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Lone Star Crime: The Criminal Enforcement of Environmental Law in the State of Texas

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ARTICLE

LONE STAR CRIME: THE CRIMINAL ENFORCEMENT OF ENVIRONMENTAL LAW IN THE STATE OF TEXAS

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I. Introduction.....	1096
II. Criminal Enforcement Tools for the Environment.....	1098
III. Compliance Versus Deterrence.....	1101
IV. Data and Method.....	1104
V. Results.....	1105
VI. Discussion.....	1120
VII. Conclusion.....	1121

ABSTRACT

Most transgressions of environmental law in the United States are remedied with civil or administrative tools. When crimes involve significant harm or culpable conduct, criminal enforcement tools may be applied. With the importance of environmental criminal enforcement for punishing offenders and deterring future offenses, we still have little empirical

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understanding of this phenomenon in Texas. We use content analysis of 2,588 federal environmental criminal prosecutions that result from EPA criminal investigations from 1983 to 2019 and select all prosecutions occurring in Texas. Our approach allows us to explore prosecution patterns over time, examine charging and sentencing trends, and draw out the broader themes of environmental crimes prosecuted in the state. Our findings show that across 122 adjudicated cases, prosecutors obtained over \$371 million in monetary penalties, roughly 483 years of probation, and 125 years of incarceration at sentencing. We find that hazardous waste crimes comprise 29% of prosecutions; water pollution crimes comprise 24% of prosecutions; air pollution crimes comprise 22% of prosecutions; and state-level crimes comprise 19% of prosecutions. This Article concludes with suggestions for bolstering the criminal enforcement apparatus through greater resources, media salience, and community policing.

I. INTRODUCTION

On March 23, 2005, an explosion at British Petroleum's (BP) Texas City refinery rocked the facility killing fifteen workers and injuring another 180. BP pled guilty to knowing violations of the Clean Air Act (CAA)¹ on March 12, 2009, for its actions that led to the explosion.² The company paid a \$50 million criminal fine, the largest ever at the time under the CAA, and settled a series of civil actions brought by the Department of Justice (DOJ), the Occupational Safety and Health Administration (OSHA), and the victims' families.³ An examination of the company's safety record showed Texas City was not an isolated event, as the development of a corporate

1. Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392 (1963) (codified as amended in scattered sections of Title 42).

2. *United States v. BP Prods. N. Am., Inc.*, No. 7-CR-434 (S.D. Tex. Mar. 12, 2009) (EPA Summary of Criminal Prosecutions Database) (reporting BP paid a \$50 million criminal fine and faced thirty-six months of probation); *accord* *United States v. Volkswagen AG*, No. 16-CR-20394 (E.D. Mich. Apr. 21, 2017) (EPA Summary of Criminal Prosecution Database) (reporting BP's record for the largest CAA fine was eclipsed by the \$2.8 billion criminal penalty levied against Volkswagen AG for their emissions rigging fraud involving clean diesel cars sold in the United States).

3. Press Release, OSHA, BP Agrees to Pay More than \$13 Million and Abate Violations in Settlement Agreement With US Department of Labor (July 12, 2012), <https://www.osha.gov/news/newsreleases/national/07122012> [<https://perma.cc/6NAF-F4PB>] (reporting on BP's settlement of most citations and payment of \$13 million in penalties); *BP Texas City Clean Air Act Settlement*, EPA, <https://www.epa.gov/enforcement/bp-texas-city-clean-air-act-settlement> [<https://perma.cc/4UG2-2RCV>] (reporting BP's civil settlement, which included injunctive relief in the form of a monitoring and control system for benzene wastes at a cost of \$161 million, a \$12 million fine, and \$6 million for a supplemental air control project).

culture that prioritized revenue over safety and maintenance had become prolific.⁴ BP's corporate culture and failure to invest in basic safety and maintenance protocols led to another major environmental crime affecting Texas on April 20, 2010—the blowout of the Macondo well.⁵ This blowout ruptured the Deepwater Horizon drilling platform and killed eleven workers, causing arguably the worst maritime environmental disaster in U.S. history.⁶ The record-setting result of the case: BP pled guilty to eleven counts of felony manslaughter and one count of felony obstruction because it withheld records from Congress during the subsequent investigation.⁷ Additionally, it pled guilty to violations of the Clean Water Act (CWA)⁸ and the Migratory Bird Treaty Act (MBTA),⁹ for which it was assessed a \$4 billion fine—the largest fine for an environmental crime in U.S. history.¹⁰

4. Previous criminal prosecutions show a pattern of the company failing to engage in maintenance and safety by cutting corners to save costs. *See* United States v. BP Expl.-Alaska (BPXA), No. A99-0141 (D. Alaska Sept. 23, 1999) (EPA Summary of Criminal Prosecutions Database) (finding BP criminally liable for mixing hazardous waste with drilling mud). In this case, a \$500,000 fine, sixty months of probation, and a \$15 million monitoring plan were assessed at sentencing. *Id.* In 2006, the Prudhoe Bay Oil Spill occurred, spilling approximately 270,000 gallons of oil. United States v. BP Expl. Alaska, No. 7-CR-125 (D. Alaska Oct. 24, 2007) (EPA Summary of Criminal Prosecutions Database). The spill caused pipeline corrosion and was attributable to improper maintenance. *Id.* The company was ordered to pay \$20 million in fines and restitution, a \$125 special assessment fee, and serve thirty-six months of probation. *Id.* BP settled the civil claims for approximately \$280 million and agreed to injunctive relief, including an independent monitoring and pipeline management system. *Id.*; *see also* BP North Slope Clean Water Act Settlement, EPA, <https://www.epa.gov/enforcement/bp-north-slope-clean-water-act-settlement> [<https://perma.cc/LME3-2K4F>] (demonstrating BP's failure to follow the requirements under the Clean Water Act to prevent this type of spillage).

5. *See* Judgment in a Criminal Case, United States v. BP Expl. & Prod., Inc., No. 12-CR-292 (E.D. La. Jan. 29, 2013), ECF No. 66 (finding BP liable for multiple counts of seaman's manslaughter, and violations of the Clean Water Act and Migratory Bird Treaty).

6. *Id.*

7. Judgment in a Criminal Case, United States v. BP Expl. & Prod., Inc., No. 12-CR-292 (E.D. La. Jan. 29, 2013), ECF No. 66.

8. Federal Water Pollution Control Act Amendment of 1972, Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251–1387).

9. Migratory Bird Treaty Act, ch. 128, 40 Stat. 755 (1918) (codified as amended at 16 U.S.C. §§ 703–712).

10. *U.S. and Five Gulf States Reach Historic Settlement with BP to Resolve Civil Lawsuit Over Deepwater Horizon Oil Spill*, U.S. DEP'T OF JUST. (Oct. 5, 2015), <https://www.justice.gov/opa/pr/us-and-five-gulf-states-reach-historic-settlement-bp-resolve-civil-lawsuit-over-deepwater> [<https://perma.cc/8L5N-X95W>]. The court found BP to be 67% at fault, Transocean—the owner of the rig—to be 30% at fault, and Halliburton—the drilling fluids contractor—to be 3% at fault. *See id.* (calculating total damages at \$20.8 billion). BP was found to be grossly negligent in its actions as the operator of the rig, which exempted them from liability caps created by the Oil Pollution Control Act, passed in a response to the Exxon Valdez disaster. *In re* Oil Spill by the Oil Rig "Deepwater Horizon," 21 F. Supp. 3d 657, 743 (E.D. La. 2014); *see also* Oil Pollution Act of 1990, Pub. L. No. 101-380, § 1004(c), 104 Stat.

BP's actions demonstrate the necessity of applying criminal enforcement tools to environmental crimes that involve significant harm and culpable conduct.¹¹ The goals of criminal investigation and prosecution for environmental crimes are to punish environmental criminals and deter future offenses.¹² Our understanding of whether criminal prosecution deters crime is generally weak, as few empirical studies have examined patterns of environmental prosecutions over time.¹³ This is particularly true of the State of Texas. This Article seeks to address this gap in the literature by exploring the charging and sentencing patterns across all environmental crime investigations undertaken by the EPA that led to criminal prosecutions in Texas between 1983 and 2019. Through content analysis of the EPA's prosecutorial case studies, we can show patterns in charging and sentencing and explore broader themes that highlight the seriousness of policing efforts for environmental offenses in the state over the past thirty-seven years. This Article will explore the brief history of the evolution of the criminal enforcement of federal environmental laws before moving to a discussion of our method, analysis, and suggestions for bolstering criminal enforcement.

II. CRIMINAL ENFORCEMENT TOOLS FOR THE ENVIRONMENT

The evolution of criminal punishment for violations of federal law can be traced back approximately 120 years. This process first began by adding misdemeanor provisions into federal law and continued evolving until the

484, 492 (establishing statutory caps based on liability that falls short of gross negligence). *Transocean* was ordered to pay a \$400 million criminal fine and a \$1 billion civil penalty and serve five years of probation. *United States v. Transocean, LTD*, No. 13-CR-1 (E.D. La. Feb. 14, 2013) (EPA Summary of Criminal Prosecutions Database). *Halliburton* was ordered to pay a \$200,000 fine and serve three years of probation. *United States v. Halliburton Energy Servs. Inc.*, No. 13-CR-165 (E.D. La. Sept. 19, 2013) (EPA Summary of Criminal Prosecutions Database).

11. See generally Michael J. Lynch, *The Sentencing/Punishment of Federal Environmental/Green Criminal Offenders, 2000–2013*, 38 *DEVIANT BEHAV.* 991 (2017) (discussing the damages and punishment stemming from environmental crime and the lack of data reported on the issue).

12. For a broader discussion of criminal deterrence, see Carole M. Billiet & Sandra Rousseau, *How Real is the Threat of Imprisonment for Environmental Crime?*, 37 *EUR. J.L. & ECON.* 183, 195 (2014) (“We can conclude that according to current law and economic models prison sentences are needed for a variety of reasons such as deterring offenders with limited resources . . .”); Raymond Paternoster, *How Much Do We Really Know about Criminal Deterrence?*, 100 *J. CRIM. L. & CRIMINOLOGY* 765, 767–69 (2010) (discussing the “intellectual roots” of the theory of deterrence).

13. See 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.* 1096, 1097, 1109 (2016) (discussing the inherent difficulty in comparing generalized study results for deterrence and how these reviews might offer a limited scope).

institutionalization of investigative and prosecutorial staff dedicated to environmental crimes in the early 1980s. The first misdemeanor provisions stemmed from the Rivers and Harbors Act of 1899 and the Lacey Act of 1900, which added penalties for the obstruction or dumping of waste in the navigable waters of the United States and the unpermitted interstate trade in wildlife.¹⁴ The present-day Environment and Natural Resources Division (ENRD) can be traced to the Public Lands Division, which was founded in 1909.¹⁵

The expansion of federal environmental laws in the 1970s saw the introduction of the CAA, the CWA, and others, effectively creating additional misdemeanor provisions to federal environmental law; however, the Hazardous and Solid Waste Amendments—added to the Resource Conservation and Recovery Act (RCRA)—created the first felony provisions in federal environmental law.¹⁶ Today, most major federal environmental statutes contain criminal provisions with significant penalties for knowing violations of environmental law.¹⁷ The EPA founded the

14. Rivers and Harbors Act, 33 U.S.C. §§ 401–67 (1899); Lacey Act, 16 U.S.C. §§ 3371–78 (1900). The Refuse Act of 1899, enacted to protect the navigable waters of the United States, was the first federal statute applied to environmental protection, making it a criminal statute. Raymond W. Mushal, *Up From the Sewers: A Perspective on the Evolution of The Federal Environmental Crimes Program*, 2009 UTAH L. REV. 1103, 1105 (2009).

15. *History*, U.S. DEP'T OF JUST. ENV'T & NAT. RES. DIV., <https://www.justice.gov/enrd/history> [<https://perma.cc/9SW4-9YHB>].

16. *See* Resource Conservation and Recovery Act, 42 U.S.C. §§ 6928–92 (1984) (providing for a term of imprisonment for knowing violations of the Act); *see also* *Historical Development of Environmental Criminal Law*, U.S. DEP'T OF JUST. ENV'T CRIMES SEC., <https://www.justice.gov/enrd/about-division/historical-development-environmental-criminal-law> [<https://perma.cc/L5XL-929M>] (discussing early efforts to prevent the “degrad[ation] [of] America’s air, water[,] and land”). The movement to criminalize serious environmental transgressions was part of a broader, global movement that began recognizing the importance of stronger tools to combat environmental crimes. *See* Michael R. Pendleton, *Beyond the Threshold: The Criminalization of Logging*, 10 SOC'Y & NAT. RES. 181, 192 (1997) (“In effect, a new shared meaning of what constitutes acceptable logging was transformed and institutionalized in ‘hard’ law that includes both fines and prison.”). The trend also applied to some of the individual states at the time. E. Dennis Muchnicki et al., *Criminal Enforcement of State Environmental Laws: The Ohio Solution*, 14 HARV. ENV'T L. REV. 217, 228 (1990). Congress added criminal provisions to the RCRA in 1984, the CWA in 1987, the CAA in 1990, and then to other federal environmental statutes. Resource Conservation and Recovery Act, 42 U.S.C. § 6928(d) (1984); Water Quality Act of 1987, Pub. L. No. 100-4, § 312(c), 101 Stat. 7 (1987); Clean Air Act, 42 U.S.C. § 7413(c) (1990).

17. *See* *Criminal Provisions of Water Pollution*, EPA, <https://www.epa.gov/enforcement/criminal-provisions-water-pollution> [<https://perma.cc/A7R3-FSXS>] (providing for negligent or intentional violations of the CWA); *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://perma.cc/RD3B-PVLU>] (establishing the elements for an intentional violation of the RCRA); *Criminal Provisions of the Clean Air Act*, EPA, <https://www.epa.gov/enforcement/criminal-provisions->

Office of Enforcement and Compliance Assurance (OECA); concurrently, the DOJ founded the Environmental Crimes Section (ECS) within the ENRD in 1982.¹⁸ The creation of these entities represented a structural shift toward the professionalization of criminal investigation and prosecution for environmental crimes at the federal level.¹⁹ By 1987, the ECS became an independent unit alongside the Environmental Enforcement Section (EES), which handles civil cases.²⁰

At this time, EPA criminal investigators, referred to as special agents or 1811s, required annual deputization as Special Deputy U.S. Marshals from 1984 until Congress granted them full law enforcement powers in

clean-air-act [<https://perma.cc/U8JF-MVUG>] (establishing the “knowingly” standard for violations of various CAA provisions).

18. Joseph B. Block, *Environmental Criminal Enforcement in the 1990s*, 3 VILL. ENV'T L. J. 33, 34 (1992) (reporting the DOJ-ECS consisted of a three-attorney unit in 1982, housed within the Environmental Enforcement Section); *About the Office of Enforcement and Compliance Assurance (OECA)*, EPA, <https://www.epa.gov/aboutepa/about-office-enforcement-and-compliance-assurance-oea> [<https://perma.cc/8M6P-EU3P>]; *Environmental Crimes Section*, U.S. DEP'T OF JUST., <https://www.justice.gov/enrd/environmental-crimes-section> [<https://perma.cc/9X2Q-EDAY>].

19. These trends were able to take place with a limited amount of bipartisanship in Congress to enhance punishments for environmental crimes. David M. Uhlmann, *New Environmental Crimes Project Data Shows That Pollution Prosecutions Plummeted During the First Two Years of the Trump Administration 2* (Oct. 2020) (unpublished research paper) (on file with University of Michigan Law School) (considering the divergent approaches to environmental program administration and regulation by Presidents Trump and Obama). This was done under the Reagan Administration, which was openly hostile to all environmental regulations, but the enforcement regime managed to persist and grow through the Clinton years. *Id.* While the Trump Administration had a negative impact on environmental enforcement, the Reagan Administration was a good model for anti-environmentalism. Cally Carswell, *How Reagan's EPA Chief Paved the Way for Trump's Assault on the Agency*, NEW REPUBLIC (2017), <https://newrepublic.com/article/141471/reagans-epa-chief-paved-way-trumps-assault-agency> [<https://perma.cc/E793-7VPS>] (comparing republican and democratic leadership styles on the landscape of environmental protection); Jessica Hejny, *The Trump Administration and Environmental Policy: Regan Redux?*, 8 J. ENV'T STUD. & SCI. 197, 197–98 (2018) (explaining how the current political divide in environmental policy “is a far cry from the bipartisan era of environmental cooperation”). The United States Sentencing Guidelines also sought to standardize punishments for crimes of similar gravity, which affected environmental crimes as well. Mushal, *supra* note 14, at 1112. Even if many judges felt such crimes deserved lesser punishments, they were at least bound, in part, to these guidelines. *Id.* (“[T]he guidelines forced even those judges disposed toward light sentencing for environmental violations to take those crimes seriously . . .”). The Alternative Fines Act also raised fines for many crimes and this was valuable to prosecutors who were pursuing charges against corporate officers for environmental crimes at the time. *Id.*

20. *Historical Development of Environmental Criminal Law*, U.S. DEP'T OF JUST. ENV'T CRIMES SEC., <https://www.justice.gov/enrd/about-division/historical-development-environmental-criminal-law> [<https://perma.cc/L5XL-929M>]; *Environmental Enforcement Section (EES): An Overview of Our Practice*, U.S. DEP'T OF JUST. ENV'T & NAT. RES. DIV., <https://www.justice.gov/enrd/overview-our-practice> [<https://perma.cc/JZ4J-6242>].

1988.²¹ Organized in 1995, the Office of Criminal Enforcement, Forensics, and Training (OCEFT) undertook investigative and forensics work.²² Currently, the EPA's Criminal Investigation Division (CID) employs about 200 criminal investigators stationed across the United States.²³ Criminal investigators tend to source information on environmental crimes from official documents, civil inspectors, and former employees.²⁴ Investigators pursue prosecution after sufficient evidence is available and typically approach prosecutors in the ECS or the U.S. Attorney's Office to file appropriate documentation in the district court.²⁵

III. COMPLIANCE VERSUS DETERRENCE

The first step toward establishing compliance begins with administrative or civil tools.²⁶ Administrative actions may include issuing a notice of violation, an order of correction, or levying fines to bring a violator into compliance.²⁷ Civil tools may include the imposition of environmental

21. EPA, REVIEW OF THE OFFICE OF CRIMINAL ENFORCEMENT, FORENSICS AND TRAINING 7 (Nov. 2003), <https://www.epa.gov/sites/production/files/documents/oceft-review03.pdf> [<https://perma.cc/927X-UANN>] [hereinafter OCEFT REVIEW].

22. *Id.* at 8.

23. U.S. Environmental Protection Agency Criminal Enforcement Program: America's Environmental Crime Fighters, EPA, <https://www.epa.gov/sites/production/files/documents/oceftbrochure.pdf> [<https://perma.cc/3PQC-ZMCY>].

24. Joel A. Mintz, Some Thoughts on the Interdisciplinary Aspects of Environmental Enforcement 10496–97 (July 2006) (unpublished research paper) (on file with Nova Southeastern University Shepard Broad Law Center). The EPA hired twenty criminal investigators to join two already hired in 1982, giving the agency twenty-two investigative staff in the early 1980s. Mushal, *supra* note 14, at 1109. The Medical Waste Tracking Act granted full law enforcement authority to investigators, and the U.S. Attorney General approved the issuance of firearms to these investigators in 1989. *Id.* at 1111. The DOJ hired five prosecutors for the Environmental Crimes Unit (ECU). *Id.* at 1109.

25. Mintz, *supra* note 24, at 10496; JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES 11 (Univ. of Texas Press rev. ed. 2012). Cases can be forwarded to state or local officials for prosecution. *See* David St. John et al., *Environmental Crimes*, 57 AM. CRIM. L. REV. 657, 662 (2020) (“[F]ederal agencies must coordinate and monitor state proceedings and will stand down if the state’s actions sufficiently address federal interests.”); Michael Herz, *Structures of Environmental Criminal Enforcement*, 7 FORDHAM ENV’T L.J. 679, 702 (1996) (explaining the role of Regional Criminal Enforcement Counsel (RCEC) in the prosecutorial structure).

26. *Types of Approaches to RCRA Corrective Action Enforcement Actions*, EPA, <https://www.epa.gov/enforcement/types-and-approaches-rcra-corrective-action-enforcement-actions> [<https://perma.cc/KZ2H-MV2Z>]; *Basic Information on Enforcement*, EPA, <https://www.epa.gov/enforcement/basic-information-enforcement> [<https://perma.cc/4FGR-B83R>].

27. *See* Memorandum from Lawrence E. Starfield, Acting Assistance Admin., to Reg’l Couns. and Deputies, Enft and Compliance Assurance Div. Dirs. and Deputies, and OCEA Off. Dirs. and

monitoring or mitigation plans, administrative orders on consent, temporary or permanent injunctive relief, or the negotiation of a supplemental environmental project.²⁸ In a civil case, a company may be found liable for damages or may pursue a negotiated settlement containing a consent decree that avoids liability and remedies the violation.²⁹

Criminal guilt rests on the standard of beyond a reasonable doubt, and criminal enforcement seeks to prosecute serious violations of environmental law with the goals of exacting sufficient punishment for crimes against the state and deterring future offenses.³⁰ The decision to pursue criminal prosecution over civil or administrative action is strategic, as criminal prosecution is more costly, requires a higher burden of proof for guilt, and utilizes more resources.³¹ Research suggests that only about

Deputies (Apr. 26, 2021) (on file with author) (“[C]ase teams should first consider which compliance tools will be most effective in ensuring a facility . . . remains in[] compliance.”).

28. See generally Memorandum from Susan Shinkman, Dir. of the Off. of Civ. Enft, to Reg'l Couns., Reg'l Enft Div. Dirs., and Reg'l Enft Coordinators, from the Off. of Civ. Enft Div. Dirs. (Nov. 14, 2012) (on file with author) (defining mitigation and the role it plays in injunctive relief in civil cases); Memorandum from Robert Van Heuvelen, Dir. of the Off. of Regul. Enft, to Reg'l Couns., Regions I-X; Dir. of the Off. of Env't Stewardship, Region I; Dir. of the Compliance Assurance & Enft, Compliance & Env't Justice, Region VIII; and Reg'l Enft Coordinators, Regions I-X (Dec. 15, 1995) (providing guidance on “how penalty amounts should be pled and argued in administrative litigation”); *Supplemental Environmental Projects (SEPs)*, EPA, <https://www.epa.gov/enforcement/supplemental-environmental-projects-seps> [<https://perma.cc/JMT6-ZEPP>] (“SEPs are projects included as part of an enforcement settlement that provide a tangible environmental or public health benefit.”).

29. Memorandum from Lawrence E. Starfield, *supra* note 27.

30. A management review regarding the Division noted: “To the extent any single pattern dominates, it is the law enforcement orientation” OCEFT REVIEW, *supra* note 21, at ii. Congress intended to show that environmental violations were serious transgressions of the law, which could include incarceration as punishment. Mushal, *supra* note 14, at 1105 n.8. This provides reasoning on why criminal provisions were added to federal statutes and sets a very clear message of deterrence. *Id.* at 1111.

31. See Jeremy Firestone, *Agency Governance and Enforcement: The Influence of Mission on Environmental Decisionmaking*, 21 J. POLY ANALYSIS & MGMT. 409, 410–11 (2002) (indicating the EPA’s preference for administrative action based on budgetary concerns); Evan J. Ringquist & Craig E. Emmert, *Judicial Policymaking in Published and Unpublished Decisions: The Case of Environmental Civil Litigation*, POL. RSCH. Q., March 1999, at 7, 12 (“[A]voiding litigation saves time in bringing violators into compliance with regulations—an important consideration in environmental protection.”); David M. Uhlmann, *Environmental Crime Comes of Age: The Evolution of Criminal Enforcement in the Environmental Regulatory Scheme*, 4 UTAH L. REV. 1223, 1234 (2009) (discussing the difficulty in establishing liability or guilt beyond a reasonable doubt). Companies may simply pay fines as the cost of doing business. See generally Daniel P. Fernandez et al., *Monetary Consequences of Environmental Regulations: Cost of Doing Business or Non-Deductible Penalties or Fines*, 9 AM. U. BUS. L. REV. 123 (2019) (discussing the deterrent effect of monetary fines and the implications on a business’s decision-making process). For general deterrence, studies show it is the certainty of being punished that matters more than the severity, but this may not be the case here. *Id.* at 124, 133; *Five Things About Deterrence*, NAT’L INST. JUST., <https://nij.ojp.gov/topics/>

2,588 criminal prosecutions stem from the EPA-CID investigations since 1983.³²

Criminal enforcement should be considered conjunctively with civil and administrative tools because regaining compliance—rather than deterrence or punishment—is the broader and preferred philosophy of environmental agencies.³³ Research indicates prosecutors are motivated to pursue offenders, which tends to validate the assumption that prosecutors seek out serious crimes involving aggravating factors when targeting cases for prosecution.³⁴ Other studies show crime severity is the best predictor of punishment severity in environmental crime prosecutions.³⁵ The logic of deterrence is that the benefits of offending must be outweighed by the cost and the chance of being caught, and the potential penalties should be significant enough to deter rational actors from committing environmental crimes.³⁶ The impact of deterrence is generally unknown in Texas for

articles/five-things-about-deterrence [https://perma.cc/TDT4-MFTU] (“[I]t is the certainty of being caught that deters a person from committing crime, not the fear of being punished or the severity of the punishment.”).

32. Joshua Ozmy et al., *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. 52, 52 (2021).

33. Memorandum from Earl E. Devaney, Dir. of the Off. of Crim. Enf't to All EPA Employees Working in or in Support of the Crim. Enf't Program 3–4 (Jan. 12, 1994) (on file with author) (selecting cases based on compliance, punishment for wrongdoing, or deterrent effects); Mushal, *supra* note 14, at 1106 (finding a shift toward civil remedies due to the lower burden of proof required).

34. See Mushal, *supra* note 14, at 1109 (emphasizing the increased attention prosecutors pay to felony offenses).

35. See David M. Uhlmann, *Prosecutorial Discretion and Environmental Crime*, 38 HARV. ENV'T L. REV. 159, 215 (2014) (“Prosecutors thus have reserved criminal prosecution for culpable conduct and avoided charges based on technical violations or when defendants acted in good faith.”); 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, 343 (2019) [hereinafter Uhlmann, *Crime Redux*] (concluding the presence of aggravating factors and repetitiveness influence the imposition of criminal charges); Joshua Ozmy & 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, 84 (2016) (finding agency culture, a culture aimed at deterrence, influences punishment severity).

36. See Gary Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 180–81 (1968) (weighing factors such as the probability of conviction, the severity of the punishment, and the social gain in order to analyze the deterrent effect of stronger regulations); Richard A. Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193, 1205 (1985) (considering “criminals [to be] sufficiently rational to be deterrable”); Larry D. Wynne, *A Case for Criminal Enforcement of Federal Environmental Law* 4–5 (Feb. 19, 1989) (L.L.M. thesis, George Washington University) (on file with Calhoun Institutional Archive of the Naval Postgraduate School) (discussing the deterrent effect of criminal sanctions on environmental crime).

notable reasons: a lack of analysis on (1) how many crimes are investigated, (2) which crimes are prosecuted, (3) who has been prosecuted, and (4) the penalties levied.³⁷ This Article sheds light on these questions through an analysis of charging and sentencing patterns in prosecutions within the Lone Star State since 1983.

IV. DATA AND METHOD

To capture data on federal environmental investigations and prosecutions occurring in Texas, we analyzed data on the EPA-CID criminal investigations that led to prosecutions using the EPA's Summary of Criminal Prosecutions Database.³⁸ The Database is an extensive source of all the division's criminal investigations. Each case provides a case summary of the investigation and subsequent prosecution. We gathered data on all years available from 1983 to 2019 and searched for data by the EPA fiscal year (FY). This approach allowed us to collect data on all 2,588 criminal prosecutions and then select all cases occurring in Texas. This analysis yielded 122 prosecutions for the state.

We analyzed each summary and recorded the following variables: docket number; narrative summary of each case; EPA fiscal year; all major environmental statutes used in the prosecution; the presence of criminal charges, such as false statements, fraud, or obstruction in the case; the number of defendants; whether at least one company was a defendant in the prosecution; whether a defendant was charged with a state environmental crime; and total penalties assigned to all individual defendants and companies in each case. We measured penalties such as total probation in months, total incarceration in months, total community service in hours, and total monetary penalties in nominal dollars, including fines, assessments,

37. Research on environmental crime enforcement at the state and local level is even scarcer. See generally Matthew S. Crow et al., *Camouflage-Collar Crime: An Examination of Wildlife Crime and Characteristics of Offenders in Florida*, 34 *DEVIANT BEHAV.* 635 (2013) (discussing "the nature and extent of cited fish and wildlife offenses and characteristics of offenders . . . in Florida"); Joshua C. Cochran et al., *Court Sentencing Patterns for Environmental Crimes: Is there a "Green" Gap in Punishment?*, 34 *J. QUANTITATIVE CRIMINOLOGY* 37 (2018) (providing a detailed discussion of environmental crime, punishment, and deterrence); Michael J. Lynch, *County-Level Environmental Crime Enforcement: A Case Study of Environmental/Green Crimes in Fulton County, Georgia, 1998–2014*, 40 *DEVIANT BEHAV.* 1090 (2019) (narrowing the focus of quantitative and qualitative environmental crime analysis to the county level).

38. See generally *Summary of Criminal Prosecutions Database*, EPA, <https://www.epa.gov/enforcement/summary-criminal-prosecutions> [<https://perma.cc/A5XY-J7A9>] (allowing searches of environmental investigations and prosecutions).

restitution, payments, community service fees, or any other monetary penalties assessed at sentencing.

Any limitations in our approach do not compromise the goals outlined in this Article. We cannot know the role of key actors in the case, nor is this identification germane to quantifying outcomes. We may not have captured all prosecutions, though we expect to have captured most, given it is the EPA's official database on the subject. Environmental laws and charging statutes have changed over almost four decades, and this impacts how prosecutors use those tools. This is an important question and we saw it reflected in the data regarding prosecutorial trends; however, we need not know this information for our analysis to remain robust. Additionally, we ended our analysis in the calendar year 2019, as opposed to the fiscal year 2019.

To code the data, we had to establish coding protocols. This process progressed for four weeks using two coders during a pilot phase that analyzed a series of cases through FY 2015. Once our accuracy improved, we moved forward with coding the data. Each coder analyzed the data independently, and the lead author reviewed for discrepancies, meeting as a team to find a consensus on values. Through this approach, our inter-coder reliability for the dataset was about 95%.³⁹

V. RESULTS

We organized our findings into three sections. In the first section, we explored general trends in prosecutions and sentencing patterns in Texas from 1983 to 2019. In the second section, we identified large penalty cases that may act as outliers and affect these broader patterns. In the final section, we organized prosecutions into general themes, based on our judgment of the crime at the center of the case, to organize and give structure to the types of environmental crimes that have been prosecuted in the state.

In Figure 1, we plotted the total number of environmental crime prosecutions annually by EPA fiscal year that occurred in Texas from 1983 to 2019. We found the first prosecution to occur in FY 1985, followed by

39. *See* OLE R. HOLSTI, *CONTENT ANALYSIS FOR THE SOCIAL SCIENCES AND HUMANITIES* 140 (1969) (“A widely used coefficient of reliability is the ratio of coding agreements to the total number of coding decisions . . .”); *see also* EARL R. BABBIE, *THE PRACTICE OF SOCIAL RESEARCH* 255 (5th ed. 1989) (“Survey research, by presenting all subjects with a standardized stimulus, goes a long way toward eliminating unreliability in observations made by the researcher.”).

two in FY 1987. Prosecutions rose to ten by FY 1995 and declined below that high point thereafter. The average number of prosecutions in the 1990s was 4.2, in 2000–2009 it was 4, and in 2010–2019 it was 3.7. The average number of prosecutions over these thirty-seven years was approximately 3.3 cases.⁴⁰

Figure 1. Total Environmental Crime Prosecutions Adjudicated in the State of Texas by Fiscal Year, 1983–2019.

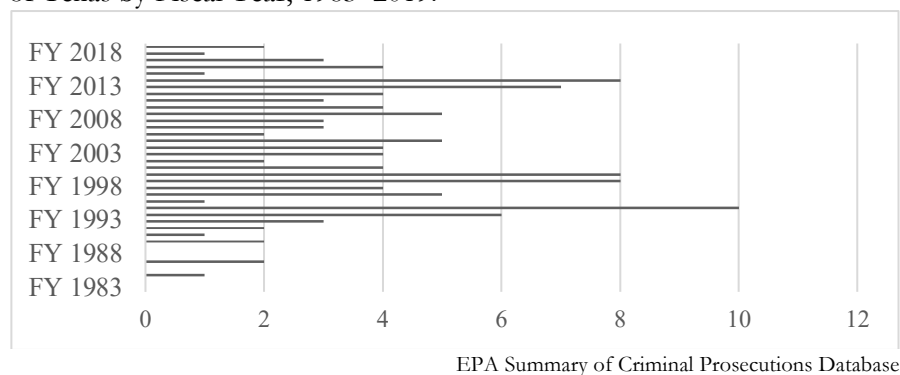
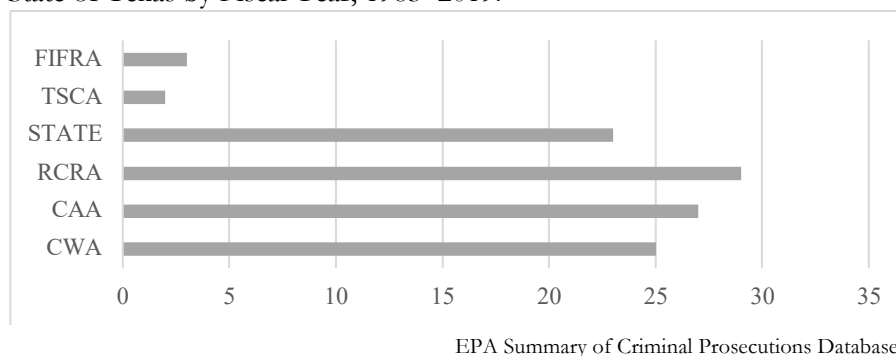


Figure 2 charts charging and sentencing patterns from 1983 to 2019. The most common charging statute used during these thirty-seven years was the RCRA. In twenty-nine cases or about 24% of all cases, at least one defendant was charged under the RCRA. In twenty-eight cases or about 23% of cases, at least one defendant was charged under the CAA. In twenty-five cases or 20% of the overall cases, at least one defendant was charged under the CWA. We found an extensive number of cases that resulted in state-level charges and prosecutions. In about 19% of cases, EPA-CID investigations led to state-level charges. Slightly less than one in five cases focused on state-level offenses, which suggested an extensive amount of collaboration and coordination between state and federal environmental agencies when investigating and charging environmental criminals. We also found two cases prosecuted under the Toxic Substances Control Act

40. Because prosecutions can take multiple years, the total number completed in a single year is less representative of the severity of prosecutions in a given year than the broader trend across time. The number of prosecutions grew in the 1980s as the criminal enforcement system institutionalized, but the trends over the following decades were relatively similar in terms of total prosecutions completed.

(TSCA) and three prosecuted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).⁴¹

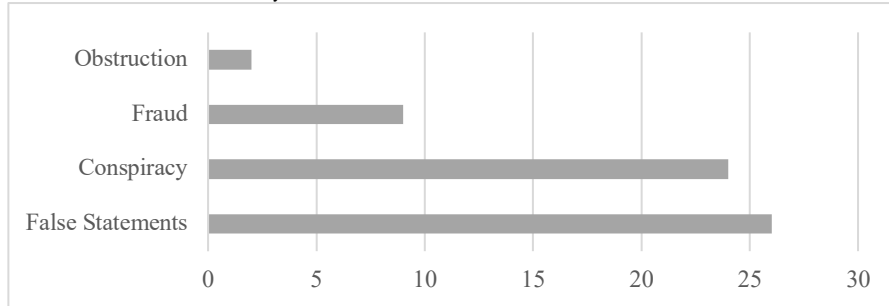
Figure 2. Charging Patterns in Environmental Crime Prosecutions in the State of Texas by Fiscal Year, 1983–2019.



In Figure 3, we examined patterns in non-environmental criminal charges that we found in the data. We found that in 21% of cases, at least one defendant was charged with giving false statements to investigators, submitting false reports, or falsifying documents. In 20% of cases, defendants were charged with conspiracy. In 7% of cases, at least one defendant was charged with fraud, and in 2% of cases, at least one defendant was charged with obstruction. While charging patterns here can cross cases (i.e., defendants can be charged with false statements and fraud), they showed a significant number of crimes involving criminal action beyond polluting.

41. Toxic Substances Control Act, 15 U.S.C. §§ 2601–29 (1976); Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136 (1972).

Figure 3. Common Criminal Charges in Environmental Crime Prosecutions in the State of Texas by Fiscal Year, 1983–2019.



EPA Summary of Criminal Prosecutions Database

In Table 1, we explored sentencing patterns among individual and company or corporate defendants in the data. Monetary penalties were aggregated in the upper-left quadrant of the figure. We found that individual defendants were assessed over \$209 million in fines, community service payments, fees, restitution, and other financial penalties. Companies were collectively sentenced to pay over \$162 million in such monetary assessments. In the upper-right quadrant of the Table, we listed the total months of probation assessed to all individuals and all companies in the data. We found individuals were cumulatively sentenced to over 4,600 months of probation and companies to 1,170 months of probation. In the bottom-left quadrant, we showed that individual defendants were cumulatively sentenced to 1,513 months of incarceration in the data. In the bottom-right quadrant, we showed that the total community service hours assessed to all defendants was 10,850 hours in the data.

Table 1. Total Penalties Assessed at Sentencing in Environmental Crime Prosecutions in the State of Texas, 1983–2019.⁴²

<i>Monetary Penalties</i> \$371 Million	<i>Probation</i> 483 Years
<i>Incarceration</i> 125 Years	<i>Community Service</i> 10,850 Hours

EPA Summary of Criminal Prosecutions Database

42. Numbers in Table 1 have been rounded.

In the second section of our analysis, to develop some context for the aggregate penalty numbers, in Table 2 we examined large-penalty cases levied against corporate environmental offenders in Texas. Craven Laboratories, located in Austin, performed pesticide residue testing for pesticide manufacturers.⁴³ Craven provided falsified safety analysis to over 260 manufacturers seeking EPA approval for new pesticides.⁴⁴ The company was sentenced on December 10, 1993, to pay restitution in the amount of \$3,725,055, a fine of \$15,499,279, and serve sixty months of probation.⁴⁵ Intertek Testing represented another major prosecution involving systematic laboratory fraud. The company altered the calibration of its instruments and provided false lab results to numerous companies, the EPA, and the Department of Defense.⁴⁶ Intertek was sentenced on February 1, 2002, to forty-three months of probation, a \$9 million federal fine, and agreed to an \$8,741,000 civil penalty.⁴⁷

Koch Industries failed to install the required pollution control devices at its West Plant refinery in Corpus Christi, resulting in the release of benzene emissions into the ambient air in 1995.⁴⁸ The company failed to report the emissions. On April 9, 2001, the company was sentenced to sixty months of probation, and ordered to pay \$10 million in criminal fines and \$10 million for community projects.⁴⁹ Rowan Companies was prosecuted for routinely pumping spent hydraulic fluid from a drilling rig overboard into the Gulf of Mexico.⁵⁰ When performing maintenance, workers would

43. United States v. Craven Lab's, Inc., No. 92-CR-152 (W.D. Tex. Sept. 22, 1992) (EPA Summary of Criminal Prosecutions Database).

44. *Id.*

45. *Id.*; see *About the Office of Enforcement*, *supra* note 18 (listing Craven as having completed analyses for 262 manufacturers). These five cases cumulatively resulted in almost \$114 million in monetary penalties or about 31% of the total monetary penalties in the analysis. This shows there is a strong effect of outliers on the broader trends in the first section of the analysis, but still almost 70% of penalties are spread out beyond these five large penalty cases.

46. See Roger A. Novak, *The Long Arm of the Lab Laws*, TODAY'S CHEMIST, <http://pubsapp.acs.org/subscribe/archive/teaw/10/i11/html/11regs.html> [<https://perma.cc/BG9H-QT4L>] (discussing the methods employed by Intertek to alter outsider perceptions).

47. United States v. Intertek Testing Serv. Env't Lab, No. 00-R-318 (N.D. Tex. Sept. 21, 2000) (EPA Summary of Criminal Prosecutions Database). The totals in Table 1 include the \$8,741,000 civil penalty noted in the case summary.

48. United States v. Koch Indus., Inc. (S.D. Tex. Jan. 11, 2001) (EPA Summary of Criminal Prosecutions Database).

49. *Id.*

50. United States v. Rowan Cos., Inc., No. 7-CR-148 (E.D. Tex. Aug. 16, 2007) (EPA Summary of Criminal Prosecutions Database).

discharge materials into the Sabine Pass.⁵¹ On November 10, 2007, Rowan was sentenced to thirty-six months of probation, a \$5 million federal fine, and \$2 million in community service payments, as well as special fees.⁵²

Table 2. Large Monetary Penalties Assessed to Corporations in Environmental Crime Prosecutions in the State of Texas.

<i>Year</i>	<i>Company</i>	<i>Monetary Penalty</i>
1994	Craven Laboratories	\$19,224,334
2001	Koch Industries	\$20,000,000
2008	Rowan Companies	\$7,000,000
2002	Intertek Testing	\$17,741,000
2009	BP Products North America	\$50,000,000

EPA Summary of Criminal Prosecutions Database

If the larger penalties against corporations in the dataset came from laboratory fraud and violations in the petroleum industry, we found an array of large penalty incarceration sentences in Table 3 levied against individual defendants at sentencing.⁵³ Wesley Ray and Sheila Putman were co-founders of Poly-Cycle Industries, a battery reclamation company.⁵⁴ Ray and his employees engaged in the illegal disposal of hazardous wastes in and around the company's facility.⁵⁵ After a pretrial conference, Ray fled to Mexico and was subsequently apprehended.⁵⁶ On August 19, 1994, Ray was sentenced to sixty months of incarceration and thirty-six months of supervised release, and Putnam was sentenced to thirty months of incarceration and twenty-four months of supervised release.⁵⁷ Similarly, Lucius, Donald, and Lionel Flanagan were collectively sentenced to 180 months of incarceration for illegally storing hazardous waste and

51. *Id.*

52. *Id.* The case summary and press release note two different amounts for the special assessment—\$400 and \$800. The BP cases in Table 2 reference the previously discussed Texas City Refinery explosion cases. *See supra* text accompanying notes 1–4.

53. These five prosecutions total fifty-six years of incarceration or roughly 45% of the total time of incarceration, showing there is a strong effect of large penalty sentences for explaining these broader trends in the analysis.

54. *United States v. Wesley Ray*, No. 93-CR-41 (E.D. Tex. June 21, 1993) (EPA Summary of Criminal Prosecutions Database).

55. *Id.*

56. *Id.*

57. *Id.*

discharging them into Halls Bayou.⁵⁸ The defendants were sentenced on state environmental charges.⁵⁹

Table 3. Large Incarceration Sentences Assessed to Individuals in Environmental Crime Prosecutions in the State of Texas.

<i>Year</i>	<i>Primary Defendant</i>	<i>Months of Incarceration</i>
1994	Wesley Ray	90
1995	Lucius Flanagan	180
1998	Daniel Brown	96
2013	Jeffrey David Gunselman	188
2016	Philip Joseph Rivkin	121

EPA Summary of Criminal Prosecutions Database

Daniel Brown and Donald Budd owned Texas Environmental Services, a laboratory that provided waste and drinking water testing reports to companies and municipalities across Texas.⁶⁰ The defendants engaged in laboratory fraud by providing hundreds of false laboratory reports to their clients.⁶¹ On May 24, 1996, Brown was sentenced to twenty-four months of incarceration, thirty-six months of probation, a \$10,000 fine, and 140 hours of community service.⁶² On January 6, 1997, Budd was sentenced to seventy-two months of incarceration, thirty-six months of probation, a \$15,000 fine, and 140 hours of community service.⁶³

Philip Joseph Rivkin and Jeffrey David Gunselman were both prosecuted for fraudulent biodiesel production.⁶⁴ The 2007 Energy Independence and Security Act (EISA) created production credit taxes to produce biofuels.⁶⁵ Producers would generate Renewable Identification Numbers (RINs) that could be sold on the open market, as well as claim federal tax credits.⁶⁶ The

58. *United States v. Lucius Flanagan*, No. 94-CR-21570 (Tex. 1994) (EPA Summary of Criminal Prosecutions Database).

59. *Id.* (suspending all but 180 days of the incarceration of both Lucius and Lionel Flanagan).

60. *United States v. Daniel Brown*, No. 96-CR-56 (E.D. Tex. Feb. 23, 1996) (EPA Summary of Criminal Prosecutions Database).

61. *Id.*

62. *Id.*

63. *Id.*

64. *United States v. Rivkin*, No. 14-CR-250 (S.D. Tex. June 19, 2014) (EPA Summary of Criminal Prosecutions Database); *United States v. Gunselman*, No. 12-CR-78 (N.D. Tex. Aug. 8, 2012) (EPA Summary of Criminal Prosecutions Database).

65. *Rivkin*, No. 14-CR-250 (EPA Summary of Criminal Prosecutions Database).

66. *Id.*

penalties in these cases greatly explain aggregate prison sentences, total fines, and penalties assessed to individual defendants in Table 1. Rivkin, also known as Felipe Poitan Arriaga, was sentenced to 121 months of incarceration, three years of supervised release, \$87 million in restitution, and ordered to forfeit \$51 million from selling fraudulent biodiesel credits.⁶⁷ Rivkin operated Green Diesel, LLC, and Fuel Streamers, LLC, and fraudulently claimed to produce fuel that never existed, generating some 60 million RINs that were sold to other producers.⁶⁸ Jeffrey David Gunselman fraudulently claimed to produce biodiesel and received payments of approximately \$41,762,236 via his company Absolute Fuels, LLC.⁶⁹ Gunselman was sentenced on March 29, 2013, to 188 months of incarceration, and ordered to pay a \$175,000 fine and \$54.9 million in restitution.⁷⁰

In the final section of our analysis, we brought together all prosecutions in the study to explore the major themes we can define across all cases. In Table 4, we explored all cases in Texas during this period and aggregated them by—what we feel in our judgment was—the predominant theme that defined the primary crime in the case. While most cases fell within the lines of the major charging statute used (i.e., illegal discharge case charged under the CWA), often cases were charged under multiple statutes. We reviewed each case and attempted to catalog them by the primary crime that was prosecuted. Our results found that most cases fall within four primary themes, including hazardous waste, water pollution, air pollution, and state-level crimes.

Table 4. Primary Themes in Environmental Crime Prosecutions in the State of Texas.

<i>Hazardous Waste Crimes</i> 29%	<i>Water Pollution Crimes</i> 24%
<i>Air Pollution Crimes</i> 22%	<i>State-Level Crimes</i> 19%

EPA Summary of Criminal Prosecutions Database

67. *Id.*

68. *Id.*

69. *Gunselman*, No. 12-CR-78 (EPA Summary of Criminal Prosecutions Database).

70. Press Release, U.S. Dep't of Just., Bio-diesel Fuel Company Owner Sentenced to 188 Months in Federal Prison on Wire Fraud, Money Laundering and False Statements Convictions (Mar. 29, 2013) (on file with author).

The most prevalent theme we uncovered in our data was the significance of hazardous waste prosecutions in Texas. We found that 29% of all prosecutions, or thirty-five cases, focus on hazardous waste crimes. The majority of these cases focused on one or more charges under the RCRA for illegal storage, transport, or disposal of hazardous waste. We found that about 91% of cases fall within one or more of these categories. Examples included Dile Kent McNair, prosecuted along with Martin Bruce Booth and Perfection Industries, Inc., for illegal storage of hazardous waste.⁷¹ Perfection was a metal plating company operating two plants in Terrell.⁷² Testing found they violated pre-treatment standards in their wastewater discharges on numerous occasions.⁷³ The defendants were charged with mail fraud, false statements, and CWA violations.⁷⁴ McNair was sentenced to 180 days of home confinement, thirty-six months of probation, and a \$100 special assessment fee.⁷⁵ Mantua Manufacturing was prosecuted for illegal disposal of trichloroethylene, found in twenty-one drums containing paint sludge dumped on a vacant lot in Houston and traced back to the company.⁷⁶ The company was charged under the RCRA and sentenced to a \$150,000 fine and \$600 in court costs.⁷⁷ Kathleen Cox, Herb Larsen, and Robert Curry were executives at Battery Reclamation, Inc. (BRI), a battery recycling facility in Pecos.⁷⁸ The Texas Commission on Environmental Quality (TCEQ) ordered the closure of the facility in 2004.⁷⁹ An investigation in 2007 found over 7,000 tons of batteries and battery components left at the abandoned facility.⁸⁰ The defendants were each

71. United States v. McNair, No. 4-CR-271 (N.D. Tex. Apr. 6, 2004) (EPA Summary of Criminal Prosecutions Database).

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

76. United States v. Mantua Mfg. Co., No. 11-75-745M (S.D. Tex. Aug. 4, 1995) (EPA Summary of Criminal Prosecutions Database).

77. *Id.*

78. Robert Matas, *B.C. Man to Stand Trial in Texas on Pollution Charge*, GLOBE & MAIL, <https://www.theglobeandmail.com/news/british-columbia/bc-man-to-stand-trial-in-texas-on-pollution-charge/article1367767/> [<https://perma.cc/ZRN7-TQG9>]; United States v. Cox, No. 10-CR-160 (W.D. Tex. Apr. 13, 2010) (EPA Summary of Criminal Prosecutions Database).

79. Matas, *supra* note 78; Cox, No. 10-CR-160 (EPA Summary of Criminal Prosecutions Database).

80. Cox, No. 10-CR-160 (EPA Summary of Criminal Prosecutions Database).

assessed twelve months of probation for abandoning the hazardous materials.⁸¹

The remaining cases focus on other issues related to hazardous waste. Examples included Villafam Contracting Services, which was prosecuted for submitting fraudulent invoices to the City of El Paso between April 1999 and June 2003.⁸² The company and its owners, Hector Villa, and Denise Villa-Aceves were charged with mail fraud and conspiracy for inflating the amounts their company charged to dispose of hazardous waste under a city contract.⁸³ Villafam was sentenced on April 22, 2005, and ordered to pay \$685,410.35 in restitution jointly with Hector Villa.⁸⁴ James Neil Mayhew was prosecuted in connection with the previously discussed Intertek lab fraud case.⁸⁵ Mayhew was sentenced to six months of incarceration, sixty months of probation, and a \$100 special assessment fee.⁸⁶ Ryan Christopher Thomas was prosecuted for falsifying shipping documents related to the transportation of hazardous waste.⁸⁷ Thomas was the logistics manager at CES Environmental Services and falsely indicated three tanker trucks of wastewater originated from the company's Houston plant when it was produced in their Port Arthur plant.⁸⁸ On July 14, 2004, Thomas was sentenced to twelve months of probation and assessed a \$500 fine.⁸⁹

The second major theme we unearthed in the data was that approximately 24% of all prosecutions were related to water pollution. In twenty-nine cases, the primary crime in the prosecution resulted mostly from the illegal discharge of toxic or hazardous substances into waterways, public sewer systems, or the ocean. Examples included Fina Oil and Chemical Company, which was prosecuted for failing to implement an effective spill response program.⁹⁰ The company owned a docking facility in Port Arthur, where

81. *Id.*

82. *United States v. Villafam Contracting Servs., Inc.*, No. 4-CR-579 (W.D. Tex. Oct. 6, 2004) (EPA Summary of Criminal Prosecutions Database).

83. *Id.*

84. *Id.*

85. *United States v. Mayhew*, No. 00-R-375 (N.D. Tex. Sept. 21, 2000) (EPA Summary of Criminal Prosecutions Database).

86. *Id.*

87. *United States v. Thomas*, No. 13-CR-109 (E.D. Tex. Nov. 6, 2013) (EPA Summary of Criminal Prosecutions Database).

88. *Id.*

89. *Id.*

90. *United States v. Fina Oil & Chem. Co.*, No. 94-347M (E.D. Tex. Apr. 5, 1994) (EPA Summary of Criminal Prosecutions Database).

petroleum products were transferred from their facility to barges.⁹¹ Despite repeated warnings from the U.S. Coast Guard, the facility did not implement a solution for chronic discharges of waste into the Sabine River during their loading operations.⁹² On October 31, 1994, the company was sentenced to thirty-six months of probation, fined \$400,000, and had to implement a \$2.5 million remediation plan to address spills at the facility.⁹³ Kmtex, Inc. operated an organic chemical processing company in Port Arthur, Texas.⁹⁴ The company engaged in the illegal and unpermitted discharge of pollutants into the West Basin of the Intercoastal Waterway.⁹⁵ The company was charged with violations of the CWA and was sentenced on December 10, 2003, to pay a \$50,000 fine.⁹⁶

Other water pollution crimes, such as those committed by William Windham, Superintendent of Utilities in Big Spring, involved laboratory testing fraud.⁹⁷ Windham falsified Discharge Monitoring Reports (DMRs) to claim the Big Spring Wastewater Facility complied with its National Pollution Discharge Elimination System (NPDES) permit.⁹⁸ Windham was sentenced on November 27, 1989, to five months of incarceration and to pay a \$125 assessment fee.⁹⁹ David Humphrey was the manager of Fox Testing Laboratory and he falsified reports for the City of Edinburgh, showing they complied with their discharge permit.¹⁰⁰ Humphrey was charged with false statements, sentenced to thirty-six months of probation, and ordered to pay a fee of \$100, a fine of \$1,000, and restitution to the city in the amount of \$2,420.¹⁰¹ Delbert Irvin Dake was also prosecuted for falsifying the bacteriological count in drinking water samples for five North

91. *Id.*

92. *Id.*

93. *Id.*

94. *United States v. Kmtex Inc.*, No. 3-CR-217 (E.D. Tex. Nov. 3, 2003) (EPA Summary of Criminal Prosecutions Database).

95. *Id.*

96. *Id.*

97. *United States v. Windham*, No. 89-CR-1 (N.D. Tex. Oct. 2, 1989) (EPA Summary of Criminal Prosecutions Database).

98. *Id.*; see *NPDES Permit Basics*, EPA, <https://www.epa.gov/npdes/npdes-permit-basics> [<https://perma.cc/VV95-CRF8>] (discussing NPDES permits being used to regulate discharges from point sources under the CWA).

99. *Windham*, No. 89-CR-1 (EPA Summary of Criminal Prosecutions Database).

100. *United States v. Humphrey*, No. 95-CR-55 (S.D. Tex. Feb. 27, 1995) (EPA Summary of Criminal Prosecutions Database).

101. *Id.*

Texas counties.¹⁰² Dake was sentenced to thirty-six months of probation and a special assessment fee of \$100.¹⁰³

In twenty-seven cases or 22% of the prosecutions in our analysis, the primary theme in the cases was related to air pollution. These cases varied, involving unpermitted emissions being released into the ambient air; the illegal abatement, removal, and disposal of asbestos in violation of the CAA Asbestos NESHAP regulations; illegal importation of CFC-12 in violation of the CAA rules; use of equipment not certified by the EPA to meet regulations; and falsifying vehicle emissions testing. Dennis Ray Alston was prosecuted for a scheme involving the importation of non-conforming emissions during a five-year exemption period under the CAA in the 1980s.¹⁰⁴ Alston pled guilty to CAA violations, including false statements, and was sentenced on December 1, 1986, to six months of probation, a \$24,000 fine, and restitution totaling \$3,800.¹⁰⁵ Juan Antonio Lopez was prosecuted for illegally importing sixty canisters of CFC-12 into the United States via the Gateway International Bridge in Brownsville.¹⁰⁶ He was charged with smuggling the ozone-depleting substances into the United States, sentenced on April 19, 2000, to twenty-four months of probation, and ordered to pay a \$1,000 fine and a \$100 special assessment fee.¹⁰⁷ Christopher Jon Baker was prosecuted for improperly conducting vapor recovery tests for companies in the Beaumont area and submitting false reports to the State of Texas.¹⁰⁸ Baker was sentenced on September 19, 2000, to five months of incarceration, five months of home confinement, thirty-six months of probation, and a special assessment fee of \$100.¹⁰⁹ Along with his co-defendant, Dennis McKibbin, he was required to pay \$22,400 in restitution.¹¹⁰

102. United States v. Dake, No. 99-CR-257 (N.D. Tex. Nov. 24, 1999) (EPA Summary of Criminal Prosecutions Database).

103. *Id.*

104. United States v. Alston, No. 85-CR-236 (S.D. Tex. Oct. 4, 1985) (EPA Summary of Criminal Prosecutions Database).

105. *Id.*

106. United States v. Lopez, No. 99-B-457 (S.D. Tex. Nov. 23, 1999) (EPA Summary of Criminal Prosecutions Database).

107. *Id.*; see *Ozone-Depleting Substances*, EPA, <https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances> [<https://perma.cc/5QXV-9KQZ>] (listing CFC-12 as an ozone-depleting substance).

108. United States v. Baker, No. 99-CR-80 (E.D. Tex. Sept. 19, 2000) (EPA Summary of Criminal Prosecutions Database).

109. *Id.*

110. *Id.*

Areas of Texas that are non-compliant with the National Ambient Air Quality Standards (NAAQS) are considered non-attainment areas and vehicles must submit to annual emissions testing.¹¹¹ In an extensive fraud case involving clean-scanning or substituting one vehicle for another that will not pass emissions standards, Huy Ngoc Nguyen and five co-defendants were prosecuted for running an extensive clean-scanning operation in Arlington.¹¹² At Mike's Autocare and Tommy Tech, the defendants clean-scanned some 7,656 cars between August 2009 and March 2011.¹¹³ The going rate for state testing was \$39.75, but the defendants charged up to \$80 a test to clean-scan and pass a vehicle.¹¹⁴ The defendants were charged with making false material statements under the CAA and conspiracy.¹¹⁵ Nguyen was sentenced to twelve months of probation on September 13, 2012.¹¹⁶ Four of his co-defendants were sentenced to prison.¹¹⁷

Jonathan Isaac Shokrian was prosecuted for improper asbestos abatement at Fazio's Department Store in the Plymouth Park Shopping Center in Irving.¹¹⁸ Workers were not given sufficient equipment to protect themselves and were not informed there was asbestos material involved in the demolition.¹¹⁹ None of the commercial tenants were notified of the demolition work.¹²⁰ Workers used gasoline to remove floor tiles containing asbestos and the Irving Fire Department evacuated the shopping center and part of the nearby neighborhood.¹²¹ The defendant was charged with violations of the CAA, sentenced to twelve months and one day of incarceration, and ordered to pay a \$25,000 fine.¹²² The Tyler Pipe

111. See *Inspection Criteria for the Annual SAFETY Inspection*, TEX. DEP'T PUB. SAFETY, <https://www.dps.texas.gov/rsd/vi/inspection/inspectioncriteria.aspx> [<https://perma.cc/89SF-RH49>] (listing counties in Texas that require emissions testing).

112. United States v. Nguyen, No. 11-CR-270 (N.D. Tex. Sept. 13, 2012) (EPA Summary of Criminal Prosecutions Database).

113. *Id.*

114. *Id.*

115. *Id.*

116. *Id.*

117. *Id.*

118. Kevin Krause, *Former SMU Student Sentenced to Federal Prison for Exposing Day Laborers to Asbestos*, DALL. MORNING NEWS (Feb. 28, 2014), <https://www.dallasnews.com/news/crime/2014/02/28/former-smu-student-sentenced-to-federal-prison-for-exposing-day-laborers-to-asbestos/> [<https://perma.cc/DC7C-VJHL>].

119. *Id.*

120. *Id.*

121. United States v. Shokrian, No. 13-CR-131 (N.D. Tex. Feb. 18, 2014) (EPA Summary of Criminal Prosecutions Database).

122. *Id.*

Company operated a large foundry for manufacturing iron pipes and castings.¹²³ The company modified one of its facilities but did not apply to the TCEQ for permission to make the alteration.¹²⁴ Applying for a permit would have required coming under the prevention of significant deterioration standards (PSD) and using the best available control technology (BACT) in the construction of the facility.¹²⁵ Rather than apply for a Title V Permit, Tyler concealed the construction from investigators and connected it to an old pollution control device.¹²⁶ The company was charged under the CAA for making false statements and was sentenced to sixty months of probation, a \$4.5 million fine, and mandatory compliance with an EPA Region 6 compliance plan.¹²⁷

In 19% of prosecutions, or twenty-three cases, the prosecution ultimately focused on state-level offenses. Given these investigations and that prosecutions in our dataset hinge on the EPA-CID investigations, this trend showed a significant number of cases involving state and federal cooperation on environmental crime cases. These cases represent a range of crimes. For example, on April 13, 2005, investigators on patrol in the Houston Ship Channel noticed that workers at Southwest Shipyard were painting a barge with no protections to keep the paint and waste from discharging into the channel.¹²⁸ Workers were also sandblasting the vessel without protection, thus illegally discharging pollutants into the waters.¹²⁹ The company was charged with state environmental violations and was ordered to pay a \$300,000 fine and \$50,000 in restitution to the State of Texas and Harris County.¹³⁰ The Gulf Chemical and Metallurgical Corporation, located in Freeport, was prosecuted for illegal discharges under state law.¹³¹ The Criminal Investigation Unit of the TCEQ communicated to the EPA-CID that the company was keeping two sets of

123. United States v. Tyler Pipe Co., No. 5-CR-29 (E.D. Tex. Mar. 29, 2005) (EPA Summary of Criminal Prosecutions Database).

124. *Id.*; Lisa Falkenberg, *Troubled Tyler Pipe Pleads Guilty, Agrees to \$4.5 Million Fine*, MIDLAND REP. TELEGRAM NEWS (Mar. 21, 2005), <https://www.mrt.com/news/article/Troubled-Tyler-Pipe-pleads-guilty-agrees-to-4-5-7547601.php> [<https://perma.cc/5J7H-YRAR>].

125. *Tyler Pipe Co.*, No. 5-CR-29 (EPA Summary of Criminal Prosecutions Database).

126. *Id.*; Falkenberg, *supra* note 124.

127. *Tyler Pipe Co.*, No. 5-CR-29 (EPA Summary of Criminal Prosecutions Database).

128. United States v. Sw. Shipyard, (Harris Co. Ct. at Law No. 10, Feb. 15, 2007) (EPA Summary of Criminal Prosecutions Database).

129. *Id.*

130. *Id.*

131. United States v. Gulf Chem. & Metallurgical Corp., No. 10-DC-900138 (S.D. Tex. May 27, 2010) (EPA Summary of Criminal Prosecutions Database).

sampling data—one that went to regulators and a more accurate one that showed the company was violating its permit.¹³² On February 2, 2010, a state search warrant was executed by TCEQ, EPA-CID, Texas Parks and Wildlife, and the Houston Police Department.¹³³ On May 27, 2010, the company pled guilty and was ordered to pay a \$2,750,000 state fine.¹³⁴

Eight prosecutions defied our four-part categorization in Table 4. Two were the biodiesel fraud cases, discussed previously against Philip Joseph Rivkin and Jeffrey David Gunselman, and the lab fraud case against Craven Laboratories. Of the remaining five cases, George Timothy Mercier was prosecuted for understating the amount of lead used by Gulf States Oil during the CAA's lead phase-down regulations.¹³⁵ Mercier was charged with conspiracy, false statements, and violations of the CAA, was fined \$15,000, and sentenced to thirty-five days of incarceration on each of the five counts to run concurrently.¹³⁶ Yousef Ishaq Abuteir was prosecuted for running a fuel excise tax scheme.¹³⁷ He pled guilty to conspiracy on April 14, 2008, but fled to Israel and remained a fugitive for eight years.¹³⁸ The defendant was later arrested and sentenced on February 24, 2016, to sixty months of incarceration and ordered to pay \$3,328,459 in restitution.¹³⁹ Allen Smith was prosecuted and sentenced to thirty-seven months of incarceration, \$867,150 in restitution, and made to forfeit \$42,269 for trafficking in pet products with counterfeit labels.¹⁴⁰ Smith sold over \$1 million worth of counterfeit veterinary products under the Frontline, Frontline Plus, Advantage, and K9 Advantage labels.¹⁴¹ Christopher Martin was also prosecuted for selling counterfeit veterinary products and was sentenced to forty-seven months of incarceration and ordered to pay \$867,150, severally with other defendants, for his role in the scheme.¹⁴² Both Martin and Allen

132. *Id.*

133. *Id.*

134. *Id.*

135. United States v. Mercier, No. 86-111 (S.D. Tex. Apr. 11, 1986) (EPA Summary of Criminal Prosecutions Database).

136. *Id.*

137. United States v. Abuteir, No. 07-H-279 (S.D. Tex. July 9, 2007) (EPA Summary of Criminal Prosecutions Database).

138. *See id.* (reporting the defendant made the EPA's Most Wanted List).

139. *Id.*

140. United States v. Smith, No. 15-CR-372 (S.D. Tex. Feb. 6, 2017) (EPA Summary of Criminal Prosecutions Database).

141. *Id.*

142. United States v. Martin, No. 15-CR-372 (S.D. Tex. Jan. 10, 2018) (EPA Summary of Criminal Prosecutions Database).

were part of one of the largest groups of illegal importers of counterfeit pet products into the country at the time, engaging in smuggling between January 2008 and July 2015.¹⁴³ John Purviance used a restricted-use pesticide in Bowie County to kill feral hogs.¹⁴⁴ The mixture was also consumed by migratory birds.¹⁴⁵ On July 6, 2017, Purviance pled guilty to unlawful use of a restricted pesticide (FIFRA), and illegal taking of migratory birds,¹⁴⁶ a violation under the Migratory Bird Treaty Act.¹⁴⁷ The defendant was fined \$2,375 and ordered to pay \$4,198 in restitution.¹⁴⁸

VI. DISCUSSION

Our analysis of environmental crime prosecutions that have taken place in Texas since the environmental criminal enforcement apparatus was institutionalized at the federal level, has yielded several important insights. The first is that prosecutors were willing and able to pursue significant penalties against offenders. We found over \$371 million in monetary penalties assessed to defendants at sentencing, as well as 483 years of probation, and 125 years of incarceration. Given the resources of environmental law enforcement personnel, these totals can be seen as significant achievements. Yet these totals were affected by outliers. The five largest monetary penalties made up about 31% of total penalties assessed at sentencing. The five largest incarceration sentences made up about 45% of total incarceration assessed at sentencing.

We found that themes in prosecutions show that investigators sought out an even distribution of cases over time. Hazardous waste crimes were the most prevalent at 29% of total prosecutions. Water pollution crimes made up 24% of prosecutions. Air pollution crimes accounted for 22% of prosecutions, and 19% of prosecutions were for state-level offenses. Our data also suggested there was a significant amount of cooperation with state environmental agencies and prosecutors, given the large number of cases that were deferred for state prosecution. This finding showed the role, albeit

143. *Id.*; *Smith*, No. 15-CR-372 (EPA Summary of Criminal Prosecutions Database).

144. *United States v. Purviance*, No. 17-CR-3 (E.D. Tex. July 6, 2017) (EPA Summary of Criminal Prosecutions Database).

145. *Id.*

146. *Id.*

147. 16 U.S.C. § 703–12 (2004).

148. *United States v. Purviance*, No. 17-CR-3 (E.D. Tex. July 6, 2017) (EPA Summary of Criminal Prosecutions Database).

indirectly, that these state-level criminal investigators and prosecutors played in enforcing environmental laws in the state.¹⁴⁹

Another empirical conclusion we drew in our analysis was that concerns over excessive prosecutions and penalties do not appear to be borne out in our analysis.¹⁵⁰ While difficult to capture empirically, we can examine cases to explore for criminal offenses, such as false statements, fraud, conspiracy, smuggling, or obstruction to analyze whether cases seem to demonstrate aggravating factors, intent, or other criminal behaviors. We found that fifty prosecutions or about 41% of all cases in our analysis, showed that a defendant was charged with one or more of these crimes. This finding is consistent with other research demonstrating the role of aggravating factors and crime severity in case selection and punishment outcomes.¹⁵¹

VII. CONCLUSION

The State of Texas has a broad, diversified economy that includes a significant number of stationary sources of pollution.¹⁵² While much of the environmental law at the state and federal level is permitted and enforced by the TCEQ, chronic, serious, and willful violations of federal environmental law require criminal enforcement tools.¹⁵³ If criminal enforcement is predicated on punishment and deterrence, and the latter requires sufficient policing and prosecution of environmental crimes, then Texas may have a serious problem policing polluters (although the polluters may feel otherwise). With the number of prosecutions below four annually,

149. See Mushal, *supra* note 14, at 1125 (advocating for greater congressional funding of environmental enforcement associations so they may grow training programs and ease the burden on federal prosecutors).

150. See *Enforcement Annual Results for Fiscal Year 2021*, EPA, <https://www.epa.gov/enforcement/enforcement-annual-results-fiscal-year-2021> [<https://perma.cc/DVE4-G63M>] (reporting 123 new cases opened in fiscal year 2021) (detailing the “vigorous enforcement and compliance program[s]” necessary to protect against environmental violations); see also Rebecca Hersher, *The EPA is Updating Its Most Important Tool for Cracking Down on Carbon Emissions*, NPR (Feb. 4, 2023), <https://www.npr.org/2023/02/04/1152080009/the-epa-is-updating-its-most-important-tool-for-cracking-down-on-carbon-emission> [<https://perma.cc/4STC-N57U>] (addressing concerns related to recent changes in the EPA’s stance on the “social costs of carbon”).

151. Uhlmann, *Crime Redux*, *supra* note 35, at 363; Ozmy & Jarrell, *supra* note 35, at 71–73.

152. See *Controlling Emissions from Stationary Sources*, TEX. COMM’N ENV’T QUALITY, <https://www.tceq.texas.gov/airquality/stationary-rules> [<https://perma.cc/8J7W-29AY>] (mapping the various locations of stationary sources of pollution in Texas).

153. See *supra* Part II (discussing criminal enforcement tools available to regulatory agencies).

the chance of being prosecuted is sufficiently low—suggesting a sub-optimal amount of deterrence occurring in the Lone Star State.¹⁵⁴

To remedy this lack of enforcement, the state must start with additional police patrols.¹⁵⁵ The statutory minimum number of EPA-CID criminal investigators should number 200,¹⁵⁶ but the number has fallen well below that mark over the past decade.¹⁵⁷ There cannot be a robust environmental law enforcement presence with so few agents. While it is true that the EPA's criminal prosecutors have always intended to make strategic choices on prosecution with limited resources, their ever-growing mandate with shrinking or stagnant resources is not the proper way forward.¹⁵⁸

The need for added resources at the federal level is evident after a quick review of the budgetary situation for the EPA and the ENRD over time. The EPA's budget, adjusted for inflation, peaked at \$17 billion in 1980.¹⁵⁹ Despite an increase in budgetary support between 2009 and 2010 from the Obama Administration, substantive increases have been lacking over time and the budget has remained stagnant.¹⁶⁰ By the time of the 2009 financial crisis, staffing at the EPA had been declining for a decade, from a peak of 18,110 in 1999, to a trough of 14,172 during the Trump Administration.¹⁶¹ The ENRD's budget had also stagnated.¹⁶² The FY 2022 enacted budget committed \$9.5 billion in funding and 14,581 staff, which is not terribly

154. See discussion *supra* Part III.

155. See *EPA CID Agent Count*, PUB. EMP. FOR ENV'T RESP., https://peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf [<https://perma.cc/AFP4-2GRT>] (listing the decreasing number of agents from 2012 to 2019).

156. Pollution Prosecution Act of 1990, Pub. L. No. 101-593, § 202, 104 Stat. 2954.

157. See *EPA CID Agent Count*, *supra* note 155 (providing the agent count at 145, as of 2019).

158. See 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, 904 (1990) (discussing the focus of enforcement action on egregious, deliberate, and recalcitrant violations); Theodora Galacatos, *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, 594 (1995) (suggesting the prosecution of environmental criminals and consideration of these crimes through the criminal lens has always been a contentious view).

159. See *EPA's Budget and Spending*, EPA, <https://www.epa.gov/planandbudget/budget> [<https://perma.cc/AQM3-U8N2>] (reporting annual budget figures with inflation, calculated using the US Inflation Calculator site, <https://www.usinflationcalculator.com>).

160. *Id.*

161. See *id.* (reporting the EPA's staffing numbers over various administrations).

162. U.S. DEP'T OF JUST., FY 2023 PERFORMANCE BUDGET CONGRESSIONAL BUDGET JUSTIFICATION 15 (2023), <https://www.justice.gov/jmd/page/file/1491706/download> [<https://perma.cc/8WHX-HGAM>].

significant.¹⁶³ The ENRD's budget appropriation of \$130 million is lacking.¹⁶⁴ Without enhanced funding, environmental law enforcement agencies will lack the ability to police and prosecute environmental criminals as needed now and in the future. The Biden Administration has committed to "leverage all available legal tools to secure protections for communities that have been overburdened by pollution and environmental injustices."¹⁶⁵ Eventually, carbon emissions will play more and more into the enforcement scheme, which is a plus on both fronts, but a collective negative, if funding is not enhanced for core functions.

In addition to resources to enhance formal policing, this Article suggests taking seriously the idea of enhanced environmental community policing. Texas hosts a significant number of stationary sources of pollution near environmental justice communities. While the EPA's Office of Environmental Justice (OEJ) is tasked with including these communities in decision-making, as well as providing small grants to study health effects, the EPA could do much more. One such move would simply be to empower citizens to gather evidence and submit it to investigators at both the EPA and the TCEQ.¹⁶⁶ The Report a Violation website created by the EPA resulted in the EPA-CID opening thirty-five cases and referring six of those cases for successful prosecution in the first decade the site went live; this could be expanded.¹⁶⁷

A final problem with enhancing the effect of criminal enforcement tools is the lack of salience attached to their importance.¹⁶⁸ Environmental crimes

163. *EPA's Budget and Spending*, *supra* note 159.

164. FY 2023 PERFORMANCE BUDGET, *supra* note 162, at 15.

165. *New Enforcement Strategy Advances President Biden's Environmental Justice Agenda*, EPA (May 5, 2022), <https://www.epa.gov/newsreleases/new-enforcement-strategy-advances-president-bidens-environmental-justice-agenda> [<https://perma.cc/KP6H-8GQR>] (refocusing the EPA's enforcement strategy toward environmental justice communities and highlighting the DOJ's added resources based on the most recent federal budget).

166. *See Office of Environmental Justice in Action*, EPA, https://www.epa.gov/sites/default/files/2017-09/documents/epa_office_of_environmental_justice_factsheet.pdf [<https://perma.cc/EHR6-CRSS>] (describing the potential for positive impact on the issue stemming from community engagement).

167. EPA, CRIMINAL ENFORCEMENT PROGRAM 6 (Oct. 2011), <https://19january2017snapshot.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf> [<https://perma.cc/MT9G-QPSY>].

168. *Richard Lazarus: Environmental Law Has Fallen "in Arrears,"* HARV. L. TODAY (May 3, 2013), <https://hls.harvard.edu/today/richard-lazarus-environmental-law-has-fallen-in-arrears-video/> [<https://perma.cc/N9PC-Q45P>] (emphasizing the need for legislative updates to current environmental laws at the federal level).

rarely receive extensive coverage by the mass media unless there is an explosion or multiple casualties.¹⁶⁹ If the public cannot see environmental crimes as serious crimes and the media does not portray them as such in a concerted and significant manner, there is little reason for Congress to put additional resources towards criminal punishment for serious environmental offenses. In the era of climate change, the EPA will be hard-pressed to achieve the outcomes needed in carbon reductions if it cannot enforce the law against environmental criminals. The costs of these regulations will likely prove just as significant or worse to companies and individuals than what they currently face in the regulatory environment. This situation is ripe for raising the value of polluting versus the chance of being caught, as well as the probability of offending.

169. See Melissa L. Jarrell, *Environmental Crime and Injustice: Media Coverage of a Landmark Environmental Crime Case*, 6 SW. J. CRIM. JUST. 25, 27–28 (2009) (discouraging media preference toward violent encounters and advocating for a renewed focus on environmental harms).