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Evaporating Into Thin Air: The Prosecution of Air Pollution Crimes During the Trump Administration

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EVAPORATING INTO THIN AIR: THE PROSECUTION OF AIR POLLUTION CRIMES DURING THE TRUMP ADMINISTRATION

Dr. Joshua Ozymy & Dr. Melissa Jarrell Ozymy+*

Antagonistic to environmental regulation, the Trump Administration sought to significantly roll back federal clean air law enforcement. Yet, we know very little about the impact of the Administration on air pollution criminal enforcement. Through content analysis of all EPA criminal investigations leading to prosecution, we analyze patterns in charging and sentencing and draw out the broader themes in air pollution prosecutions during this period. Our results show a sizable drop in prosecutions compared to the Obama Administration. Although prosecutors managed to pursue serious crimes involving significant harm and criminal conduct and secure over \$2.9 billion in monetary penalties, roughly 160 years of probation, and 146 years of incarceration at sentencing, many of these penalties result from a few prosecutions. Our conclusions focus on forward-facing solutions for the Biden Administration to make good on campaign promises to reduce environmental injustice through enhanced environmental criminal enforcement, community policing and engagement, and recognition of environmental justice communities as crime victims.

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INTRODUCTION

Donald Trump loved to make public statements denouncing the realities of climate change and blaming environmental laws for hurting jobs and the economy.¹ He promised to give few resources to the U.S. Environmental Protection Agency (EPA) and appointed anti-environmentalists, such as Scott Pruitt, to run the agency to ensure weaker enforcement of environmental laws by EPA, the U.S. Department of Justice (DOJ), and other relevant agencies.² As with many of his Republican forebearers stretching back to Reagan, Trump was openly hostile to strong environmental enforcement.³ Because clean air laws and regulations impact the country's ability to address climate change, Trump was exceedingly aggressive in rolling back clean air regulations: he loosened regulations on air pollution, attempted to weaken federal fuel economy standards, reversed Obama's Clean Power Plan, and pulled out of the Paris Climate Agreement.⁴ Whether and how the Trump Administration impacted the enforcement of federal air pollution laws is still unclear.⁵

This article addresses whether and how the Trump Administration influenced the enforcement of air pollution laws through a comprehensive analysis of the prosecution of air pollution crimes during the era. Examining all EPA criminal investigations that lead to prosecution, we analyze charging and sentencing patterns and draw out the broader themes in such prosecutions during Trump's term in office. Our approach allows us to examine whether prosecutions declined, if prosecutors were able to tackle serious violations of environmental law, what they chose to

1. See Richard J. Lazarus, *The Super Wicked Problem of Donald Trump*, 6 VAND. L. REV. 1811, 1841-43 (2020).

2. See Jay Michaelson, *The Ten Worst Things Scott Pruitt's EPA Has Already Done*, THE DAILY BEAST (Dec. 29, 2017, 5:00 AM ET), <https://www.thedailybeast.com/the-ten-worst-things-scott-pruitts-epa-has-already-done>; Bloomberg, *The Trump EPA Deals Another Blow to the Environment*, BLOOMBERG OPINION (Sept. 18, 2020, 12:00 PM UTC), <https://www.bloomberg.com/opinion/articles/2020-09-18/trump-epa-rule-on-coal-ash-puts-lives-and-the-environment-at-risk> **Error! Hyperlink reference not valid.**; Rebecca Beitsch & Rachel Frazin, *Trump Budget Slashes EPA Funding, Environmental Programs*, THE HILL (Feb. 10, 2020, 02:18 PM EST), <https://thehill.com/policy/energy-environment/482352-trump-budget-slashes-funding-for-epa-environmental-programs>.

3. Jessica Hejny, *The Trump Administration and Environmental Policy: Regan Redux?*, 8 J. ENV'T STUD. & SCI., 197, 211 (2018).

4. The Obama Clean Power Plan attempted to cut carbon emissions from power plants to reduce greenhouse gas emissions from gas and coal plants. See EPA, FACT SHEET: OVERVIEW OF THE CLEAN POWER PLAN, <https://www.epa.gov/sites/default/files/2014-05/documents/20140602fs-overview.pdf>. The Paris Agreement is an international agreement for countries to reduce greenhouse gas emissions. See Melissa Denchak, *Paris Climate Agreement: Everything You Need to Know*, NATURAL RESOURCES DEFENSE COUNCIL (Feb. 19, 2021), <https://www.nrdc.org/stories/paris-climate-agreement-everything-you-need-know>.

5. Sarah Gibbins, *15 Ways the Trump Administration Has Changed Environmental Policies*, NATIONAL GEOGRAPHIC (Feb. 1, 2019), <https://www.nationalgeographic.com/environment/article/15-ways-trump-administration-impacted-environment>.

prosecute, and if they were able to obtain significant penalties, despite counter pressures from the administration.⁶

I. PRESIDENTS AND CRIMINAL ENFORCEMENT

The simplistic narrative that Republican presidents hurt the environment and Democratic ones help it—and further, that those individuals have a direct and overwhelming influence on administrative outcomes—is not completely accurate.⁷ Democratic presidents have not always been as supportive of environmental regulation and enforcement as expected. Bill Clinton failed to strengthen budgets and enforcement, as his programs were derailed by the Republican takeover of the House and his impeachment, and while Obama passed a series of ambitious goals, such as the Paris Agreement and his Clean Power Plan, significant resources for enforcement failed to materialize.⁸

Republican Presidents have not always achieved their goals of stripping out environmental regulatory agencies, and sometimes support can be found in odd places. While Anne Gorsuch certainly had a negative impact on enforcement outcomes at EPA, she was removed from her position after being held in contempt of Congress, and enforcement continued when William Ruckelshaus was restored to a leadership position, as he had done as the EPA's inaugural director.⁹ A counterintuitive example here would be that the DOJ's efforts to prosecute environmental crimes were supported and strengthened during the George W. Bush Administration.¹⁰ Research demonstrates that a greater number of prosecutions were brought under this Administration than the Obama Administration.¹¹ Our research

6. For a discussion of enforcement during hostile presidential regimes and how, see James A. Barnes, *Implementing Presidential Policy Agendas Administratively: A View from the Inside*, 69 PUB. ADMIN. REV. 586, 594 (2009). See also Richard J. Lazarus, *Flexing Agency Muscle?*, 48 GA. L. REV. 327, 334 (2014).

7. Teddy Roosevelt is famous for his conservationism, and Bush helped to overhaul clean air laws. See *Republican Presidents on Environment*, NPR (June 3, 2007, 4:34 PM ET), [Error! Hyperlink reference not valid.https://www.npr.org/templates/story/story.php?storyId=10687339](https://www.npr.org/templates/story/story.php?storyId=10687339).

8. See Joel A. Mintz, *Neither the Best of Times Nor the Worst of Times: EPA Enforcement During the Clinton Administration*, 35 ENV'T L. REP. 10390, 10412 (2005). For a more recent sense of environmental enforcement budgets, see U.S. Department of Justice, *FY 2021 General Legal Activities - Environment and Natural Resources Division*, <https://www.justice.gov/doj/page/file/1246681/download>. Budgetary data for the ENRD is found by searching the DOJ's Budget and Performance Summary by fiscal year and scrolling down for the ENRD budget. Prior years to 2015 are found in the Archives. See: U.S. Department of Justice, 2022, *Budget and Performance Summary ENRD (Various Years)*, Available from: <https://www.justice.gov/doj/budget-and-performance>.

9. Cally Carswell, *How Reagan's EPA Chief Paved the Way for Trump's Assault on the Agency*, THE NEW REPUBLIC (March 21, 2017), <https://newrepublic.com/article/141471/reagans-epa-chief-paved-way-trumps-assault-agency>.

10. David M. Uhlmann, *Strange Bedfellows*, 25 ENV'T L.F. 40, 43 (2008).

11. David M. Uhlmann, *Prosecutorial Discretion and Environmental Crime Redux: Charging Trends, Aggravating Factors, and Individual Outcome Data For 2005-2014*, 8 MICH. J. ENV'T & ENERGY L. 297, 313 (2019).

comparing environmental prosecutions under Bush and Obama shows a similar pattern.¹²

Richard Nixon, responding to public outcry over national environmental problems, consolidated the regulation of various environmental media under the control of the newly created EPA, while Reagan was more hostile to environmental regulation, appointing Anne Gorsuch to run the EPA and subsequently reduce its enforcement program.¹³ George H.W. Bush was briefly considered to run the agency and had expressed strong support for environmental protection on more than one occasion.¹⁴ George H.W. Bush focused on reducing federal oversight of enforcement efforts, returning power to the states, and relying on political insiders for regulatory and enforcement decisions.¹⁵

The evolution of the federal environmental criminal enforcement system also began to evolve under Reagan. Congress passed the Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act (RCRA) in 1984, and they represented the first felony provisions to be included in federal environmental law.¹⁶ The 1980s were a time of global expansion to punish environmental crimes.¹⁷ By the mid-1980s, Congress was pushing for stiffer penalties for a variety of federal laws, and expanded felony provisions were added to the Clean Water Act (CWA) in 1987 under Reagan, the Clean Air Act (CAA) under Bush in 1990, and later other federal environmental laws received felony provisions including The Toxic Substances Control Act (TSCA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Federal Insecticide, Fungicide, and Rodenticide Acts (FIFRA).¹⁸

12. See Joshua Ozymy & Melissa L. Jarrell, *Wielding the Green Stick: An Examination of Criminal Enforcement at the EPA under the Bush and Obama Administrations*, 24 ENV'T POL. 38, 56 (2015).

13. See JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES, 21-41 (University of Texas Press, 2012).

14. Brett Milano, *The Evolution of American Environmental Law from Nixon to Trump*, HARVARD LAW TODAY (Nov. 7, 2017), <https://today.law.harvard.edu/evolution-american-environmental-law-nixon-trump/>.

15. Joel A. Mintz, *Treading Water: A Preliminary Assessment of EPA Enforcement During the Bush II Administration*, 34 ENV'T L. REP. 10912, 10915 (2004).

16. Resource Conservation and Recovery Act, 42 U.S.C. § 6901 (1976). Misdemeanor provisions stretch back over a century to the Rivers and Harbors Act of 1899, 33 U.S.C. § 403, and the Lacey Act of 1900, 16 U.S.C §§ 3371-72, but even with the expansion of environment law beginning in the 1970s, felony provisions did not appear until the 1980s. Neil J. Barker, *Sections 9 and 10 of the Rivers and Harbors Act of 1899: Potent Tool for Environmental Protection*, 6 ECOLOGY L.Q. 109, 156 (1976).

17. Michael R. Pendleton, *Beyond the Threshold: The Criminalization of Logging*, 10 SOC'Y & NAT. RES. 181, 181-83 (1997).

18. See Clean Water Act, 33 U.S.C. § 1251 (1972); Toxic Substances Control Act, 53 U.S.C. § 2601 (1976); Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136 (1972); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 (1980); Clean Air Act, 42 U.S.C. § 7401 (1970). For examples of criminal provisions and related punishments in federal environmental statutes, see *Criminal Provisions of the Resource Conservation and Recovery Act (RCRA)*, EPA, [https://www.epa.gov/enforcement/criminal-provisions-resource-conservation-and-recovery-act-rcra](https://www.epa.gov/enforcement/criminal-provisions-resource-conservation-and-recovery-act-rcra;).; *Criminal Provisions of the Clean Air Act*, EPA, <https://www.epa.gov/enforcement/criminal-provisions-clean-air-act>.

If Republicans are not always hostile towards environmental enforcement and Democrats are not always as supportive as expected, how are presidents able to shape agency enforcement outcomes, particularly for EPA and DOJ, the primary environmental law enforcement agencies that police and prosecute federal environmental crimes? Presidents can influence budgets and overall personnel numbers and make critical appointments that affect the outcomes of these agencies. But their influence is buttressed in good measure by organizational inertia and agency prerogatives that may conflict with presidential administrations.¹⁹ Having become accustomed to waffling between a lack of promised support and sometimes open hostility, career administrators tend to persist in their efforts within EPA and DOJ, to a degree, despite presidential influence.²⁰

Efforts to devote prosecutorial resources to environmental crimes can be traced to the founding of the DOJ's Public Lands Division in 1909, which evolved to the current Environmental and Natural Resources Division (ENRD).²¹ The serious institutionalization of resources for environmental crime prosecutions began to take shape during the Reagan Era, despite the president's anti-environmentalism. The Environmental Crimes Section (DOJ-ECS) was created in 1982 to center personnel and professional expertise on prosecuting environmental crimes. DOJ-ECS became its own unit in ENRD in 1987, running parallel to the Environmental Enforcement Section (EES) that oversees civil-judicial cases.²² Today, DOJ-ECS employs roughly forty-three prosecutors and a dozen support staff to prosecute environmental crimes.²³

The idea of extracting greater punishments for environmental crimes enjoyed a brief window of bipartisan consensus in the 1980s, which today seems somewhat strange.²⁴ As environmental regulation became increasingly defined on partisan grounds, the conversation shifted from the DOJ not doing enough to prosecute environmental offenders to doing too much. While prosecutors interpreted expanded environmental statutes to aid in their prosecution of more complex cases, their role in shaping the substance of these laws fell into academic debate.²⁵ This

19. Joshua Ozymy, Bryan Menard & Melissa L. Jarrell, *Persistence or Partisanship: Exploring the Relationship between Presidential Administrations and Criminal Enforcement by the U.S. Environmental Protection Agency, 1983-2019*, 81 PUB. ADMIN. REV. 49, 49-63 (2021).

20. See Mintz, *supra* note 15, at 10912, 10930; Uhlmann, *supra* note 10, at 40-43.

21. History, U.S. DEP'T OF JUST. ENV'T AND NAT. RES. DIV. (May 18, 2021), <https://www.justice.gov/enrd/history>; *Historical Development of Environmental Criminal Law*, U.S. DEP'T OF JUST. ENV'T CRIMES SECTION (May 13, 2015), <https://www.justice.gov/enrd/about-division/historical-development-environmental-criminal-law>.

22. See *An Overview of Our Practice*, U.S. DEP'T OF JUST. ENV'T AND NAT. RES. DIV. ENV'T ENF'T SECTION (EES) (May 14, 2015) <https://www.justice.gov/enrd/overview-our-practice>.

23. *Environmental Crimes Section*, U.S. DEP'T OF JUST. (July 2, 2021), <https://www.justice.gov/enrd/environmental-crimes-section>.

24. Judson W. Starr, *Turbulent Times at Justice and EPA: The Origins of Environmental Criminal Prosecutions and the Work that Remain*, 59 GEO. WASH. L. REV. 900, 901 (1991).

25. See Richard J. Lazarus, *Assimilating Environmental Protection into Legal Rules and the Problem with Environmental Crime*, 27 LOY. L. REV. 867, 867-70 (1994) (discussing the pros and cons of prosecutorial discretion in shaping federal environmental law).

debate set the stage for persistent inner-branch conflict over the proper role and scope of environmental law enforcement agencies.²⁶

Policing resources for the environment began to institutionalize and evolve under Reagan despite his opposition to the agency. The EPA's Office of Enforcement was founded in 1981.²⁷ EPA hired its first full-time criminal investigators the following year, who were deputized as Special Deputy U.S. Marshalls, until 1988 when Congress gave them full law enforcement authority.²⁸ Resources for policing federal environmental crimes were further expanded under Bush in 1990 with the passage of the Pollution Prosecution Act, which created a statutory minimum and goal of expanding the number of EPA criminal investigators to at least 200 in the coming years.²⁹ About 145 criminal investigators, also known as special agents, are currently housed within the Criminal Investigation Division (EPA-CID).³⁰ EPA-CID agents typically work out of field offices and build cases from information obtained from whistleblowers, formal documents, civil inspectors, or other government agencies.³¹ When they feel they possess sufficient evidence of an environmental crime, agents work with prosecutors within DOJ-ECS or the U.S. Attorneys' Office to file criminal information in an appropriate district court or convene a grand jury.³²

Environmental law enforcement agencies embody a deterrence-based organizational culture that focuses on pursuing and punishing crimes involving significant harm and culpable conduct, with the goals of extracting sufficient punishment and deterring future offenders.³³ However, most violations of

26. 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.* 587, 590 (1995).

27. The Office evolved into the modern Office of Compliance Assurance (OECA). See *About the Office of Enforcement and Compliance Assurance (OECA)*, EPA, <https://www.epa.gov/aboutepa/about-office-enforcement-and-compliance-assurance-oea>.

28. Memorandum from John Peter Suarez, Assistant Adm'r of the EPA Off. of Enf't and Compliance Assurance, to the Off. of Crim. Enf't, Forensics and Training (Dec. 15, 2003), <https://www.epa.gov/sites/production/files/documents/oceft-review03.pdf>.

29. The Pollution Prosecution Act of 1990, Pub. L. No. 101-593, § 202(a), 104 Stat. 2962 (1990).

30. The number of special agents varies depending on the source and whether one is considering those exclusively dedicated to criminal investigation or other support staff. See U.S. EPA, U.S. ENVIRONMENTAL PROTECTION AGENCY CRIMINAL ENFORCEMENT PROGRAM: AMERICA'S ENVIRONMENTAL CRIME FIGHTERS, <https://www.epa.gov/sites/production/files/documents/oceftbrochure.pdf>; *EPA CID Agent Count*, PUB. EMPLS. FOR ENV'T RESP. (2019), https://www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf.

31. Joel A. Mintz, *Some Thoughts on the Interdisciplinary Aspects of Environmental Enforcement*, 36 *ENV'T L. REP.* 10495, 10496-97 (2006).

32. *Id.* at 10497.

33. Michael J. Lynch, *The Sentencing/Punishment of Federal Environmental/Green Offenders, 2000-2013*, 38 *DEVIANT BEHAV.* 991, 993 (2017); *Criminal Enforcement: Special Agents*, EPA (July 14, 2021), <https://www.epa.gov/enforcement/criminal-enforcement-special-agents>; Memorandum from Earl E. Devaney, Dir. of the EPA Off. of Crim. Enf't, to All EPA Emps. Working in or in Support of the EPA Crim. Enf't Program (Jan. 12, 1994), <https://www.epa.gov/sites/production/files/documents/exercise.pdf>.

environmental law in the United States are handled through civil remedies.³⁴ Civil measures focus on bringing violators into compliance with the law through a range of civil or judicial actions, including restitution, injunctive relief, Administrative Orders of Consent (AOC), environmental mitigation plans, or Supplemental Environmental Projects (SEPs).³⁵

The question of importance becomes: to what degree can environmental law enforcement agencies achieve their goals and what can be reasonably expected from some four decades of back and forth since Reagan took office? Research indicates that environmental law, in general, has become calcified from a lack of congressional action over the last three decades, turning what was once innovation into a growingly ineffectual system of regulation.³⁶ Other work has noted that environmental law enforcement agencies have persisted in achieving their organizational goals within this environment but were increasingly out of gas and “running on fumes” prior to the four-year onslaught of the Trump Administration.³⁷

Research often points to the sheer lack of resources for EPA-CID and DOJ-ECS to functionally achieve deterrence, with many studies arguing that resources are simply too thin to provide general deterrence effects.³⁸ The need for additional resources has been ongoing.³⁹ EPA-CID, for example, has suffered from a declining number of special agents for years, often falling below the statutory minimum number of agents. The number has continued to slide from 175 agents in 2012 down to 145 by 2019.⁴⁰ One study shows that prosecutions resulting from EPA-CID

34. See Evan J. Ringquist & Craig E. Emmert, *Judicial Policymaking in Published and Unpublished Decisions: The Case of Environmental Civil Litigation*, 52 POL. RES. Q. 7, 12-13 (1999).

35. *Basic Information on Enforcement*, EPA (Feb. 22, 2022), <https://www.epa.gov/enforcement/basic-information-enforcement>.

36. Richard Lazarus, *Environmental Law Has Fallen 'In Arrears'*, HARVARD LAW TODAY (May 3, 2013), <https://today.law.harvard.edu/richard-lazarus-environmental-law-has-fallen-in-arrears-video/>; Richard Lazarus, *Environmental Law Without Congress*, 30 J. LAND USE & ENV'T L. 15, 15-34 (2014).

37. See Joel A. Mintz, “Running on Fumes”: *The Development of New EPA Regulations in an Era of Scarcity*, 46 ENV'T L. REP. NEWS & ANALYSIS 10510, 10511-13 (2016).

38. See Michael J. Lynch, Kimberly L. Barrett, Paul B. Stretesky, & Michael Long, *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, 1096-99 (2016) (discussing and analyzing the probability of being punished for an environmental crime and the subsequent prospects for deterrence); Mathew J. Griefe, Paul B. Stretesky, Tara O. C. Shelley, & Matthew Pogrebin, *Corporate Environmental Crime and Environmental Justice*, 28(4) CRIM. JUST. POL'Y REV. 327, 346 (2017); see also Joshua Ozymy & Melissa L. Jarrell, *Does the Criminal Enforcement of Federal Environmental Law Deter Environmental Crime? The Case of the U.S. Resource Conservation and Recovery Act*, 11 BARRY L. ENV'T & EARTH L.J. 65, 73-87 (2021) (finding underfunded environmental criminal enforcement impacting deterrence effect of Resource Conservation and Recovery Act prosecution); Lynch, *supra* note 33, at 1005 (discussing that discrepancies between “street” crime and environmental crime can be explained by less stringent enforcement due to lack of environmental environment resources).

39. See Jennifer Koons, *Wanted: Environmental Crime Fighters*, SCIENTIFIC AMERICAN (July 30, 2009), <https://www.scientificamerican.com/article/environmental-law-enforcement-crimes-epa/>.

40. *EPA CID Agent Count*, PUB. EMPLS. FOR ENV'T RESP. (2019), https://www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf.

investigations number slightly less than 2,600 from 1983-2019.⁴¹ Other research demonstrates that prosecutors focus on serious crimes that typically involve at least one if not more aggregating factors, such as chronic offending, deceptive or misleading conduct, or operating outside the boundaries of the regulatory system.⁴² Research on the relationship between presidential administrations and enforcement outcomes shows that law enforcement agencies persist in achieving many of their goals, despite presidential opposition.⁴³

Trump's threats to defund environmental agencies were not unique. His actions follow decades of underinvestment in enforcement personnel and budgets, despite growing environmental problems and regulatory responsibilities.⁴⁴ The addition of the 2009 financial crisis and the Covid-19 pandemic bring added pressures to agency budgeting, despite promises by the Biden Administration to focus resources in this area.⁴⁵ We explore the criminal prosecution of air pollution cases to see overall patterns in prosecutions and the output achieved under these difficult circumstances.

II. DATA AND METHODS

We collected data from the EPA's Summary of Criminal Prosecutions Database,⁴⁶ This database provides case summaries for all environmental crime prosecutions resulting from EPA-CID criminal investigations from 1983 to present. The database contains valuable information including a narrative summary of each investigation, a timeline, indictment, case characteristics, and sentencing information for all named defendants.

We searched the database for all cases by EPA fiscal year (FY) that runs from October 1 to September 30 and chose all cases adjudicated during the Trump Administration. The period of analysis runs from January 20, 2017 to President

41. This number includes some state prosecutions and may not include environmental crime prosecutions undertaken without EPA collaboration, meaning the real number is likely higher, but it is difficult to know the degree. See Ozymy et al., *supra* note 19, at 49-60.

42. For two important empirical studies here, see David M. Uhlmann, *Prosecutorial Discretion and Environmental Crime*, 38 HARV. ENV'T L. REV. 159, 159 (2014) and Uhlmann, *supra* note 11, at 312.

43. Ozymy et al., *supra* note 12, at 38-51; 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. OF POL'Y RSCH. 71, 71-72 (2016).

44. Budgetary data for ENRD or EPA show a lack of expansion to even keep up with real inflation over the years, not to mention expanded responsibilities. See *Budget and Performance Summary ENRD (Various Years)*, U.S. DEP'T OF JUST. (Nov. 17, 2021), <https://www.justice.gov/doj/budget-and-performance>. EPA budget and staffing numbers show a decline in inflation adjusted dollars from the early 1980s and stagnant staff prior to Trump. See *EPA's Budget and Spending*, EPA (July 30, 2021), <https://www.epa.gov/planandbudget/budget>.

45. *The Biden Plan to Secure Environmental Justice and Equitable Economic Opportunity*, BIDEN HARRIS CAMPAIGN (2021), <https://joebiden.com/environmental-justice-plan/>.

46. *Summary of Criminal Prosecutions Database*, EPA (May 10, 2021), <https://www.epa.gov/enforcement/summary-criminal-prosecutions>.

Biden's inauguration on January 20, 2021.⁴⁷ We find 282 prosecutions occurring during the Trump Administration. We read each case and selected those that focused on air pollution crimes. This left us with 69 cases for the analysis.

We used content analysis to gather the data. We piloted our data gathering protocols for four weeks to better understand and discern patterns in the data. Two coders worked independently, meeting weekly to discuss results until inter-coder reliability reached ninety percent. We then implemented our full coding protocols with two coders gathering data and one of the authors reviewing the data for discrepancies and meeting to come to a consensus on differing values. These differences tended to occur with complex sentencing data or ambiguous entries in the case summaries.

Inter-coder reliability for the study was approximately ninety-five percent.⁴⁸ Using additional resources would invalidate our ability to use the same methodology for gathering and coding every case and would affect the reliability of our data. Accordingly, we did not use legal or web-based sources to verify the data. The database is our sole source of data for the analysis. If EPA did not include a prosecution in the database or another agency undertook prosecution of a federal environmental crime, either case would be unknown to us or not included in the analysis. However, given EPA's role in cooperating with DOJ environment crime investigations, it is not likely that many cases, if any, were missing from the database.

The following data was coded from the summaries in Excel: 1) docket identifier, 2) number of named defendants, 3) primary defendant name, 4) short summary of each case, 5) presence of at least one company as a named defendant in the case coded (1) Yes or (0) No, 6) presence of criminal charges including fraud, smuggling, racketeering, false statements, or other crimes, 6) if defendants were charged with a state-level environmental crime, 7) major federal environmental statutes violated in the case, 8) state listed in the summary for where the primary crime occurred, and 9) penalties. We measured penalties in the aggregate for all individual defendants and company/corporate defendants in the case. Probation and incarceration are measured in total months. Community service is measured in total hours. Monetary penalties include all such penalties levied at sentencing, such as assessments, restitution, fines, fees, or other penalties.

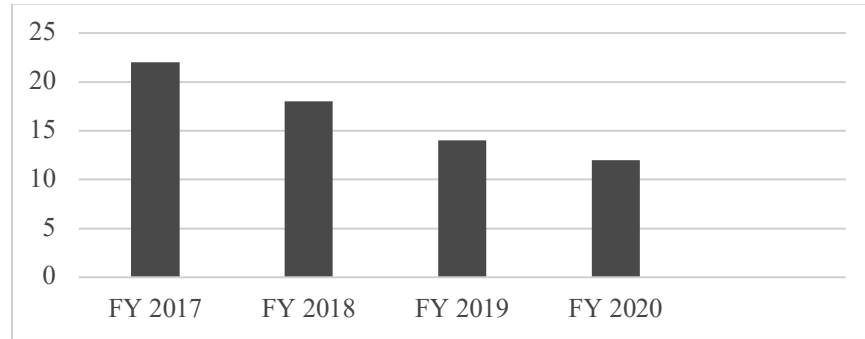
47. We took great care to exclude cases that were sentenced before or after Trump. When we gathered the data, Timothy Patrick, *State v. Patrick*, Ohio 19 CR 75 (Dec. 23, 2020) (EPA Summary of Criminal Prosecutions), was the final case sentenced before January 20, 2021. Our analysis begins with Christopher Dale Miller, *United States v. Miller*, No. 5:16-CR-205-1BO (E.D.N.C. Sept. 26, 2016) (EPA Summary of Criminal Prosecutions). A few examples of cases excluded as examples here include Isaac Cole, *United States v. Cole*, No. CR16-270JCC (W.D. Wash. Jan. 13, 2017) (EPA Summary of Criminal Prosecutions), sentenced on January 13, 2017, and Omega Protein, *United States v. Omega Protein, Inc.*, No. 6:16-CR-00292 (W.D. La. Jan. 18, 2017) (EPA Summary of Criminal Prosecutions), sentenced on January 18, 2017. There were 283 total cases we found that were adjudicated during Trump, but primary defendant Mark Meyer, *United States v. Meyer*, No. 1:20-CR-00186 (D.N.D. Dec. 29, 2020) (EPA Summary of Criminal Prosecutions), is inaccurately listed twice in the Database. Once we selected the cases for the full dataset, we read and extracted cases that focused on air pollution crimes.

48. We calculated this by dividing the agreed-upon items by non-agreed items. See OLE R. HOLSTI, *CONTENT ANALYSIS FOR THE SOCIAL SCIENCES AND HUMANITIES* 140 (Addison Wesley, 1969).

III. RESULTS

Figure 1 displays the number of air pollution prosecutions adjudicated by FY during the Trump Administration. In FY 2017, we estimate that 22 air pollution prosecutions were adjudicated. That number decreased each year through the Administration. In FY 2018, we find 18 prosecutions adjudicated, and this drops again to 14 in FY 2019, 12 in FY 2020, and 3 in FY 2021, which is very low as this year only includes the few remaining months of the Administration. Our data indicates that 69 air pollution cases were prosecuted in the Trump Era following EPA-CID criminal investigations, with an average of about 17 excluding FY 2021.

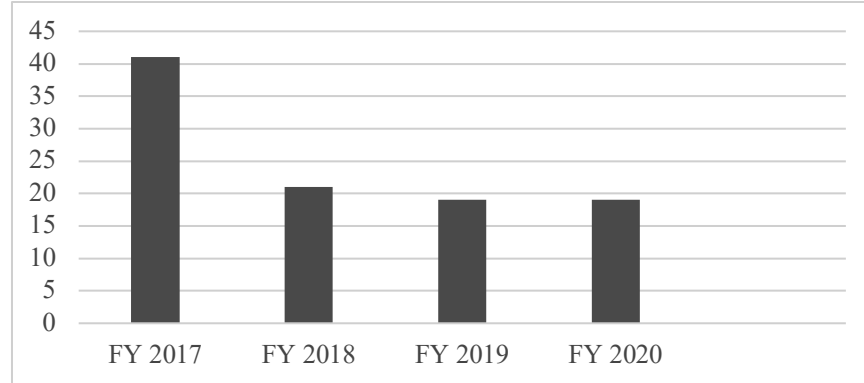
Figure 1. Total Air Pollution Prosecutions Adjudicated During the Trump Administration by Fiscal Year



Source: EPA Summary of Criminal Prosecutions Database

Figure 2 displays the total number of defendants that were prosecuted for air pollution crimes by FY during the Trump Administration. In FY 2017, we found 41 defendants prosecuted for air pollution crimes. As with the number of annual prosecutions adjudicated in Figure 1, the number of defendants prosecuted annually begins a quick slide. In FY 2018, there were 21 defendants prosecuted, 19 in FY 2019, and 19 in FY 2020. In total, we found that 105 defendants were prosecuted for air pollution crimes during this period.

Figure 2. Total Defendants Prosecuted in Air Pollution Cases During the Trump Administration by Fiscal Year



Source: EPA Summary of Criminal Prosecutions Database

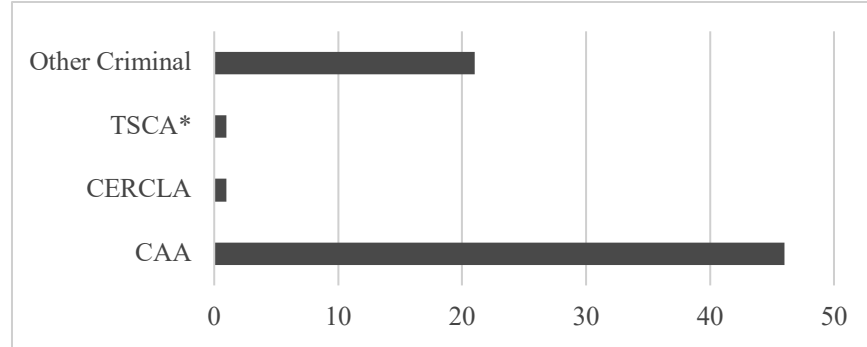
We examine charging patterns in Figure 3 for air pollution crimes prosecuted during the Trump Administration. By an overwhelming margin, prosecutors focused on charging criminals under the CAA for air pollution crimes. In 67% of prosecutions, or 46 cases, a defendant was charged with a federal air pollution crime under the CAA. In one case a defendant was prosecuted under CERCLA.⁴⁹ In one case a defendant was prosecuted under TSCA for an air pollution crime.⁵⁰ In the remaining 21 cases, defendants were prosecuted under various Title 18 and other criminal offenses.⁵¹

49. Dyno Nobel, Inc., *United States v. Dyno Nobel, Inc.*, No. 3:18-CR-63-SI (D. Or. June 4, 2018) (EPA Summary of Criminal Prosecutions), was prosecuted for discharging six tons of anhydrous ammonia into the ambient air around St. Helen's, Oregon. The company was prosecuted under CERCLA for failure to notify officials of the release of a hazardous substance and was sentenced to pay a \$250,000 fine and serve two years of probation. Kenneth Baez-Alers, *United States v. Baez-Alers*, No. 3:15-CR-871 (D.P.R. Apr. 12, 2018) (EPA Summary of Criminal Prosecutions), was prosecuted as part of the broader prosecution of AIREKO Construction that engaged in the illegal disposal of asbestos during renovation of a building in Puerto Rico. The defendant was prosecuted under the CAA for the asbestos violation and CERCLA for failure to notify officials of the release of a hazardous substance. We felt the primary crime was prosecuted under the CAA instead of CERCLA and categorized it accordingly, although it could be placed primarily under CERCLA as well. Baez-Alers was sentenced to serve twelve months of probation.

50. Paul Potter, *United States v. Potter*, No. 19-CR-00106 (E.D. Va. Aug. 9, 2019) (EPA Summary of Criminal Prosecutions), plead guilty to violations of TSCA for overseeing the improper removal of asbestos from 530 apartments in Virginia. Some tenants occupied the units while the removal was being undertaken and some workers were neither protected nor certified to do the work, which was undertaken without proper precautions. Potter was sentenced to twelve months of probation and a \$15,000 criminal fine.

51. Title 18 is the primary criminal code of the United States federal government. *See U.S. Code Title 18*, CORNELL LAW SCH. LEGAL INFO. INST., <https://www.law.cornell.edu/uscode/text/18>.

Figure 3. Charging Patterns in Air Pollution Prosecutions During the Trump Administration



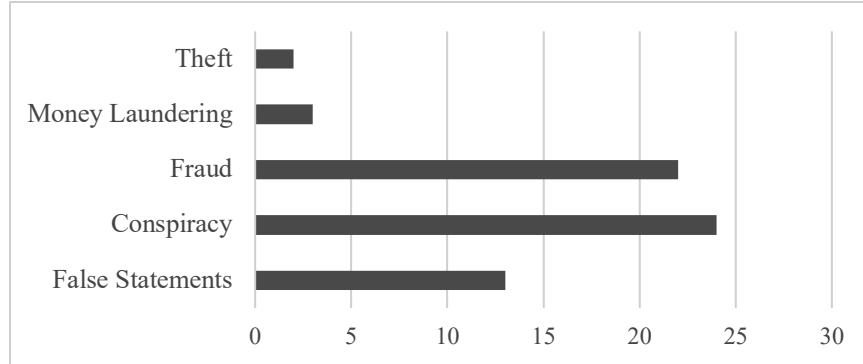
Source: EPA Summary of Criminal Prosecutions Database

In Figure 4, we explore common criminal charges in air pollution prosecutions during the Trump Administration. In a significant number of cases, at least one defendant was charged with a criminal offense, either exclusively or in addition to their environmental offense. As an indicator of the seriousness of the crimes that were prosecuted by DOJ in our dataset, these numbers suggest such prosecutions were common. In 24 prosecutions, or 35% of the prosecutions in our analysis, at least one of the defendants was charged with conspiracy. In 22% of the prosecutions, at least one defendant was charged with fraud. In 19% of prosecutions, at least one defendant was charged with false statements, compared to 4% involving money laundering and 3% involving theft.⁵² Altogether, in 41 cases or 59% of prosecutions, at least one defendant was charged with at least one non-environmental crime, showing a strong commitment to prosecute cases with aggregating factors that indicate serious violations of law.⁵³

52. Defendants can be charged with more than one of these crimes in a prosecution. For example, while in 35% of cases at least one defendant was charged with conspiracy, one or more defendants could have additionally been charged with fraud or theft.

53. For two important studies on this topic, see Uhlmann, *supra* note 42, at 159 and Uhlmann, *supra* note 11, at 312.

Figure 4. Common Criminal Charges in Air Pollution Prosecutions During the Trump Administration



Source: EPA Summary of Criminal Prosecutions Database

We move from an analysis in Figure 4 that examines some of the trends in more serious offenses in our data, to the question of whether prosecutors were able to secure significant penalties in air pollution prosecutions undertaken during the Trump Administration. Figure 5 examines total penalties assessed to all individual defendants and company/corporate defendants. We break these penalties down into total monetary penalties assessed at sentencing in current U.S. dollars, total probation assessed in months, incarceration in months, and hours of community service. We estimate that \$118 million dollars in monetary penalties were assessed to individual defendants in air pollution prosecutions. Companies were sentenced to pay over \$2.8 billion in penalties. Total probation assessed to individuals equaled 1,506 months and 408 months assessed to companies. Individual defendants were sentenced to 1,756 months of incarceration, and defendants were cumulatively sentenced to 506 hours of community service. Cumulatively, defendants were sentenced to pay \$2.97 billion in monetary penalties and 305 years of probation and incarceration.

Figure 5. Total Penalties Assessed to Defendants in Air Pollution Prosecutions During the Trump Administration

<p><u>Total Monetary Penalties</u> Individuals- \$118,170,591 Companies- \$2,859,666,322</p>	<p><u>Total Probation</u> Individuals- 1,506 Months Companies- 408 Months</p>
<p><u>Incarceration</u> 1,756 Months</p>	<p><u>Community Service</u> 1,660 Hours</p>

Source: EPA Summary of Criminal Prosecutions Database

Securing almost \$3 billion in penalties and 305 years of probation in parole at sentencing is a laudable accomplishment for prosecutors that worked under the auspices of the Trump Administration, as well as the Covid-19 pandemic. Our results show that criminal investigators and prosecutors predominately pursued cases involving serious violations of law. We turn to placing these penalties in context. Five prosecutions against Volkswagen AG, IAV GmbH, Power Plant Management Services, Harcros Chemicals, and Keystone Biofuels, are used as examples of corporate prosecutions involving large penalties.

Volkswagen AG was prosecuted for its systematic efforts to sell diesel vehicles in the United States with software designed to cheat emissions testing.⁵⁴ IAV GmbH was also prosecuted for their role in helping to engineer systems in the Volkswagen emissions rigging scheme and was ordered to pay a \$35 million criminal penalty.⁵⁵ Power Plant Management Services and Berkshire Power Company were prosecuted for tampering with air emissions controls and submitting false statements, resulting in over \$7.2 million in fines, penalties, and community service payments.⁵⁶ Harcros Chemicals was prosecuted for the release of a toxic cloud of chlorine gas that caused approximately 140 individuals to seek medical attention and both the company and MGP Ingredients were each fined \$1 million.⁵⁷ Keystone Biofuels was prosecuted for fraudulently claiming to produce biofuel to create sellable renewable fuel credits (RINs) and claim federal tax refunds.⁵⁸ The company was sentenced to pay over \$4.1 million in restitution to the Internal Revenue Service (IRS) and over \$5 million in restitution.⁵⁹

While these cases represent the largest corporate penalties in our study, monetary penalties against companies are heavily influenced by the \$2.8 billion criminal penalty assessed to Volkswagen AG. Absent that penalty alone, monetary penalties assessed to companies drop to a much less significant \$59 million. Excluding the four cases above that total over \$53 million, penalties drop to about \$5.4 million. The top five monetary penalties assessed at sentencing to individual defendants totaled over \$76 million. All but one of these prosecuted focused on biofuel production fraud. Excluding these cases brings the total penalties assessed to

54. United States v. Volkswagen AG, No. 16-CR-20394 ¶ 2 (E.D. Mich. Apr. 17, 2017) (Summary of Criminal Prosecutions Database). The company was sentenced to pay a \$2.8 billion criminal penalty for violations of the CAA, conspiracy to defraud the United States, wire fraud, obstruction of justice, and importation of vehicles into the country by means of false statements.

55. United States v. IAV GmbH, No. 16-CR-20394 ¶ 1 (E.D. Mich. May 22, 2019) (EPA Summary of Criminal Prosecutions Database).

56. United States v. Power Plant Management Services, No. 3:16-CR-30021-MGM ¶ 9 (D. Mass. Mar. 23, 2017) (EPA Summary of Criminal Prosecutions Database).

57. United States v. Harcros Chemicals, No. 19-40021-01/02/-HLT (D. Kan. May 27, 2020) (EPA Summary of Criminal Prosecutions Database).

58. U.S. DEP'T OF JUST., *Pennsylvania Biofuel Company Owners Get Prison*, INDUSTRIAL EQUIPMENT NEWS (Oct. 21, 2020), <https://www.ien.com/regulation/news/21199423/pennsylvania-biofuel-company-owners-get-prison>.

59. United States v. Keystone Biofuels, Inc., No. 17:143 (M.D. Pa. Oct. 20, 2020) (EPA Summary of Criminal Prosecutions Database).

individual defendants to a much lower figure of \$42 million.⁶⁰ Total probation and incarceration penalties were more evenly dispersed with fewer outliers than monetary penalties.⁶¹

Our final analysis in Figure 6 brings us to move beyond charging and sentencing patterns and an analysis of whether prosecutors sought and obtained significant penalties for serious crimes, to a discussion of the nature of the prosecutions themselves during the Trump Administration. We reanalyzed the cases to assess, what is in our judgment, to be the major theme of each prosecution, based on what we perceive as the primary crime in the case. In our analysis of the cases, we were able to categorize all prosecutions into one of four categories which we label as: asbestos crimes, vehicle emissions crimes, renewable fuel crimes, and operations crimes.⁶²

60. These cases include the prosecution of Scott Johnson, who was prosecuted for his role in the Gen-X Energy fraud case, where the company claimed to produce some 72 million renewable energy credits that sold for \$57 million on the open market and claimed over \$9.5 million in tax refunds from the IRS. *United States v. Johnson*, No. 4:15-CR-6042-SMJ (E.D. Wash. Jun. 1, 2017) (EPA Summary of Criminal Prosecutions Database). Donald Paul Holmes was prosecuted as Johnson's co-conspirator in a separate case involved with the Gen-X biofuel fraud. *United States v. Homes*, No. 4:15-CR-6044-SMJ-1 (E.D. Wash. Dec. 20, 2017) (EPA Summary of Criminal Prosecutions Database). Andre Mark Bernard was prosecuted in a related case. *United States v. Bernard*, No. 2:17-CR-61-FTM-38MRM (M.D. Fla. Feb. 6, 2018) (EPA Summary of Criminal Prosecutions Database). Gregory Schnabel was prosecuted in Ohio for a similar biofuel production crime. *United States v. Schnabel*, No. 2:17-CR-169 (S.D. Ohio Aug. 27, 2018) (EPA Summary of Criminal Prosecutions Database). Christopher Gattarello was prosecuted for illegal asbestos demolition under the CAA and Title 18 offenses relating to false statements and fraud. *United States v. Gattarello*, No. 1:14-CR-353 (N.D. Ohio July 7, 2017) (EPA Summary of Criminal Prosecutions Database).

61. Community service was skewed by a few prosecutions. James Powers, *United States v. Powers*, No. 1:2016cr00076 (D.D.C. Jan. 30, 2017) (EPA Summary of Criminal Prosecutions Database), and Larry Miller, *United States v. Miller*, No. 1:2015cr00163 (D.D.C. May 19, 2017) (EPA Summary of Criminal Prosecutions), were sentenced to 450 hours of community service for illegal asbestos abatement and disposal. Philip Farley, *United States v. Farley*, No. 8:15-CR-00133 (M.D. Fla. June 22, 2018) (EPA Summary of Criminal Prosecutions Database), was prosecuted for illegal asbestos abatement and sentenced to 300 hours of community service. Jacob Lee Davis, *United States v. Davis*, No. 2:2019cr00201 (D. Wyo. June 9, 2020) (EPA Summary of Criminal Prosecution Database), was also prosecuted for illegal asbestos abatement and he and his co-defendant Richard Cutler, *United States v. Cutler*, No. 2:2020-cr-00027 (D. Wyo. Aug. 26, 2020) (EPA Summary of Criminal Prosecutions Database), were sentenced to serve 120 hours of community service. The Powers and Miller, Farley, and Davis cases are responsible for 60% of the community service hours assessed to defendants at sentencing in our data.

62. Three cases centered on crimes involving refrigerants are not included in Figure 6. This includes the prosecution of Michael Wagner, *State v. Wagner*, La. No. C-1305-16 (Jun. 6, 2017) (EPA Summary of Criminal Prosecutions Database), who illegally sold propane gas as a refrigerant and replacement for Freon. This also includes the prosecution of Byron Stuckey, *United States v. Stuckey*, No. 6:2015cr10022 (D. Kan. Aug. 3, 2017) (EPA Summary of Criminal Prosecutions Database), who stole an air conditioning unit and releasing a refrigerant into the ambient air. Mahmoud Mohamed Alkabbani, *United States v. Alkabbani*, No. 2:2017cr00311 (C.D. Cal. June 13, 2018) (EPA Summary of Criminal Prosecutions Database), was prosecuted for attempting to import R-22, a banned refrigerant from China, that was fraudulently labeled R-134a, a legal refrigerant.

Figure 6. Themes in Air Pollution Prosecutions During the Trump Administration

<u>Asbestos Crime</u> 39%	<u>Vehicle Emissions Crime</u> 19%
<u>Renewable Fuel Crime</u> 26%	<u>Operations Crime</u> 12%

Source: EPA Summary of Criminal Prosecutions Database

The most common air pollution offense was related to the removal of asbestos containing materials (ACMs), including unpermitted demolition of buildings containing asbestos, abatement, disposal, or failure to protect and certify workers engaging in asbestos removal work. Asbestos is regulated under the CAA as a hazardous air pollutant (HAP) and given that unpermitted removal can release asbestos into the ambient air, it provides one of the few air emissions regulated by EPA that leaves persistent physical evidence.⁶³ Asbestos National Emissions Standards for Hazardous Air Pollutants rules are in force for owners of a stationary source containing asbestos, demolition or renovation work where asbestos is present, including rules for workers and work place standards for removal of ACM.⁶⁴ Thirty-nine percent of air pollution prosecutions (i.e. 27 total prosecutions) adjudicated during the Trump Era focus on asbestos, making it the most prevalent theme amongst all air pollution prosecutions in our analysis. Case examples classified as asbestos crimes include the examples of Joseph Chernis, Stephen J. Craig, and Cornerstone Management Professionals.

Joseph Chernis was prosecuted for hiring an untrained individual to remove asbestos pipe insulation.⁶⁵ He was charged under the CAA for illegal demolition and removal of asbestos and sentenced to thirty-seven months incarceration and three

63. For rules governing asbestos as a HAP, see *Overview of the Asbestos National Emissions Standards for Hazardous Air Pollutants*, EPA (Feb. 9, 2022), <https://www.epa.gov/asbestos/overview-asbestos-national-emission-standards-hazardous-air-pollutants-neshap>.

64. *Criminal Provisions of the Clean Air Act*, EPA (Feb. 9, 2021), <https://www.epa.gov/enforcement/criminal-provisions-clean-air-act>.

65. *United States v. Chernis*, No. 3:16-cr-30033 (C.D. Ill. Feb. 5, 2018) (EPA Summary of Criminal Prosecutions Database).

years of supervised release.⁶⁶ Stephen J. Craig, owner of Boston Lead Company, was prosecuted for fraudulently issuing lead-based paint and asbestos removal certifications.⁶⁷ Craig was sentenced to six months imprisonment, three years of supervised release, and a \$20,000 fine.⁶⁸ Cornerstone Management Professionals abated asbestos in a condominium clubhouse without giving the required ten-day notice to authorities as required by law, dumped the waste in a non-permitted landfill, and sending altered lab reports to officials showing a minimum amount of asbestos.⁶⁹ Cornerstone and its owner Robert Walsh were also charged with wire fraud in connection with an attempt to defraud the homeowners' association and was sentenced to fifteen months incarceration, three years supervised release, a \$125,000 fine, and joint and several restitution totaling \$247,413.⁷⁰

We label 26% of prosecutions or 18 prosecutions as renewable fuel crimes. These crimes were generally perpetuated in an effort to defraud the Renewable Fuel Standard (RFS) program created under the Energy Independence and Policy Act of 2005, which required a certain volume of petroleum-based fuel to be replaced with biofuels or biomass-based diesel.⁷¹ Many of these crimes are prosecuted under the CAA because they involve defrauding the renewable fuel program and came under the purview of CAA regulations. We included all of these cases as air pollution prosecutions as they were related to the general theme of defrauding the program, even if defendants were ultimately not charged under the CAA. In all cases, the prosecutions rested on defendants pretending to create a certain volume of biofuels in order to either generate renewable energy credits to sell to other producers that failed to produce enough biofuel to meet the federal standard, and/or fraudulently claim federal production tax credits for biofuel that was never produced.⁷² We

66. Crystal Thomas, *Chernis Gets Sentenced to More Than Three Years in Prison in Pillsbury Asbestos Case*, THE STATE JOURNAL-REGISTER (Feb. 5, 2018, 11:28 AM CT), <https://www.sj-r.com/story/news/2018/02/05/chernis-sentenced-to-more-than/15310444007/>.

67. United States v. Craig, No. 3:12-cr-269AW (D. Conn. Dec. 7, 2017) (EPA Summary of Criminal Prosecutions Database).

68. U.S. Attorney's Office for the District of Connecticut, *Environmental Training Company Owner to Serve Prison Time for Falsely Certifying Lead Abatement Course Completion*, U.S. DEP'T OF JUST. (Dec. 7, 2017), <https://www.justice.gov/usao-ct/pr/environmental-training-company-owner-serve-prison-time-falsely-certifying-lead-abatement>.

69. United States v. Cornerstone Mgmt. Pro., No. 16-CR-02872-BTM (S.D. Cal. May 4, 2018) (EPA Summary of Criminal Prosecutions Database).

70. *Id.*; U.S. ATT'Y OFF. FOR THE S.D. CAL., *Property Manager and Firm Charged with Defrauding Homeowners' Association for \$247,000*, U.S. DEPARTMENT OF JUSTICE (Dec. 12, 2016), <https://www.justice.gov/usao-sdca/pr/property-manager-and-firm-charged-defrauding-homeowners-association-247000>.

71. *Overview for Renewable Fuel Standard*, EPA, <https://www.epa.gov/renewable-fuel-standard-program/overview-renewable-fuel-standard>.

72. As mentioned in our previous discussion of large penalty monetary assessments in air pollution prosecutions, because it was relatively simple to fraudulently claim a significant volume of biofuel production to sell RINs and claim production tax credits, the fines and restitution tended to be high in many of these cases. Our estimates of individual fines totals are heavily skewed towards cases in this category. We estimate that total monetary fines to individual defendants in this category equal \$107,058,279 or 91% of the total individual fines assessed to all individual defendants in our analysis.

provide some examples of this category with the prosecution of Jin Chul Cha, Terry Zintel, and Calvin Glover.

Jin Chul Cha was prosecuted for his role in the Gen-X Energy Group criminal conspiracy to falsely claim more than 9,400,000 renewable energy credits and filling false claims with the IRS for over \$2.5 million in tax refunds.⁷³ Terry Zintel, co-owner of Midwest Biodiesel Products in Roxanna, Illinois, was prosecuted for claiming fraudulent excise tax refunds for the production of biofuel.⁷⁴ Calvin Glover was prosecuted for his role in filling \$7.2 million in false tax rebate claims to the IRS for production of biofuel as part of the prosecution of Shintan, Inc.⁷⁵

In 13 prosecutions or 19% of the air pollution prosecutions in our analysis are categorized as vehicle emissions crimes. These crimes centered on a few specific crimes, such as falsifying emissions testing data, using technology to produce fraudulent emissions testing results or to modify emissions equipment, and illegal importation of non-conforming vehicles. The previously mentioned prosecution of Volkswagen AG for its emissions rigging fraud falls in this category, as does the related prosecution of the engineering firm engaged in the company's conspiracy to cheat emissions testing equipment, IAV GmbH.⁷⁶ Case examples to contextualize prosecutions in this category include the prosecution of Darren Daniel Kattan, Jaime Patrick Alvarez, Wayne Joseph Powell, and Hyundai Construction Equipment Americas.

Darren Daniel Kattan was prosecuted for building and distributing some 170 devices to bypass state vehicle emissions inspections tests and was subsequently charged with violating the CAA and conspiring to commit mail fraud.⁷⁷ Jaime Patrick Alvarez along with eight co-defendants was prosecuted for circumventing California's Smog Check emissions testing by clean piping 1,300 vehicles that passed emissions tests but were never actually tested.⁷⁸ Wayne Joseph Powell was in charge

73. United States v. Cha, No. 4:17-CR6046-SMJ (E.D. Wash. Apr. 20, 2018) (EPA Summary of Criminal Prosecutions Database). Cha was sentenced to a fifty-one month prison term and three years of probation.

74. United States v. Zintel, No. 4:18WI13HEA (D. Mo. Apr. 17, 2019) (EPA Summary of Criminal Prosecutions Database). Zintel was sentenced to one year and a day in prison and \$531,947.75 in restitution to the IRS.

75. United States v. Glover, No. 1:18-cr-00346 (D. Colo. Oct. 28, 2021) (EPA Summary of Criminal Prosecutions Database).

76. Volkswagen engineer James Robert Liang was also prosecuted for his role in the conspiracy, being sentenced to forty months in federal prison and two years of probation. United States v. Liang, No. 16-CR-20394 (E.D. Mich. Aug. 25, 2017) (EPA Summary of Criminal Prosecutions Database). Oliver Schmidt, United States v. Schmidt, No. 16-cr-20394 (E.D. Mich., Dec. 6, 2017) (EPA Summary of Criminal Prosecutions Database), was the general manager of the company's U.S. Environment and Engineering Office and was sentenced to eighty-four months incarceration and to pay a \$400,000 fine for his role in the conspiracy.

77. United States v. Kattan, No. 5:16-CR-327(NAM) (N.D.N.Y. June 13, 2017) (EPA Summary of Criminal Prosecutions Database). Kattan was sentenced to three years of probation with the first four months as house arrest and a \$10,000 fine.

78. United States v. Alvarez, No. cr-2016-0049 (C.D. Cal. Aug. 7, 2017) (EPA Summary of Criminal Prosecutions Database). Alvarez was sentenced to twenty-four months of probation for conspiring to violate the CAA. Clean piping is when an individual substitutes a passing vehicle's emissions data for one that does not pass, by placing the testing probe in a tailpipe of another vehicle. *See* Underhood

of submitting certificates of conformity for emissions compliance for motorcycles manufactured by Suzuki Motor Corporation and was prosecuted for submitting false data in reports to government regulators.⁷⁹ Hyundai Construction Equipment Americas was prosecuted for conspiring to defraud the United States government and violate the CAA for knowingly importing non-conforming construction equipment.⁸⁰

The final eight prosecutions, or 12% of the air pollution prosecutions in the analysis, focused on what we label as operational crimes. These are air pollution crimes that typically involve CAA violations at stationary sources of pollution that emitted regulated emissions in excess of their Title V permits or similar violations.⁸¹ The previously mentioned prosecutions of Harcros Chemicals, Dyno Nobel, and Power Plant Management Services fall within this category. We provide a few additional examples for context in this category with the prosecutions of Syntac Coated Products, Mark Hurst, and Raymond Williams.

Syntac Coated Products was prosecuted for failing to report that its emissions equipment was not functioning properly and on multiple occasions could have likely released hazardous emissions in excess of permitted limits.⁸² Mark Hurst, the plant manager at Custom Carbon Processing was prosecuted after a delivery of natural gas condensate exploded, destroying much of the facility and injuring three workers.⁸³ Raymond Williams, the CEO of U.S. Technology Corporation, was prosecuted for conspiring to illegally ship nine million pounds of hazardous waste for their facility, as well as placing a person in imminent danger by releasing hazardous waste into the ambient air.⁸⁴

Service Staff Writers, *California Cracking Down on Smog Test Facilities 'Clean Piping' Smog Checks*, UNDERHOOD SERVICE (June 16, 2010), <https://www.underhoodservice.com/california-cracking-down-on-smog-test-facilities-clean-piping-smog-checks/>.

79. United States v. Powell, No. 2:17-CR-20374 (E.D. Mich. Dec. 14, 2017) (EPA Summary of Criminal Prosecutions Database). Powell was sentenced to one day in prison, one year of probation, and a \$2,500 fine.

80. United States v. Hyundai Constr. Equip. Am. (No.1:18-CR-00379 (N.D. Ga. Nov. 14, 2018) (EPA Summary of Criminal Prosecutions Database). The company was sentenced to pay \$1,950,000 in federal fines.

81. The CAA requires major sources of stationary pollution to possess current operational permits, known as Title V permits. See *Operating Permits Issued under Title V of the Clean Air Act*, EPA (Dec. 28, 2020), <https://www.epa.gov/title-v-operating-permits>.

82. United States v. Syntac Coated Prod., No. 3:17CR10 (D. Conn. Jan. 19, 2017) (EPA Summary of Criminal Prosecutions Database). The company was charged with failure to notify officials of the release of hazardous emissions under the CAA and was ordered to pay a \$200,000 fine and make a \$200,000 community service payment.

83. United States v. Hurst, No. CR 17-143-BLG-SPW (D. Mont. July 15, 2020) (EPA Summary of Criminal Prosecutions Database). Hurst was sentenced to two years of probation, a \$5,000 fine, and \$12,000 in restitution.

84. United States v. Williams, No. 4:17-CR-00189-RWS-PLC (E.D. Mo. Jan. 11, 2019) (EPA Summary of Criminal Prosecutions Database). Williams and UST were both sentenced to sixty months of probation and joint restitution with other parties in the case of \$1,500,000.

IV. CONCLUSION

Our analysis of air pollution demonstrates the ability to prosecutors to persist in pursuing serious crimes, as well as securing significant punishments at sentencing. The Trump Administration did not stop career prosecutors and criminal investigators from pursuing difficult cases or from meeting their organizational objectives. Even though career civil servants persisted in their efforts, according to previous research, prosecutions during this period were significantly reduced in number compared to previous presidential administrations.⁸⁵ We find prosecutions declined in a linear fashion across each FY in our analysis. The broader picture that emerges supports past research that environmental law enforcement agencies can persist through difficult presidential administrations but shows a significant decline in those efforts.⁸⁶ We conclude with an elaboration on some of these key findings, followed by practical solutions to improve federal environmental law enforcement in the United States.

Our first finding is that air pollution prosecutions declined during the Trump period. In fiscal year (FY) 2017, there were 22 prosecutions adjudicated, but these slipped to 12 by FY 2020. The total number of defendants prosecuted followed a similar pattern. In FY 2017, 41 defendants were prosecuted and by FY 2021, that number dropped to 19. These declining numbers mirror earlier work during this period, even considering the realities of Covid-19 for prosecuting environmental crimes.⁸⁷

We find that prosecutors pursued serious violations of environmental law. As an indicator, a third of prosecutions involved charges such as conspiracy or fraud. In 19% of air pollution prosecutions, at least one defendant was charged with false statements. In 59% of all air pollution prosecutions, at least one defendant was charged with a Title 18 or other crime other than an environmental crime. As with previous research, using this as one metric, a majority of crimes in our analysis involved some contributing factor in addition to an environmental crime.⁸⁸ While we could not systematically glean these factors from the EPA's case summaries, research on environmental crimes shows these to be chronic violators, willful conduct, operating outside of the regulatory system, or other aggregating factors.⁸⁹

Another key takeaway from our analysis is that while prosecutors did secure significant penalties in air pollution prosecutions, and those include large penalty cases secured at trial against large national and international corporations, and while these are all measures of success, a few key cases significantly skew the aggregate results. Corporate penalties are heavily skewed by Volkswagen AG's prosecution. Total penalties levied against companies is reduced from a handsome \$2.859 billion

85. For research analyzing environmental crime prosecutions during the first half of the Trump Era, see Uhlmann, *supra* note 11, at 314-20.

86. Ozymy et al., *supra* note 19, at 49-60.

87. See Uhlmann, *supra* note 11, at 312-20; Ozymy et al., *supra* note 12, at 38-45.

88. Research shows that 96% of defendants prosecuted for environmental crimes had at least one aggregating variable attached to the act. See Uhlmann, *supra* note 11, at 312.

89. See Uhlmann, *supra* note 42, at 159.

to only \$59 million, excluding that one case alone.⁹⁰ The ability of prosecutors to secure the second largest penalty in an environmental crime prosecution during the Trump Administration and to continue to seek these penalties is laudable, but otherwise, air pollution prosecutions generally turn up minor penalties against companies with a few noted exceptions.⁹¹ Monetary penalties levied against individuals are heavily influenced by renewable fuel crimes, as well.⁹²

There has never been a golden era of federal environmental law enforcement. The criminal enforcement apparatus evolved due to the need to investigate and punish crimes involving significant harm and culpable conduct and developed incrementally through the 1980s-1990s.⁹³ It was running on fumes by the Obama Era, due to increased responsibilities, miserly financial support, and hostile political opposition.⁹⁴ The Biden Administration has expressed strong support for addressing environmental injustice in the United States through appropriations to EPA, DOJ, and other relevant federal agencies.⁹⁵ We suggest that environmental justice can be better addressed and environmental criminal enforcement significantly renewed through additional resources, listening to environmental justice communities and engaging them in community policing efforts, and for prosecutors to further pursue recognition of environmental justice communities as victims of crime in federal court.

Enhancing resources for environmental law enforcement is long overdue. For example, Congress set the minimum number of EPA criminal investigators at 200 agents in 1990 and has this number lapsed significantly since the George W. Bush Administration. Hiring sufficient criminal investigators in EPA-CID to meet the statutory minimum is desperately needed and the Biden Administration should invest in additional criminal investigators to offset the historical slide away from supporting environmental policing efforts.⁹⁶ For DOJ-ECS to address

90. The prosecution of BP for their role in causing the Deepwater Horizon disaster was the largest penalty secured by environmental crime prosecutors. U.S. v. BP Exp. and Prod., No. 2:12-cr-002920SSV-DEK (E.D. La. Nov. 15, 2012) (EPA Summary of Criminal Prosecutions Database). BP was ordered to pay \$4 billion in criminal fines. Volkswagen agreed to plead guilty and pay a \$2.8 billion criminal penalty. U.S. v. Volkswagen AG, No. 16-CR-20394 (E.D. Mich., Apr. 21, 2017) (EPA Summary of Criminal Prosecutions Database).

91. Excluding the second largest penalties levied against Power Plant Management Services, U.S. v. Power Plant Mgmt. Serv., No. 3:16-CR-30021-MGM (D. Mass. Mar. 23, 2017) (EPA Summary of Criminal Prosecutions Database), and IAV GmbH, U.S. v. IAV GmbH, No. 16-CR-20394 (E.D. Mich. May 22, 2019) (EPA Summary of Criminal Prosecutions Database), (\$7.2 and \$35 million respectively), as well as the Volkswagen prosecution reduces total corporate monetary penalties to about \$17.4 million. *Supra* note 56; *supra* note 55.

92. We estimated that total monetary fines to individual defendants in this category equal \$107,058,279 or 91% of the total individual fines assessed to all individual defendants in our analysis.

93. See Mintz, *supra* note 13, at 10390, 10408; Mintz, *supra* note 37, at 10510-19.

94. See Mintz, *supra* note 37; Earl E. Devaney, *The Exercise of Investigative Discretion*, EPA (Jan. 12, 1994), <https://www.epa.gov/sites/production/files/documents/exercise.pdf>.

95. See *The Biden Plan to Secure Environmental Justice and Equitable Economic Opportunity*, BIDEN HARRIS CAMPAIGN (2020) <https://joebiden.com/environmental-justice-plan/>.

96. The Pollution Prosecution Act of 1990, 42 U.S.C. § 202(a)(5), created a statutory minimum at 200 investigative staff for EPA-CID. Meeting this threshold has not occurred for years. See *EPA CID*

environmental harms existing in environmental justice communities, forty something attorneys is insufficient to manage the scale of the problem.⁹⁷ Creating a general deterrent effect when environmental law enforcement numbers are so low is a near impossibility.⁹⁸ DOJ-ECS needs to hire dedicated investigators and prosecutors to shore up resources and prevent companies from polluting the fenceline.

Added investigators and prosecutors will not automatically improve community relations. Any efforts to increase environmental law enforcement staff should be met with parallel efforts to engage the communities they will serve. One potential effort could be to integrate communities into community policing efforts.⁹⁹ Expanding small grants to organize air monitoring and policing of industrial facilities is a start, particularly in environmental justice communities, where EPA small grant programs are already in place.¹⁰⁰ Empowering environmental justice communities to help with policing efforts requires more time, but in our own experience working in these communities locally on a large federal environmental crime prosecution, it was critical in successfully prosecuting and convicting a multinational corporation.¹⁰¹ Our analysis of air pollution crimes shows that during Trump Administration, very few companies were punished for operational crimes involving unpermitted emissions that violated the CAA. Protecting environmental justice communities from environmental crimes requires law enforcement agencies to step up their efforts significantly in this area if they are to police the large industrial facilities that injure nearby communities.

A final effort for the Biden Administration to address environmental injustice through environmental enforcement, is to push prosecutors to seek recognition of environmental justice communities as crime victims under the Crime Victims' Rights Act.¹⁰² A handful of cases have applied the Act to environmental

Agent Count, PUBLIC EMPLOYEES FOR ENVIRONMENTAL RESPONSIBILITY (PEER) (2019), https://www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf; see also Public Employees for Environmental Responsibility, Pollution Prosecution Plunge Continues under Biden, PEER (Jan. 24, 2022), <https://peer.org/pollution-prosecution-plunge-continues-under-biden/>

97. The number of prosecutors and environmental police make the probability of criminal punishment or detection terribly low. See Lynch et al., *supra* note 38, at 1096-98.

98. See PUBLIC EMPLOYEES FOR ENVIRONMENTAL RESPONSIBILITY (PEER), *EPA CID Agent Count*, https://www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf.

99. EPA can broaden participation in its Report a Violation program targeted at fenceline communities. See *Criminal Enforcement Program*, EPA 6-7 (2011), <https://19january2017snapshot.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf>.

100. Such programs already exist but could be expanded. See *Environmental Justice Small Grants Program*, EPA, <https://www.epa.gov/environmentaljustice/environmental-justice-small-grants-program>.

101. For a truncated synopsis of our own work in this area, see Joshua Ozymy and Melissa Jarrell, *Righting and "Writing" Wrongs: A Postmortem on a Decade of Environmental Justice Activism in Corpus Christi, Texas*, 11 ENV'T JUST. 23, 23-31(2019).

102. The movement to expand the rights of crime victims has been occurred at the state and federal level in the United States since the 1980s. See William F. McDonald, *Towards a Bicentennial Revolution in Criminal Justice: The Return of the Victim*, 13 AM. CRIM. L. REV. 649 (1976); David L. Roland, *Progress in*

crime victims, and in a limited fashion to environmental justice communities.¹⁰³ Unless corporate polluters near the fenceline face significant damages in restitution to their victims and unless prosecutors push to have these victims properly recognized in federal court, it will be difficult to deter corporate polluters, successfully police and prosecute offenders, and reduce environmental harms in fenceline communities.¹⁰⁴

the Victim Reform Movement: No Longer the "Forgotten Victim", 17 PEPPERDINE L. REV. 36 (1989); Douglas E. Beloof, *Weighing Crime Victims' Interests in Judicially Crafted Criminal Procedure*, 56 CATH. UNIV. L. REV. 1135 (2007); see also Crime Victims' Rights Act, 18 U.S.C. § 3771 (granting procedural rights to victims of crime). For an overview of the Crime Victims' Rights Act, see Paul G. Cassell, *Recognizing Victims in the Federal Rules of Criminal Procedure: Amendments in Light of the Crime Victims' Rights Act*, BYU L. REV. 835 (2005); Paul G. Cassell, *Treating Crime Victims Fairly: Integrating Victims into the Federal Rules of Criminal Procedure*, UTAH L. REV. 861 (2007). In 2018, President Trump signed the Amy, Vicky & Andy Child Pornography Victim Assistance Act that addressed victim restitution and other issues in child pornography case. See Paul G. Cassell & James R. Marsh, *The New Amy, Vicky, and Andy Act: A Positive Step Towards Full Restitution for Child Pornography Victims*, 31 FED. SENT'G REP. 9 (2009). A movement to secure greater rights for crime victims across the U.S. States, known as the Marsy's Law Movement has gained significant traction in the last five years. See *About Marsy's Law*, MARSY'S LAW, <https://www.marsyslaw.us/> (last visited Feb. 8, 2021); Paul G. Cassell, *Balancing the Scales of Justice: The Case for and Effects of Utah's Victims' Rights Amendment*, UTAH L. REV. 1373 (1994); Paul G. Cassell & Margaret Garvin, *Protecting Crime Victims in State Constitutions: The Example of the New Marsy's Law for Florida* 110 J. OF CRIM. L. & CRIMINOLOGY 99, 104-05 (2020).

103. Melissa L. Jarrell & Joshua Ozymy, *Real Crime, Real Victims: Environmental Crime Victims and the Crime Victims' Rights Act (CVRA)*, 58 CRIM., L. & SOC. CHANGE, 375 (2012).

104. For a broader treatment of environmental justice communities as potential communities of victims under state and federal law, see Joshua Ozymy & Melissa L. Jarrell, 2020, *Of Sex Crimes and Fencelines: How Recognition of Environmental Justice Communities as Crime Victims Under State and Federal Law Can Help Secure Environmental Justice*, 38 PACE ENV'T L. REV. 109, 109-40 (2020).