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# **SOUTHERN HARM: ANALYZING THE CRIMINAL ENFORCEMENT OF ENVIRONMENTAL LAW IN THE SOUTHERN UNITED STATES, 1983–2019**

DR. JOSHUA OZYMY\* & DR. MELISSA L. JARRELL\*\*

## **ABSTRACT**

When violations of environmental laws involve significant harm or culpable conduct, the application of criminal enforcement tools is required. Yet, our understanding of how environmental laws have been criminally enforced historically in the Southern United States remains poor. Our goal is to analyze historical charging and sentencing patterns and show the broader themes that emerge in environmental crime prosecutions over time in the region. Through content analysis of all 2,588 criminal prosecutions resulting from U.S. EPA criminal investigations, 1983–2019, we select all 799 prosecutions occurring in the Southern United States. Results show that 44% of prosecutions focus on water pollution, 19% on hazardous waste, 17% air pollution, and about 10% state-level violations. Total penalties assessed to all defendants at sentencing exceeded \$1.43 billion in monetary penalties and about 2,750 years' probation and 866 years' incarceration. We conclude with forward-facing solutions towards improving environmental criminal enforcement outcomes including enhanced community policing, greater public salience for enforcement activities, and enhanced resources.

## **INTRODUCTION**

When Joey Sutter and Charles Sittig went to work driving trucks for Matthew Lawrence Bowman, president and owner of Port Arthur Chemical and Environmental Services (“PACES”) and Environmental Services Company (“ESC”) near Houston, Texas, they had little reason

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to suspect it would lead to their deaths.<sup>1</sup> PACES sold caustic chemicals to paper mills, including hydrogen sulfide, one of the leading occupational causes of death in the workplace in such facilities.<sup>2</sup> Bowman was responsible for ensuring worker safety and proper disposal of hydrogen sulfide wastewater; although in some cases, Bowman was also responsible for its workers' injuries. Hazardous materials were illegally transported under Bowman's direction using false documents and without the required placards for safety purposes.<sup>3</sup> Bowman did not put in place sufficient workplace practices to protect workers handling hazardous materials.<sup>4</sup> On December 18, 2008, Joy Sutter was killed after inhaling the hydrogen sulfide gas and months later Charles Sittig died of a heart attack caused by inhalation of the poisonous gas.<sup>5</sup>

A criminal investigation into Bowman's behavior was led by the U.S. Environmental Protection Agency's Criminal Investigation Division ("EPA-CID") and a task force, including the U.S. Department of Transportation's Office of Inspector General, Texas Commission on Environmental Quality's ("TCEQ") Environmental Crimes Unit, the U.S. Coast Guard, and other state, local, and federal agencies.<sup>6</sup> On April 18, 2012, Bowman was charged with false statements and Occupational Safety and Health Administration ("OSHA") violations resulting from willful actions that cause the death of an employee by the U.S. Attorney's Office for the Eastern District of Texas and the Department of Justice's Environmental Crimes Section ("DOJ-ECS").<sup>7</sup> Bowman pled guilty and was sentenced on October 28, 2013, to 12 months' incarceration and a \$5,000 federal fine.<sup>8</sup>

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<sup>1</sup> Dan Wallach, *Business Owner Sent to Prison in Death of Man*, HOUS. CHRON. (Oct. 28, 2013, 10:52 PM), <https://www.chron.com/news/houston-texas/houston/article/Business-owner-sent-to-prison-in-death-of-man-4933934.php> [<https://perma.cc/QDR3-4893>].

<sup>2</sup> *Hydrogen Sulfide*, OSHA, <https://www.osha.gov/hydrogen-sulfide> [<https://perma.cc/7SC8-XRA7>] (last visited Oct. 14, 2021).

<sup>3</sup> *Former President of Texas Chemical Company Sentenced for Federal Occupational Safety and Health Crimes Related to Employee Deaths*, OSHA (Nov. 15, 2013), <https://www.osha.gov/quicktakes/11152013> [<https://perma.cc/YH3M-3X57>].

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

<sup>5</sup> *OSH[A] Act Violation Sends Company President to Federal Prison*, ISHN (Nov. 20, 2013), <https://www.ishn.com/articles/97387-osh-act-violation-sends-company-president-to-federal-prison> [<https://perma.cc/8UJB-T77Y>].

<sup>6</sup> *Former President of Port Arthur, Texas, Chemical Company Sentenced for Federal Crimes Related to Employee Deaths*, EPA (Oct. 28, 2013), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2516](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2516) [<https://perma.cc/F4HQ-TAMM>].

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

<sup>8</sup> Rod Rehm, *Former President of Chemical Company Sentenced for Federal Crimes Related*

Prosecuting environmental crimes involving significant harm and culpable conduct, such as those perpetrated by Matthew Lawrence Bowman, demonstrates the importance of using criminal enforcement tools to punish serious violations of environmental law and deter future offenses.<sup>9</sup> Despite the overwhelming importance of criminal enforcement for achieving these goals to protect humans, animals, and the natural environment from serious environmental crimes and criminals, few empirical studies of environmental criminal enforcement in the United States generally have been undertaken, and this is particularly true in the Southern United States.<sup>10</sup>

We address this gap in knowledge by examining all EPA-CID criminal investigations and related prosecutions over thirty-seven years in the following sixteen Southern U.S. States: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. Through content analysis of EPA-CID prosecution case summaries, we examine all 799 prosecutions occurring in these states from 1983–2019. Our analysis is able to show charging and sentencing patterns and show the broader themes that emerge for the types of environmental crimes and related prosecutions that have occurred in the region since the early 1980s. We begin with a discussion of the development of federal criminal enforcement tools for the environment, followed by a discussion of our analytical approach, and then our analysis.

## I. POLICING AND PROSECUTING ENVIRONMENTAL CRIMES

The development of criminal enforcement tools for the environment at the federal level required three primary elements: the creation

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to *Employee Deaths*, WORKERS' COMPENSATION WATCH (Nov. 14, 2013), <https://workerscompensationwatch.com/tag/matthew-lawrence-bowman/> [<https://perma.cc/YJ5N-7Y8M>].

<sup>9</sup> Memorandum from Earl E. Devaney, Director of EPA's Office of Criminal Enforcement, to EPA Employees (Jan. 12, 1994) [hereinafter Devaney], <https://www.epa.gov/sites/production/files/documents/exercise.pdf> [<https://perma.cc/9T9Y-B5ES>].

<sup>10</sup> There are few studies that examine the sentencing and punishment of environmental offenders. For examples see generally Michael J. Lynch et al., *The Weak Probability of Punishment for Environmental Offenses and Deterrence of Environmental Offenders: A Discussion Based on USEPA Criminal Cases, 1983–2013*, 37 DEVIANT BEHAV. 1095 (2016); Michael J. Lynch, *The Sentencing/Punishment of Federal Environmental/Green Criminal Offenders, 2000–2013*, 38 DEVIANT BEHAV. 991 (2017); Joshua Ozymy & Melissa L. Jarrell, *EPA's Criminal Prosecution and Punishment of Environmental Crimes*, 50 ENV'T L. REP., 10452 (2020).

of criminal provisions in environmental statutes, a dedicated policing presence, and specialized prosecutors and support staff. The first misdemeanor provisions in federal environmental law came about towards the end of the 19th century during the progressive push to have the federal government conserve natural resources.<sup>11</sup> The Rivers and Harbors and Lacey Acts were the first federal laws that contained misdemeanor provisions for violations of environmental law.<sup>12</sup> Passed in 1899 and 1900, respectively, these Acts made illegal unpermitted discharges or alterations to the navigable waters of the United States and the unpermitted interstate wildlife trade.<sup>13</sup> The Migratory Bird Treaty Act (“MBTA”) of 1918 prohibits the illegal taking, trading, or transport of migratory birds without prior approval of the U.S. Fish and Wildlife Service.<sup>14</sup> The expansion of federal environmental laws continued through the 1970s with the passage of major Acts such as the Clean Water Act (“CWA”), Clean Air Act (“CAA”), Toxic Substances Control Act (“TSCA”), Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”), Resource Conservation and Recovery Act (“RCRA”), and the Comprehensive Environmental Response, Compensation, and Liability Acts (“CERCLA”), which expanded the range of misdemeanor violations in federal environmental law.<sup>15</sup> Felony provisions came into federal environmental law in 1984, with the passage of the Hazardous and Solid Waste Amendments to RCRA.<sup>16</sup> Penalties in major environmental statutes were further strengthened a few years later.<sup>17</sup> These included upgrading certain misdemeanors in the CWA to

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<sup>11</sup> Charles K. McFarland, *The Federal Government and Water Power, 1901–1913: A Legislative Study in the Nascence of Regulation*, 42 LAND ECON. 441, 441 (1966).

<sup>12</sup> *Supreme Court Finds No Implied Private Right of Action Under § 10 of the Rivers and Harbors Act*, 11 ENV'T L. REP., 10098, 10098 (1981), <https://elr.info/sites/default/files/articles/11.10098.htm> [<https://perma.cc/24LM-V5PT>].

<sup>13</sup> *Section 10 of the Rivers and Harbors Appropriation Act of 1899*, EPA, <https://www.epa.gov/cwa-404/section-10-rivers-and-harbors-appropriation-act-1899> [<https://perma.cc/TZL8-3734>] (last visited Oct. 14, 2021); *The Lacey Act*, U.S. SUSTAINABILITY ALL., <https://thesustainabilityalliance.us/lacey-act/> [<https://perma.cc/HN6Z-KA4D>] (last visited Oct. 14, 2021).

<sup>14</sup> The Migratory Bird Treaty Act of 1918, 16 U.S.C. §§ 703–12; *Migratory Bird Treaty Act*, FWS, <https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php> [<https://perma.cc/9QX4-94MN>] (last visited Oct. 14, 2021).

<sup>15</sup> See generally Clean Water Act, 33 U.S.C. § 1251; Clean Air Act, 42 U.S.C. § 7401; Toxic Substances Control Act, 53 U.S.C. § 2601; Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136; Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601; Resource Conservation and Recovery Act 42 U.S.C. § 6901.

<sup>16</sup> David T. Barton, *Corporate Officer Liability Under RCRA: Stringent but Not Strict*, 1991 BYU L. REV. 1547, 1547–48 (1991).

<sup>17</sup> The EPA and DOJ subsequently enhanced their efforts to investigate and punish

felonies in 1987 and the same for the CAA in 1990, following Guidelines issued by the U.S. Sentencing Commission<sup>18</sup> that suggested enhancements in penalties for a variety of federal offenses that also touched environmental law.<sup>19</sup> Felony penalties in major federal environmental statutes are now commonplace.<sup>20</sup>

Developing resources to prosecute environmental crimes might be traced to the founding of the Department of Justice's ("DOJ") Public Lands Division, formed in 1909 and now known as the Environment and Natural Resources Division ("ENRD").<sup>21</sup> In 1982 the Environmental Crimes Section ("DOJ-ECS") was founded to center resources and professional expertise on prosecuting environmental crimes. In 1987 DOJ-ECS became its own unit within ENRD.<sup>22</sup> The DOJ's record for environmental prosecution came under scrutiny in the early 1990s, when the House Subcommittee on Investigations and Oversight held hearings that resulted in complaints that DOJ was not fully prosecuting major corporations or adequately

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environmental crimes through the 1990s, leading to a debate as to whether they were being too punitive and if Congress failed to make appropriate distinctions for maximum penalties in civil and criminal law, leading to overzealous prosecution of certain crimes and serious, knowing violations. *See, e.g.*, Richard J. Lazarus, *Assimilating Environmental Protection into Legal Rules and the Problem with Environmental Crime*, 27 LOY. L. REV., 867, 868 (1994). *See* KATHLEEN F. BRICKEY, ENVIRONMENTAL CRIME: LAW, POLICY, PROSECUTION 9 (2008).

<sup>18</sup> Bruce Pasfield, *Simple Negligence and Clean Water Act Criminal Liability: A Troublesome Mix*, BLOOMBERG LAW (Oct. 8, 2010, 12:00 AM), <https://news.bloomberglaw.com/environment-and-energy/simple-negligence-and-clean-water-act-criminal-liability-a-troublesome-mix> [<https://perma.cc/8JP6-CY9Y>].

<sup>19</sup> WASH. LEGAL FOUND., SPECIAL REPORT: FEDERAL EROSION OF BUSINESS CIVIL LIBERTIES ch.2, at 1–3 (2008), <https://s3.us-east-2.amazonaws.com/washlegal-uploads/upload/Chapter2EPA.pdf> [<https://perma.cc/VGA8-587P>].

<sup>20</sup> For examples of criminal provisions in federal environmental law, *see Criminal Provisions of the Clean Air Act*, EPA (Aug. 21, 2021), <https://www.epa.gov/enforcement/criminal-provisions-clean-air-act> [<https://perma.cc/T4VZ-4EAC>]; *Criminal Provisions of Water Pollution*, EPA (Aug. 21, 2021), <https://www.epa.gov/enforcement/criminal-provisions-water-pollution> [<https://perma.cc/QNH4-TZAS>]; *Criminal Provisions of the Resource Conservation and Recovery Act*, EPA (Aug. 21, 2021), <https://www.epa.gov/enforcement/criminal-provisions-resource-conservation-and-recovery-act-rcra> [<https://perma.cc/X3CH-9UPU>].

<sup>21</sup> *See Historical Development of Environmental Criminal Law*, DEPT. OF JUST. ENV'T & NAT. RES. DIV. (May 13, 2015), <https://www.justice.gov/enrd/about-division/historical-development-environmental-criminal-law> [<https://perma.cc/V4Y7-PQQE>].

<sup>22</sup> The Environmental Enforcement Section handles civil-judicial cases in ENRD. *See id.*; *Environmental Enforcement Section (EES): An Overview of Our Practice*, DEPT. OF JUST. ENV'T & NAT. RES. DIV. (May 14, 2015), <https://www.justice.gov/enrd/overview-our-practice> [<https://perma.cc/CU6A-46YE>].

cooperating with other federal agencies.<sup>23</sup> The outcome of the hearings was the perception that efforts should be strengthened. These hearings, the enhancement of penalties for environmental crimes, and DOJ-ECS receiving an organizational upgrade, all corresponded to the same period of time when Congress indicated a desire to strengthen criminal enforcement. This also corresponded to a broader global trend focused on enhancing penalties for environmental harms.<sup>24</sup>

Dedicated federal policing resources for environmental crimes can be traced to the founding of the Office of Enforcement in 1981, now referred to as the Office of Enforcement and Compliance Assurance (“OECA”).<sup>25</sup> Criminal investigators were hired a year after the Office’s founding, but were not originally granted full law enforcement powers. They were temporarily deputized as Special Deputy U.S. Marshals from 1984 until 1988, when Congress granted criminal investigators full law enforcement powers.<sup>26</sup> EPA-CID currently employs about 145 criminal investigators, who are also called special agents or 1811s, to investigate environmental crimes.<sup>27</sup> The Office of Criminal Enforcement, Forensics and Training (“OECFT”) was founded in 1995 to provide investigative and forensics support for criminal cases opened by investigators and to house EPA-CID.<sup>28</sup>

Criminal investigators have a high level of professional discretion and are typically alerted to potential crimes by former employees of companies, official documents, and civil inspectors that may communicate

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<sup>23</sup> See Debra Jacobson, *1992–1994 Investigation of the Justice Department’s Environmental Crimes Program* (2017), <https://archive.constitutionproject.org/wp-content/uploads/2017/05/EnvironmentalCrimes.pdf> [<https://perma.cc/B3VC-JV4B>].

<sup>24</sup> See Michael R. Pendleton, *Beyond the Threshold: The Criminalization of Logging*, 10 SOC’Y & NAT. RES. 182, 191–93 (1997).

<sup>25</sup> See *Historical Development of Environmental Criminal Law*, DEPT. OF JUST. ENV’T & NAT. RES. DIV. (May 13, 2015), <https://www.justice.gov/enrd/about-division/historical-development-environmental-criminal-law> [<https://perma.cc/9F6K-XT6R>].

<sup>26</sup> See John Peter Suarez, *Management Review of the Office of Criminal Enforcement, Forensics and Training*, EPA (Dec. 15, 2003), <https://www.epa.gov/sites/production/files/documents/oceft-review03.pdf> [<https://perma.cc/2686-HH9W>].

<sup>27</sup> The number of investigative staff employed by EPA-CID tends to vary, based on whether this includes active special agents or also support and management staff. See AMERICA’S ENVIRONMENTAL CRIME FIGHTERS, EPA 2–4 (2020), <https://www.epa.gov/sites/production/files/documents/oceftbrochure.pdf> [<https://perma.cc/4R8U-CECQ>]; *EPA CID Agent Count*, PUB. EMP. ENV’T RESP. 1, 1 (2019), [https://www.peer.org/wp-content/uploads/2019/11/11\\_21\\_19-Federal\\_Pollution\\_EPA\\_CID\\_Agent\\_Count.pdf](https://www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf) [<https://perma.cc/2CU3-5K5P>].

<sup>28</sup> See *generally Basic Information on Enforcement*, EPA (Jan. 13, 2021), <https://www.epa.gov/enforcement/basic-information-enforcement> [<https://perma.cc/6UP9-GXDV>].

problems found during inspections.<sup>29</sup> Once special agents build sufficient evidence of a crime, a typical scenario is to approach prosecutors in DOJ-ECS or the U.S. Attorney's Office to convene a grand jury or file an Information in District Court to pursue a case.<sup>30</sup>

Federal law enforcement agencies maintain a deterrence-based culture.<sup>31</sup> The goals of criminal enforcement are to punish environmental offenders and to deter future offenses.<sup>32</sup> For deterrence to be effective the costs of offending must outweigh the benefits of illegal activity.<sup>33</sup> This requires both sufficient police resources to monitor and survey the potential population of criminals and resources to enable swift and significant punishment for those who break the law.<sup>34</sup> Yet EPA-CID employs roughly 150 police officers for the entire country and DOJ-ECS around 40 prosecutors and a dozen support staff.<sup>35</sup> Not surprisingly, some studies suggest less than 2,600 prosecutions have resulted from EPA-CID investigations since the institutionalization of investigative and prosecutorial resources for the environment in the early 1980s.<sup>36</sup> Given these limiting factors, the deterrent value of investigating and prosecuting environmental crimes at the federal level seems relatively low.<sup>37</sup> Yet we know very little about

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<sup>29</sup> See Joel A. Mintz, *Some Thoughts on the Interdisciplinary Aspects of Environmental Enforcement*, 36 ENV'T L. REP. 10912, 10912–14 (2006).

<sup>30</sup> See generally JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES (U. Tex. Press 2012). See also Mintz, *supra* note 29.

<sup>31</sup> A management review of the Division noted, "To the extent any single pattern dominates, it is the law enforcement orientation of the Immediate Office, CID, and (to a lesser extent) LCRMD (Legal Counsel and Resources Management Division)." See Suarez, *supra* note 26.

<sup>32</sup> See AMERICA'S ENVIRONMENTAL CRIME FIGHTERS, *supra* note 27, at 3.

<sup>33</sup> See Gary Becker, *Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 170–76, 183 (1968).

<sup>34</sup> See Richard A. Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193, 1193–2000 (1985).

<sup>35</sup> These numbers are given as of 2015. *Environmental Crimes Section*, DEPT. OF JUST. ENV'T & NAT. RES. DIV. (July 2, 2021), <https://www.justice.gov/enrd/environmental-crimes-section> [<https://perma.cc/44HC-BJ88>]. The number of criminal investigators varies some depending on whether you measure this as only special agents or administrative support staff, but the number is objectively low in either case, given their wide-ranging responsibilities. See also *EPA CID Agent Count*, *supra* note 27.

<sup>36</sup> See Joshua Ozymy et al., *Persistence or Partisanship: Exploring the Relationship between Presidential Administrations and Criminal Enforcement by the U.S. Environmental Protection Agency, 1983–2019*, PUB. ADMIN. REV. 49, 50 (2021).

<sup>37</sup> See Carole M. Billiet & Sandra Rousseau, *How Real Is the Threat of Imprisonment for Environmental Crime?*, 37 EUR. J. L. & ECON. 183, 185–86 (2014). Some scholars have questioned if there is much deterrent value in environmental criminal enforcement or

the functioning of the environmental criminal apparatus in the Southern United States.<sup>38</sup> We explore this phenomena below.<sup>39</sup>

## II. DATA

Data is taken from the EPA's *Summary of Criminal Prosecutions Database*.<sup>40</sup> The Database contains summaries for all EPA-CID criminal investigations and subsequent prosecutions from 1983–present.<sup>41</sup> We selected cases by EPA fiscal year (“FY”), beginning with the first case occurring in FY 1983, and we collected all cases in the dataset until the end of calendar year 2019. We analyzed a total of 2,588 total cases and then

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criminal deterrence generally. *See generally* Raymond Paternoster, *How Much Do We Really Know about Criminal Deterrence?*, 100 J. CRIM. L. & CRIMINOLOGY 765, 765–68 (2010).

<sup>38</sup> Given that the cost of criminal prosecution is high, and the nature of most violations does not require more than civil-administration actions, the vast majority of environmental offenses are not handled through a criminal process. It was never the intent of EPA or Congress for this to occur. Criminal enforcement was always meant to be strategic, and the idea of giving environmental prosecutors and investigators discretion to police environmental crimes has always been politically contentious. The broader issue is whether there are sufficient resources for a functioning criminal apparatus to achieve its organizational goals and mandate. For a discussion of criminal versus civil enforcement incentives, organizational mandates, and criticisms of prosecutorial discretion and criminal investigative work, see: Jeremy Firestone, *Agency Governance and Enforcement: The Influence of Mission on Environmental Decisionmaking*, 21 J. POL'Y ANALYSIS & MGMT. 409, 410–12 (2002); Evan J. Ringquist & Craig E. Emmert, *Judicial Policymaking in Published and Unpublished Decisions: The Case of Environmental Civil Litigation*, 52 POL. RSCH. Q. 7, 12–13 (1999); Devaney, *supra* note 9; Judson W. Starr, *Turbulent Times at Justice and EPA: The Origins of Environmental Criminal Prosecutions and the Work that Remains*, 59 GEO. WASH. L. REV. 900, 900–10 (1991); Theodora Galactos, *The United States Department of Justice Environmental Crimes Section: A Case Study of Inter- and Intra-branch Conflict Over Congressional Oversight and the Exercise of Prosecutorial Discretion*, 64 FORDHAM L. REV., 589, 590–95 (1995); WASH. LEGAL FOUND., *supra* note 19, at 2–3.

<sup>39</sup> For other key studies on the criminal sanctioning of environmental offenders, see: Kathleen F. Brickey, *Charging Practices in Hazardous Waste Crime Prosecutions*, 62 OHIO STATE L. J. 1077 (2001); David M. Uhlmann, *Prosecutorial Discretion and Environmental Crime*, 38 HARV. ENV'T L. REV. 159 (2014); Joshua Ozymy & Melissa 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 (2016); Mathew J. Griefe et al., *Corporate Environmental Crime and Environmental Justice*, 28 CRIM. JUST. POL'Y REV. 327 (2017); Matthew J. Griefe & Michael O. Maume, *Do Companies Pay the Price for Environmental Crimes? Consequences of Criminal Penalties on Corporate Offenders*, 73 CRIME, L. & SOC. CHANGE 337 (2020).

<sup>40</sup> U.S. EPA, *Summary of Criminal Prosecutions*, <https://www.epa.gov/enforcement/summary-criminal-prosecutions> [<https://perma.cc/HW8N-JL4T>] (last updated May 10, 2021).

<sup>41</sup> *Id.*

selected all prosecutions occurring in the following sixteen states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. We included all 799 prosecutions occurring in these states during these thirty-seven years in our dataset. We selected these states to represent the Southern United States, based on the U.S. Census Bureau's Census Regions.<sup>42</sup>

The following variables were coded for the analysis: narrative summary of each case, docket number, given state identifier for where the prosecution was adjudicated, EPA fiscal year for each case given as an identifier, federal environmental statutes used to charge defendants in each case, total number of individuals listed as defendants in each case, whether at least one company/corporation was a defendant in a case, the presence of non-environmental charges, such as false statements/records, obstruction, fraud, conspiracy, and smuggling. We measured penalties by aggregating them across all individuals and companies that were defendants in the prosecutions. All penalties in nominal U.S. dollars such as special assessments, fees, restitution, supplemental environmental projects, fines, or any other listed assessments or fines are included in our measures for monetary penalties. Probation and incarceration are measured in months. Community service is measured in hours. Data is taken directly from the summaries. We do not correct or verify data by searching the web or other legal sources. We need a common baseline for all of the data and searching some cases and not others would violate this principle. If EPA employees erred when entering the data, this would be unknown to us, as would be the role of the defense, prosecutors, judge or other actors in any prosecution. These limitations are minor and do not affect our analysis or findings. They do not impact our intent, goals, or ability to show broader charging, sentencing, and environmental crime patterns over time.

We used content analysis to code the data for our analysis.<sup>43</sup> We coded cases for four weeks through FY 2015 to begin to build an understanding of the cases and how data was inputted by various employees over time. Two coders coded the data independently during this process. Once we saw emerging patterns and what we wanted to capture from the

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<sup>42</sup> U.S. CENSUS BUREAU, *Census Regions and Divisions of the United States* (Aug. 23, 2021), [https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us\\_regdiv.pdf](https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf) [<https://perma.cc/NWX3-22KF>].

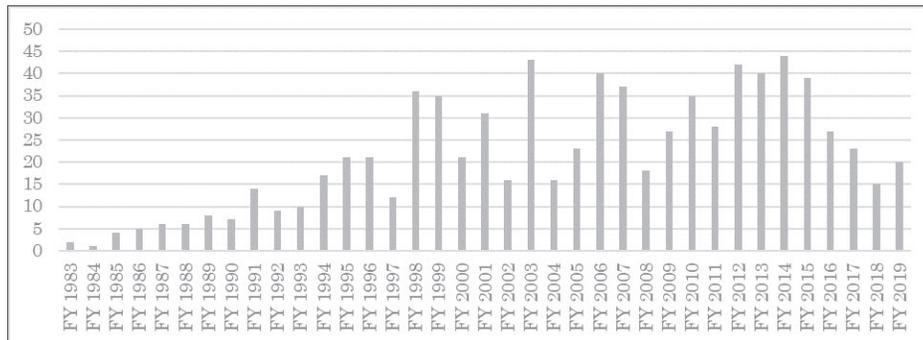
<sup>43</sup> Analysis done by dividing the total items coded by the agreed upon items. See OLE R. HOLSTI, *CONTENT ANALYSIS FOR THE SOCIAL SCIENCES AND HUMANITIES* 140 (Addison-Wesley Publ'g Co., 1969); see generally EARL R. BABBIE, *THE PRACTICE OF SOCIAL RESEARCH* (Wadsworth Publ'g Co., 13th ed. 2012).

data, which became evident when inter-coder reliability reached 90%, we began the analysis. Two individual coders coded independent with the lead author reviewing cases for discrepancies. We would then meet to find consensus on divergent values. Most of the divergent values came from complex sentencing involving multiple defendants. Our total inter-coder ability was roughly 95% for the analysis.

### III. FINDINGS

We begin the analysis by exploring the total annual environmental crime prosecutions in these sixteen southern states by EPA fiscal year, 1983–2019. We find prosecutions begin a slow uptick with the institutionalization of the criminal enforcement apparatus in the early 1980s and slowly ticked upwards through the 1990s. We find 32 cases adjudicated in the 1980s, 182 in the 1990s, 272 in 2000–09, and 313 in 2010–19. The high point in annual prosecutions adjudicated occurred in FY 2014 with 44 cases completed, with an annual average of 21.6 over these 37 years. Total prosecutions adjudicated in our dataset for all states and years was 799.

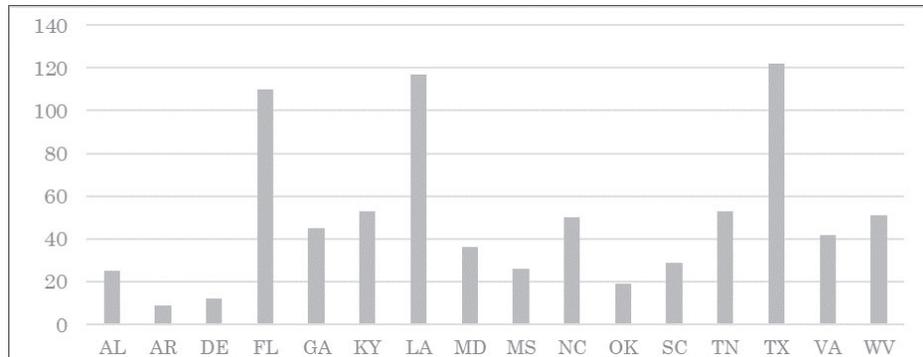
**Figure 1. Total Annual Environmental Crime Prosecutions in the Southern United States by EPA Fiscal Year, 1983–2019**



*Source: EPA Summary of Criminal Prosecutions Database*

Figure 2 explores the total annual environmental crime prosecutions per state, 1983–2019. Prosecutions range from a low in Arkansas (9 prosecutions total) to 122 in Texas. Following Texas are Louisiana (117), Florida (110), Kentucky (53), and North Carolina (50). Cases are concentrated in Texas, Louisiana, and Florida, which account for about 44% of total cases.

**Figure 2. Annual Environmental Crime Prosecutions in the Southern United States by U.S. State, 1983–2019**



*Source: EPA Summary of Criminal Prosecutions Database*

Table 1 explores charging patterns in all environmental crime prosecutions by major federal environmental statute. Here, we aggregate the number of cases per state where at least one defendant in a case was charged under the CWA, CAA, RCRA, TSCA, or FIFRA. We record the number of cases where at least one defendant was charged with a state-level offense in the far-right column. Defendants can be charged under more than one statute and these are the most common charging statutes, which explains why the cases do not equal 799.

The most common federal charging statute was the CWA. We find 285 prosecutions where at least one defendant was charged under the Act. In Louisiana 62 cases were prosecuted under the CWA. In 112 cases, at least one defendant was charged under the CAA. Texas (27) and Florida (22) led CAA prosecutions in the data. In 148 cases at least one defendant was charged under RCRA, with Texas (29), Florida (17), and Georgia (16) having the most RCRA prosecutions. Forty-seven cases were prosecuted under FIFRA by our estimates with Kentucky (13) containing the most prosecutions. Only 11 cases were prosecuted under the TSCA in our data. We find 79 cases where at least one defendant was prosecuted for violating a state environmental statute.

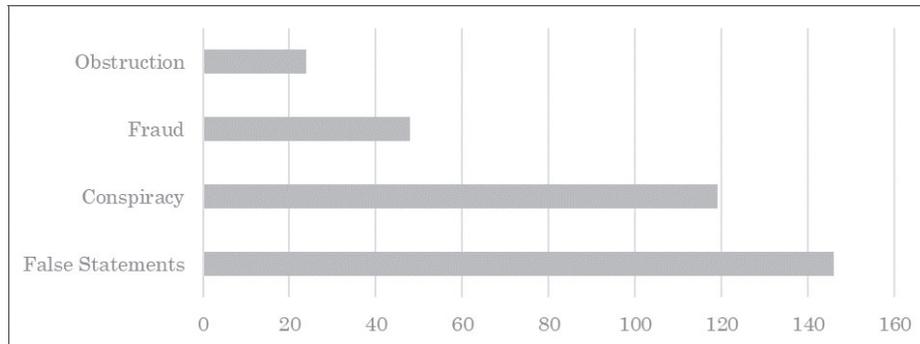
TABLE 1. CHARGING PATTERNS IN ENVIRONMENTAL CRIME PROSECUTIONS IN THE SOUTHERN UNITED STATES, 1983–2019

State	CWA	CAA	RCRA	TSCA	FIFRA	State
AL	8	2	7	0	1	2
AR	6	0	4	1	1	0
DE	12	8	4	0	0	1
FL	28	22	17	1	8	3
GA	7	5	16	0	3	9
KY	18	4	8	1	13	2
LA	62	8	8	0	5	12
MD	4	5	4	2	1	2
MS	13	0	4	0	4	4
NC	21	9	7	1	1	3
OK	6	2	7	0	1	2
SC	12	4	3	0	0	7
TN	15	3	15	0	5	5
TX	25	27	29	2	3	23
VA	18	7	4	1	1	2
WV	30	6	11	2	0	2

*Source: EPA Summary of Criminal Prosecutions Database*

In many cases in our data, defendants were charged with a series of criminal offenses outside of or in addition to their environmental crimes. We catalog these in Figure 3 below by the most common non-environmental offenses. Giving false statements to investigators, government officials, or on official documents was the most common non-environmental criminal offense in our data. In 146 cases, or about 18% of all prosecutions, at least one defendant was charged with giving false statements or falsifying documents. In 119 cases, or about 15% of the data, defendants were charged with conspiracy. In 48 cases, or 6% of all prosecutions, at least one defendant was charged with fraud. These cases included mail fraud, wire fraud, bank fraud, and tax fraud. In 3% of prosecutions, or 24 cases, at least one defendant was charged with obstruction.

**Figure 3. Common Criminal Charges in Environmental Crime Prosecutions in the Southern United States, 1983–2019**



*Source: EPA Summary of Criminal Prosecutions Database*

In Figure 4 we provide aggregate totals for all penalties assessed to individual and company defendants in our data. We aggregate total probation and incarceration assessed in months, community service in total hours, and monetary penalties including fines, assessments, restitution, community service payments, special assessments, and any other monetary penalties in nominal dollars. Individuals were assessed some \$410 million in monetary penalties in our data. Companies were assessed about \$1.02 billion. We provide context for these numbers in greater detail below. Probation assessed to all individual defendants exceeded 24,300 months, and 9,349 months cumulatively assessed to all companies in our data. Defendants were assessed 37,939 hours' community service by our estimates across all cases. Individual defendants were cumulatively assessed 10,395 months' incarceration.<sup>44</sup>

<sup>44</sup> The case against British Petroleum for their role in the Deepwater Horizon disaster was not available in the dataset. We searched by fiscal year and other means, but it could only be found by web search. We excluded the case and the \$4 billion criminal penalty from these totals because the case could not be found via the search means used for all other cases. Adding this penalty would increase total monetary penalties over \$5 billion. This case is such an extreme outlier it does not represent the typical prosecutorial outcome in any case, given the severity of the penalty. *See In re Oil Spill by Oil Rig Deepwater Horizon*, 2:12-CR-00292-DEK (E.D. La. 2013) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2468](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2468) [<https://perma.cc/RF86-R4KG>].

**Figure 4. Total Penalties Assessed in Environmental Crime Prosecutions in the Southern United States, 1983–2019**



*Source: EPA Summary of Criminal Prosecutions Database*

In Table 2 we provide context to the larger monetary penalties assessed to companies in the dataset that help to place the \$1.02 billion in monetary penalties in context. Refrigeration USA was prosecuted in Florida for illegally importing more than 4,000 tons of CFC-12, commonly known as Freon, into the United States.<sup>45</sup> The company was charged with smuggling, conspiracy, tax evasion, and violations of the CAA and was sentenced on August 22, 1997, to 60 months' probation and fines totaling \$37,372,826.<sup>46</sup> Overseas Shipholding Group was prosecuted after an investigation by the U.S. Coast Guard found that crewmen aboard the M/T Cabo Hellas were illegally discharging oily water into the Waters of the United States.<sup>47</sup> A multi-district investigation found the company was operating

<sup>45</sup> EPA, *Recent Enforcement Actions* (Aug. 23, 2021, 7:40 PM), [http://widit.knu.ac.kr/epa/ebtpages/Air/Air\\_Pollution\\_Legal\\_Aspects/Enforcement/siteout/s1out1.html](http://widit.knu.ac.kr/epa/ebtpages/Air/Air_Pollution_Legal_Aspects/Enforcement/siteout/s1out1.html) [<https://perma.cc/7T92-5CUA>].

<sup>46</sup> Refrigeration USA, CR:96-0267-CR-MORENO (S.D. Fla. 1997) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=665](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=665) [<https://perma.cc/CAH9-QHZR>].

<sup>47</sup> Overseas Shipholding Group, Inc., 7:06-CR-125-1F (E.D.N.C. 2007) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1279](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1279) [<https://perma.cc/BN35-5NTJ>].

a dozen ships illegally.<sup>48</sup> The company was charged with false statements and violating MARPOL.<sup>49</sup> They were sentenced on December 19, 2006, to pay \$37 million and to serve 36 months' probation after pleading guilty to thirty-three felony counts of deliberate vessel pollution and falsifying records.<sup>50</sup>

BP Products North America was prosecuted for criminal conduct that resulted in an explosion that killed fifteen workers and injured 180 others at its Texas City Refinery on March 23, 2005.<sup>51</sup> The company was prosecuted under the CAA for knowing violations that allowed for accidental releases that can result in death or serious injury.<sup>52</sup> The company pled guilty and was sentenced on March 12, 2009, to 36 months' probation and to pay a \$50 million fine.<sup>53</sup> Transocean was prosecuted under the CWA for its role in the Deepwater Horizon Disaster.<sup>54</sup> The company admitted that its employees, acting at the direction of BP's staff, were negligent in fully investigating the Macondo Well that subsequently blew

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<sup>48</sup> U.S. v. Overseas Shipholding Group, Inc., 625 F.3d 1, 4 (1st Cir. 2010).

<sup>49</sup> Ocean dumping is often prosecuted under the Act to Prevent Pollution from Ships, which implements provisions of The International Convention for the Prevention of Pollution from Ships ("MARPOL"). See 33 U.S.C. §§ 1901–1915.

<sup>50</sup> Overseas Shipholding, 7:06-CR-125-1F (EPA Summary of Criminal Prosecutions).

<sup>51</sup> U.S. CHEMICAL SAFETY BOARD, *CSB Releases New BP Texas City Animation* (Mar. 23, 2020), <https://www.csb.gov/csb-releases-new-bp-texas-city-animation/> [<https://perma.cc/W6LF-48UH>].

<sup>52</sup> BP Products North America, 4:07-CR-434 (S.D. Tex. 2009) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1933](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1933) [<https://perma.cc/B2DR-FS94>].

<sup>53</sup> *Id.* At the time this was the largest criminal penalty levied under the CAA. It has been surpassed by the \$2.8 billion penalty levied against Volkswagen AG for engaging in a criminal conspiracy to cheat emissions testing systems for its clean diesel vehicles marketed and sold in the United States. See Volkswagen AG, 16-CR-20394 (E.D. Mich. 2017) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=3009](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=3009) [<https://perma.cc/YT8M-4YUL>].

<sup>54</sup> Transocean owned the drilling rig that was leased by BP. Halliburton, the company providing the drilling for the operation, was also prosecuted for destroying evidence in the Deepwater prosecution and was sentenced on September 19, 2003, to pay a \$200,000 fine and serve 3 years' probation. See Halliburton Energy Services, Inc., 2:13-CR-00165-JTM-KWR (E.D. La. 2013) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2966](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2966) [<https://perma.cc/CEW6-UKKM>]. The company also agreed to a \$1.1 billion settlement to resolve claims by numerous individuals, businesses, and local governments. Clifford Krauss, *Halliburton to Pay \$1.1 Billion to Settle Damages in Gulf of Mexico Oil Spill*, N.Y. TIMES (Sept. 2, 2014), <https://www.nytimes.com/2014/09/03/business/energy-environment/halliburton-to-pay-1-1-billion-to-settle-damages-in-gulf-of-mexico-oil-spill.html> [<https://perma.cc/TF88-7L7J>].

out, caused an explosion, and resulted in the largest maritime oil spill in U.S. history.<sup>55</sup> The company pled guilty and was sentenced on February 14, 2003, to pay \$400 million in criminal penalties and serve 5 years' probation.<sup>56</sup> Duke Energy Progress and two other subsidiaries of the Duke Energy Corporation pled guilty to nine criminal violations of the CWA.<sup>57</sup> They agreed to pay \$68 million in criminal fines and spend \$34 million on environmental projects after an extensive coal ash spill from their Dan River Steam Station near Eden, North Carolina, poisoned the ecosystem in and around the Dan River after a containment pond failed.<sup>58</sup>

TABLE 2. LARGE MONETARY PENALTIES ASSESSED TO COMPANIES IN ENVIRONMENTAL CRIME PROSECUTIONS IN THE SOUTHERN UNITED STATES

<i>Year</i>	<i>Company</i>	<i>State</i>
1997	Refrigeration USA	FL
2007	Overseas Shipholding	NC
2009	BP Products North America	TX
2014	Transocean LTD	LA
2015	Duke Energy Progress	NC

*Source: EPA Summary of Criminal Prosecutions Database*

<sup>55</sup> Joan Meiners, *Ten Years Later, BP Oil Spill Continues to Harm Wildlife—Especially Dolphins*, NAT'L GEOGRAPHIC (Apr. 17, 2020), <https://www.nationalgeographic.com/animals/2020/04/how-is-wildlife-doing-now--ten-years-after-the-deepwater-horizon/> [<https://perma.cc/VCU6-R4B8>].

<sup>56</sup> EPA v. Transocean, No. 2:13-CR-00001-JTM-SS (E.D. La. 2014) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=3034](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=3034) [<https://perma.cc/8L2U-C8TX>].

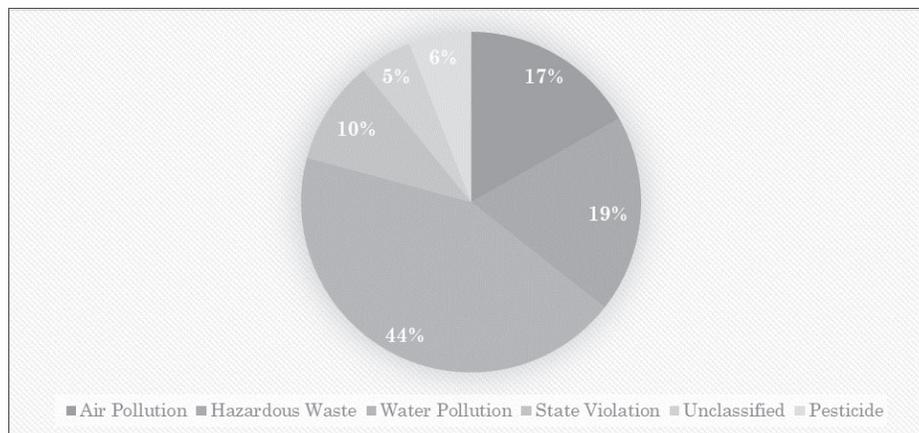
<sup>57</sup> EPA v. Duke Energy Progress, Inc., No. 5-CR-00062,67,68 (E.D.N.C. 2015) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2746&](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2746&) [<https://perma.cc/698V-SDQU>].

<sup>58</sup> EPA v. Duke Energy Progress, Inc., No. 5-CR-00062,67,68 (E.D.N.C. 2015) (EPA Summary of Criminal Prosecutions). Approximately 39,000 tons of coal ash spilled from one of the company's storage sites into the Dan River, resulting in one of the largest ongoing coal ash cleanup efforts in U.S. history. See Maya Miller & Maya Suzuki, *Duke Energy Settlement Results in the Country's Largest Coal Ash Cleanup*, CHRON. (Jan. 21, 2020), <https://www.dukechronicle.com/article/2020/01/duke-energy-settlement-country-largest-coal-ash-cleanup-north-carolina> [<https://perma.cc/D9WK-UJXJ>].

Total monetary penalties in these five prosecutions totaled about \$626 million. To place these penalties in context, we estimate all penalties to companies in the data to equal \$1.021 billion. These cases represent some 61% of all monetary penalties assessed to companies. If these cases in Table 2 are excluded, total monetary penalties assessed to all other companies in the data is reduced to approximately \$395 million—a significant, but substantially reduced sum.

We conclude the analysis with an attempt to draw out the broader themes across all prosecutions in our data. In Figure 5, we reanalyze all cases and make our best attempt to categorize each case by the primary offense that is at the heart of the investigation and subsequent prosecution in the case. This categorization was not always easy with the information provided in the case summaries, but we attempt to use our best judgment to identify the central crime in the case and code it as such in the Figure. The Figure naturally tracks the charging patterns we find in Table 1 and the big three areas of environmental offenses, including air pollution, water pollution, and hazardous waste offenses. Outside of our ability to categorize which of these is most prevalent across prosecutions, we are also able to discuss a number of cases to illustrate how prosecutions and investigators pursued particular charges within these broader categories. Altogether, we categorized 95% of cases within five categories, with 37 cases falling outside of these broader categories.

**Figure 5. Typology of Environmental Crime Prosecutions in the Southern United States**



*Source: EPA Summary of Criminal Prosecutions Database*

By far the most common type of environmental offense we uncover in our data relates to a series of water pollution crimes. In 350 prosecutions, or 44% of all prosecutions in our data, in our judgment the central crime focused on water pollution. These crimes were primarily focused on illegal discharges into public sewer systems, waterways, the ocean, or otherwise the navigable waters of the United States. Water pollution crimes also involved illegal dredging, filling, or altering wetlands or waterways without a permit or in violation of a permit. They also involved sampling and testing fraud at treatment plants and other facilities, as well as crimes related to drinking water.

Most water pollution crimes center on illegally discharging to the waters of the United States without a valid National Pollution Discharge Elimination System (“NPDES”) Permit, the primary vehicle EPA uses to regulate discharges from stationary sources into the waters of the United States.<sup>59</sup> Case examples include U.S. Coal, prosecuted in Tennessee for discharging mining waste without a NPDES permit that discharged to a tributary of the Straight Fork Creek in Scott County, Tennessee.<sup>60</sup> The company was charged with violating the CWA and was ordered on February 18, 1999, to pay a \$125 special assessment and federal fine of \$19,000.<sup>61</sup> Other violations of the CWA involve altering waterways or filling in wetlands without a permit.<sup>62</sup> Interstate General Corporation was prosecuted in this manner for illegally filling in wetlands to develop the Dorchester Neighborhood in St. Charles County, Maryland.<sup>63</sup> The company was charged with a knowing violation of the CWA and was sentenced on November 22, 1999, to pay a \$1.5 million fine, \$200 special assessment, and a \$360,000 civil fine from a related settlement.<sup>64</sup>

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<sup>59</sup> EPA, *National Pollution Discharge Elimination System (NPDES) Permit Basics* (Aug. 3, 2020), <https://www.epa.gov/npdes/npdes-permit-basics> [<https://perma.cc/DVQ7-FSTZ>].

<sup>60</sup> EPA v. U.S. Coal, Inc., No. 3:99CR00003-002 (E.D. Tenn. 1999) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=785](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=785) [<https://perma.cc/Q247-2UFJ>].

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

<sup>62</sup> Filling in wetlands or altering waterways through the use of dredge or fill materials requires a Section 404 Permit from the U.S. Army Corps of Engineers that it administers through the EPA via CWA permitting. Developers seeking to alter wetlands or waterways require a permit under the CWA and the Act has criminal provisions to punish unpermitted activities. See Clean Water Act 33 U.S.C. § 1319(c)(1)–(2); EPA, Permit Program under CWA Section 404 (Sept. 2, 2021), <https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404> [<https://perma.cc/L3SH-GM75>].

<sup>63</sup> EPA v. Interstate Gen. Corp., No. AW-95-0390 (D. Md. 2000) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1011](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1011) [<https://perma.cc/YH9K-CMMY>].

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

Delvin Erwin Dake falsified the bacteriological count in water samples from drinking water systems in five North Texas counties. He was prosecuted for making false statements and was sentenced on March 7, 2000, to 36 months' probation and a \$100 special assessment fee.<sup>65</sup> Falsifying discharge monitoring reports ("DMRs") required by a NPDES permit is another type of false statement crime under the CWA.<sup>66</sup> Gordon Thomas Tollison was prosecuted in Mississippi for submitting falsified DMRs. He was charged with 39 knowing violations of the CWA and was sentenced on February 9, 2006, to 12 months' incarceration, 12 months' probation, a \$400 special assessment fee, and a \$5,000 fine.<sup>67</sup> The Odebrecht-Metric company was prosecuted for dumping waste concrete and rebar from concrete pilings in the East Bay and Pensacola Bay during the construction of the Garcon Point Bridge between January 1997 and March 1999.<sup>68</sup> The company was prosecuted under the CWA and sentenced on November 28, 2000, to pay \$2,423,000 in restitution to the Garcon Point Restoration Trust, \$42,000 to the Florida Department of Environmental Protection ("F-DEP"), \$20,500 to the Florida Fish and Wildlife Commission, \$10,500 to F-DEP's Submerged Land Section, \$2,000 to the Okaloosa Sheriff's Office, and \$2,000 to the Fish and Wildlife Commission's Marine Patrol.<sup>69</sup>

Dumping oil and other waste into the ocean without a permit is regulated under the CWA.<sup>70</sup> George McKay was prosecuted during an investigation of the steam ship Juneau by the United States Coast Guard in Portland, Oregon, after the vessel returned from Singapore.<sup>71</sup> The vessel left the United States in late 1998 with 113,000 metric tons of wheat bound

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<sup>65</sup> EPA v. Delbert Irvin Dake, No. 4:99CR-257-A (N.D. Tex. 2000) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1073](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1073) [<https://perma.cc/XC5Q-YCY2>].

<sup>66</sup> Clean Water Act, 33 U.S.C. § 1319(c)(4).

<sup>67</sup> EPA v. Tollison, No. 3:04CR00158 (N.D. Miss. 2006) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1530](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1530) [<https://perma.cc/DL5Q-WS9G>].

<sup>68</sup> EHS Today Staff, *Construction Firm, Supervisors Sentenced for Waste Dumping*, EHS TODAY (Dec. 4, 2000), <https://www.ehstoday.com/archive/article/21908469/construction-firm-supervisors-sentenced-for-dumping-waste> [<https://perma.cc/5MLT-AWEY>].

<sup>69</sup> EPA v. Odebrecht-Metric, No. 3:00CR66-LAC (N.D. Fla. 2001) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1032](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1032) [<https://perma.cc/QTM5-QNB9>].

<sup>70</sup> Clean Water Act 33. U.S.C. § 1251(1)–(3).

<sup>71</sup> EPA v. McKay, No.04-20072CR-GOLD (S.D. Fla. 2005) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1760](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1760) [<https://perma.cc/69EU-9W3F>].

for Bangladesh as part of a USAID assistance package to the country.<sup>72</sup> The cargo was tainted with diesel fuel stored near the wheat in transit and the Bangladeshi government refused shipment.<sup>73</sup> The crew and captain George McKay, during the return voyage, hired a crew to illegally dispose of the wheat in the South China Sea.<sup>74</sup> Upon returning to port in the United States on March 5, 1999, a crew member informed the Coast Guard of the illegal activities.<sup>75</sup> The defendants were charged under MARPOL for making false statements, and for conspiracy.<sup>76</sup> McKay was sentenced to pay a \$100 special assessment and \$500 fine.<sup>77</sup> Co-defendant John Karayannides fled the country and remains at large.<sup>78</sup> Companies are required by law to keep an oil record book under the Act to Prevent Pollution from Ships (“APPS”).<sup>79</sup> Irika Shipping, S.A. was charged with falsification of records when an investigation by the U.S. Coast Guard showed falsified records in the oil record book.<sup>80</sup> Crew members of the M/V Iorana told investigators in December 2009, they had been ordered to dump bilge water overboard and bypass the ship’s oily water separator (“OWS”).<sup>81</sup> The company pled guilty to the charges and was sentenced on July 20, 2010, to pay a \$375,000 fine and restitution totaling \$125,000.<sup>82</sup>

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

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

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

<sup>75</sup> *Id.*

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

<sup>77</sup> *McKay*, No.04-20072CR-GOLD (EPA Summary of Criminal Prosecutions).

<sup>78</sup> *Id.*; EPA, EPA Fugitives (July 20, 2021), <https://www.epa.gov/enforcement/epa-fugitives#karayannides> [<https://perma.cc/H4SX-TUKR>]. John Karayannides is believed to have fled to Greece and is currently on the EPA’s Fugitive [i.e., Most Wanted] List.

<sup>79</sup> 33 C.F.R. § 151.25 (2021).

<sup>80</sup> *EPA v. Irika Shipping, S.A.*, No. 10-185, SECT.S MAG.1 (E.D. La. 2010) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2042](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2042) [<https://perma.cc/84B5-BKNX>].

<sup>81</sup> MARPOL limits the amount of oil in bilge water that can be dumped into the ocean on a daily basis. Ships produce such water continuously. An OWS limits the oil from the bilge, and ships are required to have a monitoring system. Anish Wankhede, *Oily Water Separator: Construction and Working*, MARINE INSIGHT (Aug. 27, 2021), <https://www.marineinsight.com/tech/ows/oily-water-separator-construction-and-working/> [<https://perma.cc/T8DG-274Y>].

<sup>82</sup> Prosecuting companies like Irika for dumping oily waste into the ocean often comes from false records (e.g., not keeping a proper oil record book) or using a bypass system, often referred to colloquially as a magic pipe, to circumvent the discharge monitoring system. DSD Shipping, a Norwegian company, was prosecuted for obstruction, conspiracy, witness tampering, and violations of APPS. The company operated the M/T Stavanger Blossom, a 56,000-gross-ton oil tanker without an operable OWS for 57 months after an internal corporate memo warned the system was dysfunctional and the company could be prosecuted for polluting. The company lied to investigators about the illegal activities

Hazardous waste crimes make up the second most common category of prosecutions in our data. We estimate that 151 cases, or 19% of prosecutions, are focused on hazardous waste crimes. These are typically arranged around one or more violations of illegal storage, transport, or disposal of hazardous waste under RCRA.<sup>83</sup> Other violations include transporting hazardous materials without a manifest, failure to notify of the release of a hazardous substance, testing fraud, and false statements or reporting.<sup>84</sup>

RTF Industries was prosecuted for illegally storing bulk materials for pyrotechnic and incendiary devices.<sup>85</sup> The company was charged with knowingly transporting hazardous waste without a manifest under RCRA and was sentenced on July 15, 2003, to 12 months' probation and a \$100,000 fine.<sup>86</sup> American Ecology Recycle Center was prosecuted in Tennessee for illegally storing hazardous waste.<sup>87</sup> A fire broke out in the facility in July 1994 and the company entered a consent decree with the EPA to cleanup some 29,000 gallons of residue waste.<sup>88</sup> Investigators executing a search warrant found some 15,232 pounds of hazardous waste illegally stored on site.<sup>89</sup> The company was charged with illegally treating, storing, or disposing of hazardous waste without a permit in violation of RCRA and was sentenced on August 8, 2002, to pay a \$10,000 federal fine and a \$400 special assessment.<sup>90</sup> Donald Wade Floyd was prosecuted in Georgia for abandoning six 55-gallon drums in a subdivision under development.<sup>91</sup> He was charged with violating RCRA and sentenced

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and falsified their oil record book. The company was sentenced on April 11, 2016, to pay a \$2.5 million criminal penalty, 36 months' probation, and was ordered to implement an environmental compliance plan. Irika Shipping, No. 10-185, SECT.S MAG.1 (EPA Summary of Criminal Prosecutions); DSD Shipping, No. 15-CR-00102 (S.D. Ala. 2016) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2862](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2862) [<https://perma.cc/R27S-T3PG>].

<sup>83</sup> 40 C.F.R. §§ 263.10, 264.1 (2020).

<sup>84</sup> *Id.* §§ 263.20, 263.22, 263.30, 264.33, 264.73.

<sup>85</sup> RTF Indus., Inc., No. 201-CR-16 (E.D. Tex. 2003) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1357](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1357) [<https://perma.cc/4ZZM-2RVU>].

<sup>86</sup> *Id.*

<sup>87</sup> Am. Ecology Recycle Ctr., No. 02-CR-152-001 (E.D. Tenn. 2004) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1331](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1331) [<https://perma.cc/NZ78-K9PF>].

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*

<sup>90</sup> *Id.*

<sup>91</sup> Donald Wade Floyd, No. 08-CR-76 (N.D. Ga. 2008) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&)

on May 21, 2008, to 12 months' probation and \$4,775 restitution.<sup>92</sup> Robert Clements, Inc. was prosecuted under CERCLA for failure to notify officials of the release of a hazardous substance for a facility in Alexandria, Virginia.<sup>93</sup> On April 26, 1985, the company was sentenced to pay a \$4,000 fine.<sup>94</sup> Norman Smith was prosecuted for submitting fraudulent invoices to F-DEP for laboratory tests that were never performed bearing the name Environmental Testing Laboratory of Chicopee, Massachusetts, which had not authorized the use of its name.<sup>95</sup> The lab tests were related to the cleanup of a hazardous waste site.<sup>96</sup> Smith was charged with mail fraud and sentenced on July 21, 1986, to 48 months' probation, a \$1,000 fine, and restitution totaling \$5,420.<sup>97</sup>

Air pollution crimes represent 17% of the cases in our dataset. In 132 prosecutions, we found the central crime to revolve mostly around violations of the CAA and to a much lesser extent failure to notify under CERCLA. The majority of CAA prosecutions centered on asbestos-related crimes, such as illegal removal, disposal, failure to notify of asbestos removal, issuing false certifications or training certificates for asbestos removal, or the unpermitted demolishing of buildings containing asbestos. Asbestos is regulated as a hazardous air pollutant ("HAP") under asbestos National Emission Standards for Hazardous Air Pollutants ("NESHAP") standards.<sup>98</sup> Releasing asbestos into the ambient air is regulated under the CAA.<sup>99</sup> The ubiquitous nature of asbestos as a building material for ceiling tiles, floor tiles, acoustic ceilings, pipe insulation, and other insulating applications meant the market for removal was large and the opportunities to save money through illegal removal and remediation were

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prosecution\_summary\_id=1808 [https://perma.cc/V72U-H4KQ].

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

<sup>93</sup> Robert Clements, Inc., No. 85-00069 (E.D. Va. 1985) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=146](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=146) [https://perma.cc/MZ7F-9E3H].

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

<sup>95</sup> Norman F. Smith, No. 85-00092 (M.D. Fla. 1986) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=185](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=185) [https://perma.cc/W9X3-XNAM].

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

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

<sup>98</sup> Hazardous air emissions not regulated under the NAAQS can be regulated as HAPs under NESHAP standards via the CAA. *Overview of the Asbestos National Emission Standards for Hazardous Air Pollutants ("NESHAP")*, EPA (Dec. 30, 2020), <https://www.epa.gov/asbestos/overview-asbestos-national-emission-standards-hazardous-air-pollutants-neshap> [https://perma.cc/FQ6B-EXTJ]. *See also Hazardous Air Pollutants*, EPA (Aug. 4, 2021), <https://www.epa.gov/haps> [https://perma.cc/42TS-UJVB].

<sup>99</sup> 40 C.F.R. § 61.144 (2020).

also high.<sup>100</sup> Unlike other air pollution crimes involving air emissions from large stationary sources of pollution, which were also prosecuted in this category, asbestos leaves behind physical evidence for prosecution, likely explaining the large number of asbestos prosecutions in our dataset.<sup>101</sup> We also find prosecutions focusing on the smuggling, selling, or usage of CFC-12 or other ozone depleting substances (“ODS”) regulated under the CAA, conspiracies to cheat vehicle emissions guidelines for non-attainment areas known as clean scanning, tampering with pollution controls or monitoring devices at stationary sources of pollution, and earlier violations in the 1980s which focused on circumventing EPA emissions standards for passenger vehicles.<sup>102</sup>

Guy Hylton purchased an oil railroad depot used by Elk City, Oklahoma. In 2003, for some five months, inmates in a local work program removed asbestos from the facility without proper equipment or protection.<sup>103</sup> Hylton, the city manager of Elk City, and Chick Little, the city building superintendent, were charged with negligent endangerment under the CAA and sentenced on January 10, 2008, to 6 months’ incarceration and a \$15,000 fine (Hylton) and 8 months’ incarceration with 2 years’ supervised release (Little).<sup>104</sup>

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<sup>100</sup> Asbestos was an almost ubiquitous building material for its insulating and other properties. Studies began linking asbestos exposure to mesothelioma and lung disease in the 1950s. The CAA of 1970 allowed the EPA to regulate asbestos as a HAP and the EPA issued a phaseout in the late 1980s, which was subsequently amended through court action to allow for more limited use in various applications. Asbestos is currently partially banned by EPA action, but severely limited in residential and consumer applications due to EPA rules, extensive product liability, and other litigation. The EPA issued a final rule in April 2019 amending their earlier partial ban. *EPA Actions to Protect the Public from Exposure to Asbestos*, EPA (Dec. 30, 2020), <https://www.epa.gov/asbestos/epa-actions-protect-public-exposure-asbestos> [<https://perma.cc/LN2N-C4A3>]; see *Asbestos Timeline*, MESOTHELIOMA HELP CANCER ORG., <https://www.mesotheliomahelp.org/asbestos/history/> [<https://perma.cc/URR5-7HXP>] (last visited Oct. 14, 2021).

<sup>101</sup> See generally *Com. Union Ins. Co. v. Sepco Corp.*, 765 F.2d 1543, 1546 (11th Cir. 1985) (holding that exposure theory is more accurately analyzed as positing that every asbestos-related injury results from inhalation of asbestos fibers).

<sup>102</sup> *Ozone-Depleting Substances*, EPA (June 14, 2021), <https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances> [<https://perma.cc/ET6C-TCV5>].

<sup>103</sup> *Elk City, Oklahoma, City Manager and Elk City Supervisor Convicted—Will Serve Their Sentences at the Federal Prison Camp in Big Spring, Texas*, REG’L ASS’NS INFO. NETWORK (Feb. 2, 2009), <https://regionalassociations.org/elk-city-oklahoma-city-manager-and-elk-city-supervisor-convicted-will-serve-their-sentences-at-the-federal-prison-camp-in-big-spring-texas/> [<https://perma.cc/7NY2-FC5U>].

<sup>104</sup> *Guy Hylton*, No. 06-CR-00299 (W.D. Okla. 2008) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2970](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2970) [<https://perma.cc/B2UK-96M2>].

Robert Langill was employed by an asbestos abatement company to remove asbestos containing material from several buildings for the U.S. Navy at the U.S. Naval Station, Patuxent River, Maryland.<sup>105</sup> Langill did not inform the Maryland Department of Environment of the removal and ordered workers to smash panels containing asbestos with hammers.<sup>106</sup> The material was left in improperly sealed bags overnight at the facility.<sup>107</sup> Langill was charged with a knowing violation of the CAA and was sentenced on January 10, 2008, to 60 days' incarceration, 24 months' supervised release, including a 10-month period of home detention, and a \$100 special assessment fee.<sup>108</sup>

Heraeus Metal Processing operated a precious metals refinery in Wartburg, Tennessee. The company was required to keep logs of the performance of pollution control devices pursuant to their CAA air permit, required for operation.<sup>109</sup> Brent Anderson, who was employed by the company and responsible for these reports, created false logs from October 2004 to February 2005 that were submitted to the Tennessee Department of Environmental Conservation ("TDEC").<sup>110</sup> The company and Anderson were charged with making false statements under the CAA.<sup>111</sup> The company was sentenced on January 21, 2009, to 18 months' probation, a \$400 special assessment fee, and a \$350,000 federal fine.<sup>112</sup> On April 15, 2009, Anderson was sentenced to 12 months' probation and 50 hours of community service.<sup>113</sup>

Honeywell International was prosecuted in Louisiana for mislabeling a cylinder containing antimony pentachloride.<sup>114</sup> When a worker

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<sup>105</sup> Robert Langill, No. 07-CR-0425 (D. Md. 2008) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1803](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1803) [<https://perma.cc/DRC3-9VXB>].

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

<sup>107</sup> *Environmental Supervisor Sentenced for Violations at Patuxent River Naval Air Station*, DEP'T OF JUST. (Jan. 10, 2008), [https://www.justice.gov/archive/opa/pr/2008/January/08\\_enrd\\_017.html](https://www.justice.gov/archive/opa/pr/2008/January/08_enrd_017.html) [<https://perma.cc/79VX-XYPQ>].

<sup>108</sup> Langill, No. 07-CR-0425 (EPA Summary of Criminal Prosecutions).

<sup>109</sup> *Environmental Crimes Monthly Bulletin*, DEP'T OF JUST. (Feb. 2009), [https://www.justice.gov/sites/default/files/enrd/legacy/2015/04/13/LPS-190682-v1-ECS\\_Bulletin\\_2009\\_01\\_02\\_Block.PDF](https://www.justice.gov/sites/default/files/enrd/legacy/2015/04/13/LPS-190682-v1-ECS_Bulletin_2009_01_02_Block.PDF) [<https://perma.cc/C6QR-KV8T>].

<sup>110</sup> Brent Anderson, No. 08-CR-158, 1866 (E.D. Tenn. 2009) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1866](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1866) [<https://perma.cc/8A6X-TJEM>].

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

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

<sup>114</sup> *Honeywell Sentenced for Fatal Toxic, La. Incident*, REUTERS (Sept. 13, 2007, 6:32 PM),

opened the cylinder on July 29, 2003, it released 1,800 pounds of the material that fell on the worker, who died the following day of his injuries.<sup>115</sup> The company was charged with negligently releasing the material into the ambient air under the CAA and on September 13, 2007, the company pled guilty and was sentenced to pay \$12 million in fines, restitution, and other payments.<sup>116</sup>

A citizen's complaint that Amitech USA's plant was emitting styrene into the community of Zachary, Louisiana, prompted an investigation by EPA-CID and other agencies.<sup>117</sup> The inspections revealed the company was operating without emissions control measures since beginning operations in 2002.<sup>118</sup> Amitech was charged with making false statements under the CAA.<sup>119</sup> William McCann, the plant manager, was charged with making a negligent release under the CAA.<sup>120</sup> On May 17, 2007, the company pled guilty and was sentenced to 24 months' probation, a \$400 special assessment fee, and to pay \$1,070,000 in federal fines and \$100,000 in restitution.<sup>121</sup> McCann pled guilty on December 6, 2007, and was sentenced to 60 months' probation, a \$25 special assessment fee, and \$25,000 in restitution.<sup>122</sup>

Carlos Alberto Garcia was prosecuted for receiving, purchasing, and distributing some 13,600 kilograms of HCFC-22.<sup>123</sup> He was charged with three counts of smuggling and sentenced on June 26, 2012, to 17 months' incarceration, 20 months' supervised release, and 4 months' home confinement.<sup>124</sup> Michel Jule Felnard generated fake emissions

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<https://www.reuters.com/article/us-honeywell-sentenced-toxic/honeywell-sentenced-for-fatal-toxic-la-incident-idUSWEN097220070913> [<https://perma.cc/ZDW9-EXZB>].

<sup>115</sup> Honeywell International, 7-31-FJP-SCR (M.D. La. 2007) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1181](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1181) [<https://perma.cc/8ZFQ-X2VW>].

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

<sup>117</sup> Amitech, USA, LLC, 06-96-RET-SCR (M.D. La. 2008) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1130](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1130) [<https://perma.cc/86AD-D4MV>].

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

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

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

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

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

<sup>123</sup> *US Refrigerant Smuggler Sentenced to 13 Months*, ACR NEWS (June 29, 2012), <https://www.acr-news.com/us-refrigerant-smuggler-sentenced-to-13-months> [<https://perma.cc/82A6-LBSS>].

<sup>124</sup> Carlos Alberto Garcia, 11-20653-CR-ALTONAGA.SIMO (S.D. Fla. 2012) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2309](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2309) [<https://perma.cc/5UMW-ATAX>].

certificates submitted to the North Carolina Department of Motor Vehicles.<sup>125</sup> The defendant owned Charlotte Auto Source and clean scanned some sixty vehicles to pass emissions tests that would not otherwise have passed.<sup>126</sup> The defendant was charged for submitting the false documents and sentenced on December 10, 2013, to 10 months' incarceration and a \$1,000 federal fine.<sup>127</sup> During the lead phase-down required under the CAA, George Timothy Mercier, the head of Gulf States Oil and Refining Company's fuel blending operation, understated the amount of lead in fuel in their quarterly reports.<sup>128</sup> The defendant and Timothy Scott McCleod, a company chemist, were charged with conspiracy and false statements.<sup>129</sup> On October 28, 1986, McCleod was sentenced to 12 months' probation and a \$6,000 fine.<sup>130</sup> On July 21, 1987, Mercier was fined \$15,000 and sentenced to 35 days' incarceration on each of five counts to run concurrently.<sup>131</sup>

Dennis Ray Alston was prosecuted for deceiving the EPA into granting a five-year-old exemption for nonconforming vehicles imported from Germany under the CAA.<sup>132</sup> Alston and his co-defendants were charged with conspiracy, importing goods into the country by means of false statements, smuggling, and giving false statements to government officials.<sup>133</sup> On December 1, 1986, Alston was sentenced to 6 months' probation, a \$24,000 fine, and restitution in the amount of \$3,800.<sup>134</sup>

In 77 prosecutions, approximately 10% of our data, the violation of a state-level environmental statute was the central crime in the case. Given these prosecutions result from EPA-CID investigations, this suggests that at least 10% of prosecutions involve federal-state cooperation in our data—although that number is probably much higher (i.e., it is hard to know from the case summaries if cooperation took place in most cases

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<sup>125</sup> Michel Jule Fernald, 3:12-CR-90-RJC (W.D.N.C. 2014) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2530](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2530) [<https://perma.cc/GX4D-FE9V>].

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

<sup>127</sup> *Id.*

<sup>128</sup> George Timothy Mercier, 86-00111 (S.D. Tex. 1987) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=241](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=241) [<https://perma.cc/665W-BGR9>].

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

<sup>130</sup> *Id.*

<sup>131</sup> *Id.*

<sup>132</sup> Dennis Ray Alston, 85-236 (S.D. Tex. 1987) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=235](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=235) [<https://perma.cc/4AEB-9XVK>].

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

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

unless it is stated as such in the summary). These crimes range widely across air, water, and hazardous waste pollution, as well as other crimes.

Brisa Moore was prosecuted for environmental crimes and crimes related to the production of methamphetamines in Putnam County, West Virginia.<sup>135</sup> Investigators from a state drug task force requested EPA-CID involvement when finding a chemical dump related to the drug operation.<sup>136</sup> Moore was charged with violating state environmental regulations and was sentenced on June 7, 2004, to 4 months' incarceration, 36 months' probation, and \$844 in restitution.<sup>137</sup> Michael Maver Gallaher discharged wastes into state waters and was prosecuted for state environmental violations.<sup>138</sup> He was sentenced on May 14, 2007, to 60 months' incarceration (suspended), \$10,000 in state fines and \$40,000 in restitution.<sup>139</sup>

Nathan Redwine was prosecuted for filing false public documents to a Louisiana state agency.<sup>140</sup> He misrepresented himself as an engineer and signed off on applications for three Title V air permits.<sup>141</sup> The Louisiana Department of Environmental Quality ("DEQ") and EPA-CID engaged in a joint investigation that led to Redwine being charged for making false statements under state environmental laws.<sup>142</sup> He was sentenced on September 7, 2010, to 36 months' incarceration, 60 months' probation, and a \$3,000 fine.<sup>143</sup>

Cecil Lamar Person was prosecuted under a joint operation, "Operation Jubilee," to address widespread illegal landfills and dumpsites near New Orleans East and the Ninth Ward neighborhoods.<sup>144</sup> Person was

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<sup>135</sup> Brisa N. Moore, 04-F-16 (W. Va. 2004) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1330](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1330) [<https://perma.cc/7D5X-NZZ9>].

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

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

<sup>138</sup> Michael Maver Gallaher (Va. 2007) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1214](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1214) [<https://perma.cc/QD7V-MB2Q>].

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

<sup>140</sup> Nathan C. Redwine, 8-09-0834 (La. 2010) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2056](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2056) [<https://perma.cc/YH9A-U2RF>].

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

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

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

<sup>144</sup> Cecil Lamar Person, 508-592 (La. 2012) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2238](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2238) [<https://perma.cc/CE4C-C2FJ>].

charged with criminal damage to property and willful disposal of a substance and was sentenced on November 8, 2011, to 12 months' incarceration, 24 months' probation, a \$500 state fine, \$1,000 to the Louisiana DEQ, and to remove 100 loads of solid waste from a dump site.<sup>145</sup>

A college football fan feud landed Harvey Updyke, Jr. in trouble. After the 2011 Iron Bowl Game, Updyke poisoned oak trees on the Auburn University campus in retribution for previous acts committed against University of Alabama fans.<sup>146</sup> He was charged under state environmental statutes and sentenced on March 22, 2013, to 36 months' incarceration and a \$1,000 state fine.<sup>147</sup> The Columbia Packing Company was prosecuted in Texas when aerial photographs revealed blood discharging from the pork packing company.<sup>148</sup> The company was charged under state environmental statutes for illegal discharge and was sentenced on May 6, 2014, to pay a \$100,000 criminal fine.<sup>149</sup>

We catalog 49 prosecutions, or 6% of cases, as pesticide crimes. The smallest category in our analysis, pesticide crimes tend to involve violations of FIFRA for off-label use of registered pesticides, or violations of the MBTA that occur as the result of migratory birds consuming illegally applied pesticides.<sup>150</sup> Oscar Miller was prosecuted for illegally selling methyl parathion as a roach spray to a variety of customers.<sup>151</sup> The pesticide is toxic to humans when used indoors.<sup>152</sup> He was charged with illegal distribution of a registered pesticide under FIFRA and on March 17, 1999, was sentenced to 13 months' incarceration, 60 months' probation, \$61,000 in restitution to the EPA on behalf of the Superfund, and \$1,500 restitution

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

<sup>146</sup> Updyke poisoned the Toomer's Corner Oaks Trees on the Auburn campus. He plotted to kill the 80-year-old trees and then bragged about it on a radio show. Scooby Axson, *Alabama Fan Explains Why He Poisoned Auburn Oak Trees*, SPORTS ILLUSTRATED (Mar. 7, 2019), <https://www.si.com/college/2019/03/07/auburn-harvey-updyke-toomers-corner-oak-trees> [<https://perma.cc/GT93-DTTL>].

<sup>147</sup> Harvey Almon Updyke, Jr., CC 11 492 (Ala. 2013) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2423](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2423) [<https://perma.cc/2YBR-U8BM>].

<sup>148</sup> Columbia Packing Company, F-120104546474849505758 (Tex. 2014) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2931](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2931) [<https://perma.cc/BF45-CP9G>].

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

<sup>150</sup> See Migratory Bird Treaty Act, 16 U.S.C. § 703 (2018).

<sup>151</sup> Oscar Miller, 98-159 (E.D. La. 1999) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=831](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=831) [<https://perma.cc/CLJ2-QBWS>].

<sup>152</sup> See EPA, *Parathion*, <https://www.epa.gov/sites/default/files/2016-09/documents/parathion.pdf> [<https://perma.cc/82BK-Q6J3>] (last visited Oct. 14, 2021).

to a victim.<sup>153</sup> Alfred Carrol Smith was prosecuted for using carbofuran in a manner inconsistent with its labeling by placing it in deer carcasses to kill animals on his property.<sup>154</sup> He was charged under the MBTA and FIFRA.<sup>155</sup> On February 5, 2004, he was ordered to pay a \$500 fine.<sup>156</sup> Marman USA, Inc. was prosecuted for forging EPA seals on certificates of registration for pesticides they sold abroad.<sup>157</sup> They forged seals to export pesticides to sixteen Central and South American countries.<sup>158</sup> The company was prosecuted for forging the seal of a department or agency of the United States and was sentenced on July 10, 1996, to 24 months' probation and a \$350,000 fine.<sup>159</sup>

The remaining 5% of prosecutions, or 40 cases in our data, are defly placed in the above categories. In most cases either it was too difficult to discern the primary crime in the case to place it in one of these categories, the primary crime was non-environmental in nature (e.g., manufacturing or selling narcotics) and the environmental crime was secondary, or EPA-CID played a role in the investigation, but defendants were not charged with an environmental crime that would place them in one of the above categories.

Manufacturing methamphetamines was a common crime in this category. EPA-CID was called in typically to investigate because of the illegal disposal of chemical wastes associated with operating a methamphetamine lab. One example was the prosecution of Larry Evans. Evans was prosecuted in West Virginia for running multiple methamphetamine production labs and storing hazardous chemicals in public storage buildings.<sup>160</sup> He was charged with RCRA for illegal storage of hazardous wastes and the Drug Abuse Prevention and Control Act for the manufacturing of the controlled substances.<sup>161</sup> On December 30, 2002, the defendant was sentenced

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<sup>153</sup> Miller, *supra* note 151.

<sup>154</sup> Alfred Carrol Smith, 5:03-CR-155-JBT (E.D. Ky. 2004) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1341](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1341) [<https://perma.cc/Z3E3-FNG5>].

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

<sup>156</sup> *Id.*

<sup>157</sup> Marman USA (M.D. Fla.) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=644](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=644) [<https://perma.cc/9EMJ-8EMP>].

<sup>158</sup> *Id.*

<sup>159</sup> *Id.*

<sup>160</sup> Larry Evans, 2:02-00171-01 (S.D. W. Va.) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1562](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1562) [<https://perma.cc/3Y8V-V9QC>].

<sup>161</sup> *Id.*; see Drug Abuse and Control Act, 21 U.S.C. § 841(a) (2018) (“[I]t shall be unlawful

to 135 months' incarceration, 36 months' probation, and a \$200 special assessment fee.<sup>162</sup> Francisco Corrales was prosecuted under the MBTA for illegally smuggling birds into the United States with intent to sell.<sup>163</sup> On February 16, 2006, he was sentenced to 36 months' incarceration, a \$100 special assessment, \$1,165 in restitution, and a \$2,000 federal fine.<sup>164</sup>

Another series of crimes prosecuted under the CAA was the fraudulent production of biodiesel in order to claim tax credits, generate renewable identification numbers ("RINs") to sell to other producers, or a combination of these crimes.<sup>165</sup> Philip Joseph Rivkin was sentenced to 121 months' incarceration, 3 years' supervised release, \$87 million in restitution, and to forfeit \$51 million in assets due to this type of fraud.<sup>166</sup> Rivkin pled guilty to mail fraud and making false statements under the CAA.<sup>167</sup> He created fake companies and generated 60 million RINs that were sold to companies.<sup>168</sup>

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for any person knowingly or intentionally . . . to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense a controlled substance . . .").

<sup>162</sup> Larry Evans, 2:02-00171-01 (EPA Summary of Criminal Prosecutions).

<sup>163</sup> Francisco Corrales, 05-20675-CR-COOKE (S.D. Fla. 2006) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1529](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1529) [<https://perma.cc/N66N-8TGA>].

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

<sup>165</sup> The Energy Independence and Security Act encourages fuel producers to generate biofuel. Those that generated biodiesel and other renewable fuels could then sell the RINs on the open market to producers that failed to produce renewable fuels. *See generally* Energy Independence and Security Act, 42 U.S.C. § 17022 (2018).

<sup>166</sup> Philip Joseph Rivkin, H 14-603M/H14-250 (S.D. Tex. 2016) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2858](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2858) [<https://perma.cc/JVT5-X9TU>]; *see also Houston Man Sentenced to More Than 10 Years in Prison for Biodiesel Fraud Scheme*, CHRON. (Mar. 7, 2016), <https://www.chron.com/neighborhood/fortbend/news/article/Houston-man-sentenced-to-more-than-10-years-in-9704967.php> [<https://perma.cc/TBE5-DTBX>].

<sup>167</sup> Rivkin, H 14-603M/H14-250 (EPA Summary of Criminal Prosecutions).

<sup>168</sup> *Id.* *See also* Yousef Ishaq Abuteir, H-07-279 (S.D. Tex.) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2867](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2867) [<https://perma.cc/Y6P3-RXL8>]; Thomas Anthony Davanzo, 2:15-CR-00141-UA-MRM (M.D. Fla.) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2888](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2888) [<https://perma.cc/4YES-GBYE>]; Andre Mark Bernard, 2:17-CR-61-FTM-38 MRM (M.D. Fla.) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=3063](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=3063) [<https://perma.cc/GWE6-DUS7>]; Rodney Rashawn Hailey, 1:11-CR-00540-WDQ (D. Md. 2013) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2465](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2465) [<https://perma.cc/JNE9-9PP7>]; Jeffrey David Gunselman, 5:12-CR-00078-C-BG (N.D. Tex. 2013) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index](https://cfpub.epa.gov/compliance/criminal_prosecution/index)

Another common unclassified crime was to fail to notify tenants of lead-based paint when renting or buying a home.<sup>169</sup> David Dieu Nguyen was prosecuted for failing to notify tenants of lead-based paint hazards.<sup>170</sup> He made false statements to officials to conceal this fact.<sup>171</sup> He was charged with 14 counts of making false statements, one count of obstruction of proceedings, and one violation under TSCA for failing to notify tenants of lead-based paint hazards.<sup>172</sup> On March 13, 2002, the defendant was sentenced to 24 months' incarceration, 36 months' probation, and was ordered to pay a \$50,000 federal fine.<sup>173</sup>

## CONCLUSION

Our analysis of environmental crime prosecutions in the Southern United States has yielded a few important findings. The first is that prosecutions can be distilled down to a few themes within the prosecution of water pollution, air pollution, and hazardous waste crimes. Roughly 44% of prosecutions focus on water pollution, meaning almost one in two prosecutions over such an extensive amount of time and space are focused on punishing water pollution violations, mostly under the CWA. At 17% of all prosecutions, air pollution prosecutions are much less common than water pollution prosecutions and most focus on asbestos-related crimes. Hazardous waste prosecutions focus on illegal storage, transport, and disposal crimes, typically prosecuted under RCRA. Eight out of ten prosecutions in our data centered on one of these three areas.

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.cfm?action=3&prosecution\_summary\_id=2444 [https://perma.cc/2Y EJ-DEL2] (examplifying other prosecutions related to biofuel production fraud).

<sup>169</sup> The U.S. Department of Housing and Urban Development requires a lead paint disclosure for homes or apartments built prior to 1978. Lead paint is particularly dangerous to children when it flakes off the walls in older homes and they ingest the paint chips. Lead-based paint is regulated under the TSCA. See U.S. DEP'T. HOUS. AND URB. DEV., *Disclosure of Information on Lead-Based Paint and/or Lead-Based Paint Hazards*, [https://www.hud.gov/sites/documents/DOC\\_12345.PDF](https://www.hud.gov/sites/documents/DOC_12345.PDF) [https://perma.cc/XPF4-JTVJ] (last visited Oct. 14, 2021); CDC, *Childhood Lead Poisoning Prevention*, <https://www.cdc.gov/nceh/lead/prevention/children.htm> [https://perma.cc/DA6K-9D5A] (last visited Oct. 14, 2021); EPA, *Lead Regulations*, <https://www.epa.gov/lead/lead-regulations> [https://perma.cc/UJ2Q-TAKJ] (last visited Oct. 14, 2021).

<sup>170</sup> David Dieu Nuyen, DKC-01-0134; DKC-2001-0370; 01-0248 (D. Md.) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=1019](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1019) [https://perma.cc/VZ32-5ZAV].

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

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

<sup>173</sup> *Id.*

A second important finding from our analysis is the distribution of cases involving companies and corporations. When defendants were charged with water pollution crimes, typically under the CWA or APPS, we find that of the 350 cases, 190 cases, or 54% of prosecutions, involved at least one company as a named defendant in the case. For air pollution crimes, 46 cases, or 35% of prosecutions, involved at least one company as a named defendant in the case. For hazardous waste prosecutions, 63 cases, or 42% of cases, involved at least one company as a named defendant. State-level violations were much lower, with about 21% of cases involving at least one company as a named defendant. Water pollution cases have a much higher rate of prosecuting companies for environmental crimes than other categories in our analysis.

We find that while aggregate penalties were high across all cases, monetary penalties levied against companies at sentencing were skewed towards a handful of cases. The same pattern holds for monetary penalties levied against individuals.<sup>174</sup> Both corporate and individual probation, as well as incarceration penalties were less skewed than monetary penalties

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<sup>174</sup> For example, the previous biofuel fraud cases mentioned against Rodney Rashawn Hailey, Jeffrey David Gunselman, and Philip Joseph Rivkin result in some \$245 million in monetary penalties out of a grand total of \$410 million. These three cases alone account for about 60% of all monetary penalties levied against individual defendants at sentencing. See Rodney Rashawn Hailey, 1:11-CR-00540-WDQ (D. Md. 2013) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2465](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2465) [<https://perma.cc/JNE9-9PP7>]; Jeffrey David Gunselman, 5:12-CR-00078-C-BG (N.D. Tex. 2013) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2444](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2444) [<https://perma.cc/2YEJ-DEL2>]; Philip Joseph Rivkin, H 14-603M/H14-250 (S.D. Tex. 2016) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=2858](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2858) [<https://perma.cc/JVT5-X9TU>]. Charles Ferris Callihan and four co-defendants were prosecuted for their role in a criminal conspiracy as part of Explo Systems, Inc., who lied to the military and did not properly decommission explosives when storing them in Camp Minden, Louisiana. A storage bunker exploded as a result, shattering windows in a four-mile radius, destroying the building, derailed 11 rail cars, and caused an evacuation in the town of Doyline, Louisiana. The defendants were assessed over \$35 million in restitution at sentencing. Adding this total to these other three prosecutions represents over 68 % of all monetary penalties levied against individual defendants. See Charles Ferris Callihan, 16-CR-00214-06 (W.D. La. 2018) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=3108](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=3108) [<https://perma.cc/4JK4-YA6J>]. See also *Former Explo Officials Sentenced, Ordered to Pay Restitution*, SHREVEPORTTIMES (Nov. 29, 2018, 4:19 PM), <https://www.shreveporttimes.com/story/news/2018/11/29/former-explo-officials-sentenced-ordered-pay-restitution/2155260002/> [<https://perma.cc/CDS3-YUZS>].

and more evenly distributed in the data. Community service was skewed towards a few larger cases.<sup>175</sup> Prosecutions are also skewed towards a few states including Texas (15% of all prosecutions), Louisiana (15% of all prosecutions), and Florida (14% of all prosecutions).

In order to improve the investigation and prosecution of environmental crimes in the United States, we suggest the following changes. The first is the need to engage the public in community policing activities. Engaging environmental justice communities near stationary sources of pollution is a great place to begin this process. These communities bear the brunt of the environmental burden in the United States and EPA-CID engaged only in few prosecutions of large stationary sources of pollution, particularly for CAA violations in our data. Enjoining these individuals to report violations and police facilities would help include them in the regulatory process and pay dividends.<sup>176</sup> The EPA's Office of Environmental Justice ("OEJ") could provide targeted small grants to help with this process.<sup>177</sup>

The second suggestion we offer to improve criminal enforcement outcomes is to enhance resources. Currently, EPA-CID has less than 150 special agents to police the entire country. DOJ-ECS has some 43 prosecutors and a dozen support staff.<sup>178</sup> Without additional resources for policing

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<sup>175</sup> The prosecution of Dal-Tile resulted some 8,000 of community service assessed to defendants. Dal-Tile, 3-92CR-032 (N.D. Tex. 1993) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=501](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=501) [<https://perma.cc/BQK8-57TR>]. Lake Doctors, Inc. was prosecuted for illegally applying pesticides in aquatic areas in a manner inconsistent with its labeling. The 14 defendants were collectively sentenced to 2,600 hours of community service. Lake Doctors, Inc. (M.D. Fla. 1992) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=447](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=447) [<https://perma.cc/XAF9-64K5>]. William Dee and two co-defendants were assessed 3,000 hours of community service for negligent discharge. William Dee, HAR-88-0211 (D. Md. 1989) (EPA Summary of Criminal Prosecutions), [https://cfpub.epa.gov/compliance/criminal\\_prosecution/index.cfm?action=3&prosecution\\_summary\\_id=359](https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=359) [<https://perma.cc/U946-TMWT>]. These three cases make up about 36 % of all community service assessed in our dataset.

<sup>176</sup> As an example, EPA's Report a Violation website resulted in 35 cases being opened and six referred for successful prosecution in the first decade of the site's existence. See EPA, CRIMINAL ENFORCEMENT PROGRAM 6 (Oct. 2011), <https://www.epa.gov/sites/default/files/documents/oceft-overview-2011.pdf> [<https://perma.cc/TJ56-H5HF>].

<sup>177</sup> See EPA, *Environmental Justice Small Grants Program*, <https://www.epa.gov/environmentaljustice/environmental-justice-small-grants-program> [<https://perma.cc/J4ZK-DCXN>] (last visited Oct. 14, 2021).

<sup>178</sup> These numbers were given as of 2015. U.S. DEPT. OF JUST., *Environmental Crimes Section*, <https://www.justice.gov/enrd/environmental-crimes-section> [<https://perma.cc/MQ3A>].

and prosecution of environmental crimes, the apparatus cannot be effective. While the criminal enforcement of environmental crime has always had to make hard choices with its limited resources, current policing levels fall below statutory minimums, which were set three decades ago.<sup>179</sup> Raising staff to meet statutory obligations would be a good place to start.

A final variable that would help improve the criminal enforcement of environmental law would be enhanced salience given to EPA-CID and DOJ-ECS's activities. Much of the public never hears about environmental crime unless there is an explosion or other major catastrophe and, as a result, fails to see environmental crime as real crime with significant consequences on par with street crime.<sup>180</sup> Further promotion of agency efforts are needed to show the public and policymakers the value of criminal enforcement for making environmental laws work in practice, and that will only come when the seriousness of these crimes are properly conveyed and the work of dedicated investigative and prosecutorial staff known.

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-2TGK] (last updated July 2, 2021); PUB. EMPS. FOR ENV'T RESP., *EPA CID Agent Count*, [https://www.peer.org/wp-content/uploads/2019/11/11\\_21\\_19-Federal\\_Pollution\\_EPA\\_CID\\_Agent\\_Count.pdf](https://www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf) [<https://perma.cc/G8FP-F5H3>] (last visited Oct. 14, 2021) (The EPA has 145 CID Agents as of Feb. 13, 2019).

<sup>179</sup> The Pollution Prosecution Act of 1990 (P.L. 101-593) sets the statutory minimum at 200 investigative staff. Pollution Prosecution Act of 1990, 42 U.S.C. § 4321 (2018).

<sup>180</sup> See Melissa L. Jarrell, *Environmental Crime and Injustice: Media Coverage of a Landmark Environmental Crime Case*, 6 S.W. J. CRIM. JUST. 25, 27 (2009).