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## **From the Legal Literature Environmental Victimization and Criminal Enforcement: Assessing Evidence from Thirty-Seven Years of EPA Case Summary Reports**

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# From the Legal Literature Environmental Victimization and Criminal Enforcement: Assessing Evidence from Thirty-Seven Years of EPA Case Summary Reports

Marshall R. Schmidt\* and Francesca LaGuardia\*\*

## I. INTRODUCTION

Environmental degradation poses an existential threat to humanity.<sup>1</sup> The United States has enacted criminal statutes in an attempt to delay climate change, but its approach to environmental law, regulation, and enforcement has been described as reactive, heavily influenced by large corporate interests, and underwhelming.<sup>2</sup> Additionally, regulation and enforcement are complicated by the political nature of federal and state agencies and wild shifts in environmental policy.<sup>3</sup> For instance, the controversial Keystone XL oil pipeline was denied a permit by the Obama administration in 2015, only for the Trump administration to approve the permit in 2017, and the Biden administration to cancel the permit in 2021.<sup>4</sup>

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<sup>1</sup>Patrick Keenan, *International Criminal Law and Climate Change*, 37 B.U. INT'L L.J. 89, 106–07 (2019); David M. Uhlmann, *Back to the Future: Creating a Bipartisan Environmental Movement for the 21<sup>st</sup> Century*, 50 ENV'T. L. REP. 10800, 10801 (2020).

<sup>2</sup>Carole Gibbs & Rachel Boratto, *Environmental Crime*, in OXFORD RSCH. ENCYC. OF CRIMINOLOGY & CRIM. JUST. (Mar. 29, 2017), <https://doi.org/10.1093/acrefore/9780190264079.013.269>.

<sup>3</sup>Uhlmann, *supra* note 1, at 10801–04.

<sup>4</sup>Matthew Brown, *Keystone XL Pipeline Nixed After Biden Stands Firm on Permit*, APNEWS (June 9, 2021), <https://apnews.com/article/donald-trump-joe-biden-keystone-pipeline-canada-environment-and-nature-141eabd7cca6449dfbd2dab8165812f2>.

Despite the threats posed by environmental degradation, there is still very little research on the prosecution of environmental crime.<sup>5</sup> Two recent articles, each by Joshua Ozymy and Melissa Jarrell, attempt to shed light on this subject by examining thirty-seven years of Environmental Protection Agency (EPA) case summary reports on criminal investigations.<sup>6</sup> Both articles are written using the same data, with the first article, published in 2020, focusing on victimization<sup>7</sup> and the second article, published the following year, focusing on enforcement.<sup>8</sup> Both articles are reviewed in this Article.

## II. ARTICLE SUMMARIES

### A. Exploring the Role of Victims in Federal Environmental Crime Prosecutions, 1983–2019

Most environmental crimes in the United States go unnoticed and unpunished.<sup>9</sup> This is due, at least in part, to how environmental victimization is different than other sorts of crime, the difficulty in prosecuting environmental cases, and the lack of public attention or knowledge.<sup>10</sup> For instance, the EPA, the federal agency charged with building, pursuing, and recommending environmental cases for prosecution, is given substantial power. However, the EPA routinely chooses to forgo the criminal process and, instead, to settle most cases civilly.<sup>11</sup> Since the EPA primarily pursues cases civilly, there is little reliable data on offenders and victimization, which makes studying and evaluating environmental crimes particularly difficult.<sup>12</sup> Additionally, environmental crimes are largely ignored by both the mass media and the public.<sup>13</sup>

The silent nature of environmental victimization and the financial and time costs associated with prosecution contribute to the EPA's

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<sup>5</sup> Joshua Ozymy & Melissa L. Jarrell, *A Knowing Violation: Exploring the History of the Criminal Enforcement of Environmental Law in the Midwestern United States*, 10 CHI.-KENT J. ENV'T & ENERGY L. 60, 61 (2021); Michael J. Lynch, *The Sentencing/Punishment of Federal Environmental/Green Offenders, 2000-2013*, 38 DEVIANT BEHAV. 991, 991–95 (2017).

<sup>6</sup> Joshua Ozymy & Melissa L. Jarrell, *Exploring the Role of Victims in Federal Environmental Crime Prosecutions, 1983–2019*, 57 WILLAMETTE L. REV. 25, 31–32 (2020); Ozymy & Jarrell, *supra* note 5, at 61.

<sup>7</sup> Ozymy & Jarrell, *supra* note 6, at 31.

<sup>8</sup> Ozymy & Jarrell, *supra* note 6, at 61–62.

<sup>9</sup> Ozymy & Jarrell, *supra* note 6, at 26–28.

<sup>10</sup> Ozymy & Jarrell, *supra* note 6, at 27–29.

<sup>11</sup> Ozymy & Jarrell, *supra* note 6, at 26–29.

<sup>12</sup> Ozymy & Jarrell, *supra* note 6, at 26.

<sup>13</sup> Ozymy & Jarrell, *supra* note 6, at 26.

civil strategy.<sup>14</sup> The EPA chooses to reserve the criminal process for cases involving significant harm, repeat violations, and those with clear culpability.<sup>15</sup> This likely encourages further crimes, as many businesses knowingly violate environmental statutes due to lack of enforcement and potential profit.<sup>16</sup> The EPA typically pursues a compliance monitoring strategy, rather than an active enforcement policy, which means the EPA is dependent on self-reporting or third-party reporting, and, thus ignores many violations.<sup>17</sup> Violations must also meet the burden of proof beyond a reasonable doubt, which is difficult for environmental crimes, and is a major contributing factor in the EPA deciding to pursue most cases civilly where a lower burden of proof is required.<sup>18</sup>

Most criminological research has also neglected the study of environmental crimes, instead focusing on street crimes.<sup>19</sup> This focus is evident in large, well-funded, and nationally representative surveys.<sup>20</sup> For instance, the National Crime Victimization Survey (NCVS) does not collect any information on environmental crime victimization.<sup>21</sup> Lack of victimization data is particularly concerning given that research suggests an estimated 40% of yearly global deaths can be attributed to environmental factors.<sup>22</sup> Research also shows that people view environmental crimes as victimless and are more likely to imagine crime in relation to street crime than an environmental offense.<sup>23</sup> Thus, environmental crime researchers have had to broaden their definition of environmental or “green crimes” to include any illegal acts that cause harm to humans, animals, and the natural environment.<sup>24</sup> This conception of harm better reflects environmental crimes and is more encompassing of victimization, but not enough work has been done to develop a meaningful victimization typology.<sup>25</sup>

To evaluate the role of victimization in environmental crime prosecutions, Ozymy and Jarrell examined EPA case summaries to

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<sup>14</sup>Ozymy & Jarrell, *supra* note 6, at 28.

<sup>15</sup>Ozymy & Jarrell, *supra* note 6, at 28.

<sup>16</sup>Ozymy & Jarrell, *supra* note 6, at 28.

<sup>17</sup>Ozymy & Jarrell, *supra* note 6, at 29.

<sup>18</sup>Ozymy & Jarrell, *supra* note 6, at 29.

<sup>19</sup>Ozymy & Jarrell, *supra* note 6, at 29–30.

<sup>20</sup>Ozymy & Jarrell, *supra* note 6, at 29.

<sup>21</sup>Ozymy & Jarrell, *supra* note 6, at 29.

<sup>22</sup>Ozymy & Jarrell, *supra* note 6, at 29–30.

<sup>23</sup>Ozymy & Jarrell, *supra* note 6, at 30.

<sup>24</sup>Ozymy & Jarrell, *supra* note 6, at 30.

<sup>25</sup>Ozymy & Jarrell, *supra* note 6, at 30–31.

identify cases with discernable victimization.<sup>26</sup> They then coded these cases and used the data to develop a typology of victims that accounts for why/how victims were victimized, consequences and punishments, and why/how the U.S. government chose to pursue prosecution.<sup>27</sup> They collected the following: summary information on the nature of the crime, year, docket number, state, major environmental and non-environmental charging statutes used, penalties assessed, and if each case involved death and/or injury.<sup>28</sup> Of the 2,588 cases analyzed, only ninety-three cases had identifiable victims.<sup>29</sup> Summative content analysis was used to code case summaries, with inter-coder reliability evidencing high levels of agreement across cases (95%).<sup>30</sup> Several themes emerged, and Ozymy and Jarrell explain these findings and provide specific illustrative examples.<sup>31</sup>

One noteworthy result is the geographic specificity for environmental prosecutions, with “Region 2” (New York and New Jersey) and “Region 9” (California, Nevada, and Arizona) having the most prosecutions and “Region 1” (Vermont, New Hampshire, Maine, Massachusetts, Rhode Island, and Connecticut) and “Region 7” (Nebraska, Kansas, Indiana, and Missouri) having the least.<sup>32</sup> Ozymy and Jarrell also found that many cases included non-environmental criminal charges (e.g., false statements, fraud, obstruction).<sup>33</sup>

Ozymy and Jarrell’s findings as to which federal statutes were used are worthy of retelling, if only to highlight the types of victimizations these crimes involve. The most frequently used federal statute was the Clean Air Act (CAA) ( $n = 24$ , 25.8% of 93 cases).<sup>34</sup> Most CAA violations included illegal asbestos abatement and disposal and/or negligence for exposing workers to harmful toxic chemicals.<sup>35</sup> For example, in the *Mountain Aviation* case,<sup>36</sup> a company and its president were prosecuted for hiring teenagers to remove asbestos

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<sup>26</sup>Ozymy & Jarrell, *supra* note 6, at 31.

<sup>27</sup>Ozymy & Jarrell, *supra* note 6, at 31.

<sup>28</sup>Ozymy & Jarrell, *supra* note 6, at 31.

<sup>29</sup>Ozymy & Jarrell, *supra* note 6, at 31.

<sup>30</sup>Ozymy & Jarrell, *supra* note 6, at 32.

<sup>31</sup>Ozymy & Jarrell, *supra* note 6, at 33–53.

<sup>32</sup>Ozymy & Jarrell, *supra* note 6, at 33–34.

<sup>33</sup>Ozymy & Jarrell, *supra* note 6, at 42.

<sup>34</sup>Ozymy & Jarrell, *supra* note 6, at 34–35, 39.

<sup>35</sup>Ozymy & Jarrell, *supra* note 6, at 35.

<sup>36</sup>United States v. Mountain Aviation, Inc., A98CR 00067-001 (D. Alaska June 4, 1998).

from their building without providing any training or protection, which resulted in the teenagers inhaling asbestos dust.<sup>37</sup>

In sixteen of the ninety-three cases (17.2%), defendants were charged under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).<sup>38</sup> FIFRA violations primarily included selling and applying pesticides in a negligent manner and exposing workers and bystanders to toxic insecticides.<sup>39</sup> For example, Friendly Systems, Inc. poisoned Native American children in South Dakota when they used off-label pesticides to sanitize toothbrushes.<sup>40</sup>

The Clean Water Act (CWA) was used in fourteen of the ninety-three cases (15%), with violations typically including the illegal storage or discharge of waste resulting in injury to workers or other individuals.<sup>41</sup> The most noteworthy CWA violation included charging Transocean Deepwater, Inc. for their part in the Deepwater Horizon oil disaster.<sup>42</sup>

The next most often used federal statute ( $n = 10$ ; 10.7% of 93 cases) was the Resource Conservation and Recovery Act (RCRA).<sup>43</sup> The RCRA regulates storage, transport, and disposal of hazardous substances. Violations of RCRA can be seen in the prosecution of the Southern Union Company, which improperly stored mercury, leading to the contamination of an apartment complex.<sup>44</sup> Finally, the Toxic Substances and Control Act (TSCA), was used in five (5.3%) cases of exposure to lead-based paint, one of which involved a child's death.<sup>45</sup>

Analyses revealed four types of environmental victims: 1) victims of company crimes, 2) victims of individual crimes, 3) victims of state crimes, and 4) victims of occupational crimes.<sup>46</sup> In more than half of the cases, company actions resulted in employee or non-employee injury or death, with nineteen (20.4%) involving a death and thirty-eight (40.8%) involving an injury attributed to unsafe company

<sup>37</sup>Ozmy & Jarrell, *supra* note 6, at 35.

<sup>38</sup>Ozmy & Jarrell, *supra* note 6, at 35–36.

<sup>39</sup>Ozmy & Jarrell, *supra* note 6, at 36.

<sup>40</sup>Ozmy & Jarrell, *supra* note 6, at 37 (citing *United States v. Stewart*, No. 2:98CR012 (N.D. Miss. Jan. 23, 1998)).

<sup>41</sup>Ozmy & Jarrell, *supra* note 6, at 37.

<sup>42</sup>Ozmy & Jarrell, *supra* note 6, at 37–38 (citing *United States v. Transocean, Ltd.*, No. 2:13-CR-00001-JTM-SS (E.D. La. Feb. 14, 2013)).

<sup>43</sup>Ozmy & Jarrell, *supra* note 6, at 39.

<sup>44</sup>Ozmy & Jarrell, *supra* note 6, at 40 (citing *United States v. Southern Union Co.*, No. 1:07CR00134-01S (D.R.I. Oct. 16, 2007)).

<sup>45</sup>Ozmy & Jarrell, *supra* note 6, at 40 (citing *United States v. JTA Real Estate Brokerage and Property*, No. 01-123-02-M (D.N.H. Dec. 19, 2001)).

<sup>46</sup>Ozmy & Jarrell, *supra* note 6, at 42–46.

practices.<sup>47</sup> Individual crime victims were victimized directly, either because of their own actions or the actions of another individual.<sup>48</sup> Those injured while carrying out duties of the state only included one case in which corrections officers ordered inmates to improperly dispose of toxic chemicals.<sup>49</sup> Finally, occupational crime victims included those injured directly while fulfilling work obligations, rather than through company negligence.<sup>50</sup>

Ozmy and Jarrell also categorized the crimes by their consequences.<sup>51</sup> Almost 50% of crimes included toxic exposure, which was the most common consequence and source of victimization.<sup>52</sup> Explosions were the second most common consequence, accounting for twenty-one injuries and fourteen deaths, and typically attributed to company or employee negligence.<sup>53</sup> Evacuations occurred in at least eleven cases because of company or employee negligence.<sup>54</sup> And lead-based paint exposure was present in ten cases and was attributed to either company or individual negligence.<sup>55</sup>

Finally, Ozmy and Jarrell evaluated cases in terms of punitiveness.<sup>56</sup> Of the ninety-three cases they examined, forty-nine (52.6%) cases resulted in individual fines for defendants, with total penalties exceeding \$6.2 million.<sup>57</sup> Probation was assigned in forty-one (44%) cases for individuals, totaling 1,792 months of probation, and a total of 1,840 months of prison time was assessed in thirty-four (36.5%) cases.<sup>58</sup> Companies were fined in fifty (53.7%) cases, totaling over \$584 million in fines.<sup>59</sup> However, corporate fines are

<sup>47</sup>Ozmy & Jarrell, *supra* note 6, at 42.

<sup>48</sup>Ozmy & Jarrell, *supra* note 6, at 44–45.

<sup>49</sup>Ozmy & Jarrell, *supra* note 6, at 45–46 (citing *United States v. Cecil Morgan*, No. CR 94-20061-02 (W.D. La. Dec. 15, 1994)).

<sup>50</sup>Ozmy & Jarrell, *supra* note 6, at 46.

<sup>51</sup>Ozmy & Jarrell, *supra* note 6, at 47–52.

<sup>52</sup>Ozmy & Jarrell, *supra* note 6, at 50–51.

<sup>53</sup>Ozmy & Jarrell, *supra* note 6, at 47–48.

<sup>54</sup>Ozmy & Jarrell, *supra* note 6, at 48–49.

<sup>55</sup>Ozmy & Jarrell, *supra* note 6, at 51–52.

<sup>56</sup>Ozmy & Jarrell, *supra* note 6, at 52–54.

<sup>57</sup>Ozmy & Jarrell, *supra* note 6, at 52.

<sup>58</sup>Ozmy & Jarrell, *supra* note 6, at 52.

<sup>59</sup>Ozmy & Jarrell, *supra* note 6, at 52.

skewed because of the single \$400 million dollar fine levied against Transocean for the Deepwater Horizon disaster.<sup>60</sup>

Despite increased interest in criminal enforcement, courts have been slow to recognize environmental victims, and our understanding of victimization remains limited.<sup>61</sup> Four themes derived from these findings can be used to make general inferences about environmental prosecution and victimization.<sup>62</sup> First, most environmental prosecutions do not include clearly identifiable victims. Only ninety-three (3.6%) of 2,588 cases involved identifiable victims, which equates to 2.5 victim-based prosecutions a year, illustrating how infrequently the EPA acts.<sup>63</sup> Second, criminal prosecution for environmental crimes is more likely when violations result in specific or large events and serious damage, rather than long-term ramifications.<sup>64</sup> Third, environmental crimes perpetrated by companies result in prosecutions far more often than state crime, self-harm, or individual negligence.<sup>65</sup> Finally, like previous findings,<sup>66</sup> most cases proceeded against only serious and chronic offenders.<sup>67</sup>

#### **B. A Knowing Violation: Exploring the History of the Criminal Enforcement of Environmental Law in the Midwestern United States**

Although environmental regulation and enforcement have been a concern in the United States since the early 1900s, early federal statutes were weak, and violations were mostly misdemeanor offenses.<sup>68</sup> It was not until the 1970s that a concerted shift in environmental law occurred which resulted in a major expansion of several federal environmental statutes and the addition of felony provisions.<sup>69</sup> This shift coincided with an expansion in enforcement and a strengthening of both the EPA and the Department of Justice

<sup>60</sup>Ozmy & Jarrell, *supra* note 6, at 52–53 (citing United States v. Transocean, Ltd., No. 2:13-CR-00001-JTM-SS (E.D. La. Feb. 14, 2013)).

<sup>61</sup>Ozmy & Jarrell, *supra* note 6, at 54.

<sup>62</sup>Ozmy & Jarrell, *supra* note 6, at 54.

<sup>63</sup>Ozmy & Jarrell, *supra* note 6, at 54.

<sup>64</sup>Ozmy & Jarrell, *supra* note 6, at 54–55.

<sup>65</sup>Ozmy & Jarrell, *supra* note 6, at 55.

<sup>66</sup>Ozmy & Jarrell, *supra* note 6, at 55 (citing Kathleen F. Brickey, *Environmental Crime at the Crossroads: The Intersection of Environmental and Criminal Law Theory*, 71 TUL. L. REV. 487, 494–95 (1996); Joshua Ozmy & Melissa L. Jarrell, *Why Do Regulatory Agencies Punish? The Impact of Political Principals, Agency Culture, and Transaction Costs in Predicting Environmental Criminal Prosecution Outcomes in the United States*, 33 REV. POL'Y RSCH. 71, 72 (2016)).

<sup>67</sup>Ozmy & Jarrell, *supra* note 6, at 55.

<sup>68</sup>Ozmy & Jarrell, *supra* note 5, at 62.

<sup>69</sup>Ozmy & Jarrell, *supra* note 5, at 62.



(DOJ), with the EPA giving investigators more significant powers and the DOJ adding more attorneys to prosecute environmental crimes.<sup>70</sup> Today, the EPA has significant freedom to pursue cases and recommend them for prosecution, although they arguably still lack sufficient financial and human resources to investigate environmental crimes in a country as large as the United States.<sup>71</sup> Still, as previously noted, most environmental cases are settled civilly.<sup>72</sup> This civil approach to enforcement has called into question the true deterrent effect of U.S. environmental law, particularly in the Midwestern United States.<sup>73</sup>

Environmental law enforcement at both the state and federal levels is crucial for ensuring compliance and deterring violations; yet, little research examines if and how environmental laws are enforced. Specifically, there is scant research on how these laws are enforced in the Midwestern United States, which prior research identified as the most active region.<sup>74</sup> To address this gap, Ozymy and Jarrell analyze EPA criminal prosecutions between 1983 and 2019 in twelve Midwestern states: Illinois, Indiana, Idaho, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.<sup>75</sup> Ozymy and Jarrell selected 580 prosecutions identified in these states for analysis, which collectively comprise a distinct geographic subset of the data collected for their 2020 article.<sup>76</sup>

Ozymy and Jarrell's analyses revealed few early prosecutions, with just a single case adjudicated in 1983<sup>77</sup> and the scant total of only twenty-one by 1990.<sup>78</sup> But prosecutions steadily increased over time, with 269 cases prosecuted between 2010 and 2019.<sup>79</sup> Ohio ( $n = 145$ ) and Missouri ( $n = 123$ ) had the most prosecutions, followed by Michigan ( $n = 72$ ) and Illinois ( $n = 62$ ), while Kansas ( $n = 33$ ), Iowa ( $n = 33$ ), Indiana ( $n = 49$ ), Minnesota ( $n = 27$ ), and Nebraska ( $n = 21$ ) fell in the mid-range category, and North Dakota ( $n = 8$ ), South Dakota ( $n = 8$ ), and Wisconsin ( $n = 9$ ) comprised the lower

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<sup>70</sup>Ozymy & Jarrell, *supra* note 5, at 62–63.

<sup>71</sup>Ozymy & Jarrell, *supra* note 5, at 63–64.

<sup>72</sup>Ozymy & Jarrell, *supra* note 5, at 64.

<sup>73</sup>Ozymy & Jarrell, *supra* note 5, at 64–65.

<sup>74</sup>Ozymy & Jarrell, *supra* note 5, at 61; Joshua Ozymy & Melissa Jarrell, *Wielding the Green Stick: Criminal Enforcement at the EPA under the Bush and Obama Administrations*, 24 ENV'T. POL. 38, 45 (2015).

<sup>75</sup>Ozymy & Jarrell, *supra* note 5, at 61.

<sup>76</sup>Ozymy & Jarrell, *supra* note 5, at 65.

<sup>77</sup>Ozymy & Jarrell, *supra* note 5, at 66–67.

<sup>78</sup>Ozymy & Jarrell, *supra* note 5, at 66–67.

<sup>79</sup>Ozymy & Jarrell, *supra* note 5, at 66–67.

end of the distribution.<sup>80</sup> Defendants were charged under several different statutes, with many cases including multiple charges, but the Clean Water Act (CWA) was used most often ( $n = 198$  cases).<sup>81</sup> The Clean Air Act (CAA) was used in ninety-six cases; the Resource Conservation and Recovery Act (RCRA) in seventy-eight; the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) was used in twenty-seven cases; the Toxic Substances Control Act (TSCA) in twenty-four cases; and state environmental statutes were used in eighty-two cases.<sup>82</sup> Around 35% of all cases ( $n = 207$ ) included at least one non-environmental crime charge, with giving false statements/falsifying records, conspiracy, and fraud being the most prevalent charges (decreasing in incidence in that order).<sup>83</sup>

Aggregate monetary penalties totaled over \$216 million for individual offenders and over \$3.1 billion for companies.<sup>84</sup> Individual defendants received a total of 14,606 months of probation, 8,255 months of incarceration, and 20,634 hours of community service.<sup>85</sup> Companies were assessed 4,805 months of probation.<sup>86</sup> Penalties may seem severe, but five statistical outliers account for a substantial portion of both monetary fines and greater prison/probation sentences.<sup>87</sup> For example, Volkswagen alone incurred a \$2.8 billion penalty.<sup>88</sup>

Ozmy and Jarrell's analyses also revealed that cases could be ordered around a typology of air, water, and hazardous waste crimes.<sup>89</sup> Water pollution crimes were the most prevalent with 224 cases (about 38%).<sup>90</sup> Most of these offenses were charged under the CWA for crimes like illegally discharging waste and violating pretreatment standards.<sup>91</sup> For example, Shell was charged under the Refuse Act when a ruptured pipeline between Oklahoma and Illinois

<sup>80</sup> Ozmy & Jarrell, *supra* note 5, at 67.

<sup>81</sup> Ozmy & Jarrell, *supra* note 5, at 67–68.

<sup>82</sup> Ozmy & Jarrell, *supra* note 5, at 67–68.

<sup>83</sup> Ozmy & Jarrell, *supra* note 5, at 68–69.

<sup>84</sup> Ozmy & Jarrell, *supra* note 5, at 69–71.

<sup>85</sup> Ozmy & Jarrell, *supra* note 5, at 69–71.

<sup>86</sup> Ozmy & Jarrell, *supra* note 5, at 69–71.

<sup>87</sup> Ozmy & Jarrell, *supra* note 5, at 71–74.

<sup>88</sup> Ozmy and Jarrell, *supra* note 5, at 71 (citing *Summary of Criminal Prosecutions Database: Volkswagen*, U.S. ENV'T PROT. AGENCY, [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm) [<https://perma.cc/3QHB-V364>] (search in defendants field for "Volkswagen"; then click "view" for the case in fiscal year 2017)).

<sup>89</sup> Ozmy & Jarrell, *supra* note 5, at 74.

<sup>90</sup> Ozmy & Jarrell, *supra* note 5, at 74.

<sup>91</sup> Ozmy & Jarrell, *supra* note 5, at 74–75.

dumped 863,268 gallons of oil into a Gasconade River tributary.<sup>92</sup> Violations of air pollution standards ( $n = 111$ ; 19%) were the next most prevalent type of case.<sup>93</sup> These crimes were, mostly, centered around improper asbestos removal, which is costly and necessitates the use of licensed professionals and following strict disposal requirements.<sup>94</sup> Hazardous waste crimes were the third most prevalent violation, occurring in ninety-seven (16%) cases.<sup>95</sup> These prosecutions primarily included violations of strict “cradle-to-grave” regulations, which track the creation, storage, transport, and disposal of hazardous and toxic waste.<sup>96</sup> Finally, eighty-one (14%) cases focused on violations of state-level environmental laws.<sup>97</sup> The remaining seventy-seven (13%) cases did not fit neatly into one of the four typologies prevalent in the data.<sup>98</sup>

Four larger findings can be used to characterize prosecutions in the Midwest.<sup>99</sup> As previously mentioned, one of the bigger themes that emerged from data analyses is that prosecutions have largely been infrequent.<sup>100</sup> Results show increased enforcement over time, but the relatively small number of prosecutions suggest most environmental crimes go unnoticed and unpunished.<sup>101</sup> Relatedly, the second major summary finding illustrates that, even in culturally homogenous and geographically similar areas, and after accounting for state and industry variation, large prosecution disparities persist and suggest enforcement is unequal.<sup>102</sup> For instance, Missouri and Ohio make up 45% of total prosecutions in the dataset; by contrast, North Dakota, South Dakota, and Wisconsin make up only 6% combined.<sup>103</sup> The third major finding concerns the types of crimes

<sup>92</sup>Ozmy & Jarrell, *supra* note 5, at 75 (citing *Summary of Criminal Prosecution Databases: Shell Pipe Line Corporation*, U.S. ENV'T PROT. AGENCY, [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm) [<https://perma.cc/E82T-KWUN>] (search in defendants field for “Shell Pipe”; then click “view” for the case in fiscal year 1992)).

<sup>93</sup>Ozmy & Jarrell, *supra* note 5, at 76.

<sup>94</sup>Ozmy & Jarrell, *supra* note 5, at 76.

<sup>95</sup>Ozmy & Jarrell, *supra* note 5, at 79.

<sup>96</sup>Ozmy & Jarrell, *supra* note 5, at 79.

<sup>97</sup>Ozmy & Jarrell, *supra* note 5, at 80.

<sup>98</sup>Ozmy & Jarrell, *supra* note 5, at 80.

<sup>99</sup>Ozmy & Jarrell, *supra* note 5, at 82.

<sup>100</sup>Ozmy & Jarrell, *supra* note 5, at 82.

<sup>101</sup>Ozmy & Jarrell, *supra* note 5, at 82; *see also* Ozmy & Jarrell, *supra* note 6, at 26–28.

<sup>102</sup>Ozmy & Jarrell, *supra* note 5, at 82.

<sup>103</sup>Ozmy & Jarrell, *supra* note 5, at 82.

prosecuted.<sup>104</sup> More specifically, that most charges were water pollution crimes, followed by air pollution, and hazardous waste crimes.<sup>105</sup> A caveat to this finding, though, is that the Midwest may be more susceptible to water violations because of the proximity to the Great Lakes and how industries in the area utilize them for commerce.<sup>106</sup> The fourth major summative result highlights that companies were more frequently charged than individuals.<sup>107</sup>

Ozmy and Jarrell offer three suggestions for improving the enforcement of U.S. environmental statutes.<sup>108</sup> First, we need to bring greater public awareness to industrial environmental violations, including more media attention and clearer connections to other policy concerns that attract more attention, such as the racially disparate effects of pollution.<sup>109</sup> Second, we need to increase the resources devoted to policing and prosecuting environmental crimes.<sup>110</sup> While the EPA has received greater resources and authorities in recent years, Ozmy and Jarrell argue that there are insufficient prosecutors and special agents dedicated specifically to environmental crimes; 150 such agents are currently assigned, while the Pollution Prosecution Act of 1990 requires that there be at least 200.<sup>111</sup> Third, we need to enhance local stakeholder participation and community policing of industrial facilities.<sup>112</sup> The reason for this is that it is impossible for state and federal agencies to monitor and police the large number of facilities operating across the United States.<sup>113</sup> Thus, local monitoring of facilities is necessary and can be accomplished by expanding reporting and encouraging people and communities to report violations through tools like the EPA's "Report a Violation" webpage, which has generated thirty-five cases and six referrals for prosecution.<sup>114</sup>

### III. CONCLUSION

Both of Ozmy and Jarrell's articles clearly illustrate the extent of

<sup>104</sup>Ozmy & Jarrell, *supra* note 5, at 82.

<sup>105</sup>Ozmy & Jarrell, *supra* note 5, at 82.

<sup>106</sup>Ozmy & Jarrell, *supra* note 5, at 82.

<sup>107</sup>Ozmy & Jarrell, *supra* note 5, at 82.

<sup>108</sup>Ozmy & Jarrell, *supra* note 5, at 82–83.

<sup>109</sup>Ozmy & Jarrell, *supra* note 5, at 83 n.87.

<sup>110</sup>Ozmy & Jarrell, *supra* note 5, at 83.

<sup>111</sup>42 U.S.C.A. §§ 13101 to 13109.

<sup>112</sup>Ozmy & Jarrell, *supra* note 5, at 84.

<sup>113</sup>Ozmy & Jarrell, *supra* note 5, at 84.

<sup>114</sup>Ozmy & Jarrell, *supra* note 5, at 84 (citing *Enforcement and Compliance History Online (ECHO): Report a Violation*, U.S. ENV'T PROT. AGENCY, <https://echo.epa.gov/report-environmental-violations> [<https://perma.cc/W6CH-H9BS>]).

FROM THE LEGAL LITERATURE

U.S. environmental crime victimization and the limited governmental response. Prosecutions of environmental offenders and enforcement of environmental laws have increased over time, but we still do not treat these crimes with the seriousness they deserve.<sup>115</sup> We need a dramatic shift in how we monitor and enforce environmental regulations if we want to have a livable environment in the future.

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<sup>115</sup>Ozmy & Jarrell, *supra* note 5, at 82; Ozmy & Jarrell, *supra* note 6, at 26–28.