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THE POLITICS OF THE CRIMINAL ENFORCEMENT OF THE U.S. CLEAN AIR ACT

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INTRODUCTION

When air pollution crimes involve significant harm or culpable conduct, they may be remedied through criminal prosecution. Republican and Democratic presidents offer significantly varied levels of political support for enforcing the U.S. Clean Air Act (“CAA”). However, we know little about the prosecution of such crimes historically and how they vary across presidents. By using content analysis of 2,728 criminal prosecutions, we selected all prosecutions for criminal violations of the CAA from 1983 to 2021 in order to address these questions. Results demonstrate that 391 prosecutions were adjudicated, including 733 defendants receiving over \$3.6 billion in monetary penalties, 1,379 years of probation, and 647 years of incarceration. Excluding a few outliers, prosecutions are more frequent and penalties are higher under Democrats but not by a significant margin. The undercurrent of the analysis data may be a broader trend stretching back a few decades of financial underinvestment across parties resulting in stagnating enforcement outcomes over time, rather than broad swings across political parties.

The CAA is the primary regulatory vehicle that affords the U.S. Environmental Protection Agency (“EPA”) the legal authority to regulate a variety of harmful air emissions throughout the country.¹ While imperfect

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¹ Congress first acknowledged air pollution as a serious national problem with the passage of the Air Pollution Control Act of 1955. *Evolution of the Clean Air Act*, EPA (Dec. 7, 2022), <https://www.epa.gov/clean-air-act-overview/evolution-clean-air-act> [<https://perma.cc/5XBY-DFPX>]. The modern CAA is generally cited as the CAA Extension of 1970. For the statutory history, see Clean Air Act of 1955, Pub. L. No. 84-159, 69 Stat. 322 (1955); Clean Air Act of 1963, Pub. L. No. 88-206, 77 Stat. 392 (1963); Clean Air Act of 1965, Pub. L. No. 89-272, 79 Stat. 992 (1965); Clean Air Act of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (1970); Clean Air Act of 1977, Pub. L. No. 95-95, 91 Stat. 685 (1977); and Clean Air Act of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990). See Paul Rogers, *The Clean Air Act of 1970*, 16 EPA J. 21, 21–22 (1990), <https://nepis.epa.gov/Exec/zyPDF.cgi/40>

and culled together for a series of previous legislative efforts, the modern CAA, born from focusing on events such as the Donora Smog, has been used towards a variety of successful ends, from creating a permitting regime to reducing harmful air pollution from stationary and mobile sources across the United States, reducing acid rain, protecting workers and the general public from asbestos exposure, and many other accomplishments spanning over half a century.² The CAA has been the primary regulatory vehicle for the EPA to attempt to curb carbon emissions, and thus has placed the agency front and center in the fight against anthropogenic climate change.³

000CB9.PDF?Dockey=40000CB9.PDF [https://perma.cc/495P-92FF]; see also *Clean Air Act Requirements and History*, EPA, https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history [https://perma.cc/43MU-9M8L] (last visited Oct. 17, 2022).

² See Elizabeth T. Jacobs, Jefferey L. Burgess & Mark Abbott, *The Donora Smog Revisited: 70 Years After the Event That Inspired the Clean Air Act*, 108 AM. J. PUB. HEALTH, S85, S85, S87 (2018). The United States has no comprehensive environmental law that stretches across environmental media, and the EPA has offices and structures that are unfortunately designed to be narrowing to their broader mission and as such tackling big issues like air pollution that cross various regulatory boundaries has taxed the agency over time. See Richard Arnold & Andrew B. Whitford, *Organisational Dilemmas of the US EPA: Why Structures Matter for Environmental Protection*, 14 ENV'T POL., 118, 118–20 (2005); Victor B. Flatt, *Gasping for Breath: The Administrative Flaws of Federal Hazardous Air Pollution Regulation and What We Can Learn from the States*, 34 ECOLOGY L. Q., 107, 111–14 (2007); *Operating Permits Issued Under Title V of the Clean Air Act*, EPA, https://www.epa.gov/title-v-operating-permits [https://perma.cc/GB95-9YXZ] (last visited Oct. 17, 2022); *All EPA Emissions Standards*, EPA, https://www.epa.gov/emission-standards-reference-guide/all-epa-emission-standards [https://perma.cc/ZT5N-DSS8] (last visited Oct. 17, 2022); *Acid Rain Program*, EPA, https://www.epa.gov/acidrain/acid-rain-program [https://perma.cc/9B2M-U62W] (last visited Oct. 17, 2022); see also *Asbestos Laws and Regulations*, EPA, https://www.epa.gov/asbestos/asbestos-laws-and-regulations [https://perma.cc/8V3K-MVFJ] (last visited Oct. 17, 2022).

³ The CAA was and remains the primary vehicle for the EPA to work at reducing carbon emissions, which moved forward under President Obama, but stalled under President Trump and will be increasingly important if the current regulatory structure is used, with EPA at the forefront, in dealing with anthropogenic climate change. Samantha Gross, *What Is the Trump Administration's Track Record on the Environment?*, BROOKINGS (Aug. 4, 2020), https://www.brookings.edu/policy2020/votervital/what-is-the-trump-administrations-track-record-on-the-environment/ [https://perma.cc/7JTB-DRA5]. The EPA issued rules to curb greenhouse gas emissions from large stationary sources of emissions in January 2011. See *Clean Air Act Permitting for Greenhouse Gases*, EPA, https://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases [https://perma.cc/3DZD-8MUZ] (last visited Oct. 17, 2022). This led to the Supreme Court case of *Utility Air Regulation v. EPA*, where the Court brought into question the authority of the EPA under the CAA to regulate greenhouse gas emissions for purposes of permitting a major stationary source and found mostly in favor of the agency's ability to regulate greenhouse gases. 573 U.S. 302, 307–14 (2014). The Trump Administration rolled back these requirements. See

The CAA is organized by six titles, known as Titles I–VI.⁴ A strong system of enforcement and oversight is needed to maintain the substance of air pollution laws, and the EPA maintains a compliance monitoring strategy to focus its enforcement efforts for air pollution under the Act.⁵ Violations of the CAA are typically handled through civil channels offering numerous paths to bring violators into compliance with the law, such as environmental mitigation plans, Administrative Orders on Consent (“AOCs”), Supplemental Environmental Projects (“SEPs”), civil or judicial fines, and other compliance tools.⁶ Civil enforcement mechanisms center on bringing the regulated community into compliance with the

Clean Air Act Permitting for Greenhouse Gases, EPA, <https://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases> [<https://perma.cc/7U6P-UA3R>] (last visited Oct. 17, 2022); see also John Cook, Dana Nuccitelli, Sarah A. Green, Mark Richardson, Bärbel Winkler, Rob Painting, Robert Way, Peter Jacobs & Andrew Skuce, *Quantifying the Consensus on Anthropogenic Global Warming in the Scientific Literature*, ENV’T RSCH. LETTERS, June 2013, at 1, 1–7.

⁴Title I creates air quality control regions that establish the basis for air permits and has New Source Review (“NSR”) for attainment zones that meet National Ambient Air Quality Standards (“NAAQS”) or non-attainment area permits focused on the prevention of significant deterioration (“PSD”) of air quality in the area for sources that are newly constructed or significantly modified; Title II regulates mobile sources of pollution, particularly focusing on vehicles and aircraft; Title III establishes a list of hazardous air pollutants (“HAPs”) and provisions for citizen suits; Title IV regulates acid rain; Title V creates a nationwide permitting system for stationary sources of air pollution; and Title VI regulates ozone depleting and destroying substances. See *Clean Air Act Text*, EPA, <https://www.epa.gov/clean-air-act-overview/clean-air-act-text> [<https://perma.cc/L6KA-6KUM>] (May 4, 2022); see also *New Source Review*, ENV’T & ENERGY L. PROGRAM, <https://eelp.law.harvard.edu/2018/12/new-source-review/> [<https://perma.cc/C84R-E4GA>] (last visited Oct. 17, 2022); *Best Available Control Technology (BACT) Procedure*, EPA, <https://www.epa.gov/nsr/best-available-control-technology-bact-procedure> [<https://perma.cc/8LZT-CN2U>] (Sept. 7, 2022); *Mobile Source Pollution and Related Health Effects*, EPA, <https://www.epa.gov/mobile-source-pollution> [<https://perma.cc/59PP-U76U>] (Aug. 9, 2022); *Prevention of Significant Deterioration Basic Information*, EPA, <https://www.epa.gov/nsr/prevention-significant-deterioration-basic-information> [<https://perma.cc/42XU-YFX4>] (Feb. 14, 2022); *Initial List of Hazardous Air Pollutants With Modifications*, EPA, <https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications> [<https://perma.cc/TQP5-J9F8>] (Jan. 5, 2022).

⁵*Clean Air Act (CAA) Compliance Monitoring*, EPA, <https://www.epa.gov/compliance/clean-air-act-caa-compliance-monitoring> [<https://perma.cc/4NEE-QDCN>] (June 29, 2022).

⁶*Basic Information on Enforcement*, EPA, <https://www.epa.gov/enforcement/basic-information-enforcement> [<https://perma.cc/8A4J-AMDP>] (Feb. 22, 2022); Michael J. Lynch, Kimberly L. Barrett, Paul B. Stretesky & Michael A. 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, 1096–97 (2016); Michael J. Lynch, *The Sentencing/Punishment of Federal Environmental/Green Offenders, 2000–2013*, 38 DEVIANT BEHAV. 991, 991–92 (2017).

law, but certain instances involving serious violations of the law, willful or culpable conduct, and those that create significant harm, can be dealt with through a criminal process that focuses on deterrence and punishment.⁷ Limited empirical research has explored the prosecution of federal environmental crimes generally in the United States and still fewer studies have analyzed the prosecution of air pollution crimes under the CAA.⁸ Given that a robust and effective CAA necessitates a criminal enforcement regime, there is a strong need in the regulatory, legal, and scholarly communities to further investigate the criminal prosecution of water pollution crimes under the CAA.⁹

Criminal prosecution has always existed in a political context. Democratic and Republican presidents have treated environmental regulation very differently over time and this may have a profound effect on how the criminal enforcement of air pollution laws has proceeded in the United States both historically and in the future. There was enough of a bipartisan consensus to allow the institutionalization of resources for the policing and prosecution of air pollution crimes that began in the 1980s and lasted until the early 1990s, where criminal investigators and specialized prosecutors were hired; institutionalized places for these operations to specialize and collaborate were established; as were criminal provisions in major environmental statutes that all allowed for a criminal enforcement apparatus to institutionalize and become a standard part of the environmental enforcement regime.¹⁰ By the time Bill

⁷ Memorandum from Earl E. Devaney, Dir. of Off. of Crim. Enf't, on the Exercise of Investigative Discretion to All EPA Emps. Working in or in Support of the Crim. Enf't Program (Jan. 12, 1994), <https://www.epa.gov/sites/production/files/documents/exercise.pdf> [<https://perma.cc/UVG2-DGPF>].

⁸ 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 (2020); Joshua Ozymy & Melissa Jarrell Ozymy, *Exploring Charging and Sentencing Patterns in U.S. Clean Air Act Criminal Prosecutions*, 61 NAT. RES. J. 229, 230–34 (2021). For an overview of environmental criminal enforcement, see KATHLEEN F. BRICKEY, ENVIRONMENTAL CRIME: LAW, POLICY, PROSECUTION 9 (2008).

⁹ For a summary of the criminal provisions of the CAA, see *Criminal Provisions of the Clean Air Act*, EPA (Mar. 30, 2022), <https://www.epa.gov/enforcement/criminal-provisions-clean-air-act> [<https://perma.cc/W2U7-MVW9>].

¹⁰ For a discussion on how many began to sour on criminal enforcement, see Theodora Galactos, *The United States Department of Justice Environmental Crimes Section: A Case Study of Inter- and Intrabranched Conflict over Congressional Oversight and the Exercise of Prosecutorial Discretion*, 64 FORDHAM L. REV. 589, 590 (1995); Judson W. Starr, *Turbulent Times at Justice and EPA: The Origins of Environmental Criminal Prosecutions and the Work that Remains*, 59 GEO. WASH. L. REV. 900, 900–02 (1990).

Clinton was in office, any bipartisanship over environmental enforcement began to break down and this process continued through the Trump Administration, which was openly hostile towards the agency more so than any Republican president since Reagan.¹¹ How enforcement evolved across different partisan regimes and whether Democrats offered significantly expanded political, administrative, and budgetary support compared to Republicans, should influence criminal enforcement outcomes in CAA criminal prosecutions, but these effects are mostly unknown.¹² By analyzing all CAA criminal prosecutions stemming from EPA criminal investigations from 1983 to 2021, we are able to explore outcomes across time and presidents and examine these broader patterns to address such important questions.

I. THE CRIMINAL ENFORCEMENT OF THE CAA

Institutionalizing resources to develop a criminal enforcement system for federal environmental law in the United States lead to the development of criminal penalties in environmental statutes, resources for policing environmental crimes, and specialized prosecutorial resources to prosecute environmental criminals. The development of criminal provisions in environmental law may be traced to the Rivers and Harbors Act (1899) and Lacey Act (1900), which provided penalties for illegally obstructing or altering the navigable waterways of the United States and banned the unpermitted interstate trade in wildlife.¹³ The 1970s was a

¹¹ Jessica Hejny, *The Trump Administration and Environmental Policy: Regan Redux?*, 8 J. ENV'T STUD. & SCIS. 197, 197–99 (2018). Republicans have typically, at least since President Nixon and especially since President Reagan, been mostly opposed to strong environmental enforcement, even though major accomplishments in environmental law and policy began with presidents like Teddy Roosevelt, Richard Nixon, and George H.W. Bush. *Republican Presidents on Environment*, NPR (June 3, 2007, 4:34 PM), <https://www.npr.org/templates/story/story.php?storyId=10687339> [<https://perma.cc/H362-7SYW>].

¹² Joel A. Mintz, *Neither the Best of Times Nor the Worst of Times: EPA Enforcement During the Clinton Administration*, 35 ENV'TL. REP. 10390, 10390 (2005). The budgets for the EPA and the Environment and Natural Resources Division (“ENRD”) have been relatively stagnant adjusted for inflation for many years. See *Budget and Performance Summary*, DOJ (July 1, 2022), <https://www.justice.gov/doj/budget-and-performance> [<https://perma.cc/BN6B-NPSE>]; *EPA’s Budget and Spending*, EPA (May 16, 2022), <https://www.epa.gov/planandbudget/budget> [<https://perma.cc/D4D5-HZ6V>].

¹³ Rivers and Harbors Appropriation Act of 1899, 33 U.S.C. § 403. The Refuse Act was the first federal environmental statute to criminalize environmental transgressions, but these statutes provided misdemeanor penalties. Lacey Act of 1900, Pub. L. No. 56-553, 31 Stat. 187, 187–88 (1900); Lacey Act Amendments of 1981, 16 U.S.C. § 3371.

pivotal time in the development of environmental law, with the passage of the modern CAA and other substantive laws over various environmental media including the U.S. Clean Water Act, Resource Conservation and Recovery Act ("RCRA"), Toxic Substances Control Act ("TSCA"), and the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), as well as the creation of the EPA.¹⁴

Through the 1970s, it became clear that the enforcement regime needed tougher measures to deal with non-compliance, and a criminal enforcement regime began to take place in the 1980s.¹⁵ Major environmental laws received upgraded penalties and related criminal provisions throughout the decade, first with RCRA in 1984, then in 1987 the Clean Water Act ("CWA"), followed by the CAA in 1990, and so forth.¹⁶ Support for financial resources came from Congress to support policing resources for criminal investigations in the EPA with the founding of the EPA's Office of Enforcement in 1981, now referred to as the Office of Compliance Assurance.¹⁷ The next year, criminal investigators were hired and, in 1988, given full law enforcement authority.¹⁸ The EPA's Criminal Investigation Division ("EPA-CID"), which spearheads criminal investigations, was given additional resources in 1990, under the Pollution

¹⁴ Clean Water Act, 33 U.S.C. § 1251; Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901; Toxic Substances Control Act, 15 U.S.C. § 2601; Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136.

¹⁵ Criminal enforcement was taking shape in the mid-1970s. The EPA issued the first extensive agency guidelines for proceeding in criminal cases in 1976. In 1978, the EPA and the DOJ formed a hazardous waste taskforce that initiated fifty-two civil actions under RCRA, and the DOJ was laying the groundwork for institutionalizing criminal enforcement resources by the end of the Carter Administration. For the EPA, the nexus between the two agencies was formally cemented when Peter Beerson, a former DOJ attorney, became the Director of the Office of Enforcement at its inception. See Robert I. McMurry & Stephen D. Ramsey, *Environmental Crime: The Use of Criminal Sanctions in Enforcing Environmental Laws*, LOY. L.A. L. REV. 1133, 1136–41 (1986). An example would be prosecuting corporate officers for hazardous waste crimes. See David T. Barton, *Corporate Officer Liability Under RCRA: Strict but Not Stringent*, 1991 BYU L. REV. 1547, 1547–49 (1991).

¹⁶ *Historical Development of Environmental Criminal Law*, DOJ ENV'T & NAT. RES. DIV. (May 15, 2015) [hereinafter *Historical Development*], <https://www.justice.gov/enrd/about-division/historical-development-environmental-criminal-law> [<https://perma.cc/HS9X-QYQS>].

¹⁷ *About the Office of the Enforcement and Compliance Assurance (OECA)*, EPA (Sept. 21, 2022), <https://www.epa.gov/aboutepa/about-office-enforcement-and-compliance-assurance-oeca> [<https://perma.cc/3YLX-AS7M>]; EPA, MANAGEMENT REVIEW OF THE OFFICE OF CRIMINAL ENFORCEMENT, FORENSICS AND TRAINING 5–7 (2003) [hereinafter MANAGEMENT REVIEW], <https://www.epa.gov/sites/production/files/documents/oceft-review03.pdf> [<https://perma.cc/Q8ML-L7AR>].

¹⁸ *Id.*

Prosecution Act, and today employs roughly 145 criminal investigators.¹⁹ What became the ENRD was originally the Public Lands Division, organized within the DOJ in 1909.²⁰ The Environmental Crimes Section (“DOJ–ECS”) was organized in the DOJ in 1982, and by 1987, became its own organizational unit within ENRD, now employing about forty-three attorneys and a dozen staff.²¹

Collaboration between the EPA–CID, DOJ–ECS, and U.S. Attorney’s Office is a critical element of the criminal enforcement regime. Criminal investigators build cases and take them to attorneys in one of these units, often working with state, local, and other federal agents in a taskforce-type environment, forming cases through civil inspections, requiring reports and regulatory filings, or through whistle-blowers and former employees among other sources.²² Criminal investigators must work with prosecutors to file criminal information in federal court or convene a grand jury to press a case to prosecution.²³

Republican presidents have never been terribly keen on environmental regulation and enforcement. Nixon was not excited about the existence of the EPA or its enforcement role, and Reagan was equally

¹⁹ The Pollution Prosecution Act of 1990 required statutory minimum of 200 investigative staff for the EPA–CID, which were hired in subsequent years. Pollution Prosecution Act of 1990, Pub. L. No. 101-593, §§ 201–02, 104 Stat. 2963 (1990). The number of special agents varies by source. See EPA CRIM. ENV’T PROGRAM, AMERICA’S ENVIRONMENTAL CRIME FIGHTERS, <https://www.epa.gov/sites/production/files/documents/oceftbrochure.pdf> [<https://perma.cc/U5JZ-U85G>]; PUBLIC EMPLOYEES FOR ENVIRONMENTAL RESPONSIBILITY, EPA CID AGENT COUNT, https://www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf [<https://perma.cc/QT47-ALJY>] (last visited Oct. 17, 2022).

²⁰ *History*, DOJ ENV’T & NAT. RES. DIV. (May 18, 2021), <https://www.justice.gov/enrd/history> [<https://perma.cc/7ZY9-8VF9>]; *Historical Development*, *supra* note 16.

²¹ *History*, DOJ ENV’T & NAT. RES. DIV., *supra* note 20; *Environmental Crimes Section: Prosecutors Protecting our Nation’s Ecological Heritage*, DOJ ENV’T & NAT. RES. DIV. (July 2, 2021), <https://www.justice.gov/enrd/environmental-crimes-section> [<https://perma.cc/47Z2-AKT9>] (employment figures given as of 2015); see also *Environmental Enforcement Section: An Overview of Our Practice*, DOJ ENV’T & NAT. RES. DIV. (May 14, 2015), <https://www.justice.gov/enrd/overview-our-practice> [<https://perma.cc/4ZBF-29P9>] (the DOJ’s Environmental Enforcement Section is responsible for civil judicial enforcement and is separate from the DOJ’s Environmental Crimes Section).

²² The case may also be forwarded to state or local officials for prosecution instead of pursuing federal charges. For the role of sources in criminal investigations, see Joel A. Mintz, *Treading Water: A Preliminary Assessment of EPA Enforcement During the Bush II Administration*, 34 ENV’T L. REP. 10912, 10922, 10924 (2004).

²³ For a discussion of the nature of criminal investigations and collaborations, see Joel A. Mintz, *Some Thoughts on the Interdisciplinary Aspects of Environmental Enforcement*, 36 ENV’T L. REP. 10495, 10497–98, 10504 (2006).

dissatisfied with any regulation of business.²⁴ When Anne Gorsuch was appointed as Administrator of the EPA, she made certain to carry out these wishes rather swiftly.²⁵ Gorsuch halted much of the enforcement process and supported budgetary cuts, and many of the early criminal enforcement functions were dismantled, although spread across the agency.²⁶ It was not until William Ruckelshaus was reinstated after Gorsuch resigned from her position that the enforcement regime was put back on track.²⁷ Despite the vitriol during the Reagan Administration, budgets managed to increase over time through Presidents Reagan and G. W. Bush, criminal provisions were placed within major environmental statutes, and budget increases managed to make their way to the agencies.²⁸ The Pollution Prosecution Act further bolstered resources, and major environmental laws, such as RCRA, CWA, and CAA were amended.²⁹

²⁴ See *id.* at 10500–01.

²⁵ JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES, 43–44 (rev. ed., 2012).

²⁶ Cally Carswell, *How Reagan's EPA Chief Paved the Way for Trump's Assault on the Agency*, NEW REPUBLIC (Mar. 21, 2017), <https://newrepublic.com/article/141471/reagans-epa-chief-paved-way-trumps-assault-agency> [<https://perma.cc/A72G-UUX5>]. Criminal enforcement also benefitted from the desire to enhance penalties for a range of federal crimes, including environmental crimes, and the standardization that was being attempted by the U.S. Sentencing Commission at the time. See Raymond W. Mushal, *Up from the Sewers: A Perspective on the Evolution of the Federal Environmental Crimes Program*, 2009 UTAH L. REV. 1103, 1103–1105 (2009).

²⁷ William Ruckelshaus was the first Administrator of the EPA from 1970 to 1973, and 1983 to 1985. *Bill Ruckelshaus, 1932–2019*, EPA (June 28, 2022), <https://www.epa.gov/history/bill-ruckelshaus-1932-2019> [<https://perma.cc/SFX5-S9HX>]. Criminal enforcement was dismantled under Gorsuch, but the functions were distributed across the EPA until being later restored. See MANAGEMENT REVIEW, *supra* note 17, at 5–7; David M. Uhlmann, *Environmental Crime Comes of Age: The Evolution of Criminal Enforcement in the Environmental Regulatory Scheme*, 4 UTAH L. REV. 1223, 1227 (2009).

²⁸ See Leif Fredrickson, Christopher Sellers, Lindsey Dillon, Jennifer Liss Ohayon, Nicholas Shapiro, Marianne Sullivan, Stephen Bocking, Phil Brown, Vanessa de la Rosa, Jill Harrison, Sara Johns, Katherine Kulik, Rebecca Lave, Michelle Murphy, Liza Piper, Lauren Richter & Sara Wylie, *History of U.S. Presidential Assaults on Modern Environmental Health Protection*, 108 AM. J. PUB. HEALTH S95, S96–99 (2018).

²⁹ It is often overlooked that George H.W. Bush was a contender to lead the newly founded EPA. Brett Milano, *The Evolution of American Environmental Law from Trump to Nixon*, HARV. L. TODAY (Nov. 7, 2017), <https://hls.harvard.edu/today/evolution-american-environmental-law-nixon-trump/> [<https://perma.cc/5N6D-U6TA>]. Expanded criminal statutes caused some alarm by Republicans in Congress, as well as legal scholars. See Richard J. Lazarus, *Assimilating Environmental Protection into Legal Rules and the Problem with Environmental Crime*, 27 LOY. L. REV. 867, 871–81 (1994); WASH. LEGAL FOUND., *Chapter Two: EPA Criminal Enforcement Policies 2-2*, <https://s3.us-east-2.amazonaws.com/washlegal-uploads/upload/Chapter2EPA.pdf> [<https://perma.cc/TL5W-T385>].

Thus, while criminal enforcement had a rocky start, the necessary tools for its evolution and institutionalization still took place under Republican presidents.

By the Clinton Administration, any remaining bipartisanship started to wane. Budgets and staffing increased during the administration, but a shift towards flexible regulation came into being.³⁰ President G. W. Bush focused on returning enforcement authority to the U.S. states and overlooked careerists to lead key agencies.³¹ For the most part, when President Obama took office, he failed to stem the longer term budgetary stagnation and drops in staffing that started during the G. W. Bush years, and some research shows enforcement outcomes on some metrics were better under the Bush Administration.³² When President Trump took office, what had been a distaste for environmental regulation—particularly when it came to regulating greenhouse gas emissions—erupted into outright hostility from both the White House and some Republicans in Congress, causing significant problems at the EPA, where some 700 staff departed and former staff organized rare political opposition to the Administration.³³

Key successes were no longer taking place with environmental enforcement or law in general by the time President Trump took office, with budgetary resources for the EPA and the DOJ stagnant nominally

³⁰ Mintz, *supra* note 12, at 10408. A good example of flexible regulation is EPA’s “Aiming for Excellence” initiative. See *Aiming for Excellence*, EPA, <https://archive.epa.gov/performancectrack/web/pdf/report99.pdf> [<https://perma.cc/V3B4-4F96>] (last visited Oct. 17, 2022).

³¹ See Mintz, *supra* note 22, at 10914–15.

³² Joshua K. Westmoreland, *Global Warming and Originalism: The Role of the EPA in the Obama Administration*, 37 B.C. ENV’T AFF. L. REV. 225, 225–56 (2010); David M. Uhlmann, *Strange Bedfellows*, 25 ENV’T F. 40, 44 (2008); 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, 50–56 (2015).

³³ Elgie Holstein, *The Severe, Real-World Casualties of Trump’s EPA Budget Cuts*, ENV’T DEF. FUND (Mar. 3, 2017), <https://www.edf.org/blog/2017/03/03/severe-real-world-casualties-trumps-epa-budget-cuts> [<https://perma.cc/8V7D-97R5>]; Jay Michaelson, *The Ten Worst Things Scott Pruitt’s EPA Has Already Done*, DAILY BEAST (Dec. 29, 2017, 10:26 AM), <https://www.thedailybeast.com/the-ten-worst-things-scott-pruitts-epa-has-already-done> [<https://perma.cc/U8E2-KVJJ>]; Valerie Volcovici, *U.S. EPA Employees Protest Trump’s Pick to Run Agency*, REUTERS (Feb. 6, 2017, 6:12 PM), <https://www.reuters.com/article/usa-epa-pruitt-idUSL1N1FR1NZ> [<https://perma.cc/G3QB-8D3N>]; Press Release, Am. Fed’n of Gov’t Emps., AFGE EPA Council Launches “Save the Environment” Campaign (Aug. 5, 2011), <https://www.afge.org/publication/afge-epa-council-launches-save-the-environment-campaign/> [<https://perma.cc/8W7J-N2MX>]; Yaron Steinbuch, *Inside the Mass Exodus at the EPA*, N.Y. POST (Dec. 22, 2017, 11:31 AM), <https://nypost.com/2017/12/22/hundreds-have-quit-the-epa-since-trump-took-office/> [<https://perma.cc/D77C-6HWW>].

and declining when adjusted for inflation, and most major environmental laws had not received significant amendment since the early 1990s.³⁴ Trump furthered a frontal assault on environmental agencies, removing scientists from important advisory committees, pushing to cut the EPA's budget by a third, undermining major parts of the CWA and other environmental laws, and appointing a climate change denialist to initially run the EPA.³⁵ On the DOJ side of the equation, perhaps the most shocking move by any president as it comes to environmental law, Trump pressured Jeffrey Clarke, then the head of the ENRD, to persuade the DOJ leadership to assist in overturning the results of the 2020 presidential election.³⁶ One witnessed limitations on the use of traditional prosecutorial tools during this era, drops in enforcement, and the lowest levels of injunctive relief in fifteen years.³⁷

³⁴ Charlie Savage, *E.P.A. Threatens to Stop Funding Justice Dept. Environmental Work*, N.Y. TIMES (Sept. 27, 2017), <https://www.nytimes.com/2017/09/27/us/politics/scott-pruitt-epa-justice-department-funding.html> [<https://perma.cc/49FL-LHFB>].

³⁵ The Trump Administration focused efforts on rollbacks of many important provisions of the CWA, particularly Section 401 permits that had been denied by many states. See Eric L. Christensen, *Supreme Court Wades into Troubled Waters, Brings Trump Administration State Water Quality Certification Rule Back to Life*, NAT'L L. REV. (Apr. 12, 2022), <https://www.natlawreview.com/article/supreme-court-wades-troubled-waters-brings-trump-administration-state-water-quality> [<https://perma.cc/Y2EZ-RWTA>]; Peter Kalicki, *Section 401 of the Clean Act from Trump to Biden*, ENV'T & ENERGY L. PROGRAM (Jan. 25, 2021), <https://eelp.law.harvard.edu/2021/01/section-401-of-the-clean-water-act-from-trump-to-biden/> [<https://perma.cc/23YN-9MK9>]; *Trump's War on the Environment*, ENV'T INTEGRITY PROJECT, <https://environmentalintegrity.org/trump-watch-epa/> [<https://perma.cc/NQD4-X3D7>] (last visited Oct. 17, 2022).

³⁶ Katie Benner & Charlie Savage, *Jeffrey Clark Was Considered Unassuming. Then He Plotted with Trump*, N.Y. TIMES (July 12, 2022), <https://www.nytimes.com/2021/01/24/us/politics/jeffrey-clark-trump-election.html> [<https://perma.cc/3XGB-3LDS>].

³⁷ *Three Strikes and the EPA's Scientist Advisory Committees Directive May Be Out*, NAT'L L. REV. (Apr. 29, 2020), <https://www.natlawreview.com/article/three-strikes-and-epa-s-scientist-advisory-committees-directive-may-be-out> [<https://perma.cc/S2UM-8HHH>]; Ellen M. Gilmer, *DOJ's Rapid Rollback of Trump Policies Marks Environmental Reset*, BLOOMBERG L. (Feb. 5, 2021, 12:35 PM), <https://news.bloomberglaw.com/business-and-practice/dojs-rapid-rollback-of-trump-policies-marks-environmental-reset?context=article-related> [<https://perma.cc/AP52-FD6X>]; Aaron McDade, *EPA Takes Steps to Undo Trump-Era Rollback of Protections Under Clean Water Act*, NEWSWEEK (Nov. 18, 2022, 10:35 PM), <https://www.newsweek.com/epa-takes-steps-undo-trump-era-rollback-protections-under-clean-water-act-1651054> [<https://perma.cc/SQ4Y-7XAT>]; EPA OFFICE OF INSPECTOR GEN., *EPA'S COMPLIANCE MONITORING ACTIVITIES, ENFORCEMENT ACTIONS, AND ENFORCEMENT RESULTS GENERALLY DECLINED FROM FISCAL YEARS 2006 THROUGH 2018 9–11 (2020)*, https://www.epa.gov/sites/production/files/2020-04/documents/_epaoig_2020_0331_20-p-0131_0.pdf [<https://perma.cc/BG6S-8EJQ>]; Hana Vizcarra & Lauren Bloomer, *DOJ Phases Out Supplemental Environmental Projects in Environmental Enforcement*,

A brief examination of partisanship in the White House and criminal enforcement shows that Democrats have been more sympathetic to stronger environmental enforcement over time but that key accomplishments when institutionalizing and funding this regime managed to happen with Republicans in the White House and even criminal enforcement persisting through the G. W. Bush years.³⁸ What seems to be the case is the potential for stagnating budgetary support and a lack of full attention from Democrats and, up until President Trump, perhaps the ability of environmental agencies to persist, though not thrive, in this environment.³⁹ We analyze trends in CAA criminal prosecutions to see if such trends hold from Reagan through the Biden Administrations below.

II. DATA

Data are collected from the EPA's Summary of Criminal Prosecutions Database ("EPA's Database"), providing all EPA-CID criminal investigations resulting in prosecution from 1983 to the present.⁴⁰ Data are searched by fiscal year ("FY") from the first case until the end of data gathering on April 30, 2022. These data provide an excellent source on information on criminal prosecution from the Reagan era through Trump's presidency. There are a limited number of prosecutions adjudicated thus far under the Biden administration, and we discuss them in text but do not include them in the results below as they skew the charts.⁴¹ We

ENV'T & ENERGY L. PROGRAM (Aug. 6, 2020), <https://eelp.law.harvard.edu/2020/08/doj-phases-out-supplemental-environmental-projects-in-environmental-enforcement/> [<https://perma.cc/PD7R-8LTW>]; DAVID M. UHLMANN, NEW ENVIRONMENTAL CRIMES PROJECT DATA SHOWS THAT POLLUTION PROSECUTIONS PLUMMETED DURING THE FIRST TWO YEARS OF THE TRUMP ADMINISTRATION 2 (2020); Evan Lehmann & Emily Holden, *Trump Budget Cuts Funds for EPA by 31 Percent*, SCI. AM. (Mar. 16, 2017), <https://www.scientificamerican.com/article/trump-budget-cuts-funds-for-epa-by-31-percent/> [<https://perma.cc/42PE-3HAU>].

³⁸ See Robinson Meyer, *How the U.S. Protects the Environment, From Nixon to Trump*, ATLANTIC (Mar. 29, 2017), <https://www.theatlantic.com/science/archive/2017/03/how-the-epa-and-us-environmental-law-works-a-civics-guide-pruitt-trump/521001/> [<https://perma.cc/H2XE-VJVQ>]; Uhlmann, *supra* note 32, at 40.

³⁹ For a review of the interplay of these factors, see Joshua Ozymy & Melissa Jarrell, *Why do Regulatory Agencies Punish? The Impact of Political Principals, Agency Culture, and Transaction Costs in Predicting Environmental Criminal Prosecution Outcomes in the United States*, 33 REV. POL'Y RSCH. 71, 71–89 (2016); Ozymy & Jarrell, *supra* note 32, at 38–56.

⁴⁰ *Summary of Criminal Prosecutions Database*, EPA (July 5, 2022), <https://www.epa.gov/enforcement/summary-criminal-prosecutions> [<https://perma.cc/9SV2-ZB52>].

⁴¹ See *infra* Part III.

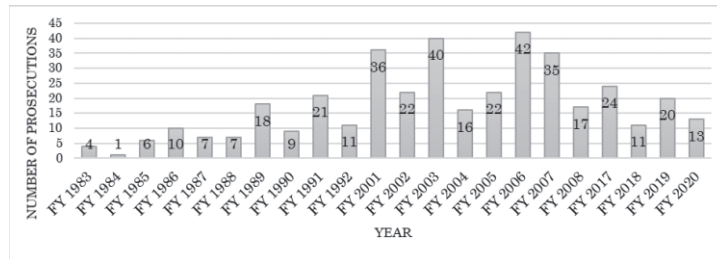
catalog 2,728 total prosecutions and select all 391 that involved criminal violations of the CAA for our analysis. We coded the following information from each case narrative in the database: a short narrative summary we created for each case; FY recorded in the database; docket number; state identifier; number of defendants; presence of at least one company as a named defendant in the prosecution; and all sentencing data including incarceration and probation (in months), all monetary penalties including fines, special assessments, restitutions, and other penalties, organized by penalties to companies and individuals. All data come from the EPA's Database and if the agency failed to include a prosecution it will not be included in our analysis. We used content analysis to code each prosecution summary with two coders independently recording data. We test-piloted our analytical strategy for the process for four weeks and once patterns became clearer in the data and we could see the issues that may arise, we commenced with coding. Discrepancies were reviewed by one of the authors and then we met until consensus was found on the values. In most cases coding was straightforward, with the exception of sentencing data in complex prosecutions involving numerous defendants. The inter-coder reliability for the study was about ninety-five percent for the analysis.⁴²

III. RESULTS

We begin the analysis with Figure 1, which explores total CAA prosecutions adjudicated under Republican presidents since Reagan. Prosecutions take time to develop from the 1983 baseline when criminal investigators were just hired, and we do not see any completed until 1986 when two cases were adjudicated. Prosecutions rise to five in 1987, with a total of sixteen adjudicated as the result of EPA–CID criminal investigations during the Reagan/Bush era, averaging 1.6 per year. By the time G. W. Bush takes office, the institutionalization of criminal enforcement tools for the environment have been well under way for almost two decades and the number of CAA prosecutions adjudicated increases, from a high of twenty in 2003, to a grand total of ninety-seven during his presidency, with an average of 12.13 per year. Prosecutions continue under Trump, totaling fifty-one during his one term in office, with an annual average of 12.75.

⁴² The agreed-upon items are divided by non-agreed items. See OLE R. HOLSTI, *CONTENT ANALYSIS FOR THE SOCIAL SCIENCES AND HUMANITIES* 140 (1969).

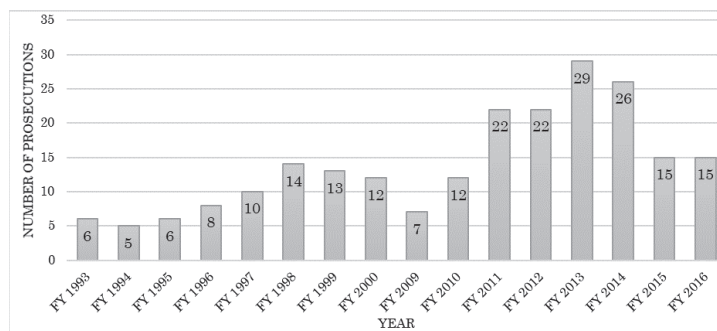
Figure 1. Annual CAA Prosecutions Adjudicated Under Republican Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

Comparing CAA prosecutions adjudicated under Democratic presidents in Figure 2, we find prosecutions ramping up during the Clinton Administration, totaling seventy-four prosecutions across his two terms in office, with an annual average of 9.25. Efforts are greatly ramped up during the Obama Administration, with 148 prosecutions adjudicated, averaging 18.5 prosecutions annually. Until Trump takes office, we see a fairly linear trend, particular across Presidents Bush, Clinton, and Obama, where total prosecutions continue to increase over time. Comparing Republicans to Democrats, we find the former has 164 prosecutions adjudicated, averaging 7.45 annually, while the latter has 222 total prosecutions adjudicated, averaging 13.88, showing Democrats to score higher on both metrics. Thus far we find five CAA prosecutions adjudicated under Biden in the database at the time of writing.

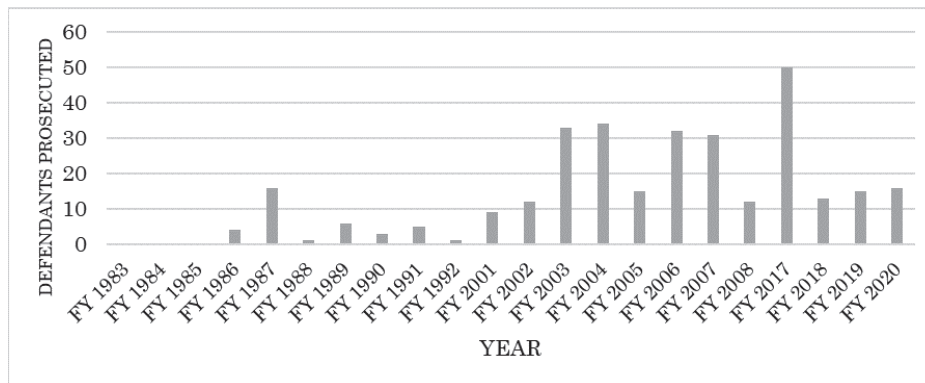
Figure 2. Annual CAA Prosecutions Adjudicated Under Democratic Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 3, we move to examining the number of defendants prosecuted in CAA prosecutions adjudicated under Republican presidents. Some thirty-six defendants are prosecuted during the Reagan/Bush eras. This number rises under President G. W. Bush significantly to 178 defendants prosecuted in these cases, averaging 22.25 annually. We find ninety-four defendants prosecuted during Trump's term in office.

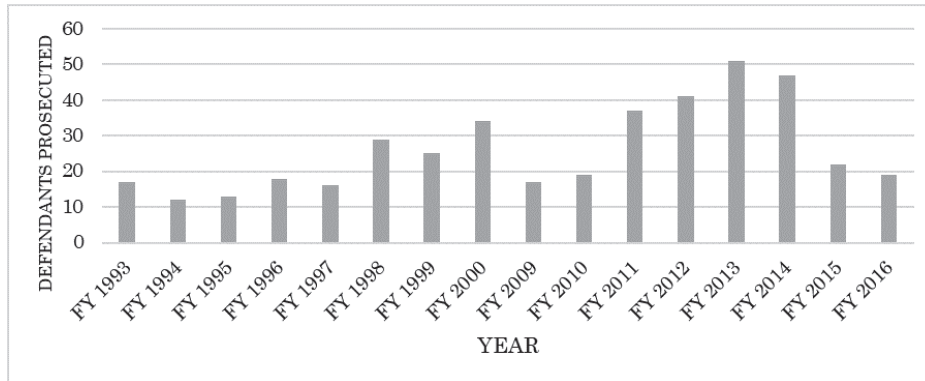
Figure 3. Total CAA Defendants Prosecuted Under Republican Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

Moving to an analysis of the number of defendants prosecuted under Democratic presidents in Figure 4, during the Clinton era, we find this time to be much more robust than the Reagan/Bush eras, with 164 defendants prosecuted, averaging 20.5 per term. Under Obama, this number increases again to 253 defendants total, with an annual average of 31.63. Overall, the number of defendants prosecuted in CAA criminal cases under Republicans totals 308, with an annual average of fourteen, where under Democrats we find 417 defendants prosecuted, annually averaging twenty-six defendants. On both metrics, we find more defendants prosecuted by Democrats in our data. At the time of writing, we find eight defendants prosecuted in CAA cases under the Biden Administration.

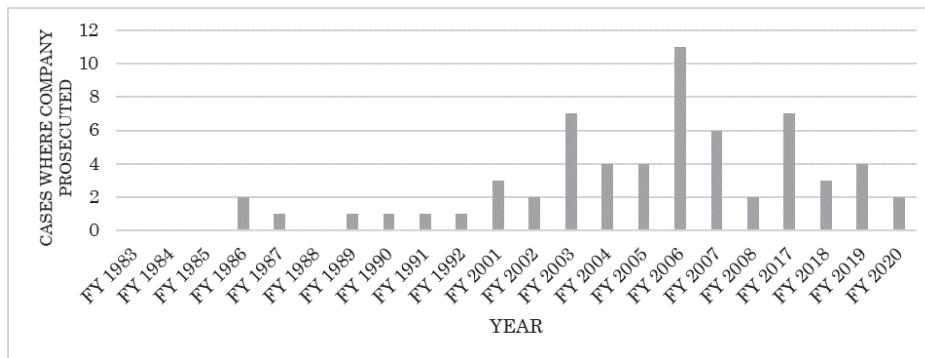
Figure 4. Total CAA Defendants Prosecuted Under Democratic Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

We switch to analyzing the number of cases with at least one company as a named defendant that were prosecuted in CAA cases under Republican presidents. In Figure 5, only seven cases emerge from the data in the Reagan/Bush eras. These prosecutions increase significantly by the time G. W. Bush takes office, with thirty-nine total cases, averaging 4.88 during his presidency. Under Trump, we find sixteen cases adjudicated.

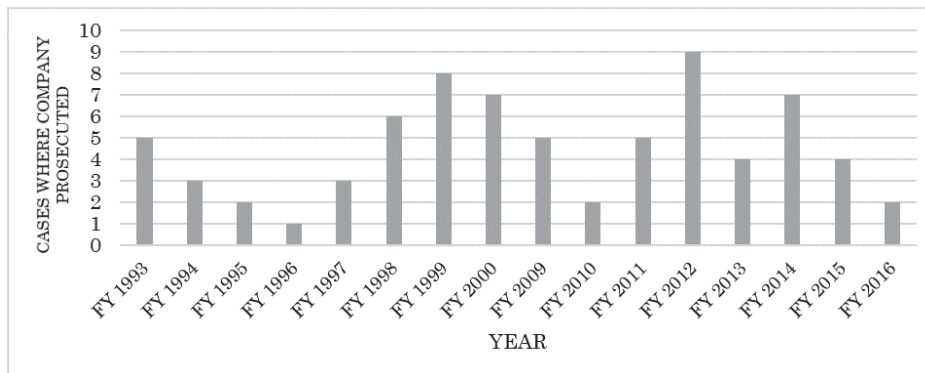
Figure 5. Total CAA Prosecutions Involving Companies Under Republican Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

We move to analyze cases involving companies prosecuted under Democratic presidents in Figure 6. As with previous metrics, the Clinton era was much more robust than the Reagan/Bush eras, with thirty-five cases prosecuted, averaging 4.38. Under President Obama, cases do not increase much, with thirty-eight prosecuted during his term. For Democrats overall, we find seventy-three prosecutions involving companies, averaging 4.56 per term. For Republicans, we find sixty-two cases, averaging 2.82, showing again higher numbers under Democratic presidents. We find three cases adjudicated involving companies as defendants under the Biden Administration.

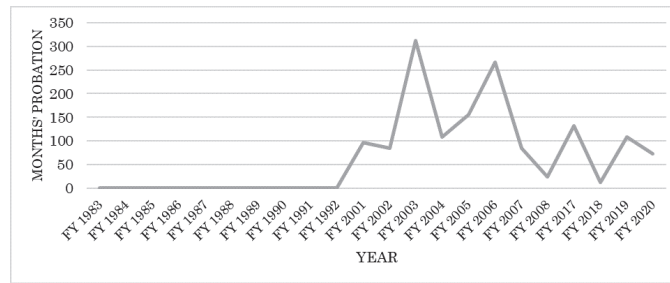
Figure 6. Total CAA Prosecutions Involving Companies Under Democratic Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 7, we move to analyze penalties against companies in terms of total probation assessed to companies at sentencing (in months) during Republican presidents. We find very poor metrics under Reagan and Bush with zero months of probation assessed to companies in CAA prosecutions. By the G. W. Bush presidency, this metric increases significantly to 3,928 months' probation assessed to companies overall, averaging 491 months annually. During Trump's one term in office, the numbers shrink to 1,194 total months.

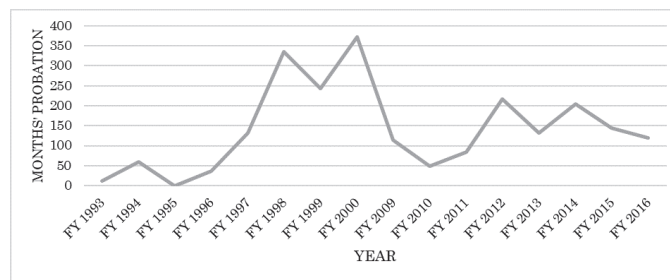
Figure 7. Total Probation Time (in Months) Assessed to Companies in CAA Prosecutions Under Republican Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 8, we examine total probation time assessed to companies under Democratic presidents. Under Clinton, some 2,996 months were assessed to companies during his presidency, averaging 374.5 months annually. Under Obama, probation increased to 3,962 months overall, averaging 495.25 months annually. Republicans, on the whole, had 1,455 months of probation assessed to companies in our data, averaging 66 months annually. Under Democrats, prosecutors secured significantly more penalties, with 2,254 months overall, averaging 140.88 months annually. Under the Biden Administration, we catalog 108 months’ probation.

Figure 8. Total Probation Time (in Months) Assessed to Companies in CAA Prosecutions Under Democratic Presidents by Fiscal Year



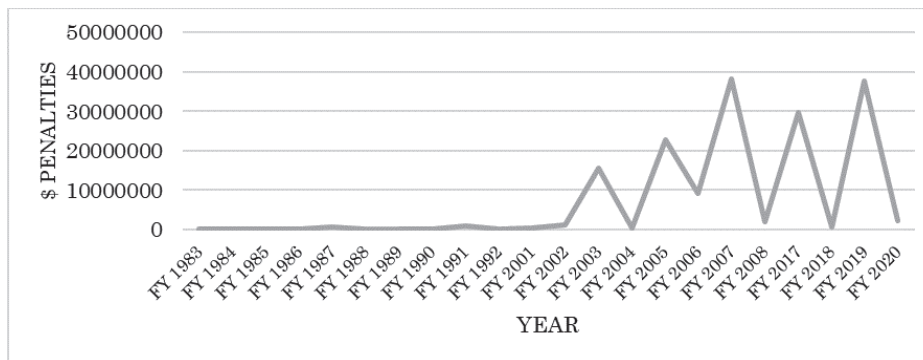
Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 9, we explore monetary penalties assessed to companies under Republican presidents. These grow slowly during the Reagan/Bush eras, topping out at \$1.7 million during the period, with an annual average of \$170,060.⁴³ Under G. W. Bush, penalties exceed \$89 million, with an annual average of \$1.11 million. During Trump's presidency, penalties rise to the highest point in our data, exceeding \$2.8 billion, but much of this comes as the result of the prosecution of Volkswagen AG for violations of the CAA.⁴⁴

⁴³ One of the first large-penalty prosecutions during the Reagan/Bush era was the prosecution of Robert E. Derektor, President of Derektor, Inc. (D. Rhode Island 86-022, 1987). NAT'L ENF'T INVESTIGATIONS CTR., SUMMARY OF CRIMINAL PROSECUTIONS RESULTING FROM CRIMINAL INVESTIGATIONS 3 (1987). Derektor operated a shipyard that built and repaired vessels in Middletown, Rhode Island. Charles Lunan, *Ship Firm in Debt Boat Builder Owes Millions in R.I.*, SUNSENTINEL (Mar. 26, 1993), <https://www.sun-sentinel.com/news/fl-xpm-1993-03-26-9302020118-story.html> [<https://perma.cc/2SCS-DZ9A>]. Derektor and the company illegally buried electrical transformers at a farm in Portsmouth that leaked Polychlorinated Biphenyls ("PCBs"). *Id.* Derektor was prosecuted under TSCA for illegally dumping the transformers and the CAA (among other charges) for illegal disposal of asbestos. NAT'L ENF'T INVESTIGATIONS CTR., *supra* note 43, at 3. The company was sentenced to pay a \$600,000 fine (suspension of \$200,000 if the same amount is paid in restitution) and Derektor a \$75,000 fine alongside sixty months of probation. *Id.* Cuyahoga Wrecking Corporation (N.D. Ohio 4-89-CR-0281, 1991) was also sentenced to pay a \$1 million fine for asbestos violations under the CAA concerning the improper demolition of buildings and other charges. NAT'L ENF'T INVESTIGATIONS CTR., SUMMARY OF CRIMINAL PROSECUTIONS RESULTING FROM CRIMINAL INVESTIGATIONS 120–21 (1991). PCBs are chlorinated hydrocarbons, whose manufacture was banned in 1979, because they do not readily break down in the natural environment and are regulated under TSCA. *See Learn about Polychlorinated Biphenyls (PCBs)*, EPA, <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs> [<https://perma.cc/89ZM-F4BZ>] (last visited Oct. 17, 2022).

⁴⁴ We leave this prosecution out of the Figure in order to avoid skewing it for purposes of presentation. Volkswagen AG agreed to pay a \$2.8 billion penalty for cheating emissions devices and pleaded guilty to conspiracy to defraud the United States, wire fraud, obstruction of justice, importation of merchandise by means of false statements, and violations of the CAA. *See Volkswagen AG*, 16-CR-20394 (E.D. Mich. 2017) (EPA Summary of Criminal Prosecutions), https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=3009 [<https://perma.cc/SZK6-NLVM>] (last visited Oct. 17, 2022).

Figure 9. Total Monetary Penalties Assessed to Companies in CAA Prosecutions Under Republican Presidents by Fiscal Year

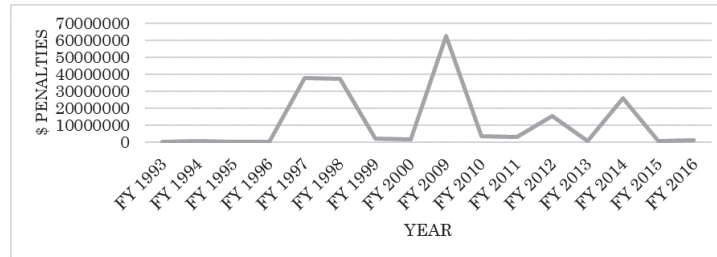


Source: *EPA Summary of Criminal Prosecutions Database*. Excludes \$2.8 billion judgment against Volkswagen AG for purposes of illustration.

In Figure 10, we examine monetary penalties assessed to companies for CAA violations under Democratic presidents. Under Clinton, we find over \$79 million in penalties in our data, averaging \$9.9 million annually during his presidency. Under Obama, penalties rise to exceed \$112 million, with an annual average of \$14 million. Under Republicans as a whole, some \$2.9 billion in monetary penalties were assessed to companies, averaging over \$134 million per term. If one excluded the Volkswagen AG prosecution, the total drops to \$161 million overall, with an annual average of \$7.3 million. The total amount of secured penalties under Democrats was \$192 million, averaging \$12 million annually.⁴⁵

⁴⁵ Two other cases notable for large monetary penalties assessed to corporations include Refrigeration USA, CR:96-0267-CR-MORENO (S.D. Fla. 1997) (EPA Summary of Criminal Prosecutions), https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?Action=3&prosecution_summary_id=665 [<https://perma.cc/U6WD-GLAR>] (last visited Oct. 17, 2022), prosecuted for illegal importation of 4,000 tons of CFC-12 and agreed to pay a fine exceeding \$37 million, BP Products North America, 4:07-CR-434 (S.D. Tex. 2009) (EPA Summary of Criminal Prosecutions), https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=1933 [<https://perma.cc/T8EX-92ZB>] (last visited Oct. 17, 2022), prosecuted for violations of the CAA in an explosion at their Texas City Refinery that killed fifteen workers and injured some 170 others, for which the company pleaded guilty and was sentenced to thirty-six months' probation and a \$50 million fine, at the time the largest criminal penalty for a CAA violation until the prosecution of Volkswagen AG, Volkswagen AG, *supra* note 44.

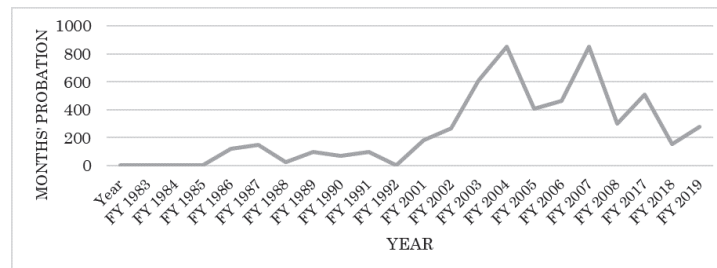
Figure 10. Total Monetary Penalties Assessed to Companies in CAA Prosecutions Under Democratic Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 11, we explore total probation in months assessed to individual defendants in CAA criminal prosecutions adjudicated under Republican presidents. Under Reagan/Bush, we find individual defendants were collectively sentenced to serve 558 months of probation, with an annual average of fifty-six months. Under G. W. Bush, we find 3,928 months of probation, averaging 491 months annually. Under Trump, 1,194 months of probation were assessed to individual defendants, averaging 299 months annually.

Figure 11. Total Probation (in Months) Assessed to Individuals in CAA Prosecutions Under Republican Presidents by Fiscal Year

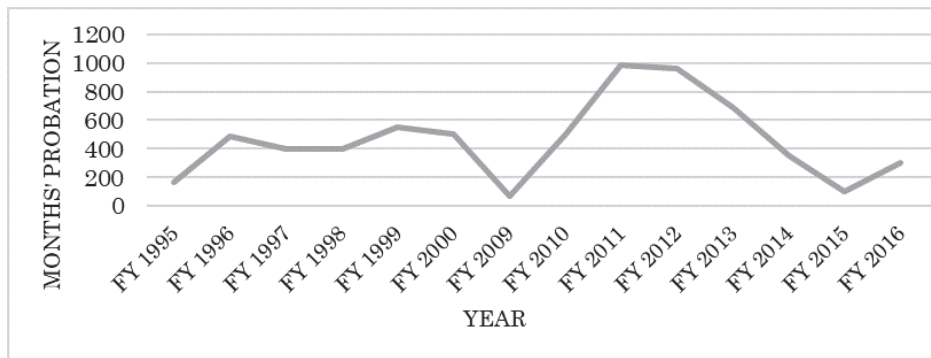


Source: *EPA Summary of Criminal Prosecutions Database*

CFC-12 is an ozone-depleting refrigerant that was widely used in air conditioners until it was banned in 1994. It is regulated under the CAA. *See, e.g., Choosing and Using a Retrofit Refrigerant for CFC-12 MVAC*, EPA, <https://www.epa.gov/mvac/choosing-and-using-retrofit-refrigerant-cfc-12-mvac> [<https://perma.cc/6758-REY8>] (last visited Oct. 17, 2022).

In Figure 12, we explore total probation in months assessed to individual defendants in CAA criminal prosecutions adjudicated under Democratic presidents. A total of 2,996 months’ probation were assessed to individual defendants under Clinton, averaging 375 months per term. Under Obama, 3,962 months’ probation were assessed to defendants, averaging 495.25 months per term. When we look at Republican presidents as a whole, individual defendants received 5,680 months’ probation, averaging 258 months annually. Under Democrats, 6,958 months were assessed to individual defendants, averaging 435 months annually—both significantly higher. Under Biden, we catalog ninety-six months’ probation assessed to individual defendants in our data.

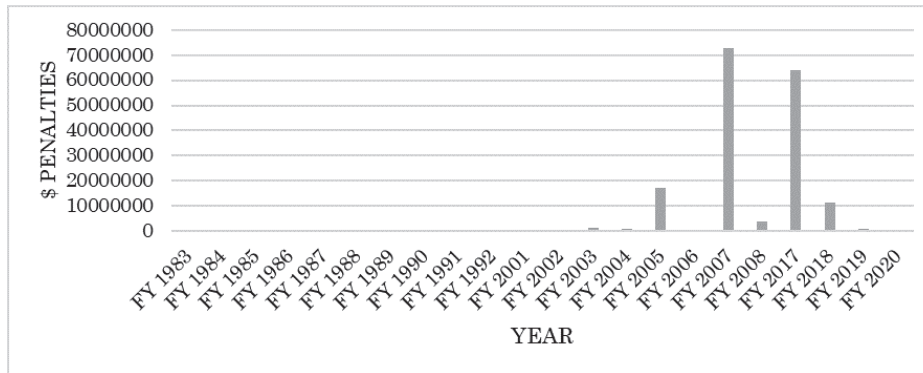
Figure 12. Total Probation (in Months) Assessed to Individuals in CAA Prosecutions Under Democratic Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 13, we explore total monetary penalties assessed to individuals in CAA criminal prosecutions under Republican presidents. We find only about \$237,000 in monetary penalties assessed to individuals during the Reagan/Bush Administrations. This increased quite a lot under G. W. Bush to \$96 million, averaging \$12 million annually. Under Trump, penalties exceeded \$76 million in his one term in office.

Figure 13. Total Monetary Penalties Assessed to Individuals in CAA Prosecutions Under Republican Presidents by Fiscal Year

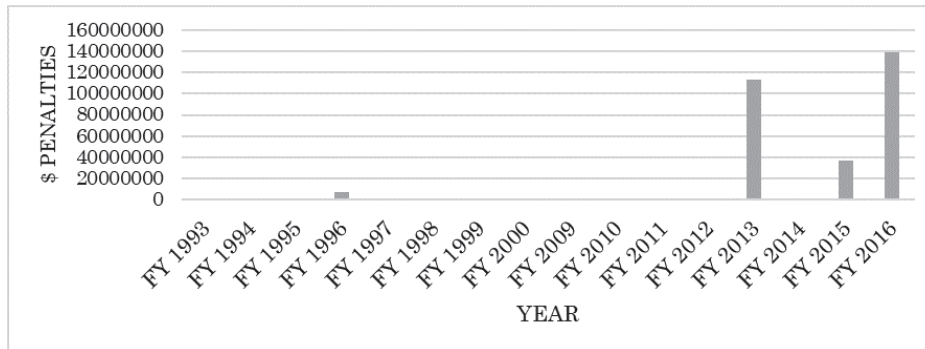


Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 14, we explore monetary penalties assessed to individual defendants under Democratic presidents. Under Clinton, some \$8.8 million in monetary penalties were assessed to individual defendants. Under Obama, this rose dramatically to exceed \$293 million overall, averaging in excess of \$36 million. Examining Republican presidents overall, we find individuals were assessed in excess of \$173 million in monetary penalties with an annual average of about \$7.9 million. Under Democrats, totals were in excess of \$302 million, averaging \$18 million annually, showing a significant gain on Republicans on this metric. Under Biden, we find \$68,832 assessed to individual defendants.⁴⁶

⁴⁶ The largest monetary penalty in the data was assessed to Philip Joseph Rivkin for a biofuel production fraud. Philip Joseph Rivkin, H 14-603M/H14-250 (S.D. Tex. 2016) (EPA Summary of Criminal of Prosecution), https://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2858 [<https://perma.cc/958Y-YLAB>] (last visited Oct. 17, 2022). Rivkin took advantage of provisions in the Energy Independence and Security Act, 42 U.S.C. § 7545(u) (2010), that authorized biodiesel producers to generate renewable fuel credits with attached Renewable Identification Numbers (“RINs”) that could be sold to other producers on the open market. Rivkin, H 14-603M/H14-250 (EPA Summary of Criminal of Prosecution). Rivkin generated some 60 million RINs and sold them without producing any biodiesel. *Id.* The defendant pleaded guilty to mail fraud and making false statements under the CAA and was sentenced to 121 months’ incarceration, three years of supervised release, and \$138 million in restitution and forfeiture. *Id.*

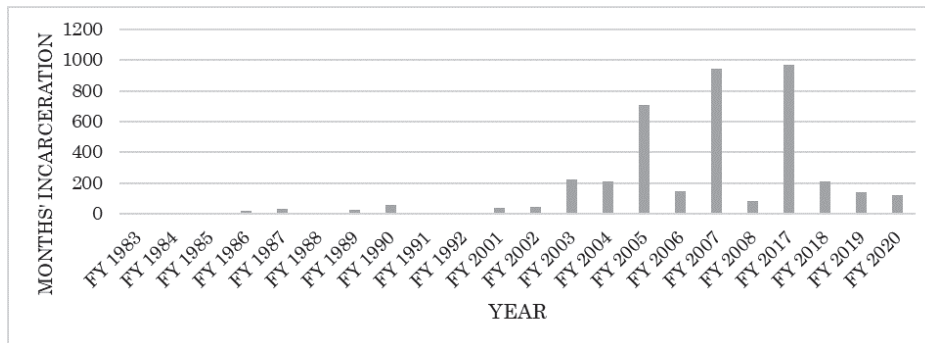
Figure 14. Total Monetary Penalties Assessed to Individuals in CAA Prosecutions Under Democratic Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

In Figure 15, we show total incarceration assessed to defendants (in months) under Republican presidents. Prison time totaled 146 months under Reagan/Bush. Under G. W. Bush, 2,414 total months incarceration was assessed to individual defendants, averaging 301.8 months per year. Under Trump, 1,446 months' incarceration was assessed to individual defendants, averaging 361.5 months annually.

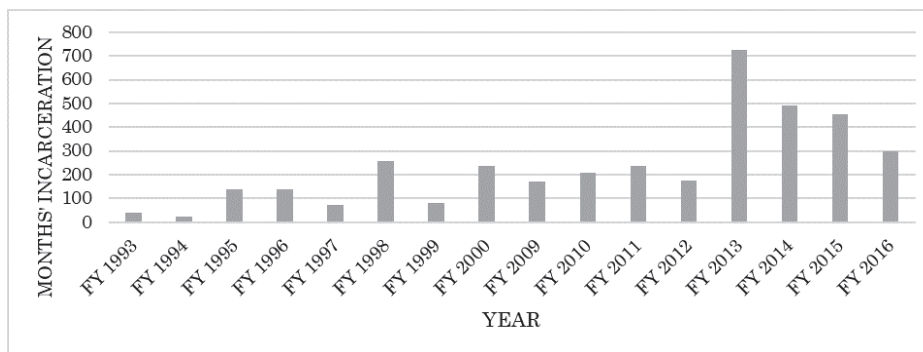
Figure 15. Total Incarceration (in Months) Assessed to Individuals in CAA Prosecutions Under Republican Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

In our final Figure, we explore total incarceration assessed to individual defendants in CAA criminal prosecutions under Democratic presidents. Prison time totaled 991 months under Clinton, averaging about 124 months per year during his presidency. Totals rose under Obama to 2,761 months with an annual average of 345 months per year. Examining Republicans over time, we find total incarceration assessed to defendants was 4,006 months, with a yearly average of 182 months. Under Democrats, the overall total was slightly lower at 3,752 months, but the annual average of about 235 months was much higher than Republicans'.

Figure 16. Total Incarceration (in Months) Assessed to Individuals in CAA Prosecutions Under Democratic Presidents by Fiscal Year



Source: *EPA Summary of Criminal Prosecutions Database*

CONCLUSION

Republican presidents have become increasingly hostile to environmental enforcement, particularly culminating in the Trump Administration, while Democratic presidents have increasingly offered vocal support for more stringent environmental enforcement, but what have actually been the outcomes of these varied visions historically? Have career staff been able to effectively investigate and prosecute CAA crimes over time, from institutionalization in the 1980s to present? Are outcomes significantly more robust under Democrats than Republicans when it comes to prosecuting air pollution crimes? How have presidents across parties invested or disinvested in criminal enforcement over the years? By analyzing data on CAA criminal prosecutions resulting from EPA–CID criminal

investigations from 1983 to the present, we were able to address many of these questions. Our results show that penalties and prosecutions tend to increase across Democratic presidents compared to Republicans, but the gap may not be as wide as one might think.

It took time for institutionalization to take place in criminal enforcement in the 1980s and there was significant vitriol from the Reagan Administration and actions by that administration to successfully disrupt enforcement.⁴⁷ Those efforts were not in vain but were abated as responsibilities were shifted throughout the EPA and then criminal enforcement picked up in earnest. By the time George H.W. Bush left office, significant amendments were made to the CAA, criminal provisions were inserted into law, criminal investigators and prosecutors were afforded time to collaborate and build up the criminal enforcement apparatus, and resources were put forward by Congress to these ends.⁴⁸ As would be expected, prosecutions and penalties slowly grew through Reagan and Bush, with more consistent success achieved during the Clinton presidency.⁴⁹ Under Clinton, prosecutions increased significantly, as did the number of defendants prosecuted, as well as penalties on all metrics in our data. One would think that as G. W. Bush entered office, outcomes would start to decline, given the administration's lack of enthusiasm for environmental regulation, but it persisted in terms of air pollution prosecutions.⁵⁰ Cases adjudicated grew slightly under G. W. Bush, as did the number of defendants prosecuted and the number of cases involving companies. Monetary penalties assessed to companies, increases in probation assessed to individual defendants, incarceration time assessed at sentencing, and monetary penalties assessed to individual defendants also grew.⁵¹

Prosecutions continued to ratchet up in the Obama Administration by a good number, as did the number of defendants prosecuted, but on other important metrics, such as the number of cases where a company

⁴⁷ Philip Shabecoff, *Reagan and Environment: To Many, a Stalemate*, N.Y. TIMES (Jan. 2, 1989), <https://www.nytimes.com/1989/01/02/us/reagan-and-environment-to-many-a-stale-mate.html> [<https://perma.cc/YD95-PS65>].

⁴⁸ See Hanna Vizcarra & Joe Goffman, *What Environmental Protection Owes George H.W. Bush*, HARV. L. SCH. ENV'T & ENERGY L. PROGRAM (Dec. 6, 2018), <https://eelp.law.harvard.edu/2018/12/what-environmental-protection-owes-george-h-w-bush/> [<https://perma.cc/HZ9S-NB3A>].

⁴⁹ See Sebastien Malo, *EPA-Referred Enviro Crime Prosecutions Continue Decline—Report*, REUTERS (May 25, 2021), <https://www.reuters.com/business/legal/epa-referred-enviro-crime-prosecutions-continue-decline-report-2021-05-25/> [<https://perma.cc/S2NZ-ATGH>].

⁵⁰ See *supra* Figure 1.

⁵¹ See *generally* discussion *supra* Part III.

is prosecuted for an air pollution crime, probation time assessed to companies and individuals, and incarceration time, the stagnation that appears to occur to a good extent between the Clinton and the Bush years appeared again under Obama.⁵² Monetary penalties against companies and individuals increased during this period, but it is hard to assess this period as a significant advancement from the G. W. Bush era. While metrics increased since Clinton, it is hard to support the picture of a linear relationship between time in office and prosecutions and penalties in a substantive way or significant declines from Democrats to Republicans on the whole. That said, the Trump Administration, while working in part under the Covid-19 pandemic, was openly hostile to environmental enforcement, and most metrics, even under one term in office, drop fairly consistently from Obama.⁵³ It is hard to estimate if another term in office would have shown a subsequent decline in output, but it would not be far-fetched either to make such a claim. Still, during this period the prosecution of Volkswagen AG persisted through the courts as did a series of related CAA cases that bolstered overall penalties significantly during this time.⁵⁴

If Democrats on the whole did not save criminal enforcement, and Republicans were unable on the whole to defeat the efforts of career staff to maintain their organizational prerogatives, which is a reasonable conclusion in part from our analysis, as it pertains to the limited area of air pollution prosecutions under the CAA, another variable to consider is whether financial investment in the EPA and the DOJ rose dramatically under Democrats and dropped precipitously under Republicans,⁵⁵ which may be invoked to explain somewhat stagnating outcomes over time.

If one examines the EPA's budget over time, their FY 1980 budget would be the high point, adjusted for inflation (at about \$16 million).⁵⁶ The EPA's budget was more inconsistent early on and was cut from \$5 billion to \$3 billion in FY 1981 but climbed back over time.⁵⁷ With the exception of the \$7.6 billion budget in FY 2009 that jumped to \$10.2 billion in FY 2010

⁵² See generally discussion *supra* Part III.

⁵³ See generally discussion *supra* Part III.

⁵⁴ See generally discussion *supra* Part III.

⁵⁵ See *EPA's Budget and Spending*, EPA [hereinafter *EPA's Budget*], <https://www.epa.gov/planandbudget/budget> [<https://perma.cc/NGA2-HLD7>] (last visited Oct. 17, 2022). See generally discussion *supra* Part III.

⁵⁶ See U.S. INFLATION CALCULATOR, <https://www.usinflationcalculator.com/> [<https://perma.cc/D6MY-VHKM>] (calculation performed using the 1980 EPA budget); *EPA's Budget*, *supra* note 55.

⁵⁷ See *EPA's Budget*, *supra* note 55.

under Obama, most of the time in the modern era, the agency's budget has been mostly stagnant since the Clinton years, increasing modestly and sometimes decreasing nominally, but dropping if considering inflation.⁵⁸ Staffing at the EPA grew modestly during Clinton's presidency, too, and hit its peak of 18,110 by FY 1999, dropped slowly but staying in the 17 thousand range during G. W. Bush's presidency, and then declining through the Obama years.⁵⁹ Unlike Trump's budget requests and public claims to slash EPA funding, budgets increased slightly, even if staffing was stuck at 14,172 through most of his term, the lowest point since FY 1987.⁶⁰ Not surprisingly, while prosecutions increased during the Clinton administration, staffing and budgetary support did not receive significant infusions, not the "best of times or worst of times" for the EPA.⁶¹ At the same time, budgets and staffing continued on at a similar pace through the G. W. Bush Administration as did outcomes in air pollution enforcement, perhaps showing agencies keeping their heads above water during this period.⁶² The budget for ENRD has also been stagnant for years.⁶³

The summary assessment of the historical evolution of CAA criminal enforcement is that criminal investigators and prosecutors seem to fare better under Democratic presidents than Republicans. They achieve a greater number of prosecutions and penalties on most metrics, but these are not nearly as significant as one might expect. Given the rhetoric from both sides of the aisle, one might expect substantial investments in resources under Democrats and pullbacks under Republicans, but instead it appears to be stagnant (nominally) and substantive underinvestment across partisan regimes, where it may be fair to say the enforcement apparatus is often keeping its head above water and doing important work without proper political and financial support on either end of the political spectrum.

The political inertia and partisan bickering in Washington seem to hold little hope for the Biden administration to change course on criminal enforcement. Biden's FY 2022 budget proposal for the EPA was for

⁵⁸ *See id.*

⁵⁹ *See id.*

⁶⁰ *See id.*

⁶¹ Mintz, *supra* note 12, at 10390. *See EPA's Budget*, *supra* note 55; *supra* Figure 6.

⁶² *See EPA's Budget*, *supra* note 55; Mintz, *supra* note 22, at 10,912.

⁶³ *See* DOJ, GENERAL LEGAL ACTIVITIES: ENVIRONMENTAL & NATURAL RESOURCES DIVISION (ENRD) 64 (2022), <https://www.justice.gov/jmd/page/file/1489466/download> [<https://perma.cc/APX8-F88Q>].

\$11 billion and 15,000 staff members.⁶⁴ These numbers will not substantively, if adjusted for inflation, get the agency back to the nominal high point in FY 2010, and the staffing will not really move the agency forward much from its sorry position during the Trump Administration. While the administration's proposal was far from historic, enacted at \$9.5 billion and 14,581 staff for the EPA, it was telling.⁶⁵ Even the proposed increase of \$133 million for ENRD was not substantively important considering that in FY 2012 ENRD's budget was about \$132 million and failed to really grow or shrink through the remainder of the Obama and Trump administrations.⁶⁶ By FY 2021, the budget shrank to \$130 million.⁶⁷ Hopefully, the greater investments in environmental justice, openness of administrators to pursue stronger enforcement, and commitments to greater funding over time may bear fruit if Biden remains in office for two terms.⁶⁸

⁶⁴ EPA, FISCAL YEAR 2022 JUSTIFICATION OF APPROPRIATION ESTIMATES FOR THE COMMITTEE OF APPROPRIATIONS (2021), <https://www.epa.gov/sites/default/files/2021-05/documents/fy-2022-congressional-justification-all-tabs.pdf> [<https://perma.cc/HW42-YTNA>].

⁶⁵ See *EPA's Budget*, *supra* note 55; *Statement by Administrator Regan on the President's FY 2022 Budget*, EPA, <https://www.epa.gov/newsreleases/statement-administrator-regan-presidents-fy-2022-budget> [<https://perma.cc/KC5W-DJLN>] (last visited Oct. 17, 2022).

⁶⁶ See DOJ, ENVIRONMENT AND NATURAL RESOURCES DIVISION FY 2023 PERFORMANCE BUDGET CONGRESSIONAL BUDGET JUSTIFICATION 15 (2022).

⁶⁷ See *id.*

⁶⁸ *Assistant Attorney General Todd Kim Delivers Remarks at the American Bar Association's National Environmental Enforcement Conference's Section of Environment, Energy and Resources*, DOJ, <https://www.justice.gov/opa/speech/assistant-attorney-general-todd-kim-delivers-remarks-american-bar-association-s-national> [<https://perma.cc/6JFL-KTXF>] (last visited Oct. 17, 2022).