate the damage after contamination has occurred.”<sup>170</sup> The D.C. Circuit found this rule particularly disturbing, seeing as how the Dan River Duke Energy catastrophe in North Carolina was the result of a legacy pond failure.<sup>171</sup> The D.C. Circuit also listed several other examples of legacy pond failures and pointed out that most legacy ponds are unlined, meaning they pose the greatest health risk.<sup>172</sup> Based on these findings, the D.C. Circuit vacated and remanded these regulations for the EPA to reconsider.

While RCRA could undoubtedly regulate coal ash impoundments stringently and effectively, the D.C. Circuit decision clearly shows that the current regulations do not. And these regulations likely will not be adequate for the foreseeable future. The CCR Rule needs to be substantially amended or redone entirely, and that is unlikely to happen under the current Administration. Even if the current Administration was receptive, it would still take considerable time to do correctly.

With how many coal ash impoundments that are designated high-risk and the recent litany of litigation over coal ash ponds contaminating nearby groundwater and surface waters, waiting for new rules could prove costly, both in monetary terms and in terms of human and environmental health. As illustrated in *Sierra Club*, Dominion’s coal ash pond in Chesapeake, Virginia,

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<sup>166</sup> *Id.*

<sup>167</sup> *Id.* at 431.

<sup>168</sup> *Id.* at 431–32.

<sup>169</sup> *Id.* at 432–33.

<sup>170</sup> *Id.* at 432.

<sup>171</sup> *Id.* at 433.

<sup>172</sup> *Id.*

was polluting the waters since 2002, but in 2018, 16 years later, the Fourth Circuit found for Dominion because (according to the Fourth Circuit) coal ash ponds are not point sources, and thus the plaintiffs had filed their complaint under the wrong statute.<sup>173</sup>

Luckily, we would not have to wait a day to regulate coal ash impoundments because, contrary to what the Fourth Circuit said in *Sierra Club v. Virginia Electric & Power Co.*, the CWA could cover pollution from coal ash impoundments. In fact, the CWA already does play some part in coal ash impoundments, as many coal ash impoundments already have NPDES permits for discharging excess liquid from their impoundments after the coal ash has settled to the bottom of the impoundment. These discharges inherently will have some of the nasty contaminants in it, but, by requiring a NPDES permit, the EPA knows how much contaminants that body of water is getting so it can ensure that safe levels are not exceeded.

If the CWA can cover these discharges, why would the CWA not also be able to cover the leaching of these contaminants through groundwater to the surface waters? Courts could hold parties responsible under the CWA for their pollution that occurred without an NPDES permit because any discharge into WOTUS without a permit is a violation of the CWA. The EPA could then decide whether or not the pollution in question is within safe, acceptable levels. If the pollution is minimal and safe, the EPA could issue an NPDES permit for further discharges from that coal ash impoundment. If the EPA finds that such discharges are not safe or acceptable, then the EPA would not issue an NPDES permit, which would then require the power plant to either excavate its coal ash impoundment or install a synthetic liner, or else be subject to hefty fines that accumulate by the day. This would accomplish what the CCR Rule does not: it would cover all coal ash impoundments alike, regardless of whether they are legacy ponds, unlined ponds, composite lined ponds, or synthetic lined ponds.

For this to work, however, one must consider how coal ash ponds could fit into the CWA's regulatory framework of point sources and WOTUS. The next section will discuss the various ways that coal ash ponds would fit into this framework, and the strengths and weaknesses of those approaches.

## V. SOLUTIONS: HOW THE CWA COULD COVER COAL ASH IMPOUNDMENTS

There are several ways that the CWA could regulate pollution from coal ash impoundments. While some suggestions are unlikely in light of the current statutory framework and judicial precedents, they still warrant discussion because statutes could always be updated and judicial views could change.

One option is to designate coal ash ponds as WOTUS. A second option is to say that groundwater is a point source. A third, and likely best, option is to characterize coal ash ponds as point sources. However, even if coal ash ponds

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<sup>173</sup> See *supra* Section III.D.1.

are point sources, recent court cases show that another theory regarding the CWA must be accepted to have CWA liability. Still, this third option is likely the best and most sensible solution to the problem while respecting the text and purpose of the CWA. Each option will be discussed in turn below.

A. *Coal ash ponds as WOTUS*

Conceptually, the easiest way to put coal ash ponds under the umbrella of the CWA would be to designate coal ash ponds as WOTUS. If coal ash ponds were WOTUS, contamination of groundwater or navigable waters would not be a part of the equation. Thus, all that one would need to prove is that the coal-fired powerplant used a pipe, a truck, or some other sort of point source to deposit the coal ash in the pond.

However, coal ash ponds would almost never be considered WOTUS. Coal ash ponds are almost always manmade features. It is one thing if coal-fired power plants dumped their coal ash into an existing pond or a dammed river, but almost all coal ash ponds are dug, sometimes lined, and then filled with the coal ash sludge. Other, larger, coal ash impoundments might be in what was once a natural valley that the power plant dammed and filled with its coal ash sludge—one of example of this is the Little Blue Run in Pennsylvania, the largest coal ash impoundment in the United States.<sup>174</sup> Still, both of these types of impoundments are manmade, and thus would not be considered WOTUS under current precedent.

Coal ash ponds could not be WOTUS under current Corps' regulations either, as its regulations specifically exempt “[w]aste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the [CWA].”<sup>175</sup> These same regulations also exempt “[a]rtificial, constructed lakes and ponds created in dry land.”<sup>176</sup> While these regulations are not conclusive, they are given considerable deference.<sup>177</sup> Considering that some naturally occurring wetlands are not considered WOTUS, deference to the Corps here is reasonable. Unless Congress amended the CWA to include manmade bodies of water, coal ash ponds will likely never be considered WOTUS.

B. *Groundwater as a point source*

Making coal ash ponds WOTUS has not been seriously advanced as a theory in many, if any, cases. However, environmental groups have argued that

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<sup>174</sup> Moore, *supra* note 77.

<sup>175</sup> 33 C.F.R. 328.3(b)(1).

<sup>176</sup> 33 C.F.R. 328.3(b)(4)(ii).

<sup>177</sup> *Town of Norfolk v. U.S. Army Corps of Eng'rs*, 968 F.2d 1438, 1451 (1st Cir. 1992).

groundwater is a point source.<sup>178</sup> If groundwater is a point source, then seepage from coal ash ponds into groundwater would be actionable under the CWA so long as that groundwater carried the pollutants into WOTUS. Seeing as all of the cases discussed in Section III.D of this Note involved just that scenario, this route of liability would ensure CWA coverage of coal ash impoundments in most cases.

However, unless the CWA were amended, it is hard to conceive that groundwater is a point source. For one, if groundwater were a point source, it would vastly increase the things that could be considered a point source. The Sixth Circuit recently rejected the notion that groundwater is a point source. While admitting that groundwater is certainly a conveyance, the Sixth Circuit noted that groundwater is neither discernible, confined, or discrete, three additional properties that the CWA requires for point sources.<sup>179</sup> Rather, “[b]y its very nature, groundwater is a ‘diffuse medium’ that seeps in all directions, guided only by the general pull of gravity. . . . One cannot look at groundwater and discern its precise contours as can be done with traditional point sources like pipes, ditches, or tunnels.”<sup>180</sup>

It is likely most circuits would find the Sixth Circuit’s reasoning persuasive. The Ninth Circuit also assumed, without deciding, that groundwater was not a point source.<sup>181</sup> However, rather than classifying groundwater as a point source, which would stretch the bounds of the CWA, there is a simpler solution: courts could classify coal ash ponds as point sources. This option is discussed in the next section below.

### C. Coal ash ponds as point sources

Most courts seem to agree that coal ash ponds are not WOTUS and that groundwater is not a point source, so the more likely solution is to regulate coal ash ponds under the CWA by classifying them as “point sources.” However, the Fourth and Sixth Circuit disagree. The Fourth Circuit recently held that coal ash ponds are not point sources because they are not acting as conveyances.<sup>182</sup> The Sixth Circuit indicated agreement with this position in *Kentucky Waterways Alliance*, arguing that coal ash ponds are the opposite of a conveyance because “they are designed to store coal ash in place.”<sup>183</sup>

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<sup>178</sup> See, e.g., *Ky. Waterways All. v. Ky. Utils. Co.*, 905 F.3d 925, 932 (6th Cir. 2018).

<sup>179</sup> *Id.* at 933.

<sup>180</sup> *Id.*

<sup>181</sup> Tiffany Dowell, *Clean Water Act Application to Groundwater: Keeping Score*, TEX. A&M (Dec. 10, 2018), <https://agriflife.org/texasaglaw/2018/12/10/clean-water-act-application-to-groundwater-keeping-score/>.

<sup>182</sup> See *supra* Section III.D.1.

<sup>183</sup> *Ky. Waterways All.*, 905 F.3d at 934–35 n.8. It seems interesting that the court was so concerned with what the coal ash pond was designed to do, but many things, such as a pipeline in

Nevertheless, the Fourth and Sixth Circuits are mistaken, and coal ash ponds should be considered point sources under the plain text of the CWA for five reasons. First, the term “point source” has always been broadly construed. Second, the canon of *ejusdem generis* supports a broader reading of the term “point source” that would include coal ash ponds. Third, existing Fifth Circuit precedent confirms that coal ash ponds can be considered point sources. Fourth, by holding that coal ash ponds are not point sources, the Fourth Circuit has created adverse precedent for other similar structures that are not covered by RCRA. Fifth, and finally, despite the Fourth Circuit’s concerns, the CCR Rule and the CWA can work together to regulate coal ash ponds.

The term “point source” means “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container . . . concentrated animal feeding operation, or vessel . . . , from which pollutants are or may be discharged.”<sup>184</sup> It has been a long-standing principle to broadly construe the term “point source,” and the fact that the list of point sources is illustrative, rather than exhaustive, supports that long-standing principle.<sup>185</sup> “The concept of a point source was designed to further [the CWA] scheme by embracing the broadest possible definition of any identifiable conveyance from which pollutants might enter the waters of the United States.”<sup>186</sup>

“The canon of *ejusdem generis* states that ‘the general term must take its meaning from the specific terms with which it appears.’”<sup>187</sup> While the Fourth Circuit focused on the term “conveyance,” it failed to explain how things like concentrated animal feeding operations (“CAFOs”), vessels, and containers fit within the definition of “conveyance.”<sup>188</sup> Instead, it seems that “[t]he common denominator between wells, containers, ditches, and vessels is that each is a man-made, defined area where liquid collects.”<sup>189</sup> Based on that characterization of point sources, coal ash ponds are clearly point sources because they are man-made areas where liquid collects.<sup>190</sup>

The Fifth Circuit would likely agree that coal ash ponds are point sources. According to the Fifth Circuit, in the context of sediment basins constructed by coal miners to catch run off, CWA liability will still attach “so

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*Kinder Morgan*, are not designed to discharge but rather to hold liquid, but nevertheless become a point source if there is a breach or a leak.

<sup>184</sup> 33 U.S.C.A. § 1362(14) (West 2019).

<sup>185</sup> *Ky. Waterways All.*, 905 F.3d at 942 n.2 (Clay, J., dissenting).

<sup>186</sup> *United States v. Earth Scis.*, 599 F.2d 368, 373 (10th Cir. 1979).

<sup>187</sup> *Ky. Waterways All.*, 905 F.3d at 942 n.2 (Clay, J., dissenting).

<sup>188</sup> *Id.*

<sup>189</sup> *Id.*

<sup>190</sup> Based on recent oral arguments in *Hawai’i Wildlife Fund*, the Supreme Court likely would agree that coal ash ponds are point sources, although the Court has never actually opined on the matter. See *infra* note 247.



long as [the conveyances] are reasonably likely to be the means by which pollutants are ultimately deposited into a navigable body of water.”<sup>191</sup> This makes sense when considering that the CWA covers only point source pollution in order to “minimize the difficulty of discerning the source of pollutants.”<sup>192</sup> No court has had difficulty determining that pollution was emanating from the coal ash impoundment.<sup>193</sup> Thus, so long as it is clear where the pollution is coming from, characterizing coal ash ponds as point sources is consistent with the CWA and its purpose.

The Fourth Circuit also failed to consider how such a holding could have adverse consequences on similar impoundments or ponds with pollutants in them that are not covered by RCRA. For instance, lagoons on farms<sup>194</sup> are not likely to be covered by RCRA because they are not solid waste. Lagoons could be analogized to coal ash ponds, and thus could be held to be non-point sources. Thus, if a leaching lagoon contaminated a body of water and was held to be a nonpoint source, an injured party is left with no remedy because neither the CWA nor RCRA would cover lagoon.

Additionally, while the Fourth Circuit seemed concerned that finding that coal ash ponds are point sources would upend the existing regulatory framework under RCRA, such concerns are exaggerated at best. The CCR Rule and the CWA can work together, as the CCR would govern coal ash while it is stored in ponds or landfills and provides for groundwater monitoring, but the CWA would come into play when water monitoring detects high levels of heavy metals in the nearby navigable waters. And, the CCR Rule and the CWA already are working together in some respects, as some, if not most, coal ash impoundments have NPDES permits for some discharges from the pond.<sup>195</sup>

However, even if coal ash ponds are found to be point sources, there must be some other theory that is accepted for CWA liability to attach. This is because the coal ash ponds usually pollute groundwater, and groundwater is not generally considered WOTUS.<sup>196</sup> Therefore, even if courts agreed that coal ash ponds are point sources, courts must also accept the direct hydrological connection theory, the fairly traceable theory, or that groundwater is WOTUS. The strengths and weaknesses of each approach will be addressed in turn.

<sup>191</sup> *Sierra Club v. Abston Constr. Co.*, 620 F.2d 41, 45 (5th Cir. 1980).

<sup>192</sup> *Haw. Wildlife Fund v. Cty. of Maui*, 24 F. Supp. 3d 980, 999 (D. Haw. 2014) (citing *Trs. for Alaska v. EPA*, 749 F.2d 549, 558 (9th Cir. 1984)).

<sup>193</sup> *See supra* Section III.D.

<sup>194</sup> While lagoons on large concentrated animal feeding operations (“CAFOs”) would be covered by the CWA because CAFOs are explicitly classified as point sources in the CWA, lagoons on smaller farms are not, thus leaving many lagoons completely unregulated.

<sup>195</sup> *See Cape Fear River Watch v. Duke Energy Progress*, 25 F. Supp. 3d 798, 801 (E.D.N.C. 2014).

<sup>196</sup> *See supra* Section V.C.2.

### 1. Groundwater connection theories

Currently there are two groundwater connection theories that would allow the slow seepage of arsenic and other heavy metals from coal ash ponds to be actionable under the CWA, again assuming that the coal ash ponds are point sources. The first is the direct hydrological connection theory advanced by the Fourth Circuit, and the second is the fairly traceable theory advanced by the Ninth Circuit. While technically different theories, the difference between the two of them is minimal, and the direct hydrological connection theory can be thought of as a narrower version of the fairly traceable theory.<sup>197</sup> Because the differences are few, these theories will be discussed together.

The direct hydrological connection theory is a way for discharges of pollutants from point sources to be covered by the CWA even though the discharge does not flow directly from a point source into WOTUS. Rather, these discharges first flow through groundwater before reaching WOTUS. With the hydrological connection theory, discharges from point sources that flow through groundwater before reaching WOTUS can still be actionable, so long as the hydrological connection is *direct*. The purpose behind this theory is to ensure that these discharges are still regulated because they “effectively [are] discharges to the directly connected surface waters.”<sup>198</sup> Thus, under this theory, groundwater is not WOTUS, but the discharges from point sources into groundwater hydrologically connected to navigable waters still require NPDES permits because they are effectively discharges directly into the navigable waters themselves.<sup>199</sup>

While the Fourth Circuit did not find that coal ash ponds are point sources, it did recently decide that the CWA supports the direct hydrological connection theory. Specifically, the Fourth Circuit held that the CWA does apply to discharges of pollutants that travel through groundwater before reaching WOTUS if there is a direct hydrological connection.<sup>200</sup> In *Upstate Forever v. Kinder Morgan Energy Partners*,<sup>201</sup> an underground gasoline pipeline burst, polluting the nearby navigable waters.<sup>202</sup> While some of the pollution was immediate, the plaintiffs also alleged that the gasoline plume continued to spread and seep into navigable waters through groundwater and other natural

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<sup>197</sup> *Upstate Forever v. Kinder Morgan Energy Partners, L.P.*, 887 F.3d 637, 651 n.12 (4th Cir. 2018).

<sup>198</sup> Amendments to the Water Quality Standards Regulation that Pertain to Standards on Indian Reservations, 56 Fed. Reg. 64,892 (Dec. 12, 1991).

<sup>199</sup> *Id.* at 64,892.

<sup>200</sup> See *Upstate Forever*, 887 F.3d at 651.

<sup>201</sup> 887 F.3d 637 (4th Cir. 2018).

<sup>202</sup> *Id.* at 643.

formations.<sup>203</sup> The Fourth Circuit found that this seepage was actionable under the CWA because the plaintiffs had sufficiently established a “direct hydrological connection” between the broken pipeline and the pollution found in the nearby navigable waters.<sup>204</sup> The Fourth Circuit also affirmed the direct hydrological connection theory in the context of coal ash impoundments, albeit without finding CWA liability because coal ash ponds are not point sources.<sup>205</sup>

The Ninth Circuit also recently found liability for pollution that travelled through groundwater from a point source before reaching WOTUS under the fairly traceable theory. In *Hawai’i Wildlife Fund v. County of Maui*,<sup>206</sup> the County of Maui was using four injection wells to dispose of its sewage.<sup>207</sup> The sewage injected into the wells reached the Pacific Ocean indirectly, which the County was aware of when it decided to use the injection wells instead of dumping its sewage directly into the Pacific Ocean.<sup>208</sup> The Ninth Circuit held that such discharges without a permit violated the CWA because the discharges came from point sources, the wells, and the pollutants were “fairly traceable” from the injection wells to the Pacific Ocean.<sup>209</sup>

However, the Sixth Circuit, in two recent companion cases decided on the same day, rejected the hydrological connection theory and held that the CWA requires a discharge of a pollutant to go directly from a point source into WOTUS.<sup>210</sup> In both cases, the Sixth Circuit held that the CWA did not cover pollution coming from coal ash ponds through groundwater because there was no direct discharge from the coal ash pond into WOTUS.<sup>211</sup>

Some secondary sources characterize the First, Fifth, and Seventh Circuits as having also foreclosed the hydrological connection theory.<sup>212</sup> But

<sup>203</sup> *Id.* at 644.

<sup>204</sup> *Id.* at 651–52.

<sup>205</sup> *See* *Sierra Club v. Va. Elec. & Power Co.*, 903 F.3d 403, 409 (4th Cir. 2018).

<sup>206</sup> 886 F.3d 737 (9th Cir. 2018), *cert. granted sub nom.* *Cty. of Maui v. Haw. Wildlife Fund*, 139 S. Ct. 1164 (2019).

<sup>207</sup> *Id.* at 742.

<sup>208</sup> *Id.*

<sup>209</sup> *Id.* at 749.

<sup>210</sup> *See* *Ky. Waterways All. v. Ky. Utils. Co.*, 905 F.3d 925 (6th Cir. 2018); *Tenn. Clean Water Network v. Tenn. Valley Auth.*, 905 F.3d 436 (6th Cir. 2018).

<sup>211</sup> *Ky. Waterways All.*, 905 F.3d at 934; *Tenn. Clean Water Network*, 905 F.3d at 444.

<sup>212</sup> *See, e.g.*, Jay Crowder, *Notice to SCOTUS: Coal Ash Should be a Point Source Discharge Under the Clean Water Act*, 19 VT. J. ENVTL. L. 89, 100 (2018); *Does the Clean Water Act Regulate Discharges of Pollutants to Hydrologically Connected Groundwaters? Federal Courts Disagree*, MARTEN L. (Jan. 27, 2016), [https://www.martenlaw.com/newsletter/20160127-cwa-regulate-discharges-pollutants#\\_ftnref37](https://www.martenlaw.com/newsletter/20160127-cwa-regulate-discharges-pollutants#_ftnref37) [hereinafter *Federal Courts Disagree*]; Ellen M. Gilmer, *Groundwater’s Muddy Legal History Under the Clean Water Act*, E&E NEWS (Dec. 4, 2018), <https://www.eenews.net/stories/1060108689>; R. Timothy Weston et al., *What’s the Point (Source)? New Developments in the Ongoing Debate Concerning Clean Water Act Jurisdiction*

these sources fail to distinguish between the difference between courts deciding that groundwater is not WOTUS and courts rejecting the hydrological connection theory.<sup>213</sup>

The First Circuit has not foreclosed the hydrological connection theory. In *United States v. Johnson*,<sup>214</sup> the First Circuit stated in a footnote that the “CWA does not cover any type of ground water; the CWA only covers surface water.”<sup>215</sup> However, the First Circuit only meant that groundwater is not WOTUS. Similarly, in *Town of Norfolk v. United States Army Corps of Engineers*,<sup>216</sup> the First Circuit deferred to the U.S. Army Corps of Engineers that groundwater is not WOTUS.<sup>217</sup> The First Circuit declined to decide whether groundwater that was hydrologically connected to surface waters should be WOTUS, finding that such an ecological decision was better left to the agency.<sup>218</sup> Thus, in neither case did the First Circuit foreclose, or even opine on, the merits of the hydrological connection theory, because the discussions of each case focused on whether groundwater was WOTUS, not whether pollution flowing through direct, hydrologically connected groundwater to WOTUS was actionable under the CWA.

In *Rice v. Harken Exploration Co.*,<sup>219</sup> the Fifth Circuit held that groundwater was not navigable waters under the Oil Pollution Act (“OPA”).<sup>220</sup> However, contrary to what the secondary sources imply, this decision did not foreclose the hydrological connection theory. Rather, the Fifth Circuit found there was no OPA liability specifically because (1) groundwater generally is not WOTUS and (2) the plaintiffs failed to prove a hydrological connection between the groundwater and WOTUS.<sup>221</sup> However, this is not to say the Fifth Circuit would approve of the hydrological connection theory because the issue in *Rice* was whether groundwater itself was WOTUS if there was a hydrological connection. This question is distinct from the question of whether a discharge from a point source that reaches WOTUS through hydrologically connected

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over *Indirect Discharges via Groundwater*, K&L GATES (Mar. 4, 2018), <http://www.klgates.com/whats-the-point-source-03-04-2018/>.

<sup>213</sup> This confusion perhaps arises because the *Rapanos v. United States* decision mentions that wetlands that have a direct hydrological connection to surface waters may be considered WOTUS. However, this language would only be helpful to argue that coal ash ponds themselves are WOTUS.

<sup>214</sup> 437 F.3d 157 (1st Cir. 2006).

<sup>215</sup> *Id.* at 161 n.4.

<sup>216</sup> 968 F.2d 1438 (1st Cir. 1992).

<sup>217</sup> *Id.* at 1451.

<sup>218</sup> *Id.*

<sup>219</sup> 250 F.3d 264 (5th Cir. 2001).

<sup>220</sup> The court here found that Congress intended “navigable waters” to have the same meaning in both the OPA and CWA. *Id.* at 267, 270.

<sup>221</sup> *Id.* at 272.

groundwater is actionable under the CWA, as courts that accept the hydrological connection theory admit that groundwater is not WOTUS.

In *Village of Oconomowoc Lake v. Dayton Hudson Corp.*,<sup>222</sup> the Seventh Circuit held that a six-acre retention pond fell outside the scope of the CWA, regardless of whether the retention pond was hydrologically connected to navigable waters.<sup>223</sup> While many secondary sources,<sup>224</sup> lower court decisions,<sup>225</sup> and even the brief for certiorari<sup>226</sup> filed by the County of Maui in *Hawai'i Wildlife Fund* cite this case to say that the Seventh Circuit has disclosed the hydrological connection theory, such a reading is far too broad. Rather, the Seventh Circuit held that this six-acre retention pond was not WOTUS, regardless of whether it was hydrologically connected to WOTUS or not.<sup>227</sup> In other words, the Seventh Circuit only held that the pond itself was not WOTUS even if it was hydrologically connected to WOTUS. Importantly, the Seventh Circuit did not opine on whether a polluter could be held liable under the CWA if pollution entered WOTUS through a direct hydrological connection from the pond.

Thus, the Sixth Circuit currently is the only circuit court of appeals to have conclusively foreclosed the hydrological connection theory. And for good reason, seeing as the plain text of the CWA and the purpose behind the CWA both support it.

The plain text of the CWA prohibits the discharge of a pollutant *to* navigable waters *from* a point source.<sup>228</sup> The text of the CWA does not indicate that this needs to be a direct connection from a point source to navigable waters.<sup>229</sup> Justice Antonin Scalia said as much in his plurality opinion in *Rapanos v. United States*.<sup>230</sup> Justice Scalia also observed “that federal courts consistently have held that a discharge of a pollutant ‘that naturally washes downstream likely violates § 1311(a).’”<sup>231</sup> While Justice Scalia’s plurality opinion is not the binding

<sup>222</sup> 24 F.3d 962 (7th Cir. 1994).

<sup>223</sup> *Id.* at 965–66.

<sup>224</sup> See, e.g., Crowder, *supra* note 212; *Federal Courts Disagree*, *supra* note 212; Gilmer, *supra* note 212; Weston et al., *supra* note 212.

<sup>225</sup> See, e.g., *Prairie Rivers Network v. Dynegy Midwest Generation, L.L.C.*, 350 F. Supp. 3d 697, 704–05 (C.D. Ill. 2018); *Cape Fear River Watch v. Duke Energy Progress*, 25 F. Supp. 3d 798, 809–10 (E.D.N.C. 2014).

<sup>226</sup> Petition for Writ of Certiorari at 20, *Cty. of Maui v. Haw. Wildlife Fund*, No. 18-260, 2018 WL 4205010 (U.S. Aug. 27, 2018).

<sup>227</sup> *Vill. of Oconomowoc Lake*, 24 F.3d at 965.

<sup>228</sup> 33 U.S.C.A. § 1362(12)(A) (West 2019).

<sup>229</sup> *Upstate Forever v. Kinder Morgan Energy Partners, L.P.*, 887 F.3d 637, 649 (4th Cir. 2018).

<sup>230</sup> 547 U.S. 715, 743 (2006) (“The Act does not forbid the ‘addition of any pollutant *directly* to navigable waters from any point source,’ but rather the ‘addition of any pollutant *to* navigable waters.’”).

<sup>231</sup> *Upstate Forever*, 887 F.3d at 650.

or controlling opinion (rather, Justice Kennedy’s concurrence is), it should be persuasive because “no Justice challenged this aspect of the opinion, and for good reason: the statutory text unambiguously supports it.”<sup>232</sup> “The word ‘from’ indicates ‘a starting point: as . . . a point or place where an actual physical movement . . . *has its beginning*.’”<sup>233</sup> Giving “from” its plain meaning would reveal that a point source just needs to be the starting point for the pollution into WOTUS; it does not need to “also convey the discharge directly to navigable waters.”<sup>234</sup>

In fact, if a direct connection were needed between the point source and WOTUS, it would open up a huge loophole that polluters could exploit to frustrate CWA jurisdiction. “[I]f the presence of a short distance of soil and ground water were enough to defeat a claim, polluters easily could avoid liability under the CWA by ensuring that all discharges pass through soil and ground water before reaching navigable waters.”<sup>235</sup> In other words, using the Sixth Circuit’s reasoning, a polluter could not get an NPDES permit, move his pipe three foot back so it is not pouring directly into the river, and thus avoid CWA liability. However, “Congress did not hide a massive regulatory loophole in its use of the word ‘into.’”<sup>236</sup> “Congress ‘does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.’”<sup>237</sup> The CWA has the broad purpose of “restor[ing] and maintain[ing] . . . the Nation’s waters.”<sup>238</sup> Requiring a direct connection from a point source to WOTUS would frustrate that purpose.<sup>239</sup> Additionally, “if courts required both the cause of the pollution *and* any intervening land to qualify as point sources, such as an interpretation would, in practice, ‘impose a requirement not contemplated by the Act: that pollutants be channelized not once but twice before the EPA can regulate them.’”<sup>240</sup>

The Fourth Circuit has explicitly approved of this hydrological connection theory in *Upstate Forever*.<sup>241</sup> While the Second Circuit has not explicitly answered this question, it has weighed in on whether pollution must go directly from a point source to WOTUS to be covered by the CWA. The

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<sup>232</sup> Ky. Waterways All. v. Ky. Utils. Co., 905 F.3d 925, 941 (6th Cir. 2018) (Clay, J., dissenting).

<sup>233</sup> *Upstate Forever*, 887 F.3d at 650.

<sup>234</sup> *Id.*

<sup>235</sup> *Id.* at 652.

<sup>236</sup> Ky. Waterways All., 905 F.3d at 943 (Clay, J., dissenting).

<sup>237</sup> Epic Sys. Corp. v. Lewis, 138 S. Ct. 1612, 1626–27 (2018) (quoting Whitman v. Am. Trucking Ass’ns, 531 U.S. 457, 468 (2001)).

<sup>238</sup> 33 U.S.C.A. § 1251(a) (West 2019).

<sup>239</sup> *Upstate Forever*, 887 F.3d at 652.

<sup>240</sup> *Id.* at 650 (quoting Waterkeeper All., Inc. v. EPA, 399 F.3d 486, 510–11 (2d Cir. 2005)).

<sup>241</sup> *Id.* at 651.

Second Circuit has held that the CWA still covered pollutants discharged from a point source that travelled briefly through a field or the air before reaching WOTUS.<sup>242</sup> Justice Scalia, in *Rapanos*, favorably cited *Concerned Area Residents for the Environment v. Southview Farm*,<sup>243</sup> indicating that he would agree that the CWA does not require a direct connection between a point source and the navigable waters.<sup>244</sup>

While there is currently a circuit split on these groundwater connection theories, it may soon be resolved because the Supreme Court granted certiorari for *Hawai'i Wildlife Fund*.<sup>245</sup> The Court will consider “whether the CWA requires a permit when pollutants originate from a point source but are conveyed to navigable waters by a nonpoint source, such as groundwater.”<sup>246</sup> It is unclear how the Supreme Court will decide the issue and how narrow or broad its decision might be. The Court could affirm the fairly traceable theory or instead adopt the Fourth Circuit’s direct hydrological connection theory, although oral arguments showed that the Court was concerned that both theories were too broad. For instance, the Court was particularly worried that adopting the hydrological connection or fairly traceable theory would force individuals with septic tanks to obtain a NPDES permit or else risk fines of \$50,000 per day if pollution from their septic tanks found its way into WOTUS.<sup>247</sup> The Court also could reverse and find that a point source must discharge directly from a point source into WOTUS. If so, then CWA liability for coal ash ponds would not attach, even if coal ash ponds are point sources. But, based on the Justices’

<sup>242</sup> See *Peconic Baykeeper, Inc. v. Suffolk Cty.*, 600 F.3d 180, 188–89 (2d Cir. 2010) (air); *Concerned Area Residents for the Env’t v. Southview Farm*, 34 F.3d 114, 118–19 (2d Cir. 1994) (fields).

<sup>243</sup> 34 F.3d 114 (2d Cir. 1994).

<sup>244</sup> *Rapanos v. United States*, 547 U.S. 715, 744 (2006).

<sup>245</sup> Savannah Rose, *Supreme Court Granted Certiorari to a Clean Water Act Case: Hawai'i Wildlife Fund v. County of Maui*, VT. J. ENVTL. L. (Apr. 19, 2019), <http://vjel.vermontlaw.edu/supreme-court-granted-certiorari-clean-water-act-case-hawaii-wildlife-fund-v-county-maui/>.

<sup>246</sup> *Petition for Writ of Certiorari, Cty. of Maui v. Haw. Wildlife Fund*, No. 18-260, 2018 WL 4205010 (U.S. Aug. 27, 2018).

<sup>247</sup> Jimmy Hoover & Juan Carlos Rodriguez, *Justices Grappling with Groundwater Liability in Sewage Case*, LAW360 (Nov. 6, 2019, 11:53 AM), <https://www.law360.com/articles/1217475/justices-grappling-with-groundwater-liability-in-sewage-case>. While the Court’s concerns about septic tanks are valid, the CWA could be amended to explicitly exempt septic tanks as point sources. Further, the fact that the Court used a septic tank as an example point source that could have liability under the hydrological connection theory or the fairly traceable theory is strong evidence that *Sierra Club v. Virginia Electric & Power Co.*, 903 F.3d 403, 409 (4th Cir. 2018), was wrongly decided: if a septic tank is clearly a point source, then how could a coal ash pond not be a point source? Septic tanks and coal ash ponds are both man-made, defined areas where liquid collects and “from which pollutants . . . may be discharged.” 33 U.S.C.A. § 1362(14) (West 2019). Because of these similarities, this Author believes that the Supreme Court would find that a coal ash pond is a point source.

questions during oral arguments for *Hawai'i Wildlife Fund*, the Court is unlikely to require a direct connection from a point source to WOTUS because that would make evasion all but inevitable: all a polluter would have to do is move its pipe five feet back from the water.<sup>248</sup> Instead of adopting either party's position, the Court may instead adopt its own test; Justice Breyer, at one point, even suggested a functional equivalent test, where CWA liability would attach if the indirect discharge was "the functional equivalent of a direct discharge."<sup>249</sup>

Regardless of what the Court decides, it is almost certain that its decision will not conclusively decide the issue of CWA liability over coal ash ponds. And even if the Court interprets the CWA in a way that forecloses liability for coal ash ponds under the CWA, the CWA can always be amended to reverse the Court's decision. Coincidentally, even if there is a liberal decision in *Hawai'i Wildlife Fund*, amending the CWA to explicitly cover coal ash ponds is the best solution because it would settle the question without need for further litigation.

## 2. Groundwater as WOTUS

Aside from these groundwater connection theories, pollution from coal ash ponds could still be subject to CWA jurisdiction if coal ash ponds are point sources and groundwater is considered WOTUS. If groundwater was WOTUS, most coal ash impoundment cases would fall under the CWA because most coal ash cases involve coal ash leaching into groundwater from the impoundment.<sup>250</sup> In fact, the "majority of these [coal ash] impoundments are sitting in the groundwater," which means that there is a "greater threat because contamination can directly enter the groundwater, and you'll get more contamination at a faster rate."<sup>251</sup> This perhaps might be the best way to regulate coal ash ponds under the CWA if the Supreme Court gives an unfavorable decision in the *Hawai'i Wildlife Fund* case that was recently granted certiorari.

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<sup>248</sup> *Id.*; see also Ephrat Livni, *The US Supreme Court Takes on the Clean Water Act, Whiskey Flasks, and Punch*, QUARTZ (Nov. 7, 2019), <https://qz.com/1743646/the-us-supreme-court-takes-on-the-clean-water-act/> ("All right, but then what we have is, I take it, an absolute road map for people who want to avoid the point source regulation. All we do is we just cut off the pipes or whatever, five feet from the ocean or five feet from the navigable stream or five feet from—you see? You understand the problem,' [J]ustice Stephen Breyer countered when the county's counsel laid out its position.").

<sup>249</sup> Oral Argument at 26:16, *Cty. of Maui v. Haw. Wildlife Fund* (No. 18-260), <https://www.oyez.org/cases/2019/18-260>; see also Robert Barnes, *Justices Seem to Want to Avoid Extremes in Clean Water Act Case*, WASH. POST (Nov. 6, 2019, 6:31 PM), [https://www.washingtonpost.com/politics/courts\\_law/justices-seem-to-want-to-avoid-extremes-in-clean-water-act-case/2019/11/06/68c3e90c-001a-11ea-8501-2a7123a38c58\\_story.html](https://www.washingtonpost.com/politics/courts_law/justices-seem-to-want-to-avoid-extremes-in-clean-water-act-case/2019/11/06/68c3e90c-001a-11ea-8501-2a7123a38c58_story.html).

<sup>250</sup> See *supra* Section III.D.

<sup>251</sup> Catherine Morehouse, *As 67 Coal Plants in 22 States Report Coal Ash Violations, Greens Fear Prolonged Cleanup*, UTIL. DIVE (Dec. 20, 2018), <https://www.utilitydive.com/news/as-67-coal-plants-in-22-states-report-coal-ash-violations-greens-fear-prol/544843/>.



However, most courts agree that groundwater is not WOTUS.<sup>252</sup> The CWA is silent on whether groundwater is WOTUS, and many courts have interpreted that silence to mean that groundwater is not WOTUS, particularly because classifying groundwater as WOTUS would greatly increase the reach of the CWA. A few courts seem willing to classify groundwater as WOTUS if there is a substantial nexus or a direct hydrological connection to WOTUS,<sup>253</sup> while others have held that no groundwater could be WOTUS under the current framework. The Corps agrees, as its current regulations specifically state that groundwater is not WOTUS.<sup>254</sup>

Even so, statutes can always be amended. Making all groundwater WOTUS would greatly increase the CWA's scope, but perhaps that is necessary or desirable. The statute could also narrowly provide for groundwater as WOTUS at coal ash impoundments or if the groundwater has a substantial nexus or direct hydrological connection to WOTUS. Without some form of statutory change, the Corps or the EPA could still change or enact regulations specifically stating that groundwater is WOTUS, and it is conceivable that courts would defer to such regulations; however, considering how unfavorably courts have treated the theory that groundwater is WOTUS, a change in the CWA itself is the best bet. Seeing as statutory change is not easy, the groundwater connection theories are the best option for regulating coal ash ponds as point sources under the CWA.

## VI. CONCLUSION

Coal ash is a threat to human health and to the environment. Only recently has the federal government decided to pay attention, but those efforts have fallen short and may continue to be inadequate for years to come. Fortunately, Congress passed a law almost 50 years ago that can pick up the slack until regulations are passed under RCRA that will actually protect humans and the environment from the dangers of coal ash. And climate change has only worsened the dangers associated with coal ash ponds because many coal ash impoundments are located near the coasts. These coal ash impoundments are sitting ducks as extreme weather events become more common and the sea level rises—these coal ash ponds will eventually breach or overflow, causing more devastation like that seen in Kingston, Tennessee, in 2008. And, even if not one coal ash pond ever breached or overflowed again, the risk still remains: almost all coal ash impoundments are leaching and will continue to leach pollutants into

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<sup>252</sup> See, e.g., *United States v. Johnson*, 437 F.3d 157, 161 n.4 (1st Cir. 2006), *vacated*, 467 F.3d 56 (1st Cir. 2006); *Exxon Corp. v. Train*, 554 F.2d 1310, 1322 (5th Cir. 1977).

<sup>253</sup> *Haw. Wildlife Fund v. Cty. of Maui*, 24 F. Supp. 3d 980, 998 (D. Haw. 2014) (“An aquifer with a substantial nexus with navigable-in-fact water may itself be protected under the Clean Water Act even if it is not necessarily a conduit for pollutants.”). The Ninth Circuit did not reach the merits of this assertion.

<sup>254</sup> 33 C.F.R. § 328.3(b)(5) (2019).

our Nation's groundwater, which threatens ecosystems and humans alike. The CWA's goal is to make our Nation's waters fishable, swimmable, and drinkable. Seeing as coal ash ponds threaten all three of those goals, it is appropriate for the CWA to hold utilities responsible for the damage their coal ash ponds have done and will continue to do. This is what the CWA lives for, so that we can live too.

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