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## A Legacy That No One Can Afford to Inherit: The Gold King Disaster and the Threat of Abandoned Hardrock Legacy Mines

Kelly Roberts

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# A Legacy That No One Can Afford to Inherit: The Gold King Disaster and the Threat of Abandoned Hardrock Legacy Mines

Kelly Roberts\*

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## I. INTRODUCTION

On August 5, 2015, over 3 million gallons of toxic sludge were unleashed from Gold King Mine into the Animas River in Colorado. Headline news documented the event with some unusual photos: brave kayakers paddling through the bright orange water,<sup>1</sup> a confused resident holding up a bottle of something resembling “Sunny Delight,”<sup>2</sup> and aerial shots of the snaking Animas River, yellowish-orange for miles.<sup>3</sup> Also unusual about the disaster was an ironic twist: the Environmental Protection Agency (EPA)—the federal agency tasked with protecting the environment—in fact caused the spill when their contractors breached a holding during a leak investigation.<sup>4</sup> Following the spill, states of emergency were declared in Colorado, New Mexico, Utah, and the Navajo Nation, since the acidic water was unsafe and laced with toxic harmful heavy metals such as arsenic, lead, copper, and cadmium.<sup>5</sup>

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<sup>1</sup> Casey Leins, photo by Jerry McBride, *Photos: Mine Waste Spill Pollutes Animas River*, U.S. NEWS & WORLD REPORT (Aug. 11, 2015), <http://www.usnews.com/news/photos/2015/08/11/photos-mine-waste-spill-pollutes-animas-river>.

<sup>2</sup> Jerry McBride (@jerryphotog), TWITTER (Aug. 6, 2016, 10:20 AM), <https://twitter.com/jerryphotog/status/629341358663331840> (photo of Rayna Willhite of Aztec holding a bottle of water collected from the Animas River).

<sup>3</sup> Tobias Salinger, *EPA mine cleanup accident leaks yellow sludge from old Colorado mine into river; agency triples contamination estimate*, N.Y. DAILY NEWS (Aug. 10, 2015), <http://www.nydailynews.com/news/national/epa-cleanup-accident-leaks-yellow-sludge-river-article-1.2319500>.

<sup>4</sup> Julie Turkewitz, *Colorado Spill Heightens Debate Over Future of Old Mines*, N.Y. TIMES (Aug. 16, 2015), <http://www.nytimes.com/2015/08/17/us/animas-river-colorado-mine-spill-epa.html>.

<sup>5</sup> See Bruce Finley & Tom McGhee, *Animas mine disaster: Arsenic, cadmium, lead broke water limits*, DENVER POST (Aug. 10, 2015), [http://www.denverpost.com/environment/ci\\_28614946/epa-taking-damage-claims-toxic-spill-animas-river](http://www.denverpost.com/environment/ci_28614946/epa-taking-damage-claims-toxic-spill-animas-river) (Colorado declares state of emergency); Susan Montoya Bryan & Ellen Knickmeyer, *New Mexico governor declares state of emergency after Colorado mine spill contaminates rivers*, O.C. REGISTER (Aug. 10, 2015), <http://www.oregister.com/articles/water-676896-mexico-new.html> (New Mexico and Navajo Nation declare states of emergency); Dennis Romboy, *Utah declares*

While questions regarding EPA liability took the spotlight immediately following the disaster, the incident also brought nationwide attention to the much larger concern of abandoned legacy mines. The Gold King Mine ceased operating in 1924.<sup>6</sup> An estimated 250,000 and 500,000 similar abandoned mines litter the landscape across the United States.<sup>7</sup> They are “ticking time bombs” that threaten people and the environment, and the cost and liability involved in cleanup efforts is unwieldy—an estimated total of \$20-54 billion.<sup>8</sup>

This article begins with a description of the alarming matter of abandoned mines, mainly due to the issue of acid mine drainage. Then, it provides a detailed account of the Gold King disaster, including the current state of affairs surrounding the question of EPA liability. Next, it provides a simplified overview of some of the federal statutory hurdles that make it difficult to tackle remediation of abandoned hardrock mines. In wake of Gold King, another round of legislation has been proposed that might help, and these proposed bills center on familiar themes of reforming the General Mining Law of 1872 and providing Good Samaritan waivers to environmental regulations. The strengths, weaknesses, and difficulties of the proposed legislation are evaluated in this article. Lastly, some potential federal regulatory solutions are briefly presented. This article is limited to discussion of federal legislative and regulatory solutions, even though states are engaged in solving these problems

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*state of emergency, considers legal action over EPA spill*, KSL.COM (Aug. 12, 2015), <https://www.ksl.com/?sid=35931048&nid=148> (Utah declares state of emergency).

<sup>6</sup> Bridget Huber, *No End in Sight for Toxic Legacy of Abandoned Mines*, FAIRWARNING (Dec. 9, 2015), <http://www.fairwarning.org/2015/12/toxic-heritage/>.

<sup>7</sup> *Reforming the U.S. Hardrock Mining Law of 1872: The Price of Inaction*, THE PEW CAMPAIGN FOR RESPONSIBLE MINING 4 (2009), <http://www.pewtrusts.org/~media/legacy/uploadedfiles/peg/publications/report/reforming20mining20lawpdf.pdf>. For an interactive map of inactive metal mining operations in the U.S., see *Abandoned Mines*, EARTHWORKS, [https://www.earthworksaction.org/issues/detail/abandoned\\_mines#.Vq5xuzbe3dk](https://www.earthworksaction.org/issues/detail/abandoned_mines#.Vq5xuzbe3dk) (last visited Feb. 7, 2016).

<sup>8</sup> See, SenatorTomUdall, *On Anniversary of Gold King Mine Spill, Tom Calls for Action on Hardrock Mining Reform*, YOUTUBE (Nov. 6, 2015), [https://www.youtube.com/watch?v=1H0v8B2\\_Rbg&noredirect=1](https://www.youtube.com/watch?v=1H0v8B2_Rbg&noredirect=1) (calling the abandoned mines a “ticking time bomb” at 2:59, and noting they will take \$20-54 billion to cleanup at 3:13-3:18).

as well.<sup>9</sup> Abandoned hardrock mines are a perpetual, pressing concern to human health and the environment, and the law needs to change in order to facilitate cleanup, ensure adequate compensation of injured parties, and prevent future disasters like Gold King.

## II. ACID MINE DRAINAGE: A PERPETUAL THREAT TO THE PUBLIC AND WATERSHEDS

A broader understanding of the problems surrounding abandoned hardrock mines puts the Gold King disaster into its proper context. Hardrock mining—in contrast to soft-rock mining of resources such as coal—is the extraction of minerals from metamorphic or igneous rock.<sup>10</sup> These minerals include gold, silver, copper, nickel, zinc, others.<sup>11</sup> Mining these precious metals is an important component of the national economy, and the minerals are used in a wide variety of goods and for national defense efforts.<sup>12</sup>

While hardrock mining has been vital to the economy's health for over a century, it has also exacted its toll on the health of watershed ecosystems and downstream communities.<sup>13</sup> The boom-and-bust

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<sup>9</sup> See, e.g., *Inactive Mine Reclamation Program*, COLORADO DEP'T OF NAT. RES., DEP'T OF RECLAMATION MINING AND SAFETY, <http://mining.state.co.us/Programs/Abandoned/Pages/impwelcomepage.aspx> (last visited Mar. 31, 2016); *About Us*, CALIFORNIA DEP'T OF CONSERVATION ABANDONED MINE LANDS PROGRAM, [http://www.conservation.ca.gov/omr/abandoned\\_mine\\_land](http://www.conservation.ca.gov/omr/abandoned_mine_land)s (last visited Mar. 31, 2016).

<sup>10</sup> Julia Layton, *How Underground Mining Works: Hard-Rock Underground Mining*, HOWSTUFFWORKS.COM (May 21, 2013), <http://science.howstuffworks.com/engineering/structural/underground-mining1.htm>.

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

<sup>12</sup> *EPA's Nat'l Hardrock Mining Framework*, E.P.A., 1 (Sept. 1997), [https://www.epa.gov/sites/production/files/2015-10/documents/hardrock\\_mining\\_framework\\_0.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/hardrock_mining_framework_0.pdf).

<sup>13</sup> *Burden of Gilt*, MINERAL POLICY CTR., 3 (June 1993), <https://www.earthworksaction.org/files/publications/REPORT-Burden-of-Gilt.pdf>. In 2005, the Mineral Policy Center and the Oil and Gas Accountability Project joined forces to become Earthworks, a nonprofit organization that is “dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions.” *About*

nature of mining over the last two centuries has often caused mining companies to close up shop and declare bankruptcy, leaving many sites abandoned without adequate environmental protections in place.<sup>14</sup> Further, before the environmental regulation began in the 1970's, the mining industry was largely unregulated in their operations.<sup>15</sup>

Tragic fatal accidents occur on abandoned mine sites each year,<sup>16</sup> yet the biggest problem posed by abandoned mines is a phenomenon called acid mine drainage. From the beginning, miners noticed that their operations turned the water different colors, even though they did not fully understand the environmental consequences.<sup>17</sup> The constant leaching of acid mine drainage was the problem that the EPA was trying to fix at Gold King, when they instead breached a holding full of this toxic sludge.<sup>18</sup> Chemically, the basic explanation of acid mine drainage is that it forms when the three components of sulfide minerals, oxygen, and water mix together, yielding acid and dissolved metals.<sup>19</sup> It occurs in hardrock mining because pyrite is an iron sulfide present in most of the waste rock.<sup>20</sup> Sometimes, the waste rock is left in large chunks, but often it is milled into a fine powder, called mine tailings.<sup>21</sup> Ground-up tailings and mine waste are two of the worst culprits of acid mine drainage.<sup>22</sup> When pyrite

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EARTHWORKS, EARTHWORKS, <https://www.earthworksaction.org/about> (last visited Feb. 20, 2016).

<sup>14</sup> See MINERAL POLICY CTR., *supra* note 13, at 1.

<sup>15</sup> *Id.*

<sup>16</sup> See *Previous Fatal Accident Summaries*, MINE SAFETY & HEALTH ADMIN., U.S. DEP'T. OF LABOR, <http://www.msha.gov/sosa/previousfatalstats.asp> (last visited Feb. 7, 2016) (cataloging the causes of fatal accidents each year at active and abandoned mine sites).

<sup>17</sup> Patricia Nelson Limerick, Joseph N. Ryan, Timothy R. Brown & T. Allan Comp, *Cleaning Up Abandoned Hardrock Mines in the West: Prospecting for a Better Future*, UNIV. OF COLO. AT BOULDER CTR. OF THE AMERICAN W., 17 (2005), <http://www.centerwest.org/publications/pdf/mines.pdf>.

<sup>18</sup> Salinger, *supra* note 3.

<sup>19</sup> Limerick et al., *supra* note 17, at 16.

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

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

<sup>22</sup> See *Acid Mine Drainage and Effects on Fish Health and Ecology: A Review*, RECLAMATION RESEARCH GRP., 3-4 (June 2008), [http://reclamationresearch.net/publications/Final\\_Lit\\_Review\\_AMD.pdf](http://reclamationresearch.net/publications/Final_Lit_Review_AMD.pdf).

and oxygen mix, the pyrite oxidizes (i.e. it rusts).<sup>23</sup> Water enters the mines through either rainfall or streams; sometimes the water is already inside the mine.<sup>24</sup> As the water interacts with the rusted rock, it carries away a toxic mixture of heavy metals and acidic (low pH) water, which is the acid mine drainage.<sup>25</sup> This phenomenon happens “anywhere on the mine where sulfides are exposed to air and water — including waste rock piles, tailings, open pits, underground tunnels, and leach pads.”<sup>26</sup> The acid dissolves toxic metals into the water such as “zinc, arsenic, cadmium, lead, copper, and selenium.”<sup>27</sup> This chemical combination of acid and metal often turns the water strange colors such as yellow, orange, or even a bluish-white.<sup>28</sup> While it is quite true that a certain level of water acidity occurs naturally in mineral-heavy areas, mining operations exponentially increase the acidity formed by this natural process through exposing the water to an increased surface area of sulfide minerals.<sup>29</sup>

<sup>23</sup> Limerick et al., *supra* note 17, at 16.

<sup>24</sup> *Id.*

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

<sup>26</sup> *Acid Mine Drainage*, EARTHWORKS [https://www.earthworksaction.org/issues/detail/acid\\_mine\\_drainage#.Vkoe20szJg0](https://www.earthworksaction.org/issues/detail/acid_mine_drainage#.Vkoe20szJg0) (last visited Feb. 20, 2016). For a helpful visual what acid mine drainage looks like at one extremely contaminated “Superfund” site, see *Diagram of Acid Mine Drainage at Iron Mountain Mine*, U.S.G.S. CAL. WATER SCI. CTR., [http://ca.water.usgs.gov/projects/iron\\_mountain/images/acid\\_mine\\_drainage.png](http://ca.water.usgs.gov/projects/iron_mountain/images/acid_mine_drainage.png) (last visited Feb. 10, 2016).

<sup>27</sup> See Limerick et al., *supra* note 17, at 16.

<sup>28</sup> To see picture of a creek that has turned an eerie bluish-white due to aluminum hydroxide runoff, see Andy Sheehan, *Experts: Runoff From Abandoned Mines Is Killing Pa.’s Waterways*, CBS PITTSBURG (Apr. 29, 2015), <http://pittsburgh.cbslocal.com/2015/04/29/acid-mine-runoff/>.

<sup>29</sup> Limerick et al., *supra* note 17, at 18. Coffee brewing is a simple illustration that comes to mind to help explain the difference between naturally-occurring water acidity on mineral-laden lands and toxic acid mine drainage. If boiling water is poured over whole, unground beans of coffee, the result is, at best, a yellowish-brown cup of hot water with a little bit of caffeine in it. However, if the same coffee beans are finely ground and *then* the hot water is poured over them, the result is a delicious cup of morning jet-fuel. Similarly, rocks left to themselves are like whole-bean coffee: when the water and air interact with the sulfide minerals, some acid and metals are released into the water. When those same rocks are ground up, these mine tailings are similar to coffee grounds. Snowmelt and precipitation “brew” through the tailings, creating acid mine drainage—much like a freshly-brewed cup of coffee, but slightly less delicious.

When the acid and metal content is high enough in a stream, it creates what is known as a “dead” stream.<sup>30</sup> In streams and rivers, high metal concentrations are often lethal to fish that are in the water.<sup>31</sup> Further, in terms of fish reproduction, when deposits from rusting sulfides settle to the bottom of a streambed, the deposits form an “impenetrable layer” between the sandy gravel and the water, known as “armoring.”<sup>32</sup> Armoring prevents fish from making their nests and spawning in the gravel at the bottom of stream-beds.<sup>33</sup> Bugs, near the bottom of the food chain, are similarly prevented from burrowing and accessing their habitat.<sup>34</sup> When the acid mine drainage is bad enough, the stream becomes a “dead” stream that is incapable of supporting aquatic life.<sup>35</sup> Reclamation Research Group explains the matter simply: “[w]ater contaminated by AMD [acid mine drainage], often containing elevated concentrations of metals, can be toxic to aquatic organisms, leaving receiving streams devoid of most living creatures.”<sup>36</sup>

The Iron Mountain Mine Superfund<sup>37</sup> site in California provides an example of what can happen when acid mine drainage is really extreme. Both the EPA and the United States Geological Survey tend to slightly euphemize the concern of “dead” streams by instead referring to the “fish kills” at Iron Mountain.<sup>38</sup> While “fish kills” are

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<sup>30</sup> *Id.* at 19.

<sup>31</sup> *Id.*

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

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> RECLAMATION RESEARCH GRP., *supra* note 22, at 5.

<sup>37</sup> The term “Superfund” is commonly used to refer to several different things under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). A “Superfund” site is a highly contaminated site that has been placed on the National Priorities List (NPL). The term “Superfund” is also commonly used to refer to the statute of CERCLA itself. Lastly, and a bit anachronistically, Superfund refers to the pot of money used to facilitate cleanups under CERCLA; very little money is left in the fund. *See* ROBERT V. PERCIVAL, CHRISTOPHER H. SCHROEDER, ALAN S. MILLER & JAMES P. LEAPE, ENVTL. REGULATION: LAW, SCI., AND POLICY 412-13 (Walters Kluwer Law & Business 7th ed. 2013).

<sup>38</sup> *E.g., Tech. Document: Acid Mine Drainage Prediction*, E.P.A., 42 (Dec. 1994)

certainly a concern, a more complete description of the extent of ecological damage at Iron Mountain is as follows:

Contaminated water from the mine is metal-laden and more than 6,300 times more acidic than battery acid, which has caused the virtual elimination of aquatic life in sections of Slickrock, Boulder and Spring Creeks. Impacted organisms include *Chinook salmon, steelhead and other resident trout species, hundreds of species of aquatic insects, clams, mussels and plants* in the Sacramento River. Between 1981 and 1996 approximately 20 million fall-run Chinook salmon were killed in the river. Spring Creek downstream of the Stowell Mine and Iron Mountain Mine will never be clean enough to support a fishery.<sup>39</sup>

Certainly more than just fish are killed in the river—the entire ecosystem is destroyed by severe acid mine drainage. In another Superfund example, acid runoff from the Summitville Mine in Colorado killed all biological life along the Alamosa River for seventeen miles; after earning a place on the National Priorities List for its extreme level of environmental degradation, the EPA has so far spent over \$210 million trying to remediate it.<sup>40</sup> While the impact of acid mine drainage on fish is well-documented, acid mine drainage also adversely impacts birds,<sup>41</sup> and probably poses a threat to larger

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<https://www3.epa.gov/epawaste/nonhaz/industrial/special/mining/techdocs/amd.pdf> (“fishery productivity loss and periodic fish kills have been observed.”); *Environmental Effects of Iron Mountain*, U.S.G.S. CAL. WATER SCI. CTR., [http://ca.water.usgs.gov/projects/iron\\_mountain/environment.html](http://ca.water.usgs.gov/projects/iron_mountain/environment.html) (click tab to “Aquatic Life”) (last visited Feb. 20, 2016) (“A major flush-out event caused by heavy rains in 1955 led to a massive fish kill”).

<sup>39</sup> *Polluting the Future: How Mining Companies are Contaminating Our Nation's Waters in Perpetuity*, EARTHWORKS, 12 (May 2013), <https://www.earthworksaction.org/files/publications/PollutingTheFuture-FINAL.pdf> (emphasis added) [hereinafter *Polluting the Future*].

<sup>40</sup> *Acid Mine Drainage*, EARTHWORKS, *supra* note 26.

<sup>41</sup> T.H. Watkins, *Mining's Hard Rock Legacy*, NAT'L GEOGRAPHIC (Mar. 2000), <http://science.nationalgeographic.com/science/earth/inside-the-earth/hard-rock/#page=7> (311 dead birds so far that spring in Coeur d'Alene River Basin, Washington, due to lead poisoning from toxic drainage, in a region where the river “runs cleaner” than it used to run).

animals and marine life as well.<sup>42</sup> In the mining region where Gold King is located, the Upper Animas Mining District, regions of Cement Creek and the Upper Animas River have been mostly devoid of fish and aquatic life due to acid mine drainage for many years;<sup>43</sup> due to outcry from the community and industry, the area has continued to evade listing on the National Priorities List.<sup>44</sup> The tide seems to be turning after Gold King, with renewed, serious talks of Superfund listing for the area.<sup>45</sup> Colorado Governor Hickenlooper recently gave his formal endorsement of a Superfund cleanup of over fifty mines in Colorado, including Gold King.<sup>46</sup>

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<sup>42</sup> See, *Acid Mine Drainage: devastating to aquatic life*, GREENPEACE, <http://www.greenpeace.org/usa/wp-content/uploads/legacy/Global/usa/planet3/PDFs/acid-mine-drainage-devastatin.pdf> (last visited Mar. 31, 2016).

<sup>43</sup> *Upper Animas Mining District*, E.P.A., <http://www.epa.gov/region8/upper-animas-mining-district> (last visited Feb. 20, 2016).

Metals concentrations in the Animas River below Mineral Creek have eliminated virtually all fish down to Elk Creek and all cutthroat and rainbow trout down to Cascade Creek, where only a small community of brook and brown trout exists. Results also predict fish populations are likely impaired down to at least Bakers Bridge.

*Id.*

<sup>44</sup> Chase Olivarius-Mcallister, *Superfund: A dirty word to some in Silverton*, DURANGO HERALD (Aug. 3, 2013 8:14 PM), <http://www.durangoherald.com/article/20130803/NEWS01/130809831/Superfund:-A-dirty-word-to-some-in-Silverton>.

<sup>45</sup> Bruce Finley, *Gold King Superfund talks loom; local officials favor narrow EPA role*, DENVER POST (Dec. 4, 2015, 2:47 AM), [http://www.denverpost.com/animas-river/ci\\_29199431/gold-king-superfund-talks-loom-local-officials-favor](http://www.denverpost.com/animas-river/ci_29199431/gold-king-superfund-talks-loom-local-officials-favor); Associated Press, *Governor gets support for mine spill Superfund listing*, GAZETTE (Feb. 6, 2016, 2:00 PM), <http://gazette.com/governor-gets-support-for-mine-spill-superfund-listing/article/1569418>; Letters to the Editor, *Superfund*, DURANGO HERALD (Feb. 27, 2016), <http://www.durangoherald.com/article/20160227/OPINION01/160229627/0/SEARCH/Superfund> (“Silverton and San Juan County’s unanimous vote on Monday asking Colorado Gov. John Hickenlooper to pursue a Superfund listing for the mine array that is compromising water quality in the Animas River’s headwaters marked an historic turning point.”).

<sup>46</sup> Grace Hood, *Hickenlooper Approves Superfund Application For Gold King Mine*, COLO. PUB. RADIO (Feb. 29 2016), <https://www.cpr.org/news/newsbeat/hickenlooper-approves-superfund-application-gold-king-mine#sthash.0kfKv8j5.dpuf>.

When acid mine drainage enters municipal surface water supplies and groundwater, it poses significant threats to human health if not properly treated.<sup>47</sup> Nearly two decades ago, an Economic Report of the President stated that hardrock mining had polluted 3,346 miles of rivers and streams in the West with concerning toxics, including cyanide, asbestos, and mercury.<sup>48</sup> All of these are harmful toxins, and threaten the water supplies of communities downstream of mine sites.

The breadth of the problem and exorbitant cost of fixing it cannot be overstated. There are an estimated 557,650 hardrock abandoned mine sites across the nation.<sup>49</sup> There are various estimates on the cost of cleanup, ranging from as low as \$20-54 billion<sup>50</sup> to as high as \$32.7 - \$71.5 billion.<sup>51</sup> The Government Accountability Office estimates that there are 161,000 abandoned hardrock mine sites in the 12 western states and Alaska alone.<sup>52</sup> Of these, an estimated 33,000 have degraded the environment, either by contaminating water or leaving arsenic-contaminated tailings piles.<sup>53</sup> It may seem an obvious point, but the very fact that the mines have been abandoned over the decades makes assignment of liability for cleanup very difficult, if not impossible. Establishing liability at these sites “will rarely be feasible or cost-effective, and even in cases of more recent abandonment, the offending company will typically either have gone bankrupt or will have been taken over by a corporate entity that had nothing to do with the original crime.”<sup>54</sup> Further, while CERCLA—the statute designed to govern cleanup of hazardous sites—would

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<sup>47</sup> David Gerard, *The Mining Law of 1872: Digging a Little Deeper*, PROP. AND ENV'T RESEARCH CTR. (1997), <http://www.perc.org/articles/mining-law-1872-0>.

<sup>48</sup> ECONOMIC REPORT OF THE PRESIDENT 219 (Feb. 1997), [http://www.presidency.ucsb.edu/economic\\_reports/1997.pdf](http://www.presidency.ucsb.edu/economic_reports/1997.pdf).

<sup>49</sup> MINERAL POLICY CTR., *supra* note 13, at 4.

<sup>50</sup> SenatorTomUdall, *supra* note 8.

<sup>51</sup> MINERAL POLICY CTR., *supra* note 13, at 3.

<sup>52</sup> *Abandoned Mines: Information on the Number of Hardrock Mines, Cost of Cleanup, and Value of Financial Assurances*, GAO-11-834T *Before the Subcomm. on Energy & Mineral Resource of the H. Comm. on Natural Resources*, preface (July 2011), <http://www.gao.gov/assets/130/126667.pdf> (statement of Anu. K. Mittal, Dir. Natural Resources & Env't. Team).

<sup>53</sup> *Id.*

<sup>54</sup> MINERAL POLICY CTR., *supra* note 13, at 51-52.

seem capable of facilitating cleanup, the D.C. Circuit recently noted that there is a huge problem of bankrupt mining companies falling outside of CERCLA's liability scheme: "[a]lthough CERCLA requires operators to pay to clean up hazardous releases, *see* 42 U.S.C. § 9607(a), many avoid payment by structuring their operations so they never have to pay. It is a common practice for operators to avoid paying environmental liabilities by declaring bankruptcy or otherwise sheltering assets."<sup>55</sup> Since there is often no private party left to shoulder liability, either taxpayers bear the burden of cleanup<sup>56</sup> or residents endure the negative health impacts of unremediated sites.<sup>57</sup>

The matter gets worse—indefinitely. Because acid mine drainage is a chemical reaction between the exposed rock, water, and oxygen, it will continue for as long as water comes into contact with the site.<sup>58</sup> In other words, the contamination is perpetual. Even properly remediated sites and treatment facilities will require periodic monitoring for centuries (and probably millennia)—long after the expected existence of any mining corporation.<sup>59</sup>

The scale of the matter is massive. As discussed in Sections IV and V, below, the United States is already having great difficulty figuring out how to remediate mine sites that were abandoned over the last two centuries; these are generally much smaller in scale than today's mining operations. We are only beginning to see the scope of the catastrophic damage caused by more recent large-scale operations. Just one example of the massive scale of mining in recent decades and exorbitant cost of remediation is the Zortman-

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<sup>55</sup> *In re* Idaho Conservation League, USCA Case #14-1149 Document #15960811, 9-10 (D.C. Cir. 2016), [https://www.cadc.uscourts.gov/internet/opinions.nsf/01F012EA1238D7A3C85257F490054E52E/\\$file/14-1149-1596081.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/01F012EA1238D7A3C85257F490054E52E/$file/14-1149-1596081.pdf). This recent decision, which requires the EPA to regulate financial assurances for hardrock mining, is further discussed *infra* Section V.

<sup>56</sup> THE PEW CAMPAIGN FOR RESPONSIBLE MINING, *supra* note 7.

<sup>57</sup> Aimee Boulanger & Alexandra Gorman, *Hardrock Mining: Risks to Community Health*, EARTHWORKS, 3-5 (2004), [https://www.earthworksaction.org/files/publications/MiningHealthReport\\_WVE.pdf?pubs/MiningHealthReport\\_WVE.pdf](https://www.earthworksaction.org/files/publications/MiningHealthReport_WVE.pdf?pubs/MiningHealthReport_WVE.pdf).

<sup>58</sup> *Polluting the Future*, *supra* note 39, at 4.

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

Landusky site in Montana.<sup>60</sup>—Zortman-Landusky was a massive operation that extracted gold from open-pit mines using toxic cyanide heap leaching methods from 1979 to 1998.<sup>61</sup> The operation had a meager \$30 million reclamation bond and \$10 million water treatment bond put up by the mining company, Pegasus Gold; these bonds have been used for the past ten years, but do not cover the full cost of remediation.<sup>62</sup> With Pegasus now bankrupt, the federal Bureau of Land Management (BLM) and the state of Montana are footing the rest of the bill—they have already spent \$12 million in taxpayer dollars.<sup>63</sup> The site requires \$1.5 million to operate annually, and only half of that amount is covered by Pegasus Gold’s water reclamation bond.<sup>64</sup> Zortman-Landusky is yet another example of mining companies “externalizing” their true costs of operation (i.e. the damages imposed on ecosystems and human health) to the rest of today’s society, as well as to future generations.<sup>65</sup> Mining operations have exponentially grown in scale in recent decades, and will continue to do so; therefore, the problem of mine cleanup liability will only be exacerbated in the future.<sup>66</sup>

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<sup>60</sup> The satellite view of the Zortman-Landusky site gives a sense of the massive scale of modern mining operations. See *Fort Belnap Reservation*, EARTHWORKS, [https://www.earthworksaction.org/index.php/voices/detail/fort\\_belnap\\_reservation#.VtD4\\_jbe3dk](https://www.earthworksaction.org/index.php/voices/detail/fort_belnap_reservation#.VtD4_jbe3dk) (click link under map “click to view larger map of Zortman-Landusky mines”). To get a sense of how mines like these pose a tremendous threat to human health, see *id.* at main page (Dean Stiffarm of the Fort Belnap tribe holding up a glass of bright orange water, which is the mine runoff).

<sup>61</sup> *Zortman Landusky Mines*, MONT. DEPT. OF ENVTL. QUALITY, <http://deq.mt.gov/recovery/remediation/zortmanlandusky/default.mcp>x (last visited Feb 7, 2016) [<https://web.archive.org/web/20150128210240/http://deq.mt.gov/recovery/remediation/ZortmanLandusky/default.mcp>]. For further reading on the Zortman-Landusky mine and a plea for more adequate financial assurances, see generally, William Barlow, *Insult to Injury: How Government Requirements Should Protect the Public from Hardrock Mine Contamination and the Financial Liability of Its Reclamation*, 26 J. LAND RESOURCES & ENVTL. L. 339 (2006).

<sup>62</sup> MONT. DEPT. OF ENVTL. QUALITY, *supra* note 61.

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

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

<sup>65</sup> MINERAL POLICY CTR., *supra* note 13, at 1.

<sup>66</sup> For further information on some of the challenges in present-day mining, including how to address the legacy of abandoned historic and modern hard rock mines, see Watkins, *supra* note 41.

In summary, history shows that there are almost two certainties surrounding the issue: mining companies will go bankrupt, and there will be a mess left behind.<sup>67</sup> What is left to be determined is how the problem will be addressed now and how much of the hardship will be passed on to future generations.

### III. THE EPA AND LIABILITY FOR GOLD KING

The history of what happened at Gold King first requires a bit of history about the Upper Animas Mining District, located high in the Rocky Mountains near Silverton, Colorado. Since the late-1800s, this area has been heavily mined for its mineral deposits.<sup>68</sup> In the 1990s, the EPA began evaluating the Upper Animas region for Superfund status, since the area was contaminated heavily with “severe impacts to aquatic life in the UA [Upper Animas] and its tributaries from naturally occurring and mining-related heavy metals.”<sup>69</sup> Industry and residents strongly resisted Superfund designation through their lobbying efforts, largely out of fear that the designation would harm the mining and tourism industries.<sup>70</sup> Notably, in 2011, a mining company in the region and Potentially Responsible Party (PRP) under CERCLA, Sunnyside Gold Corporation, offered \$6.5 million to avoid Superfund designation.<sup>71</sup> Through these negotiations, the “town and the agency came to a sort of detente,” and the EPA agreed not to list the area on the National Priorities List provided that efforts were made to clean it up.<sup>72</sup> Since the 1990s, remediation of the area has largely been a piecemeal,

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<sup>67</sup> *Polluting the Future*, *supra* note 39, at 5.

<sup>68</sup> *Upper Animas Mining District*, E.P.A., *supra* note 43 (“Active mining in and around Silverton started around 1870 and ended in 1991”).

<sup>69</sup> *Id.*

<sup>70</sup> Olivarius-Mcallister, *supra* note 44.

<sup>71</sup> Sunnyside Gold Corporation offered in \$6.5 mitigation to address water quality issues in Cement Creek and the Upper Animas River. Mark Esper, *Sunnyside Gold Corp. offers 6.5 million*, THE SILVERTON STANDARD AND THE MINER (Oct. 6, 2011), <http://www.silvertonstandard.com/news.php?id=378>.

<sup>72</sup> Stephanie Paige Ogburn, *Why Was The Environmental Protection Agency Messing With A Mine Above Silverton?*, KUNC.ORG (Aug. 6, 2015), <http://www.kunc.org/post/why-was-environmental-protection-agency-messing-mine-above-silverton#stream/0>.

collaborative effort by the EPA, the Colorado Department of Public Health and Environment (CDPHE), the Bureau of Land Management (BLM), a mining industry group called the Animas River Stakeholders Group (ARSG), the Sunnyside Gold Corporation (SGC), and other local government and agencies.<sup>73</sup>

Up until the early 2000s, the water quality in the Upper Animas seemed to be improving through these piecemeal efforts.<sup>74</sup> However, since the early 2000s, the water quality “has not improved and, for at least 20 miles below the confluence with Cement Creek, has declined significantly.”<sup>75</sup> What happened? In order to reduce the amount of acid mine drainage over the last few decades, many of the nearby mines, including the large Sunnyside Mine, were “plugged” using hydraulic bulkheads to keep the water inside the mines.<sup>76</sup> This practice is used as an alternative “singular solution” as opposed to perpetual water treatment systems, which are costly and can require indefinite maintenance.<sup>77</sup> The Upper Animas Region is a heavily mined region with many interconnected tunnels and various geologic features, and therefore “plugging” some of the mines and tunnels can lead to more water flowing out of others.<sup>78</sup> According to a technical evaluation of the Gold King blowout prepared by the Department of the Interior (DOI), the “plugging” of the American Tunnel and Sunnyside Mine in 1993 and the Mogul Mine in 2003 facilitated the conditions leading up to the blowout, and drastically increased the amount of acid mine drainage coming from the Red and Bonita Mine,

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<sup>73</sup> See *Upper Animas Mining District*, E.P.A., *supra* note 43.

<sup>74</sup> See *Technical Evaluation of the Gold King Mine Incident*, BUREAU OF RECLAMATION, U.S. DEP’T. OF THE INTERIOR, 18, 22 (Oct. 2015), <http://www.usbr.gov/docs/goldkingminerereport.pdf> (describing the significantly increased acid mine drainage from various mines beginning in 2000); *Upper Animas Mining District*, E.P.A., *supra* note 43 (water quality began deteriorating in 2005).

<sup>75</sup> *Upper Animas Mining District*, E.P.A., *supra* note 43.

<sup>76</sup> BUREAU OF RECLAMATION, *supra* note 74, at 17-18.

<sup>77</sup> “Most bulkheads start out as a singular solution.” Kirstin Brown, *Underground Bulkheads*, COLO. DIV. OF RECLAMATION MINING & SAFETY, <http://www.animasriverstakeholdersgroup.org/attachments/File/Bulkheads.pdf> (last visited Feb. 7, 2016). The “[b]enefits of [b]ulkheads” include “prevent[ion] [of] the formation of Acid Mine Drainage” and the “[l]ack or minimization of perpetual water treatment.” *Id.*

<sup>78</sup> Ogburn, *supra* note 72.

as well as from Gold King.<sup>79</sup> In part, the EPA allowed Sunnyside Corporation to plug the American Tunnel after a consent decree settlement<sup>80</sup> was reached between Sunnyside Corporation and the Colorado Water Quality Control Division, which freed Sunnyside Corporation from responsibility for perpetual water agreement in exchange for their cleanup of a few smaller sites.<sup>81</sup>

This background on the hydraulic bulkheads helps explain some of the events directly leading up to the blowout. While the region was still not a Superfund site, the EPA stepped in to address the contamination with a then-estimated \$1.5 million effort to stop the drainage coming from Red and Bonita as a result of blockheading of the American Tunnel.<sup>82</sup> Red and Bonita Mines are below Gold King, and all three mines flow into Cement Creek, a tributary to the Animas River.<sup>83</sup> The plan was to install two bulkheads (i.e. massive plugs) on Red and Bonita, and the EPA needed to first “remove the blockage and reconstruct the portal at the Gold King Mine in order to best observe possible changes in discharge caused by the installation

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<sup>79</sup> BUREAU OF RECLAMATION, *supra* note 74, at 1, 17-18, B-3 (American Tunnel) and B-4 (Mogul Mine).

<sup>80</sup> Consent Decree, *Sunnyside Gold Corp. v. Colo. Water Quality Control Div.*, 94 CV 5459 (City & Cty. of Denver Dist. Ct. 1996), [http://www.epa.gov/sites/production/files/2015-08/documents/08-1136165.cdattachcwqd\\_0.pdf](http://www.epa.gov/sites/production/files/2015-08/documents/08-1136165.cdattachcwqd_0.pdf).

<sup>81</sup> BUREAU OF RECLAMATION, *supra* note 74, at 18.

In May 1996, a consent decree was signed between the Colorado Department of Health and Environment and Sunnyside Gold, Inc., to allow the discontinuation of perpetual water treatment. An essential part of the agreement was that Sunnyside would undertake reclamation of numerous acid sources in the area to offset the residual acid seepage expected to continue to discharge from the American Tunnel. With the additional waste removal and reclamation work underway, they commenced the installation of hydraulic bulkheads.

*Id.*

<sup>82</sup> Mary Shinn, *EPA to plug Silverton mine soon*, DURANGO HERALD (June 28, 2015), <http://www.durangoherald.com/article/20150628/NEWS01/150629600/0/SEARCH/EPA-to-plug-Silverton-mine-soon>.

<sup>83</sup> *Red and Bonita Mine Bulkhead Construction*, REGION 8, E.P.A., (May 2015), <http://www.epa.gov/sites/production/files/2015-06/documents/upper-animas-red-and-bonita-bulkhead-fact-sheet-5-22-2015.pdf>.

of Red and Bonita Mine bulkhead.”<sup>84</sup> Essentially, this project was an “experiment” just like plugging the American Tunnel, so the EPA wanted to make sure that they could at least monitor drainage coming from the nearby mines as a result of the upcoming Red and Bonita bulkhead project.<sup>85</sup>

Therefore, when the EPA unleashed 3 million gallons of toxic sludge from Gold King on August 5, 2015, some argue that their mistakes were really the “straw that broke the camel’s back.”<sup>86</sup> In an internal report, the EPA said that the blowout was “likely inevitable” under the conditions.<sup>87</sup> Still, the EPA has been subject to heavy scrutiny for their mistakes at Gold King, and at the time of writing this article, lawsuits are emerging.<sup>88</sup> Public outcry immediately ensued against the EPA for the spill when several states were unable to drink their water, and those who relied on the water for agriculture, tourism, and livestock took a huge financial hit.<sup>89</sup> EPA

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

<sup>85</sup> “‘This, in a way, is as much as experiment as the American Tunnel,’ said Steve Fearn, co-coordinator of the Animas River Stakeholders Group.” Shinn, *supra* note 82 “‘The EPA understands that this new bulkhead could have the same effect as the American Tunnel bulkheads and cause water to drain from other mines. As a result, the agency plans to monitor the Gold King number 7 level and the Mogul because they are both nearby,’ Way said.” *Id.*

<sup>86</sup> Meg Lentz, *Animas River Release: 143 Years in the Making*, PROJECT ON GOV’T OVERSIGHT (Aug. 19, 2015), <http://www.pogo.org/blog/2015/08/colorado-animas-river-release.html?referrer=http%3A%2F%2Ft.co%2FkqYMInt0S2>.

<sup>87</sup> *Internal Review of the August 5, 2015 Gold King Mine Blowout*, E.P.A. 9 (Aug. 24, 2015), [http://www.epa.gov/sites/production/files/2015-08/documents/new\\_epa\\_nmt\\_gold\\_king\\_internal\\_review\\_report\\_aug\\_24\\_2015fnldated\\_redacted.pdf](http://www.epa.gov/sites/production/files/2015-08/documents/new_epa_nmt_gold_king_internal_review_report_aug_24_2015fnldated_redacted.pdf).

<sup>88</sup> Russell Contreras & Susan Montoya Bryan, *New Mexico first to issue plans to sue EPA, Colorado over Gold King Mine spill*, DURANGO HERALD (Jan. 14, 2016), <http://www.durangoherald.com/article/20160114/NEWS02/160119758/-1/s/New-Mexico-first-to-issue-plans-to-sue-EPA-Colorado-over-Gold-King-Mine-spill>; Lindsay Whitehurst, *Utah prepares lawsuit against EPA over mine spill contamination*, STANDARD EXAMINER (Feb. 12, 2016), <http://www.standard.net/Environment/2016/02/12/Utah-No-EPA-alert-about-metal-in-water-after-mine-spill>.

<sup>89</sup> *EPA’s Gold King Mine Disaster: Examining the Harmful Impacts to Indian Country*, Senate Indian Affairs Committee Hearing, 114th Cong. (2015) WLNR 27599357 (statement by Douglas Eakin, President-American Action Forum) (“Local business centered around the river has dried up, farming has come to a halt and the sheer public safety threat that the 3 million plus gallons of toxic mining

Administrator Gina McCarthy assured the public shortly after the disaster that the Agency would be “taking responsibility to ensure that it is cleaned up,”<sup>90</sup> but many have expressed doubt over what full responsibility would look like from an agency that some feel has too much power and not enough oversight.<sup>91</sup> The EPA also received heavy critique that it took too long to communicate the emergency to the effected states, especially the sovereign Navajo Nation, whom it took two full days for the EPA to inform.<sup>92</sup> There were also concerns over the fact that part of the delay was due to lack of cell service or a satellite phone at the remote mine site.<sup>93</sup> In the months that followed, an official investigation by the Department of the Interior revealed that the EPA could have prevented the disaster if they had been more careful in checking water levels.<sup>94</sup> The EPA looked particularly

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waste created has left waterways in Colorado, Utah, New Mexico and Arizona in peril. Studies suggest it will take decades to restore the affected waterways and surrounding areas.”

<sup>90</sup> Gina McCarthy, *Remarks on Gold King Mine*, E.P.A., (Aug. 11, 2015), <http://www2.epa.gov/goldkingmine/epa-administrator-gina-mccarthy-8112015-remarks-gold-king-mine>.

<sup>91</sup> Rachel Leven, *Senators Strike at EPA Treatment of Navajo Nation*, WATER, LAW, & POLICY MONITOR (BNA) No. 38, at “Mining” (Sept. 24, 2015).

<sup>92</sup> *Watch Live: Senate Hearing on Gold King Mine Spill*, ROLL CALL (Sept. 16, 2015),

[http://video.rollcall.com/video/watch\\_live\\_senate\\_hearing\\_on\\_gold\\_king\\_mine\\_spill](http://video.rollcall.com/video/watch_live_senate_hearing_on_gold_king_mine_spill) (Senator Gardner’s comments at 18:14-20:24); 161 CONG. REC. S7541 (daily ed. Oct. 27, 2016) (statement of Sen. McCain) (“In her testimony, Administrator McCarthy portrayed the EPA’s response to the tribes as timely, but her portrayal was directly contradicted by the testimony of the Navajo president, who noted that it took EPA 2 days to notify the tribe about the plume’s threat to the tribe.”).

<sup>93</sup> *EPA Toxic River Spill, Hearing before the S. Env’t and Pub. Works Comm.*, 114th Cong., C-SPAN (Sept. 16, 2015), <http://www.c-span.org/video/?328127-1/epa-administrator-gina-mccarthy-testimony-gold-king-mine-wastewater-spill> (comments of Senator Fischer at 1:25:20-1:27:05).

<sup>94</sup> BUREAU OF RECLAMATION, *supra* note 74.

A critical difference between the Gold King plan and that used at the Red and Bonita Mine in 2011 was the use in the latter case of a drill rig to bore into the mine from above and directly determine the level of the mine pool prior to excavating backfill at the portal. Although this was apparently considered at Gold King, it was not done. Had it been done, the plan to open the mine would have been revised, and the blowout would not have occurred.”

*Id.*

negligent in the edited footage that was released of the spill as it happened, when their contractors shouted “Get outta here . . . what do we do now?”<sup>95</sup>

Despite differing opinions as to the actual level of fault that can rightfully be attributed to the EPA, the agency has stated that they will take responsibility for the blowout.<sup>96</sup> Questions remain as to what responsibility will look like when states and individuals seek compensation from a very powerful federal agency. At the time of writing this article, there are several actions underway to hold the EPA and others liable for the Gold King spill. On January 14, 2016, the New Mexico Environment Department filed a notice of intent to sue the EPA for “creating an imminent and substantial endangerment to the health of New Mexico’s citizens and the environment of the Animas and San Juan Rivers in New Mexico.”<sup>97</sup> The state intends to file a citizen suit under the Resource Conservation and Recovery Act (RCRA) Section 7002(a)(1)(B), and will “pursue injunctive relief, future costs and legal fees.”<sup>98</sup> RCRA is the environmental statute that governs solid waste disposal; the citizen suit provision of RCRA, 42 U.S.C. § 6972(a)(1)(B), allows for injunctive relief “against any person, including the United States . . . who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.”<sup>99</sup> The citizen suit provision is also known as the “private attorney-general provision,” and gives private individuals a right of action to enforce the environmental regulatory regime of RCRA.<sup>100</sup> The remedy of the citizen suit is injunctive rather than

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<sup>95</sup> The HARRY READ ME File, *EPA releases Gold King Mine blowout footage: ‘Get outta here?!... What do we do now?’*, YOUTUBE (Sept. 10, 2015), <https://www.youtube.com/watch?v=ZBIR05tDCbI>.

<sup>96</sup> Gina McCarthy Remarks, *supra* note 90.

<sup>97</sup> Notice of Endangerment and Intent to Sue under Section 7002(a)(1)(B) of the Resource Conservation & Recovery Act, Jackson Gilmour & Dobbs PC (Jan 14, 2016), [https://www.env.nm.gov/OOTS/documents/NMED\\_RCRA\\_Notice\\_of\\_Intent\\_regarding\\_Animas\\_River\\_Spill\\_002.pdf](https://www.env.nm.gov/OOTS/documents/NMED_RCRA_Notice_of_Intent_regarding_Animas_River_Spill_002.pdf).

<sup>98</sup> *Id.* at 1-2.

<sup>99</sup> 42 U.S.C. § 6972 (2012).

<sup>100</sup> *Bologna v. Kerr-McGee Corp.*, 95 F. Supp. 2d 197, 201 (S.D.N.Y. 2000).

monetary, and therefore could require the EPA to be “responsible for site investigation, monitoring and testing costs as well as an order barring further endangerment;” this remedy would not require money damages, such as plaintiff’s past cleanup costs.<sup>101</sup> Before New Mexico can file suit, they must provide a ninety-day notice to the EPA, in keeping with 42 U.S.C. § 6972(b)(2)(A). If causation is established, the citizen suit provision of RCRA generally provides for joint and several liability and, similarly to CERCLA, allows for strict liability.<sup>102</sup> Under this scheme of liability, given the EPA’s negligence in not checking the water levels, discussed above, New Mexico could potentially prevail in the RCRA citizen’s suit, and the EPA would then be required to test, monitor, and ensure water quality in New Mexico. In their letter of intent to sue the EPA, New Mexico stated that they intend to follow through on the suit unless the EPA “begin[s] to take meaningful measures to clean up the affected areas and agree to a long-term plan that will research and monitor the effects of the toxic spill.”<sup>103</sup> The coming months and years will reveal the outcome of this potential litigation.

To address damages to persons or property caused by the spill,<sup>104</sup> the EPA quickly set up a claims process under the existing Standard

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<sup>101</sup> Carter E. Strang, *RCRA Citizen Suits for Injunctive Relief*, TUCKER ELLIS & WEST LLP, [http://www.tuckerellis.com/files/rcra\\_citizen\\_suits\\_for\\_injunctive\\_relief.pdf](http://www.tuckerellis.com/files/rcra_citizen_suits_for_injunctive_relief.pdf)

<sup>102</sup> *Id.* at 2, “Liability is joint and several unless the defendant can establish that the damages are divisible and that there is a reasonable basis for an apportionment.” (citing *Maine People’s Alliance v. Mallinckrodt, Inc.*, 471 F. 3d 277 (1st Cir. 2006); *Waste, Inc. Cost Recovery Group v. Allis Chalmers Corp.*, 51 F. Supp. 2d 936 (N.D. Ind. 1999); *United States v. Conservation Chemical Co.*, 619 F. Supp. 162 (D.C. Mo. 1985)). “Liability is strict, as is true under CERCLA, though there is legislative language that can be cited to the contrary.” (citing *United States v. Northeastern Pharm. & Chem. Co.*, 810 F. 2d 726 (8th Cir. 1986); *Cox v. City of Dallas*, 256 F. 3d 281 (5th Cir. 2001)).

<sup>103</sup> *New Mexico Environment Department Announces Intent to Sue U.S. EPA for 2015 Massive Waste Spill*, STATE OF N.M. ENV’T DEPT. (Jan. 14, 2016), <https://www.env.nm.gov/OOTS/documents/160114PR-OOTSNoticeIntentToSueEPA.pdf>.

<sup>104</sup> Personal injury firms have also seized on the opportunity to offer their services and free consultations to spill victims, including “The Navajo Nation, [r]anchers, [f]armers, [b]usinesses that draw water from the river, [and i]ndividuals with illnesses from water contamination.” *See, e.g., Gold King Mine Spill*, STERN

Form 95 for claims under the Federal Tort Claims Act (FTCA).<sup>105</sup> The EPA's general, two-paged form is "used to present claims against the United States under the Federal Tort Claims Act (FTCA) for property damage, personal injury, or death allegedly caused by a federal employee's negligence or wrongful act or omission occurring within the scope of the employee's federal employment."<sup>106</sup> Enacted in 1946, the FTCA is a limited waiver of the United States' immunity from suit, allowing claims for damages when the "United States, if a private person, would be liable to the claimant" for the act or omission.<sup>107</sup> Essentially, Form 95 is a tool that helps parties "settle" with the EPA rather than filing a lawsuit. While not required for FTCA claims, the EPA maintains that Form 95 is a convenient format that ensures all the relevant information is included in the claim.<sup>108</sup>

There are two important requirements for claims brought under the FTCA with Standard Form 95: first, the claim must be brought "within two years after the claim accrues," and second, a "sum certain" (i.e. a specific amount) of monetary damages must be specified.<sup>109</sup> Failure of either of these requirements invalidates the claim. Under this process, the EPA has told the public that individuals, businesses, or governmental entities can "amend [their] claim at any time prior to reaching a settlement with EPA, or before [they] file a lawsuit under the FTCA."<sup>110</sup> Additionally, if the claim is

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LAW GROUP, <http://www.stern-lawgroup.com/Gold-King-Mine-Spill.aspx> (last visited Feb 20, 2016).

<sup>105</sup> *Claims Process and Standard Form 95 for Damage, Injury or Death as a Result of Gold King Mine Release*, E.P.A., <http://www.epa.gov/goldkingmine/claims-process-and-standard-form-95-damage-injury-or-death-result-gold-king-mine> (last visited Feb. 20, 2016).

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

<sup>107</sup> 28 U.S.C. § 1346(b)(1) (2012).

<sup>108</sup> *Claims Process and Standard Form 95*, E.P.A., *supra* note 105.

<sup>109</sup> See DEPT. OF JUSTICE, OMB NO. 1105-0008, STANDARD FORM 95: CLAIM FOR DAMAGE, INJURY, OR DEATH (Feb. 2007), [http://www.epa.gov/sites/production/files/2015-08/documents/standardform95\\_4.pdf](http://www.epa.gov/sites/production/files/2015-08/documents/standardform95_4.pdf) (form emphasizing "**SUM CERTAIN**" and "**TWO YEARS**") (emphasis in original).

<sup>110</sup> *Frequent Questions About Federal Tort Claims Act (FTCA) Claims Processing*, E.P.A., <http://www.epa.gov/goldkingmine/frequent-questions-about-federal-tort-claims-act-ftca-claims-processing> (citing 40 C.F.R. pt. 10).

denied or ignored for six months, then claimants can sue the EPA under the FTCA, under 28 U.S.C. § 2675(a).<sup>111</sup> However, there is some confusion due to language on the form itself, which appears to indicate that claiming a specific amount on the form obligates the claimant to accept that amount, and also bars future redress for unknown injuries. The clause states in the following bolded and capitalized wording: **“I CERTIFY THAT THE AMOUNT OF CLAIM COVERS ONLY DAMAGES AND INJURIES CAUSED BY THE INCIDENT ABOVE AND AGREE TO ACCEPT SAID AMOUNT IN FULL SATISFACTION AND FINAL SETTLEMENT OF THIS CLAIM.”**<sup>112</sup> Navajo Nation Attorney General Ethel Branch believes that this clause is “a significant limiting clause that, despite assurances from the USEPA, could limit or waive the future rights of claimants.”<sup>113</sup> Due to worry over this clause and the alleged tactics of EPA workers going door-to-door on the Navajo Reservation to get individuals to sign claims forms, the Navajo Nation felt that the EPA was trying to force Native Americans to waive their rights to future claims stemming from the Gold King disaster.<sup>114</sup> Despite Form 95’s ambiguous language, the EPA has assured the public that claims may be amended up until final settlement; still, the process provides no redress for harms that were unknown at the time of the original claim.<sup>115</sup> The Navajo Nation has pressed the EPA to act fairly, and may eventually file suit.<sup>116</sup>

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<sup>111</sup> 28 U.S.C. § 2675(a) (2012).

<sup>112</sup> DEPT. OF JUSTICE, *supra* note 109.

<sup>113</sup> Andrew Westney, *Navajo Nation Presses EPA To Treat Mine Spill Claims Fairly*, LAW360 (Oct 6, 2016), <http://www.law360.com/articles/711678/navajo-nation-presses-epa-to-treat-mine-spill-claims-fairly>.

<sup>114</sup> Stephen Dinan, *EPA denies cheating Navajo on Gold King Mine spill, says future claims will be allowed*, WASH. TIMES (Aug. 13, 2015), <http://www.washingtontimes.com/news/2015/aug/13/epa-denies-cheating-navajo-gold-king-mine/>.

<sup>115</sup> “You may amend your claim at any time prior to reaching a settlement with EPA . . . If you accept a final settlement from EPA for your claim related to the Gold King Mine accident, you may not pursue additional claims originating from the Gold King Mine accident.” *Frequent Questions About Federal Tort Claims Act (FTCA) Claims Processing*, E.P.A., *supra* note 110.

<sup>116</sup> Andrew Westney, *supra* note 113.

Others beside the Navajo Nation are not completely satisfied with the relief for disaster victims provided by the Federal Tort Claims Act (FTCA). On September 22, 2015, Senator Tom Udall (D-New Mexico), with co-sponsors Senators Martin Heinrich (D-New Mexico) and Michael Bennet (D-Colorado) introduced S.2063, the Gold King Mine Spill Recovery Act of 2015.<sup>117</sup> The bill would house an “Office of Gold King Mine Spill Claims” within the EPA to administer FTCA claims of injured parties (Section 4).<sup>118</sup> Further, it would require long-term water quality monitoring (Section 5), and amend CERCLA to require assessment and a priority plan for abandoned mines (Section 6).<sup>119</sup> In September 2015, the bill was referred to the Senate committee, read twice, and referred to the Committee on the Judiciary.<sup>120</sup> It has not gone anywhere since. Despite the seeming reasonableness of the proposed legislation to assure that victims of Gold King are adequately compensated, a website called govtrack.us, which tracks various proposed bills, gives the legislation an estimated zero percent chance of ever being enacted.<sup>121</sup>

A state Representative from Colorado, Don Coram (R-Montrose), introduced a short-lived bill that would have taken a much more aggressive approach to holding the EPA liable by “allow[ing] the state to file lawsuits against the federal government on behalf of individuals financially impacted by the Gold King Mine spill” under the FTCA.<sup>122</sup> There have already been a number of claims filed; so far, the EPA has received 41 claims from individuals affected by the disaster.<sup>123</sup> Essentially, the bill<sup>124</sup> would have allowed the state of

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<sup>117</sup> Gold King Mine Spill Recovery Act of 2015 (Introduced in Senate - IS), S.2063.IS, 114th Cong. (2015), <https://www.gpo.gov/fdsys/pkg/BILLS-114s2063is/pdf/BILLS-114s2063is.pdf>.

<sup>118</sup> *Id.* at § 4.

<sup>119</sup> *Id.*

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

<sup>121</sup> Gold King Mine Spill Recovery Act of 2015, S. 2063, 114th Cong. (2015), <https://www.gpo.gov/fdsys/pkg/BILLS-114s2063is/pdf/BILLS-114s2063is.pdf>.

<sup>122</sup> Peter Marcus, *Bill would allow lawsuits after Gold King Mine spill north of Durango*, DURANGO HERALD (Dec 27, 2015), <http://www.durangoherald.com/article/20151227/NEWS01/151229679/Bill-would-allow-lawsuits-after-Gold-King-Mine-spill-north-of-Durango>.

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

Colorado to sue the EPA on behalf of its citizens under the FTCA, if the EPA reneged on their duty to compensate those who were adversely impacted by the spill.<sup>125</sup> The short-lived bill died in a 5-4 vote.<sup>126</sup>

In conclusion, while many have rushed to point the finger at the EPA for their negligence in causing the spill,<sup>127</sup> others have pointed out the reality that cleaning up these abandoned mines is a difficult, risky endeavor.<sup>128</sup> Further, unlike mining companies who may have financially benefited from the initial mining of the land, the EPA had no financial interest in Gold King or any of the surrounding mines; their efforts were done in order to follow their mission of “protecting human health and the environment.”<sup>129</sup> While subsequent reports unveiled that the EPA was not careful enough in their clean up endeavors, this does not change the root concern: there are still hundreds of thousands of abandoned mines like Gold King that

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<sup>124</sup> H. 16-1055, 70th Gen. Assemb., 2nd Reg. Sess. (Colo. 2016), [http://www.leg.state.co.us/clics/clics2016a/csl.nsf/fsbillcont/24DAA8320899DC4887257F240063FE80?Open&file=1055\\_01.pdf](http://www.leg.state.co.us/clics/clics2016a/csl.nsf/fsbillcont/24DAA8320899DC4887257F240063FE80?Open&file=1055_01.pdf).

<sup>125</sup> Marcus, *supra* note 122.

<sup>126</sup> Peter Marcus, *Gold King Mine spill legislation drowns in Colorado Legislature*, DURANGO HERALD (Jan 27, 2016), <http://www.durangoherald.com/article/20160127/NEWS01/160129614/Gold-King-Mine-spill-legislation-drowns-in-Colorado-Legislature>.

<sup>127</sup> 161 CONG. REC. H5790 (daily ed. Sept. 8, 2015) (statement of Sen. Burgess).

Mr. Speaker, I will just ask: Has anyone been fired? Has anyone been held accountable at the Environmental Protection Agency for this disaster? No, they have not. What would have happened had a private company been responsible for a disaster of this order of magnitude? I shudder to think where those people in charge of that company would be today. The EPA did not follow its own procedures. It did not have proper communications equipment at the site of the disaster. They had no satellite phone. They had no radio. As a consequence, they did not notify local officials until a day later of what had occurred at the mine. They have also refused to answer questions about the potential health risks in the polluted water to humans and animals downriver.

*Id.*

<sup>128</sup> Huber, *supra* note 6.

<sup>129</sup> *Our Mission and What We Do*, E.P.A., <http://www.epa.gov/aboutepa/our-mission-and-what-we-do> (last visited Feb. 20, 2016).

require remediation.<sup>130</sup> Placing all the focus on ensuring that the EPA is held accountable by calling for criminal prosecution of EPA officials or impeachment of Administrator Gina McCarthy distracts from the bigger issue. Given the decades of EPA pressure on industry stakeholders to either clean up the Upper Animas or face Superfund designation, and their failure to do so adequately without EPA intervention, Lauren Pagel at Earthworks has said that blaming the EPA is “like blaming the fire department for kicking down your door to put out your house fire. After you–ignored the fire marshal’s warnings. And cut the fire department’s budget.”<sup>131</sup> To extend the analogy further, pointing the finger also does not answer the questions of how the fire started, or how future fires can be prevented. In the next two sections, the broader answers to these questions in regards to abandoned legacy mines are discussed.

#### IV. FEDERAL STATUTORY OBSTACLES AND PROPOSED LEGISLATION

##### A. Amending the Mining Law of 1872

Understanding the legal quandaries that have allowed acid mine drainage to largely go unregulated requires a look at the General Mining Law of 1872. Many have noted that the Mining Law has remained unchanged since it was passed shortly after the Civil War in 1872—in itself one big reason some that argue it should be updated.<sup>132</sup> The Mining Law was passed in the wake of the California Gold Rush and similar Western mining booms in the mid-nineteenth century, and was intended to encourage movement to

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<sup>130</sup> See PEW CAMPAIGN FOR RESPONSIBLE MINING and EARTHWORKS, *supra* note 7.

<sup>131</sup> *Statement of Earthworks Policy Director, Lauren Pagel, on Sep 8 House Science, Space, and Technology Committee Hearing regarding the Gold King Mine/Animas River disaster*, EARTHWORKS (Sept. 9, 2015), [https://www.earthworksaction.org/media/detail/statement\\_of\\_earthworks\\_policy\\_director\\_lauren\\_pagel\\_on\\_sep\\_8\\_house\\_science#.VkYvaUszJg0](https://www.earthworksaction.org/media/detail/statement_of_earthworks_policy_director_lauren_pagel_on_sep_8_house_science#.VkYvaUszJg0).

<sup>132</sup> See *General Mining Law of 1872*, EARTHWORKS, [https://www.earthworksaction.org/issues/detail/general\\_mining\\_law\\_of\\_1872#.Vko0UszJg0](https://www.earthworksaction.org/issues/detail/general_mining_law_of_1872#.Vko0UszJg0) (last visited Feb. 20, 2016).

sparsely populated Western lands.<sup>133</sup> Most of the minerals were located on federal lands, but no standardized laws governed the transfer of ownership of these lands from the federal government to the miners.<sup>134</sup> In 1872, Congress combined and amended the customs, codes, and laws surrounding mining into the General Mining Law.<sup>135</sup> The cornerstone of the Mining Law is self-initiation or free access, the principle that citizens and companies can search for minerals without authorization from any government agency. That is:

[i]f a site contains a deposit that can be profitably marketed, claimants enjoy the "right to mine," regardless of any alternative use, potential use, or non-use value of the land. Until recently, claimants maintained their rights by satisfying an annual work requirement, but in 1992 Congress replaced this requirement with an annual \$100 holding fee for each claim. Claimants then may acquire outright title both to the minerals and the land by obtaining a mineral patent, at a per-acre cost of \$2.50-\$5. Producers do not pay royalty taxes on the minerals taken from federal lands.<sup>136</sup>

In summary, at \$2.50-\$5 per acre, the General Mining Law of 1872 practically gives away public lands for nearly nothing to those who would like to stake a mining claim.

The General Mining Law has jurisdictional coverage over 270 million acres of publicly owned land, which is almost one-fourth of all land in the United States, and two-thirds of the land that the U.S. Government "holds in trust for all Americans."<sup>137</sup> The law mostly covers extraction of hardrock minerals not governed by other laws, and does not include extraction of coal, oil, or natural gas.<sup>138</sup> Roughly \$1 billion worth of hardrock minerals are extracted each

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<sup>133</sup> Gerard, *supra* note 47.

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

<sup>135</sup> *Id.*

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

<sup>137</sup> *General Mining Law of 1872 - Polluter of water, provider of pork*, EARTHWORKS, <https://www.earthworksaction.org/files/publications/EWfs-1872MiningLaw-WaterPolluterPorkProvider-low.pdf> (last visited Feb. 20, 2016).

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

year from America's public lands, according to the Congressional Budget Office's (CBO's) estimates, resulting in an estimated \$40 million in lost royalties annually.<sup>139</sup>

Advocates for both a healthy environment and responsible government express concern that the General Mining Law of 1972 gives away public land to private companies practically for free, and the public then bears the costs of polluted water and cleaning up the mining operations.<sup>140</sup> As discussed in Sections I and II above, and particularly in Part II with the example of Zortman-Landunsky,<sup>141</sup> the cost to taxpayers is astronomical, and treatment is required in perpetuity. The Mining Law contains no environmental protections conditional on use of the land for mining, and therefore regulation of the use of the land must come from other sources, such as the Forest Service and Bureau of Land Management.<sup>142</sup> Many have criticized the Mining Law heavily since there are no royalty provisions, and therefore "billions of dollars of federal resources can pass into private hands for a pittance through the patenting process."<sup>143</sup> A law that was originally written to benefit Western prospectors now primarily benefits billion-dollar, multi-national corporations, many of which are foreign-owned.<sup>144</sup> Some have critically characterized the law as a "140-year-old law that allows foreign companies to make a profit off of resources owned by the collective American public."<sup>145</sup> According to the U.S. Geological Survey, seven of the ten top gold

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<sup>139</sup> THE PEW CAMPAIGN FOR RESPONSIBLE MINING, *supra* note 7.

<sup>140</sup> *Id.* See also, *General Mining Law of 1872*, EARTHWORKS, *supra* note 132.

<sup>141</sup> See *supra* notes 60-65.

<sup>142</sup> Gerard, *supra* note 47; see, e.g., *Mining Laws*, BUREAU OF LAND MGMT., [http://www.blm.gov/wo/st/en/info/regulations/mining\\_claims.html](http://www.blm.gov/wo/st/en/info/regulations/mining_claims.html) (last visited Feb. 20, 2016).

<sup>143</sup> Gerard, *supra* note 47.

<sup>144</sup> *1872 Mining Law - the Need for Reform*, EARTHWORKS, [https://www.earthworksaction.org/issues/detail/1872\\_mining\\_law\\_the\\_need\\_for\\_reform#.Vko2XUzJg1](https://www.earthworksaction.org/issues/detail/1872_mining_law_the_need_for_reform#.Vko2XUzJg1) (last visited Feb. 20, 2016).

<sup>145</sup> Rachael Bale, *Foreign-owned mines operate royalty-free under outdated US law*, REVEAL (Jan. 21, 2015), <https://www.revealnews.org/article/foreign-owned-mines-operate-royalty-free-under-outdated-us-law/>. The journalist seems particularly concerned that a foreign-owned company, Hong Kong's Azarga Resources, might pollute the water supply in nearby communities through toxic uranium mining at the Dewey Burdock project, without paying any royalties to the United States government.

producing mines are foreign-owned.<sup>146</sup> On the other hand, mining companies argue that they already pay their fair share in taxes, and do not want to pay a royalty on top of taxes for their use of federal lands. However, advocates for reform have emphasized that the General Mining Law of 1872 was created in an era when the government was encouraging settlement and mining of scarcely-populated lands out West—a policy reason that cannot be justified in today’s world, where populations only continue to grow and are adversely effected by nearby mining operations.<sup>147</sup> With this increase in population, the law needs to reflect that the “highest use” of public lands is not just mining, but a balance of interests such as “energy development, recreation, conservation, and other interests.”<sup>148</sup> If not, the Mining Law will continue to show “deferential treatment afforded [to] hardrock mine operators . . . result[ing] in damages costing the public dearly not only in the form of severe environmental damage, but the financial liability of its reclamation as well.”<sup>149</sup>

While advocates seek many reforms to the General Mining Law of 1872,<sup>150</sup> the main proposed reforms involve the imposition of

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<sup>146</sup> *1872 Mining Law - the Need for Reform*, EARTHWORKS, *supra* note 144; See *2009 Minerals Yearbook: Gold*, U.S.G.S. 31.15 (Mar. 2011), <http://minerals.usgs.gov/minerals/pubs/commodity/gold/myb1-2009-gold.pdf> (Table 3: Leading Gold-Producing Mines in the United States in 2009, in Order of Output: Barrick Gold Corp., Canada; Newmont Mining Corp., United States; Kennecott Utah Copper Corp., United States, but wholly owned subsidiary of Rio Tinto Group, United Kingdom; Kinross Gold Corp., Canada; Sumitomo Metal Mining Co., Japan; AngloGold Ashanti Ltd., South Africa).

<sup>147</sup> See, *1872 Mining Law - the Need for Reform*, EARTHWORKS, *supra* note 144.

<sup>148</sup> *Summary of the Hardrock Mining and Reclamation Act of 2015*, EARTHWORKS (Nov. 2015), [https://www.earthworksaction.org/library/detail/hardrock\\_mining\\_and\\_reclamation\\_act\\_of\\_2015#.VreZQTbe3dk](https://www.earthworksaction.org/library/detail/hardrock_mining_and_reclamation_act_of_2015#.VreZQTbe3dk).

<sup>149</sup> Barlow, *supra* note 61, at 355.

<sup>150</sup> *1872 Mining Law - Reform Requirements*, EARTHWORKS, [https://www.earthworksaction.org/issues/detail/1872\\_mining\\_law\\_reform\\_requirements#.VrZHS3dk](https://www.earthworksaction.org/issues/detail/1872_mining_law_reform_requirements#.VrZHS3dk) (last visited Feb. 20, 2016). One extremely important problem with the General Mining Law of 1872 is the “lack of any provisions relating to environmental protection.” Jeffrey A. Kodish, *Restoring Inactive and Abandoned Mine Sites: A Guide to Managing Environmental Liabilities*, 16 J. ENVTL. L. & LITIG. 381, 382 (2001).

royalties and the creation of a hardrock mining reclamation fund, similar to what is in place for comparable industries such as coal mining.<sup>151</sup> Coal, oil, and natural gas pay between 8 and 12.5 percent in royalties.<sup>152</sup> Royalty and reclamation fund legislation has been proposed in the past,<sup>153</sup> but the Gold King disaster has brought a resurgence of attention to it. In 2015, the 114th Congress took up the issue in the Senate, when Senate sponsor Tom Udall (D-NM) and co-sponsors Martin Heinrich (D-NM), Michael Bennett (D-CO), Ron Wyden (D-OR) and Edward Markey (D-MA) introduced S.2254, the “Hardrock Mining and Reclamation Act of 2015.”<sup>154</sup> A similar bill, H.R.963, was proposed in the House several months before the Gold King spill on February 13, 2015, by Rep. Raul Grijalva (D-AZ), entitled the “Hardrock Mining Reform and Reclamation Act of 2015.”<sup>155</sup> Commenters have noted that “[t]he proposed legislation would represent a sea change for those miners and companies who are accustomed to operating on federal land under the 1872 system.”<sup>156</sup> The key reforms would amend the 1872 Mining Law to require royalties and establishment of a reclamation fund.

The royalty provisions of the House and Senate bills vary. In the Senate, S.2254 allows the Secretary of the Interior to set a “reasonable royalty rate between 2 and 5 percent of “the gross

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<sup>151</sup> See, e.g., Surface Mining Control and Reclamation, 30 U.S.C. Ch. 25 (2012).

<sup>152</sup> Summary of the Hardrock Mining and Reclamation Act of 2015, EARTHWORKS, *supra* note 148.

<sup>153</sup> See, e.g., Hardrock Mining and Reclamation Act of 2007, H.R. 2262, 110th Cong. (2007) (4% & 8% royalties). For a discussion of proposed legislation in the 1990’s, see Paul Stokstad, *Structuring a Reclamation Program for Abandoned Noncoal Mines*, 25 ECOLOGY L.Q. 121, 144-45 (1998) (discussing H.R. 1580, 104th Cong. (1995); S. 506, 104th Cong. (1995); H.R. 357, 104th Cong. (1995); S. 257, 103d Cong. (1993); H.R. 322, 103d Cong. (1993); S. 775, 103d Cong. (1993); H.R. 1708, 103d Cong. (1993); H.R. 918, 102d Cong. (1992)).

<sup>154</sup> Hardrock Mining and Reclamation Act of 2015, S. 2254, 114th Cong. (2015).

<sup>155</sup> Hardrock Mining and Reform Act of 2015, H.R. 963, 114th Cong. (2015).

<sup>156</sup> Anne Harrington & Gregory Louer, *Republicans and Democrats Push for Hardrock Mining Reform in the Wake of Colorado Mine Spill*, FRESH PERSPECTIVES ON ENVIRONMENTAL, SAFETY & HEALTH (Dec. 1, 2015), <http://www.freshlawblog.com/2015/12/01/republicans-and-democrats-push-for-hardrock-mining-reform-in-the-wake-of-colorado-mine-spill/>.

income from mining for production of all locatable minerals.”<sup>157</sup> Section 202(a) provides for relief from the royalty if the mining company can show by “clear and convincing evidence” that, “without the reduction in royalty, production would not occur.”<sup>158</sup> Notably, the Senate bill exempts existing mining operations from the royalty and only imposes the royalty on new operations;<sup>159</sup> this is in sharp contrast with the House bill, H.R.963, which levies an 8 percent royalty on new mines, and 4 percent on existing mines.<sup>160</sup> The Senate bill’s failure to impose a royalty on existing mines could create an impediment to collecting the necessary revenue for costly mine cleanup; therefore, the House bill might be superior in assuring adequate funding for cleanup due to its more robust royalty provision.

The reclamation fund provisions are also slightly different in each bill. Under the Senate bill, new and existing hardrock mine operators would pay a reclamation fee between 0.6 percent and 2 percent of “the value of the production from the hardrock minerals mining operation for each calendar year”<sup>161</sup> into a newly created U.S. Treasury Hardrock Minerals Reclamation Fund. The Fund would authorize the Secretary of Interior to use amounts in the Fund—subject to availability by appropriations—for “reclamation and restoration of land and water resources adversely affected by past hardrock minerals and mining and related activities in abandoned hardrock mine States.”<sup>162</sup> The Fund would have a hierarchy of priorities to allocate resources for cleanup, similar to Surface Mining Control and Reclamation Act of 1977 (SMCRA), which places human health, safety, and property as the highest priority.<sup>163</sup> The Senate bill’s sponsors estimate that up to \$100 million annually could be generated from reclamation fees alone.<sup>164</sup> For the House bill, H.R.

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<sup>157</sup> S. 2254, 114th Cong. § 201(a) (2015).

<sup>158</sup> S. 2254, 114th Cong. § 202(a) (2015).

<sup>159</sup> S. 2254, 114th Cong. § 201(c) (2015).

<sup>160</sup> H.R. 963, 114th Cong. § 102(a)(1)-(2) (2015).

<sup>161</sup> S. 2254, 114th Cong. § 403(a) (2015).

<sup>162</sup> S. 2254, 114th Cong. § 402(a)(1) (2015).

<sup>163</sup> See Bart Lounsbury, *Digging Out of the Holes We've Made: Hardrock Mining, Good Samaritans, and the Need for Comprehensive Action*, 32 HARV. ENVTL. L. REV. 149, 197 (2008).

<sup>164</sup> Harrington & Louer, *supra* note 156.

963, a “Displaced Material Reclamation Fee” of 7 cents per ton of displaced material is levied on operators, and then placed into a similar Hardrock Minerals Fund.<sup>165</sup> The difference between the Senate bill’s “value of production” and the House bill’s “per ton” reclamation fee needs to be compared in order to see which one will generate more funding for reclamation; given the cost of abandoned mine reclamation, preference should be given to the bill that provides more funding.

Both bills have been introduced and referred to committees, but no further progress has been made recently. Given that the Democrats do not currently have the majority in Congress, and Republicans are hesitant to impose any royalties that might appear to harm the mining industry, it is unlikely that these reforms will occur in Congress’ current session.<sup>166</sup>

Historically, the mining industry has argued that they are already paying enough in taxes, and the addition of royalties and reclamation fees would curtail domestic metal production. “In 2008, there were \$20 billion in sales in U.S. metals, and we paid about \$8.3 billion in various taxes on that,” said Carol Raulston, a spokeswoman for the National Mining Association.<sup>167</sup> However, as it currently stands, the Government has no idea what volume of hardrock minerals are being extracted from federal public lands each year, since there is no requirement to pay royalties or report extraction volume.<sup>168</sup> The

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<sup>165</sup> H.R. 963, 114th Cong. § 405 (2015). For a more detailed discussion of a proposed hardrock reclamation fund and other alternatives, such as a fund created through CERCLA, see Bart Lounsbury, *supra* note 163, at 195-203.

<sup>166</sup> See *S. 2254: Hardrock Mining and Reclamation Act of 2015*, GOVTRACK.US, <https://www.govtrack.us/congress/bills/114/s2254> (last visited Feb. 20, 2016) (4% chance of being enacted), *H.R. 963: Hardrock Mining Reform and Reclamation Act of 2015*, GOVTRACK.US, <https://www.govtrack.us/congress/bills/114/hr963> (last visited Feb. 20, 2016) (7% chance of being enacted).

<sup>167</sup> Jason Dearen, *GAO report shows royalties from hard-rock mining could generate billions for U.S., if collected*, MISSOULIAN (Dec. 12, 2012), [http://missoulian.com/business/local/gao-report-shows-royalties-from-hard-rock-mining-could-generate/article\\_b76de304-4574-11e2-963a-001a4bcf887a.html](http://missoulian.com/business/local/gao-report-shows-royalties-from-hard-rock-mining-could-generate/article_b76de304-4574-11e2-963a-001a4bcf887a.html).

<sup>168</sup> The GAO report found the following:

Regarding the availability of data on hardrock minerals, we found that federal agencies generally do not collect data from hardrock

public has expressed concern that this system allows foreign companies to extract public resources with no accountability.<sup>169</sup> Environmental advocates urge that money is the key resource needed for cleanup of these costly abandoned mine sites, and that a reclamation fund is essential to facilitate abandoned mine cleanup.<sup>170</sup> For these reasons, the General Mining Law of 1872 needs to be amended to include royalties and a reclamation fund for mining conducted on federal lands, similar to the requirements placed on similar mineral extraction industries such as coal.<sup>171</sup>

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mine operators on the amount and value of hardrock minerals extracted from federal lands because there is no federal royalty that would necessitate doing so. Furthermore, while many western states collect data on the hardrock minerals produced in their state for purposes of assessing a state royalty, they generally do not collect data on the volume of those minerals extracted from federal land within those states.

U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-45R, MINERAL RESOURCES: MINERAL VOLUME, VALUE, AND REVENUE 3 (2012), <http://www.gao.gov/assets/660/650122.pdf>.

<sup>169</sup> Dearen, *supra* note 167. Commenter troutcreek (Dec, 15, 2012 6:44am) writes:

Royalties need to be paid for the ore removed from public lands, there needs to be some control over foreign companies that seem to dominate the mining industry in the US. How long will it be before China begins to invest in the "free ride" and becomes a major player in the industry? We do need some mechanism in place that protects "special places", mining companies unfortunately do not have the ability to recognize unique and fragile regions that should never be mined.

*Id.* Commenter Sukey (Dec. 16, 2012 5:44am) writes: "If I'm not mistaken, Canada already owns a number of mines in the US, reaping profit off America's land (there's huge mines all over Nevada that are now in Canadian hands)." *Id.* For a report on the millions of dollars in U.S. taxpayer liability caused by bankrupted Canadian mining companies, supporting these commenter's positions, see *Canadian Mining Companies: Costing U.S. Taxpayers and the Environment*, EARTHWORKS, <https://www.earthworksaction.org/files/publications/CanCoFS.pdf> (last visited Feb. 20, 2016).

<sup>170</sup> The non-profit advocacy group Earthworks maintains that the "[r]eal [s]olution to [c]lean [u]p [o]ld [m]ines [is] [m]oney." *Good Samaritan Legislation Isn't the Solution to Our Hardrock Mine Reclamation Problem*, EARTHWORKS (2015), [https://www.earthworksaction.org/files/publications/FACTSHEET\\_-\\_Good\\_Samaritan\\_2015.pdf](https://www.earthworksaction.org/files/publications/FACTSHEET_-_Good_Samaritan_2015.pdf).

<sup>171</sup> 30 U.S.C. §1231 *et seq.* (2012).

The normative question is simple: as between mining companies and taxpayers, who is better situated to bear the burden for remediation of abandoned mines? Congress needs to break their silence evidenced by decades of failed legislation that has resulted in taxpayers bearing the burden, and instead place responsibility on the shoulders of the better-situated party. The primary vehicle that would facilitate cleanup of abandoned mines is a major revision of the General Mining Law of 1872 that includes royalties and reclamation fees.<sup>172</sup>

### B. “Good Samaritan” Waivers

Before discussing the proposed Good Samaritan waivers, a brief explanation will be provided explaining how two statutes—the Clean Water Act (CWA)<sup>173</sup> and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—create unintended obstacles for parties who would otherwise wish to help remediate abandoned mines. Other literature provides a much more in-depth explanations of these statutes and several other environmental regulations, and the various other ways in which they might be amended to allow for cleanup of abandoned mines<sup>174</sup>—inquiries that are beyond the scope of this discussion.

The Clean Water Act was passed to accomplish the “[r]estoration and maintenance of chemical, physical and biological integrity of Nation's waters.”<sup>175</sup> The CWA is an extensive water permitting system that is accomplished through cooperative federalism, or a regulatory structure that allocates some responsibility to state agencies and some responsibility to the EPA to carry out the Act’s

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<sup>172</sup> For a discussion of other laws regulating federal lands that could also be amended, such as the Surface Resources and Multiple Use Act of 1955 and the Federal Land Policy and Management Act of 1976, see John F. Seymour, *Hardrock Mining and the Environment: Issues of Federal Enforcement and Liability*, 31 *ECOLOGY L.Q.* 795, 824-847 (2004).

<sup>173</sup> The Federal Water Pollution Control Act Amendments of 1972 are now known as the Clean Water Act (CWA). PERCIVAL, ET. AL, *supra* note 37, at 665.

<sup>174</sup> See Lounsbury, *supra* note 163, at 197; Seymour, *supra* note 172, at 797; Kodish, *supra* note 150.

<sup>175</sup> 33 U.S.C. § 1251 (2012).

regulatory purposes.<sup>176</sup> Under the CWA, discharge of pollutants into navigable waterways from a point source is prohibited unless authorized by a permit.<sup>177</sup> The Act defines “pollutants” as “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.”<sup>178</sup> A “point source” is any “discernable, confined, and discrete conveyance.”<sup>179</sup> The “discharge of a pollutant” is “any addition of any pollutant to navigable waters from any point source.”<sup>180</sup> One main way that the Act regulates point source discharges is through § 402, the National Pollutant Discharge Elimination System (NPDES) permit program, which allows discharge of pollutants provided that the permit requirements are met.<sup>181</sup> There is a Clean Water Act violation when a plaintiff “prove[s] that defendants (1) discharged, i.e., added (2) a pollutant (3) to navigable waters (4) from (5) a point source.”<sup>182</sup> Citizen suits are authorized under the Act to assist in enforcement (i.e. force compliance with the NPDES permitting system); individuals with standing are authorized to bring suit.<sup>183</sup>

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<sup>176</sup> See Katie M. Sweeney & Sherrie A. Armstrong, *Cooperative Federalism in Environmental Law: A Growing Role for Industry*, AMERICAN BAR ASSOC. 2-5 (2013), [http://www.americanbar.org/content/dam/aba/events/environment\\_energy\\_resources/2013/10/21st\\_fall\\_conference/conference\\_materials/17-sweeney\\_katie-paper.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/events/environment_energy_resources/2013/10/21st_fall_conference/conference_materials/17-sweeney_katie-paper.authcheckdam.pdf).

<sup>177</sup> 33 U.S.C. § 1251 (2012) (“except as otherwise provided in the Act, the discharge of any pollutant by any person shall be unlawful.”)

<sup>178</sup> § 1362(6) (2012).

<sup>179</sup> § 1362(14) (2012).

<sup>180</sup> § 1362(12) (2012).

<sup>181</sup> §§ 1251–1376 (2012).

<sup>182</sup> *Comm. to Save Mokelumne River v. E. Bay Mun. Util. Dist.*, 13 F.3d 305, 308 (9th Cir. 1993) (citing *Ntn’l Wildlife Fed’n v. Gorsuch*, 693 F.2d 156, 165 (D.C. Cir. 1982)).

<sup>183</sup> 33 U.S.C. § 1365 (2012) authorizes citizen suits. In order to “satisfy Article III’s standing requirements, a plaintiff must show “injury in fact,” causation, and redressability.” *Friends of the Earth, Inc. v. Laidlaw Env’tl. Servs.*, 528 U.S. 167, 169 (2000) (citing *Lujan v. Defenders of Wildlife*, 504 U.S.555, 560–61 (1992)).

While the comprehensive regulatory structure of the CWA does much to protect the Nation's valuable water resources, one consequence of the permitting system is that parties who attempt to cleanup abandoned mines will likely become subject to its extensive permitting requirements. For example, in *Committee To Save Mokelumne River v. East Bay Municipal Utilities District*,<sup>184</sup> the East Bay Municipal Utility District (the District) and the members of the California Regional Water Quality Control Board (the Board) attempted to cleanup the Penn Mine. The abandoned site contained a copper and zinc mine that operated intermittently from the 1860s through the 1950s.<sup>185</sup> Much like the many abandoned mines discussed earlier in this article, the "site left behind reactive mine tailings, waste rock, and excavated ores" which, "[w]hen exposed to oxygen and water . . . form[ed] 'acid mine drainage,' which contains high concentrations of aluminum, cadmium, copper, zinc, iron, and sulfuric acid."<sup>186</sup> To curb the catastrophic water pollution from entering San Francisco's water supply, the Board and the District built the Penn Mine Facility and constructed dams that would catch and treat the acid mine drainage runoff, preventing it from polluting the Mokelumne River.<sup>187</sup> Plaintiffs wanted to make the Board and District operate the Penn Mine Facility under a NPDES permit.<sup>188</sup> The court found that the collection and treatment of the surface runoff acid mine drainage was considered a "discharge of a pollutant" contained in the regulations,<sup>189</sup> and all elements of a CWA violation were met. Accordingly, the Ninth Circuit affirmed the lower court's grant of summary judgment in favor of the plaintiffs, finding that the Board and the District were "owners or operators" subject to the NPDES permitting requirements of a CWA.<sup>190</sup> The

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<sup>184</sup> 13 F.3d 305 (9th Cir. 1993).

<sup>185</sup> *Id.* at 306.

<sup>186</sup> *Id.*

<sup>187</sup> *Id.*

<sup>188</sup> *Id.* at 307.

<sup>189</sup> The court notes that such surface runoff is expressly listed under the definition of "discharge of a pollutant" contained in the regulations under 40 C.F.R. § 122.2, which states that "[d]ischarge of a pollutant means . . . additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man." *Id.* at 308.

<sup>190</sup> *Id.* at 310.

Board and the District were therefore required to get a permit and meet the water quality standards under the Clean Water Act, or face the consequences (i.e. fines<sup>191</sup>) for violations.<sup>192</sup> A permit was required regardless of whether the cleanup activity aggravated or improved the water quality issues.<sup>193</sup>

The concurring opinion by Judge Ferdinand Francis Fernandez foresaw the logical consequences of this decision. He wrote:

Appellants earnestly argue that the EPA's approach, and that of the appellee's, will not serve the long-term purpose of bettering the aquatic environment. They indicate that it takes no genius or epopt to see what the message will be. Do nothing! Let someone else take on the responsibility. Let the water degrade, let the fish die, but protect your pocketbook from vast and unnecessary expenditures. Do not try to bring some order out of environmental chaos. In short, appellants suggest that no Odysseus or Daedalus crafted the policy which we are now asked to follow. Perhaps they are correct; I suspect they are.<sup>194</sup>

Judge Fernandez's concurrence was reluctant; he noted that judges are not policymakers, and that he was obligated to apply the law as it was written.<sup>195</sup> Thereafter, *Mokelumne River* sent a clear message to future parties that might consider cleaning up abandoned mines: do not bother cleaning them up; instead, shield yourself from liability while the water quality continues to worsen. In addition to the requirement of obtaining an NPDES permit when conducting cleanup activities, some waters are subject to more stringent water

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<sup>191</sup> The CWA has several criminal provisions, including fines and prison time for violations. See generally *Criminal Provisions of the Clean Water Act*, E.P.A., <http://www.epa.gov/enforcement/criminal-provisions-clean-water-act> (last visited Mar. 30, 2016).

<sup>192</sup> Comm. to Save Mokelumne River, 13 F.3d at 309.

<sup>193</sup> "The statute [CWA] does not require the Committee to show that a greater level of pollution enters the Mokelumne now than was the case before the Penn Mine facility was constructed." *Id.*

<sup>194</sup> *Id.* at 310 (Fernandez, J., concurring).

<sup>195</sup> *Id.*

quality standards and require higher technology-based standards in order to operate under the permit<sup>196</sup>

CERCLA is the primary statute designed to clean up sites that are already contaminated with hazardous substances and pollutants, and it is commonly referred as the “Superfund” due to the large fund that it created for cleanup of contaminated sites.<sup>197</sup> Similarly to the CWA, CERCLA creates potential liability for parties that might attempt to clean up abandoned mines; distinguishably, the potential liability for parties is postponed to the future and usually takes the form of lawsuits for either cost recovery or contribution. The statute authorizes the EPA “to respond to environmental emergencies involving hazardous substances and contaminants, initiate investigations and clean-ups, and take enforcement actions.”<sup>198</sup> Under the National Contingency Plan (NCP), CERCLA authorizes the EPA to either engage in short term cleanup in response to emergencies or long-term cleanup for larger cleanup projects.<sup>199</sup> For long-term cleanups, once the EPA goes through the public process of listing a site on the National Priorities List (NPL) (i.e. Superfund), it can either require a party to clean up the site, or clean up the site and then recover costs of cleanup from any Potentially Responsible Parties (PRPs).<sup>200</sup> In turn, the sued PRP can file a “contribution” suit against any other PRP.<sup>201</sup> This process reflects “[o]ne of the most controversial and dramatic aspects of CERCLA . . . the imposition of strict, joint and several, and retroactive liability.”<sup>202</sup> This all-encompassing “black hole [of liability] that indiscriminately devours

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<sup>196</sup> STAFF OF SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, 114TH CONGRESS, ABANDONED MINES IN THE UNITED STATES AND OPPORTUNITIES FOR GOOD SAMARITAN CLEANUPS 4 (Oct. 16, 2015), [http://transportation.house.gov/uploadedfiles/2015-10-21\\_-\\_water\\_ssm.pdf](http://transportation.house.gov/uploadedfiles/2015-10-21_-_water_ssm.pdf).

<sup>197</sup> “CERCLA is commonly known as “Superfund” because the statute authorized the creation of a large fund to pay for the clean-up of the nation’s worst hazardous waste sites.” Kodish, *supra* note 150, at n.15.

<sup>198</sup> *Id.* at 384.

<sup>199</sup> PERCIVAL, ET. AL, *supra* note 37, at 458. CERCLA authorizes the federal government to clean up abandoned mines under both authorities. STAFF OF SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, *SUPRA* NOTE 196, at 3.

<sup>200</sup> *Id.*

<sup>201</sup> 42 U.S.C. § 9613(f)(1) (2012).

<sup>202</sup> Kodish, *supra* note 150, at 388.

all who come near it”<sup>203</sup> is such that “it extends to parties classified as current owners or operators, owners or operators at the time of disposal, generators, arrangers, or transporters.”<sup>204</sup> Under this definition, any party trying to clean up a site who, “for example, removes a small pile of toxic mine tailings that are leaching into a river and caps them elsewhere might become liable for remediating the entire site, including all hazardous residue generated by historic mining operations.”<sup>205</sup> The only way for parties to shield themselves from CERCLA liability is to clean up the site in compliance with a valid Clean Water Act NPDES permit.<sup>206</sup> As discussed above in Sections I and II, the cost of cleanup for abandoned mine sites can be several million dollars, and the permitting requirements under the CWA are very difficult to achieve. Therefore, the “financial implications of such liability can be devastating.”<sup>207</sup> Fear of future liability under CERCLA is a strong barrier to parties interested in cleanup efforts.

In sum, the fear of potentially unwieldy liability under CERCLA and excessively costly compliance under the CWA permitting has made it nearly impossible for parties, who otherwise might be interested in cleanup, from remediating abandoned mines. The EPA has attempted to allay fears of liability for Good Samaritans,<sup>208</sup> yet without statutory certainty, parties are afraid to clean up these sites.<sup>209</sup> Largely in response to these statutory hurdles under the CWA, CERCLA, and other environmental statutes, the last decade of proposed legislation has focused on “Good Samaritan” waivers for

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<sup>203</sup> Long Beach Unified Sch. Dist. v. Dorothy B. Godwin California Living Trust, 32 F.3d 1364, 1366 (9th Cir. 1994) (quoting Jerry L. Anderson, *The Hazardous Waste Land*, 13 VA. ENVTL. L.J. 1, 6-7 (1993)).

<sup>204</sup> Lounsbury, *supra* note 163. See 42 U.S.C. § 9607 (2012).

<sup>205</sup> Lounsbury, *supra* note 163, at 153.

<sup>206</sup> “Superfund provides liability protection where a release is pursuant to a Clean Water Act permit . . . [the] shield is effective as long as the release complies with the permit.” STAFF OF SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, *supra* note 196, at 5.

<sup>207</sup> Lounsbury, *supra* note 163.

<sup>208</sup> See discussion, Section V part C.

<sup>209</sup> Dale Rodebaugh, *Does policy offer shelter from legal storm?*, DURANGO HERALD (Feb. 18, 2013), <http://www.durangoherald.com/article/20130218/NEWS01/130219571/0/SEARCH/Does-policy-offer-shelter-from-legal-storm?>

parties who want to try to cleanup mines but do not have the resources to take on the liability that might accompany cleanup efforts.<sup>210</sup> These “Good Samaritans” are “voluntary parties, who did not own or operate the abandoned mines or have anything to do with causing pollution problems, willing to take steps to reduce the environmental, health, and safety problems associated with abandoned mine sites.”<sup>211</sup> They may include “government agencies, nongovernmental organizations, mining companies, or other private parties” with various motives.<sup>212</sup> For example, a fishing group may want to reestablish a suitable fishery habitat, a municipality may wish to reduce water treatment costs downstream, or a mining company may wish to re-mine the land.<sup>213</sup>

The main controversies surrounding Good Samaritan legislation center on three main concerns. First, botched cleanup efforts by Good Samaritans still threaten health and the environment, and can result in additional taxpayer burden. Second, casting the waivers on environmental regulation too broadly might result in “Bad Samaritan” mining companies who mine abandoned sites with impunity under the guise of a “Good Samaritan” waiver. Lastly, given the exorbitant cost of cleanup, actions by Good Samaritans only scratch the surface on the kind of remediation that is necessary to address the problem of abandoned mines; an adequate reclamation fund would be more suitable for the task.

As to the first concern, the historical trend has been for environmental advocates to oppose “Good Samaritan” legislation out of fear that it will do more harm than good.<sup>214</sup> The very same

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<sup>210</sup> *Good Samaritan Legislation Isn't the Solution to Our Hardrock Mine Reclamation Problem*, EARTHWORKS, *supra* note 170, at note n.vii (citing various bills that would have authorized Good Samaritan cleanup).

<sup>211</sup> STAFF OF SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, *supra* note 196, at 4.

<sup>212</sup> *See id.*

<sup>213</sup> *Id.*

<sup>214</sup> *Good Samaritan Legislation Isn't the Solution to Our Hardrock Mine Reclamation Problem*, EARTHWORKS, *supra* note 170. Senator Boxer (CA) has expressed similar concerns: “Boxer warned that any good Samaritan legislation needs to be crafted carefully to limit ‘unintended consequences.’ Boxer asked McCarthy whether the public could be on the hook for the bill if something goes wrong when a good Samaritan attempts to clean up these legacy mines.” Leven, *supra* note 91.

reasons that some use to support Good Samaritan legislation are often used to oppose it: if Good Samaritans are financially incapable of bearing the full cost of abandoned mine reclamation, then they should not take on the task at risk to taxpayer expense and further environmental harm.<sup>215</sup> Environmental groups opposed the legislation in 2005<sup>216</sup> and later in 2013,<sup>217</sup> due to “concerns about the difficulty of mine remediation” and the potential for failed efforts that can make leaks worse.<sup>218</sup> It is no surprise that the most recent iteration of this type of legislation is similarly met with opposition by many environmental organizations, who maintain that “it would allow a private entity to create an Animas-type spill, and exempt the polluting party from responsibility for their mistake or from compensating damaged communities downstream.”<sup>219</sup>

On the second account, environmental advocates are concerned that some of the proposed legislation creates too large of a loophole for liability, and could result in so-called “Bad Samaritans” who utilize the legislation to shield themselves from liability while gaining a bigger profit.<sup>220</sup> In the last decade of proposed legislation, “former Colorado senators Ken Salazar and Mark Udall proposed laws that would have given special dispensation to groups doing mining cleanup. Udall’s Good Samaritan bill specifically addressed the Clean Water Act, while Salazar’s also included permit waivers for the Toxic Substances Control and the Solid Waste Disposal acts.”<sup>221</sup> With broad environmental exemptions to important regulations, the concern is that “Bad Samaritan” bills will allow “mining companies to re-mine under the guise of clean up.”<sup>222</sup> This

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<sup>215</sup> Susan Cosier, *This Land is Mine Land* (2015), <http://www.onearth.org/earthwire/land-mine-land>; Lounsbury, *supra* note 163.

<sup>216</sup> Cleanup of Inactive and Abandoned Mines Act, S.1848, 109th Cong. (2005-2006).

<sup>217</sup> Good Samaritan Cleanup of Abandoned Hardrock Mines Act of 2013, S.1443, 113th Cong. (2013).

<sup>218</sup> Cosier, *supra* note 215.

<sup>219</sup> *Good Samaritan Legislation Isn’t the Solution to Our Hardrock Mine Reclamation Problem*, EARTHWORKS, *supra* note 170.

<sup>220</sup> *Id.*

<sup>221</sup> Cosier, *supra* note 215.

<sup>222</sup> *Good Samaritan Legislation Isn’t the Solution to Our Hardrock Mine Reclamation Problem*, EARTHWORKS, *supra* note 170.

concern maintains that “[e]xtracting metals from the ground for profit is mining, not reclamation, and should not be rewarded with liability waivers granting permission to pollute.”<sup>223</sup>

In response to concerns of “Bad Samaritans,” Roger Flynn, director of the Western Mining Action Project, has suggested a compromise that would not bar mining companies from acting as “Good Samaritans” altogether: allow mining companies to remediate lands for a charitable tax write-off, but do not allow them to extract any minerals on or near remediated sites.<sup>224</sup> This would prevent a “free ride” for the mining industry hoping to financially benefit from waivers to environmental regulation on abandoned mine sites.<sup>225</sup> The idea seems reasonable given that mining companies possess the equipment, money, and expertise that might allow for successful and less-costly remediation, and have an understanding of some of the environmental regulations they would need to comply with for any regulations that were not waived. This is an interesting proposal, given that most environmental advocates tend to categorically reject Good Samaritan statutes.

Finally, environmental advocates tend to oppose Good Samaritan legislation because it distracts from what all advocates have aptly pointed out is the biggest issue in remediating abandoned mines: money.<sup>226</sup> Advocates for responsible mining have noted that, as seen at Gold King, “much can go wrong when cleaning up highly polluted mine sites. . . [a]dequate funding from a reclamation fee can ensure that funding is available to do the work right.”<sup>227</sup> Others have noted that “[t]he central trouble . . . is that there are few Good Samaritans with adequate funding and expertise. By focusing on enabling Good Samaritan cleanups, Congress diverts attention from the larger underlying problems: insufficient funds available for reclaiming abandoned mines . . . .”<sup>228</sup> Essentially, this argument points out the practical consideration that, aside from potential “Bad Samaritan”

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<sup>223</sup> *Id.*

<sup>224</sup> Telephone interview with Roger Flynn, Director and Managing Attorney, Western Mining Action Project (Jan. 5, 2016).

<sup>225</sup> *Id.*

<sup>226</sup> *Good Samaritan Legislation Isn't the Solution to Our Hardrock Mine Reclamation Problem*, EARTHWORKS, *supra* note 170.

<sup>227</sup> *Id.*

<sup>228</sup> Lounsbury, *supra* note 163.

mining companies, most local non-profit community organizations or municipal governments will not have the money to effectuate a successful cleanup, and a reclamation fund is better capable of handling the millions of dollars in liability involved in abandoned mine cleanup.

Currently, two House bills, H.R. 963 and H.R. 3843, propose Good Samaritan waivers.<sup>229</sup> Representative Grijalva's bill, H.R. 963, would create more narrowed waivers by only providing waivers to the Clean Water Act through a special Good Samaritan discharge permit.<sup>230</sup> On the other hand, the stand-alone bill, H.R. 3843, "proposes Good Samaritan relief from requirements of the CWA and [CERCLA]."<sup>231</sup> In the Senate, S.2254, the Hardrock Mining and Reclamation Act of 2015, (discussed above), no mention is made of Good Samaritan provisions.<sup>232</sup>

Good Samaritan waivers are a mixed bag, and may result in unintended consequences for the overall objective of abandoned mine cleanup. While it may at first glance seem odd to oppose parties' well-intentioned efforts to clean up abandoned sites, in wake of the botched Gold King cleanup, it might make sense to limit which parties are allowed to take on these projects while also exercising significant caution regarding which environmental regulations are waived.

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<sup>229</sup> Hardrock Mining and Reform Act of 2015, H.R. 963, 114th Cong. Title VI (2015); Locatable Minerals Claim Location and Maintenance Fees Act of 2015, H.R. 3843, 114th Cong (2015).

<sup>230</sup> Hardrock Mining and Reform Act of 2015, H.R. 963, 114th Cong. Title VI (2015).

<sup>231</sup> CLAUDIA COPELAND, CONG. RESEARCH SERV., R44285, CLEANUP AT INACTIVE AND ABANDONED MINES: ISSUES IN "GOOD SAMARITAN" LEGISLATION IN THE 114TH CONGRESS 2 (Nov. 25, 2015), <https://www.fas.org/sgp/crs/misc/R44285.pdf>.

<sup>232</sup> Hardrock Mining and Reclamation Act of 2015, S. 2254, 114th Cong. (2015).

## V. POTENTIAL FEDERAL REGULATORY SOLUTIONS

A. *Increased Financial Assurances*

The Zortman-Landunsky operation in Montana, described in Section II, above, provides a perfect case point of insufficient financial assurances that result in an undue burden on taxpayer shoulders. Many have taken note that the cost of cleanup often exceeds the amount of financial backing that mining companies give to state and federal agencies prior to commencing their mining operations. As a result, both proposed House and Senate hardrock mining acts, discussed above, include robust permit and financial assurance requirements—an essential aspect of legislative mining reform.<sup>233</sup> However, the EPA already has the power to require increased financial assurances under CERCLA 108(b);<sup>234</sup> therefore, while legislative action might be helpful in further strengthening assurance requirements, arguably, no legislative activity is needed.

Indeed, the District of Columbia Circuit agreed with this reasoning earlier this year in a writ of mandamus action brought against the EPA by Earthjustice, a national non-profit environmental

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<sup>233</sup> Harrington & Louer, *supra* note 156.

Both bills propose significant new layers of regulation for mining claimants, including requiring claimants to apply for and obtain two new federal environmental permits—an exploration permit and an operation permit. Both permit applications would require submission of reclamation plans and substantial evidence of financial assurances. Under both bills, claimants would be forced to hold financial assurances for the duration of the mineral activities and until reclamation and long term maintenance are complete. Under the Senate bill, the sufficiency of a claimant's bond, surety, or other financial assurance would be subject to public notice and comment to ensure its adequacy to complete the reclamation and restoration activities required under the Act.

*Id.*

<sup>234</sup> Stephen W. Smithson, *Hardrock Mining Financial Assurances—Feasible?*, S&W ENVTL. AND NAT. RES. L. BLOG (June 19, 2015), <http://www.swlaw.com/blog/environmental-and-natural-resources/2015/06/19/hardrock-mining-financial-assurances-feasible/#sthash.fukkdh9u.dpuf>.

law firm.<sup>235</sup> The ruling found that the EPA is now *required* to demand increased financial assurances from hardrock mining companies under their obligation to carry out CERCLA.<sup>236</sup> The court examined the relevant portion of CERCLA, Section 108(b), which states that “[b]eginning not earlier than five years after December 11, 1980, [EPA] shall promulgate requirements . . . that classes of facilities establish and maintain evidence of financial responsibility consistent with the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances.”<sup>237</sup> The court noted that in “the intervening thirty years since section 108(b) took effect, EPA has made little progress toward promulgating any financial assurance regulations.”<sup>238</sup> Acknowledging the problems of mining companies avoiding liability through declaring bankruptcy, discussed in Section II above, the court stated “[i]t is a common practice for operators [of sites that produce hazardous substances] to avoid paying environmental liabilities by declaring bankruptcy or otherwise sheltering assets.”<sup>239</sup> The D.C. Circuit’s order to the EPA should result in finalized rules requiring adequate financial assurances from mining companies in the near future.<sup>240</sup>

Opponents of increased financial assurances argue that imposition of both royalties and financial assurances requirements results in “double liability”—that is, mining companies are paying both abandoned mine cleanup fees for the damage caused by miners decades ago, and they are also required to post reclamation bonds for

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<sup>235</sup> *Court Orders Environmental Protection Agency to Finalize Rules so Polluters Pay for Their Own Toxic Messes*, EARTHWORKS (Jan. 29, 2016), [https://www.earthworksaction.org/media/detail/court\\_orders\\_environmental\\_protection\\_agency\\_to\\_finalize\\_rules\\_so\\_polluters/04270#](https://www.earthworksaction.org/media/detail/court_orders_environmental_protection_agency_to_finalize_rules_so_polluters/04270#).

<sup>236</sup> *In re Idaho Conservation League*, USCA Case #14-1149 Document #15960811 (D.C. Cir. 2016), [https://www.cadc.uscourts.gov/internet/opinions.nsf/0/1F012EA1238D7A3C85257F490054E52E/\\$file/14-1149-1596081.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/0/1F012EA1238D7A3C85257F490054E52E/$file/14-1149-1596081.pdf).

<sup>237</sup> 42 U.S.C § 9608(b)(1) (2012).

<sup>238</sup> *In re Idaho Conservation League*, USCA Case #14-1149 Document #15960811 at 3 (D.C. Cir. 2016), [https://www.cadc.uscourts.gov/internet/opinions.nsf/0/1F012EA1238D7A3C85257F490054E52E/\\$file/14-1149-1596081.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/0/1F012EA1238D7A3C85257F490054E52E/$file/14-1149-1596081.pdf).

<sup>239</sup> *Id.* at 10.

<sup>240</sup> *Id.*

their own ongoing activities.<sup>241</sup> Arguments are made that excessive regulation and fees force mining operations overseas and hurt U.S. jobs.<sup>242</sup> However, these arguments “hardly pass the straight-face test”:

[w]hile hardrock mining is the only extractive industry not to pay a federal royalty, mining companies seem to have no trouble paying substantial state royalties (e.g., 18 percent for a gold mine in Nevada's Carlin Trend). . . impos[ing] fees of 8 percent or less, which the Congressional Research Service concluded ‘[would] not radically affect mining economics in the United States.’<sup>243</sup>

Increased financial assurance requirements are an essential aspect of hardrock mining reform, and, pursuant to the recent D.C. Circuit opinion, must be issued by the EPA in the near future to ensure that liability does not continue to fall on taxpayer shoulders.

#### *B. Renewable Energy on Mining Sites*

Renewable energy on mining sites is an unclear regulatory solution, and not much has been said on the idea. It may provide a piece to the solution, depending on how it is implemented. The EPA has stated that they have “placed a national priority on showcasing opportunities for the development of renewable energy projects on contaminated lands, including renewable energy development on mining and mineral processing sites.”<sup>244</sup> It seems like this potential solution might be borrowing from the idea of the Brownfield Program under CERCLA, which facilitates re-use of contaminated lands.<sup>245</sup>

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<sup>241</sup> Lounsbury, *supra* note 163, at 200-01.

<sup>242</sup> *Id.*

<sup>243</sup> *Id.*

<sup>244</sup> *Abandoned Mine Lands*, E.P.A., <http://www.epa.gov/superfund/abandoned-mine-lands> (last visited Feb. 20, 2016).

<sup>245</sup> *See Brownfields*, E.P.A., <http://www.epa.gov/brownfields> (last visited Feb. 20, 2016).

### C. “Good Samaritan” Rulemaking

The EPA can use its regulatory authority to grant waivers to “Good Samaritans” to the requirements of CERCLA and the CWA; however, it has only issued guidance letters on the subject, and has not engaged in regulatory rulemaking.<sup>246</sup> In 2007, the EPA issued its “Interim Guiding Principles for Good Samaritan Projects at Orphan Mine Sites and Transmittal of CERCLA Administrative Tools for Good Samaritans.”<sup>247</sup> Minor grammatical changes were made to the document in 2015.<sup>248</sup> The document states that its purpose is to “provide greater legal certainty to Good Samaritans and resolve to the extent possible the threat of potential federal liabilities so that voluntary cleanups at these sites can proceed.”<sup>249</sup> Essentially, the guidance is a promise from the EPA not to sue Good Samaritans under CERCLA for agreed-upon cleanup efforts, and to also defend them against third-party lawsuits.<sup>250</sup> Five years later, in the “2012 EPA Good Samaritan Memo,” the EPA issued guidance for Good Samaritan waivers to the CWA and clarified CERCLA waivers.<sup>251</sup> These documents appear to demonstrate a willingness by the EPA to work with Good Samaritans on cleanup of abandoned mines.

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<sup>246</sup> See Section IV part B above for discussion of legislative Good Samaritan waivers. Whereas legislative waivers require Congress to pass a law that would amend the relevant statute, regulatory waivers rely on the agency’s regulatory power to carry out the relevant statute (in this case, the EPA’s regulatory powers to carry out CERCLA and the CWA).

<sup>247</sup> *Memorandum on Interim Guiding Principles for Good Samaritan Projects at Orphan Mine Sites and Transmittal of CERCLA Administrative Tools for Good Samaritans*, E.P.A., (updated Aug. 25, 2015), <http://www.epa.gov/sites/production/files/2015-09/documents/cercla-goodsam-principles-mem-ed2015.pdf>.

<sup>248</sup> *Id.*

<sup>249</sup> *Id.* at 1.

<sup>250</sup> STAFF OF SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, *supra* note 196, at 5.

<sup>251</sup> *Memorandum on Clean Water Act § 402 National Pollutant Discharge Elimination System (NPDES) Permit Requirements for Good Samaritans at Orphan Mine Sites*, E.P.A. (Dec. 12, 2012), <http://www.epa.gov/sites/production/files/2015-10/documents/2012-good-samaritan-memo-signed.pdf>.

However, “[d]espite the EPA’s issuance of Good Samaritan guidance, few parties to date have been willing to proceed ahead with Good Samaritan cleanup projects at abandoned mine sites.”<sup>252</sup> Largely, given the incredibly high costs of potential liability, parties are still afraid to get involved in cleanup efforts.<sup>253</sup> Groups that want to clean up are leery, aptly noting that “[t]he guidance is not regulation. It’s not law.”<sup>254</sup> Their fear is probably well-founded—the 2012 EPA Good Samaritan Memo discloses that “[although EPA expects] this memorandum to provide clarification regarding permit obligations for Good Samaritans, we recognize that it does not address or resolve all potential liability associated with discharges from abandoned mines.”<sup>255</sup>

Environmental advocates voice much of the same concerns over regulatory Good Samaritan waivers as they have concerning legislative ones. For example, in reference to CWA waivers, Lauren Pagel, policy director for Earthworks, said “[w]hile we applaud the EPA for aiding Good Samaritan clean ups of abandoned hardrock mines, this policy does nothing to remove the greatest barrier to abandoned mine clean-up in the West: a steady funding source.”<sup>256</sup> The most logical way to accomplish this is through imposing royalties on mining companies and creating an abandoned mine reclamation fund, similar to the system used for cleanup in other industries like coal.<sup>257</sup>

## VI. CONCLUSION

If there is one lesson to be learned from abandoned legacy mines, it is that they are a legacy that no generation should have to inherit.

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<sup>252</sup> STAFF OF SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, *supra* note 196, at 5.

<sup>253</sup> Rodebaugh, *supra* note 209.

<sup>254</sup> *Id.*

<sup>255</sup> STAFF OF SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, *supra* note 196, at 5.

<sup>256</sup> *New EPA Clean Water Act policy aids abandoned mine cleanup*, EARTHWORKS, (Dec. 12, 2012), [https://www.earthworksaction.org/media/detail/new\\_epa\\_clean\\_water\\_act\\_policy\\_aids\\_abandoned\\_mine\\_cleanup#.Vp34Hjbe3wx](https://www.earthworksaction.org/media/detail/new_epa_clean_water_act_policy_aids_abandoned_mine_cleanup#.Vp34Hjbe3wx).

<sup>257</sup> *See* discussion, *supra*, Section IV part A.

The acid mine drainage from these sites alone causes significant threats to the health of humans and river ecosystems, threatening the availability of clean water for our children and for us. Cleanup of these sites is excessively costly, and presents the potential for botched cleanup efforts that result in even greater harms than the slow, everyday release of acid mine drainage. In recent years, the scale of mining operations has become larger than life. Who will clean up these sites in the next century when the mining companies that created these operations close up shop and disperse? What will our grandchildren say when rivers are not orange because of a catastrophic spill, but because it is the “norm” due to acid and toxic metals leaching from these gigantic industrial mines? Hardrock mining not only leaves a toxic legacy, but it also leaves an expensive one. As responsible citizens, we need to learn from the mistakes of the legacy left to us by our ancestors and prevent ourselves from passing it along with even greater toxic dividends to the next generations. Toxic legacy mines are a legacy that no generation can afford to inherit, and policy and regulations need to be put in place that facilitate remediation of abandoned mines.