

Pungent Sound: Analyzing the Criminal Enforcement of Environmental Law in the Pacific Northwest

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ABSTRACT

Violations of environmental law involving significant harm or culpable conduct may require the application of criminal enforcement tools to punish offenders and deter future offences. Yet, we know very little about how this enforcement apparatus has operated historically in the Pacific Northwest. We undertake content analysis of all 2,588 environmental criminal prosecutions resulting from EPA criminal investigations from 1983-2019. We select and analyze all 230 prosecutions adjudicated in Washington, Oregon, and Idaho, with the goals of understanding charging and sentencing patterns, as well as drawing out the broader themes that define such prosecutions over the last 37 years. We find that over \$125 million in monetary penalties were assessed to defendants, as was some 753 years of probation, 139 years of incarceration, and over 10,000 hours of community service. Forty-three percent of prosecutions focused on water pollution, 18% hazardous waste, 10% air pollution, and 24% on state-level offences. We conclude with suggestions for bolstering the criminal enforcement apparatus in the name of strengthening the substance of environmental laws in the region, including greater resources, public salience, and community policing.

Keywords: EPA; Criminal Enforcement; Environmental Law; Pacific Northwest

I. INTRODUCTION

On June 10, 1999, a horrible explosion rocked the city of Bellingham, Washington, at 3:25 in the afternoon. A giant plume of smoke rose 30,000 feet into the air.¹ A pipeline owned by Olympic Pipeline ruptured, spilling 277,000 gallons of gasoline into Hanna and Whatcom Creeks. Liam Wood, 18, was fly fishing in the area when he was overcome by the fumes and perished. Two ten-year old boys, Wade King and Stephen Tsiorvas, were playing near the creek and suffered burns so severe they died the next day.² A criminal investigation by the U.S. Environmental Protection Agency (EPA) determined that the company's computer system indicated a likely rupture in the pipeline and employees started the pumping stations anyway, leading to the rupture. When the boys lit a butane lighter, they accidentally ignited the fumes.³

On September 13, 2001, Equilon Pipeline Company was charged with negligent violations of the U.S. *Clean Water Act* (CWA), and Olympic Pipeline was charged with violating the *Refuse Act*.⁴ On June 16, 2003,

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¹ Kira Millage, "Timeline of Bellingham pipeline Explosion" (7 June 2009), online: *The Bellingham Herald* <www.bellinghamherald.com/2009/06/07/938966/timeline-of-bellingham-pipeline.html>.

² Daryl C. McClary, "Olympic Pipe Line accident in Bellingham kills three youths on June 10, 1999" (11 June 2003) online: *The Free Online Encyclopedia of Washington State History* <www.historylink.org/File/5468> [perma.cc/266B-9VK6].

³ *United States v Equilon Pipeline*, 2003 W.D. Washington CR01-338R.

⁴ *Clean Water Act*, 33 USC §1251 (1972). The Act empowers the EPA to regulate the discharge of pollutants into the waters of the United States, including surface waters. The Act makes illegal the discharge of a pollutant from a point source without a permit issued by EPA under the National Pollutant Discharge Elimination System (NPDES). The Act helped to fund, modernize, and regulate water treatment facilities throughout the country known as publicly-owned treatment works (POTWs). The CWA does not regulate drinking water and does not do a robust job of empowering EPA to regulate nonpoint source pollution. See Laws & Regulations, "Summary of the Clean Water Act" (last modified 9 September 2020), online: *United States Environmental Protection Agency*, <www.epa.gov/laws-regulations/summary-clean-water-act> [perma.cc/S83R-GLSP]; National Pollutant Discharge Elimination System, "National Pretreatment Program" (last modified 10 September 2020), online: *United States Environmental Protection Agency*, <www.epa.gov/npdes/national-pretreatment-program> [perma.cc/L9

Equilon was sentenced to 60 months of probation, in addition to receiving a federal fine of \$15 million and a \$525 special assessment fee. Olympic was sentenced to 60 months of probation and subject to a \$6 million federal fine and a \$650 special assessment fee. Cumulative monetary penalties assessed at sentencing to both companies exceeded \$21 million.⁵

Environmental crimes, such as the actions of the individuals and companies that led to the Bellingham Pipeline Disaster, require an appropriate legal response. Significant harm and culpable conduct are the overriding factors that prompt an environmental violation to be investigated and referred for possible federal criminal prosecution in the United States.⁶ While the general goals of the federal environmental criminal enforcement system are to punish such offences and deter future ones, we know very little about how environmental laws have been enforced

58-WHNT]; Polluted Runoff, “Basic Information about Nonpoint Source (NPS) Pollution” (last modified 7 October 2020), online: *United States Environmental Protection Agency*, <www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution> [perma.cc/W23G-H6DB]; *Refuse Act*, 33 USC § 407 (1899). A section of the *Rivers and Harbors Act*, it prohibits dumping refuse into the navigable waters of the United States without a permit. See also “EPA and the Refuse Act Program” (1971), online: *Environmental Law Reporter* <elr.info/news-analysis/1/10133/epa-and-refuse-act-permit-program> [perma.cc/Y9WY-HYLZ].

⁵ Three company officials – Frank Hopf (manager), Kevin Dyvig (control center operator), and Ronald Brentson (supervisor of the computer control center) – were sentenced for their role in the disaster as follows: Hopf was sentenced to 6 months incarceration, 36 months probation, 200 hours of community service, and ordered to pay a \$100 special assessment fee and a \$1,000 federal fine; Dyvig was sentenced to 12 months probation and 150 hours of community service and ordered to pay a \$25 special assessment fee; Brentson was sentenced to 1 month incarceration and 24 months probation and had to pay a \$100 special assessment fee and a \$1,000 federal fine. The supervisors were charged under the *Liquid Pipeline Safety Act Hazardous Liquid Pipeline Safety Act*, 49 USC § 60101 (1970). The Act regulates the transport of hazardous liquids and natural gas in the United States. For a discussion of federal pipeline safety laws in the United States, see Carol M. Parker, “Pipeline Industry Meets Grief Unimaginable: Congress Reacts with the Pipeline Safety Improvement Act of 2002” (2004) 44 *Natural Resources J* 243 at 243. See also “Officials Sentenced in Pipeline Blast” (19 June 2003), online: *The Daily News* <tdn.com/business/local/officials-sentenced-in-pipeline-blast/article_19ba2543-03c1-5cac-84e7-a9b5e8b8f008.html> [perma.cc/NFL7-AJKF].

⁶ Memorandum from Earl E. Devaney (12 June 1994), *The Exercise of Investigative Discretion* at 3–4, online: <www.epa.gov/sites/production/files/documents/exercise.pdf> [perma.cc/4M5G-L2Q3].

in the Pacific Northwest through the criminal process in the United States.⁷ Our goal in this manuscript is to analyze the history of the prosecution of environmental crimes in the region to gain a better perspective on what crimes have occurred, charging statutes utilized, trends in penalties, and to draw out the broader themes that define criminal prosecutions. We begin with a discussion of the historical development of federal criminal enforcement tools for the environment, followed by a review of the empirical literature on environmental crimes and criminal sanctioning, then a discussion of our analytical strategy and results.

II. THE CRIMINAL ENFORCEMENT PROCESS

The evolution of developing a criminal enforcement apparatus to enforce federal environmental laws has been ongoing for over a century in the United States.⁸ The initial foray into including provisions to punish environmental crimes in federal environmental statutes can be traced to the *Rivers and Harbors Act*, which sought to prevent the obstruction of the navigable waters of the United States and to prohibit dumping in its waters.⁹ The *Lacey Act* soon followed, banning the unpermitted interstate wildlife trade.¹⁰ Both of these Acts contained misdemeanor punishments for environmental crimes. The Environment and Natural Resources Division (ENRD) of the Department of Justice (DOJ), the primary vehicle for enforcing civil and criminal environmental laws in the United States, was founded later as the Public Lands Division in 1909.¹¹

⁷ US, EPA, “U.S. Environmental Protection Agency Criminal Enforcement Program: America’s Environmental Crime Fighters” (last visited 2021), online: <www.epa.gov/sites/production/files/documents/oceftbrochure.pdf> [perma.cc/G73R-PQLG].

⁸ The United States Department of Justice, “History” (19 June 2019), online: <www.justice.gov/enrd/history> [perma.cc/P275-VF5Z].

⁹ *Rivers and Harbors Act*, 33 USC § 403 (1899). The Act prohibits the dredging, filling, or construction of bridges, dams, or other structures in the navigable waters of the United States without a permit. See *Rivers and Harbors Appropriation Act* (1899).

¹⁰ *Lacey Act*, 16 USC § 3371 (1900). The first U.S. law protecting wildlife and, as amended, provides for civil and criminal penalties for illegal trade or importation of certain animals and plants and their respective parts.

¹¹ The United States Department of Justice, “Historical Development of Environmental Criminal Law” (13 May 2015), online: <www.justice.gov/enrd/about-division/historical-development-environmental-criminal-law> [perma.cc/A3QX-8UUC].

Developing felony provisions and institutionalizing a process for the criminal investigation and prosecution of federal environmental crimes took some time. The passage or expansion of major environmental laws in the 1970s that managed air, water, and hazardous waste pollution – such as the *Clean Air Act* (CAA), CWA, and the *Resource Conservation and Recovery Act* (RCRA) – added a broader array of misdemeanors for environmental crimes into federal environmental law.¹² Felony provisions made their way into federal environmental law in 1984 with the passage of the Hazardous and Solid Waste Disposal Amendments to RCRA.¹³ Penalties in major environmental statutes were further strengthened a few years later. For example, certain misdemeanors in the CWA were upgraded to felonies in 1987, and changes were also made to the CAA in 1990 following guidelines issued by the U.S. Sentencing Commission that suggested enhancements in penalties for a variety of federal offences.¹⁴ Today, most major federal environmental statutes contain criminal provisions and significant penalties for negligent and knowing violations, with particularly significant penalties

¹² *Clean Air Act*, 42 USC § 7401 (1970). Empowered the EPA to regulate air pollution from mobile and stationary sources in the United States. The Act has been used to combat a series of national environmental problems, such as smog, ozone depletion, acid rain, and potentially climate change. Building upon a series of previous efforts, the CAA was the first significant federal environmental law to provide for citizen lawsuits and represented a change where the federal government would take the lead in managing air pollution as a national environmental problem. See US, EPA, *Overview of the Clean Air Act and Air Pollution* (30 November 2020), online: <www.epa.gov/clean-air-act-overview> [perma.cc/9KMY-FVNP]. The *Resource Conservation and Recovery Act*, 42 USC § 6901 (1976) gave EPA authorization to develop a national framework for the cradle-to-grave regulation of hazardous wastes and non-hazardous solid wastes in the United States. The Act banned open pit landfills in the country and EPA developed minimum federal standards for the operation of municipal waste and industrial landfills. See US, EPA, *Resource Conservation and Recovery Act* (2021), online: <www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-overview> [perma.cc/U3JQ-7PKU].

¹³ Prior to these changes, it was difficult to hold corporate officers accountable for willful or knowing violations of environmental law under the RCRA. See David T. Barton, “Corporate Officer Liability Under RCRA: Stringent but not Strict” (1991) 4 BYUL Rev at 1548–50. The Amendments broadened EPA’s regulatory scope over hazardous wastes in the United States. See William L. Rosbe & Robert L. Gulley, “The Hazardous and Solid Waste Amendments of 1984: A Dramatic Overhaul of the Way America Manages Its Hazardous Wastes” (1984) *Envtl L Reporter* at 10458–463.

¹⁴ Washington Legal Fund, “Chapter 2, Environmental Protection Agency Criminal Enforcement Policies” at 2–3, online (pdf): <s3.us-east-2.amazonaws.com/washlegal-uploads/upload/Chapter2EPA.pdf> [perma.cc/G5TV-HCZZ].

for knowing endangerment.¹⁵ These changes correspond with a global trend beginning in the 1980s to enhance statutory penalties for environmental offences.¹⁶

The early 1980s also represented a push to institutionalize the criminal investigative and prosecution apparatus with the founding of the EPA's Office of Enforcement in 1981 – later to be renamed the Office of Enforcement and Compliance Assurance (OECA) – and the DOJ's Environmental Crimes Section (DOJ-ECS) founded in 1982 and located within the ENRD.¹⁷ The creation of these organizational entities allowed for the development of professional specialization among criminal investigators and prosecutors.¹⁸ DOJ-ECS became an independent unit within ENRD in 1987 and now employs approximately 43 prosecutors and support staff specializing in the prosecution of environmental crimes.¹⁹ The Environmental Enforcement Section (EES) housed in ENRD was organized to oversee civil-judicial actions.²⁰

EPA criminal investigators were deputized as Special Deputy U.S. Marshals beginning in 1984 and were given full law enforcement authority by Congress in 1988.²¹ In 1995, The Office of Criminal Enforcement,

¹⁵ US, EPA, *Criminal Provisions of Water Pollution* (21 August 2020), online: <www.epa.gov/enforcement/criminal-provisions-water-pollution> [perma.cc/34GS-GRWM]; US, EPA, *Criminal Provisions of the Clean Air Act* (12 March 2018), online: <www.epa.gov/enforcement/criminal-provisions-clean-air-act> [perma.cc/ABX7-9J49].

¹⁶ Michael R Pendleton, “Beyond the Threshold: The Criminalization of Logging” (1997) 10:2 *Society & Natural Resources* 181 at 191-93.

¹⁷ US, EPA, *Criminal Enforcement Program* (October 2011), online: <www.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf> [perma.cc/V92W-WGBN].

¹⁸ Theodora Galactos, “The United States Department of Justice Environmental Crimes Section: A Case Study of Inter- and Intrabranh Conflict over Congressional Oversight and the Exercise of Prosecutorial Discretion” (1995) 64 *Fordham L Rev* 587 at 590.

¹⁹ US, Department of Justice Environmental Crimes Section, *Historical Development of Environmental Criminal Law* (13 May 2015), online: <www.justice.gov/enrd/about-division/historical-development-environmental-criminallaw> [perma.cc/E33T-H37W].

²⁰ US, Department of Justice Environmental Enforcement Section (EES), *An Overview of Our Practice* (14 May 2015), online: <www.justice.gov/enrd/overview-our-practice> [perma.cc/C7AT-ENRW].

²¹ Criminal investigators were deputized by the U.S. Attorney General in 1984 as Special Deputy United States Marshals, which required regular renewal until 1988. See Memorandum from John Peter Suarez, Management Review of the Office of Criminal Enforcement, Forensics and Training (15 December 2003) online: <www.epa.gov/sites/production/files/documents/oceft-review03.pdf> [perma.cc/UD99-8WJY] [Suarez, “Memorandum”].

Forensics and Training (OECFT) was established to house OECA and undertake investigative and forensics work.²² Today, EPA's Criminal Investigation Division (EPA-CID) currently employs about 145 criminal investigators, located across roughly 41 offices throughout the United States.²³ Known as Special Agents or criminal investigators, they enjoy a high degree of autonomy in case selection and often work in conjunction with state, local, and other relevant law enforcement agencies when conducting investigations and/or participating in prosecutions.²⁴ Evidence for investigations tends to come from former employees of a company, other civil inspectors who notice violations, or official documents.²⁵ When EPA-CID investigators determine enough evidence is available to pursue criminal prosecution, they tend to approach prosecutors in DOJ-ECS or the U.S. Attorney's Office to convene a grand jury or file an information in District Court.²⁶

III. CRIMINAL SANCTIONING AND ENVIRONMENTAL CRIME

The overriding goal of criminal enforcement is to punish serious offences of environmental law and to deter future offenders.²⁷ Criminal guilt rests on a standard of beyond a reasonable doubt that a defendant

²² US, EPA, *Basic Information on Enforcement* (13 January 2021), online: <www.epa.gov/enforcement/basic-information-enforcement> [perma.cc/RQ5X-YT6B].

²³ US, EPA, *U.S. Environmental Protection Agency Criminal Enforcement Program: America's Environmental Crime Fighters* (last visited 2021), online: <www.epa.gov/sites/production/files/documents/oceftbrochure.pdf> [perma.cc/KFY3-2LQS]; US, EPA, *Criminal Enforcement Area and Resident Offices* (last modified 6 December 2016), online: <snapshot.epa.gov/enforcement/criminal-enforcement-area-and-resident-offices_.html> [perma.cc/3852-2CDZ].

²⁴ Suarez, "Memorandum", *supra* note 21 at 16.

²⁵ Joel A. Mintz, "Treading Water: A Preliminary Assessment of EPA Enforcement During the Bush II Administration" (2004) 34 *Envtl L Rep* at 10912.

²⁶ Criminal investigators tend to develop relationships with prosecutors and approach them to pursue cases. EPA employs attorneys for a variety of purposes, but cases are typically referred for prosecution to one of these units in DOJ. See Joel A. Mintz, *Enforcement at the EPA: High Stakes and Hard Choices*, 2nd ed (Austin: University of Texas Press, 2012); Joel A. Mintz, "Some Thoughts on the Interdisciplinary Aspects of Environmental Enforcement" (2006) 36 *Envtl L Reporter* 10495.

²⁷ A management review noted of the Division, "[t]o the extent any single pattern dominates, it is the law enforcement orientation of the Immediate Office, CID, and (to a lesser extent) LCRMD (Legal Counsel and Resources Management Division)." See Suarez, "Memorandum", *supra* note 21 at ii.

committed a crime for which they are charged, as contrasted to a lower preponderance of the evidence standard for civil liability. In the U.S. system, civil enforcement actions may go to trial, but they can also be handled internally through a range of sanctions including administrative actions, injunctive relief, civil settlements, consent decrees, environmental mitigation plans, or supplemental environmental projects (SEPs).²⁸ Given the nature of most offences and the broad options for punishment than can be handled internally, it is unsurprising that most environmental violations are handled through a civil process.²⁹

Research exploring environmental sanctioning centres on whether the probability of detection is adequate enough and the severity of punishment is sufficient enough to properly punish environmental offenders and set broader precedents across industries to produce a more general deterrent effect. For proper sanctioning to occur, there would need to be enough staff to police and prosecute environmental crimes, as well as the ability and willingness of prosecutors to seek substantial punishments at times and to prosecute enough crimes to maintain sufficient deterrence.³⁰ Criminal enforcement resources are limited. With only about 145 criminal

²⁸ US, EPA, *Basic Information on Enforcement* (13 January 2021), online: <www.epa.gov/enforcement/basic-information-enforcement> [perma.cc/27VB-RLYF]. SEPs are projects undertaken by a violator that provide tangible environmental results and is related to the violation EPA is attempting to resolve. Injunctive relief generally takes the form of operational changes or physical improvements at a facility to ensure compliance with appropriate regulations. Injunctive relief can also take the form of mitigation actions to offset harm created as the result of past or ongoing actions. Consent decrees are legal arrangements entered into by EPA and DOJ on behalf of the United States with a responsible party to perform some action or series of actions. See US, EPA, *Supplemental Environmental Projects* (10 February 2021), online: <www.epa.gov/enforcement/supplemental-environmental-projects-seps> [perma.cc/4F78-FB2E]; Memorandum from Susan Shinkman, *Securing Mitigation as Injunctive Relief in Certain Civil Enforcement Settlements*, (14 November 2012), online: <www.epa.gov/sites/production/files/2016-08/documents/2ndeditionsecuringmitigationemo.pdf> [perma.cc/34RJ-5DVN]; US, EPA, *Consent Decrees and Settlement Agreements* (15 November 2017), online: <www.epa.gov/ogc/consent-decrees-and-settlement-agreements> [perma.cc/KN N7-BY5N].

²⁹ Evan J. Ringquist & Craig E. Emmert, “Judicial Policymaking in Published and Unpublished Decisions: The Case of Environmental Civil Litigation” (1999) 52:2 *Political Research Q* 7 at 12–13.

³⁰ Gary Becker, “Crime and Punishment: An Economic Approach” (1968) 76:2 *J Political Economy* 169 at 183; Richard A. Posner, “An Economic Theory of the Criminal Law” (1985) 85:6 *Colum L Rev* 1193 at 1193–1200.

investigators to investigate potential crimes in EPA-CID and roughly 43 specialized attorneys in DOJ-ECS or other DOJ attorneys that assist, the chance of being detected and prosecuted criminally for an environmental crime seems decidedly low. This assertion comports with empirical studies showing the historical probability of being punished criminally in the United States is very small.³¹ It also fits with research findings that large penalties assessed at sentencing in environmental crime prosecutions are somewhat rare.³² Recent work confirms this assertion, showing there may be a little less than 2,600 criminal prosecutions resulting from EPA-CID investigations in the United States since 1983.³³ The low number of prosecutions occurring over the last four decades may suggest that the swiftness of punishment (i.e., the chance of being prosecuted) and attached penalties are so low as to render the value of environmental criminal prosecution insufficient to have any broader deterrent effect among potential environmental offenders.³⁴

A related issue in the empirical literature is whether environmental law enforcement agencies are sufficiently motivated to pursue significant cases and penalties. Research demonstrates that federal prosecutors are typically motivated to seek criminal sanctions when environmental violations are serious, defined by the fact they almost always involve aggregating factors, such as deceptive or misleading conduct, chronic offences, actions involving significant harm, or illegally operating outside the bounds of the regulatory system.³⁵ Other studies show that crime severity in hazardous waste prosecutions are positively related to sanctioning outcomes.³⁶ Crime severity

³¹ 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” (19 May 2016) 37:10 *Deviant Behavior* 1095 at 1096–99.

³² Michael J. Lynch, “The Sentencing/Punishment of Federal Environmental/Green Offenders, 2000-2013” (31 October 2016) 38:9 *Deviant Behavior* 991 at 991–95.

³³ Joshua Ozymy, Bryan Menard & Melissa L. Jarrell, “Persistence or Partisanship: Exploring the Relationship between Presidential Administrations and Criminal Enforcement by the US Environmental Protection Agency, 1983-2019” (2021) 81 *Public Admin Rev* 49 at 49.

³⁴ Carole M. Billiet & Sandra Rousseau, “How Real is the Threat of Imprisonment for Environmental Crime?” (2014) 37 *Eur JL & Econ* 183 at 183–88.

³⁵ David M. Uhlmann, “Prosecutorial Discretion and Environmental Crime” (2014) 38:1 *Harv Envtl L Rev* 159 at 159.

³⁶ Kathleen F. Brickley, “Charging Practices in *Hazardous Waste* Crime Prosecutions” (2001) 62 *Ohio St LJ* 1077 at 1077–99.

is found in other studies to be the best predictor of penalties in environmental crime prosecutions.³⁷

While research may show that the statistical odds of being punished criminally for an environmental crime or receiving a substantial punishment at sentencing is decidedly low, this finding is buttressed by a series of studies showing that federal prosecutors are motivated and do prosecute serious crimes.³⁸ The deterrent value of criminal sanctioning must be placed within the context of civil fines and other remedies used by the EPA and DOJ to gain compliance with the law rather than seek criminal prosecution – the latter of which is costly, time-consuming, and ill-suited for many situations where a criminal violation has not occurred and/or a civil remedy is more appropriate to gain compliance with the law. Criminal enforcement should be thought of as one of many tools that can and is applied to significant crimes in a surgical manner, given the current and historical context of limited resources for criminal enforcement. Noting this point, the Director of the EPA’s Office of Enforcement argued early on that EPA would have to maximize its presence through careful case selection to gain regulatory compliance and punish criminal behavior.³⁹

We provide the first study to explore charging, sentencing, and punishment patterns in environmental crime prosecutions in the Pacific Northwest. We attempt to develop a greater perspective on the broader themes we see in these prosecutions since the federal criminal enforcement apparatus developed in 1983. We categorize what has been prosecuted with an eye towards understanding the broader themes in these prosecutions and sentencing patterns. Our results can speak to whether criminal prosecution may have a deterrent value to environmental crime in the region but cannot provide a sufficient answer to this complex question.

³⁷ 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” (2016) 33:1 Rev Policy Research at 71-73.

³⁸ See Uhlmann, *supra* note 35 at 159; Raymond Paternoster, “How Much Do We Really Know about Criminal Deterrence?” (2010) 100:3 J Crim L & Criminology 765 at 765-68.

³⁹ Devaney, *supra* note 6 at 1-3.

A. Data

We gathered data on all EPA-CID criminal investigations that led to criminal prosecution using the EPA's *Summary of Criminal Prosecutions Database*.⁴⁰ Using content analysis, we analyzed all cases in the database by EPA fiscal year (FY), beginning with the first case in FY 1983 through the end of calendar year 2019. Given that both DOJ-ECS and EPA-CID were founded in the years immediately prior, these 37 years of data give us significant insight into the history of federal environmental crime investigations and prosecutions, as well as state-level prosecutions stemming from EPA-CID investigations. We select out all cases occurring in the Pacific Northwest, defined as the U.S. states of Washington, Oregon, and Idaho. We collected data on all 2,588 prosecutions and selected all 230 cases completed in these states during this time period for the analysis. In reading the prosecution case summaries, we captured data on the following: state of occurrence, a narrative summary of each case, docket number, EPA fiscal year identifier, major environmental charging statutes used in the prosecution, the presence of other criminal charges (such as false statements, fraud, and conspiracy), whether defendants were charged with state-level environmental violations, whether at least one company was a named defendant in the case, the total number of defendants identified in the case, and punishments including total probation in months assigned to all individual and company defendants in each case, the total number of months incarceration assigned to all defendants in a case, the total monetary penalties including special assessments, fees, restitution, fines, community service payments, and any other monetary assessment.

Our content analysis strategy was to develop testing protocols by analyzing cases through FY 2015 with two coders. We met and discussed discrepancies weekly. After about four weeks, we felt comfortable developing our coding protocols for the project and moved forward. Coders analyzed data independently and the lead author would review for discrepancies between coders. We met and dialogued about any differences until consensus was met on the final values. Our inter-coder reliability for the dataset was approximately 95%.⁴¹

⁴⁰ US, EPA, *Summary of Criminal Prosecutions Database* (10 May 2021), online: <www.epa.gov/enforcement/summary-criminal-prosecutions> [perma.cc/8S9D-CJMF].

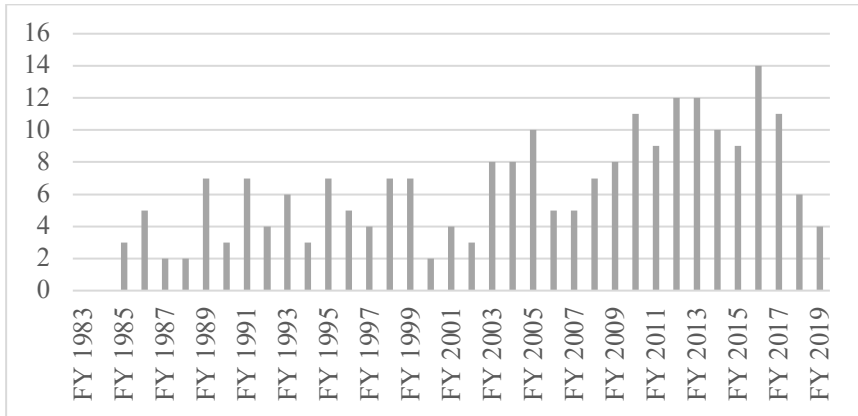
⁴¹ Ole R. Holsti, *Content Analysis for the Social Sciences and Humanities* (Boston: Addison Wesley, 1969) at 140.

The limitations of our approach should be acknowledged, but none pose serious problems for our results. The first is that prosecutions stemming from EPA-CID investigations may be absent from the database. We assume this is not the case or it is not a serious problem, given we are working from the agency's official database. A second problem is that we seek to derive meaning from the prosecution summaries but cannot know in-depth details across all prosecutions, such as the role of the judge, prosecutors, defendants, or investigators. A third limitation is that if any changes in federal environmental laws occurred during this time period and affected the way prosecutors used certain statutes or how investigators approach their investigations, we cannot account for such changes. Given that we are examining broader trends over time, it is not imperative that we know what changed so much as the outcomes, which are properly captured.

B. Results

We begin the analysis by plotting the total number of criminal prosecutions adjudicated by EPA fiscal year across all three states, from 1983-2019. We find the first prosecutions adjudicated in FY 1985. Through the 1980s, there were 19 prosecutions adjudicated. In the 1990s, this number rises considerably to 53 prosecutions. From 2000-2010, there were 71 prosecutions adjudicated, and from 2011-2019, there were 87 prosecutions. The sum total of prosecutions adjudicated during these 37 years was 230, with an annual average of about 6.2 per fiscal year.

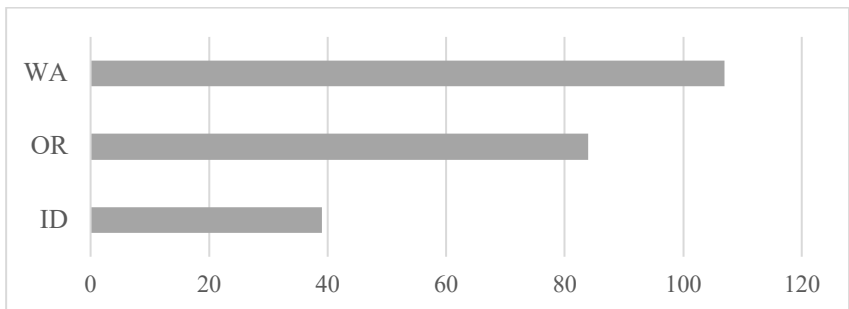
Figure 1: Total Environmental Crime Prosecutions by EPA Fiscal Year in the Pacific Northwest



Source: EPA Summary of Criminal Prosecutions Database

In Figure 2, we break down this data by state and examine total prosecutions adjudicated by fiscal year, from 1983-2019. Washington dominates the dataset with 107 prosecutions, or about 47% of total prosecutions, being undertaken in the region. A total of 84 prosecutions were adjudicated in Oregon or about 37% of total prosecutions. Seventeen percent of total prosecutions occurred in Idaho, where a total of 39 prosecutions occurred.

Figure 2. Total Environmental Crime Prosecutions in the Pacific Northwest by U.S. State



Source: EPA Summary of Criminal Prosecutions Database

In Table 1 we analyze trends in prosecutions across these three states by exploring charging patterns across major federal environmental statutes since 1983. We explore how many cases used CWA, CAA, RCRA, *Toxic Substances Control Act (TSCA)*, and the *Federal Insecticide, Fungicide, and Rodenticide Acts (FIFRA)*.⁴² We also include the final column on the far right to denote the number of cases where at least one defendant in a case was charged with state-level environmental offences.

The most prevalent crimes were prosecuted under the CWA. In a total of 77 prosecutions, at least one defendant was charged with a CWA violation, representing roughly a third of all prosecutions since 1983. In Washington, 36 cases were prosecuted under the CWA: 24 in Oregon and 17 in Idaho. The second most prevalent federal environmental charging statute used in these prosecutions was the RCRA. A total of 38 RCRA prosecutions occurred across these states, representing about 17% of all prosecutions. Eighteen RCRA prosecutions occurred in Washington, 12 in Oregon, and eight in Idaho. In 16 cases, at least one defendant was charged with a CAA crime, representing about 7% of all cases in the data. Eight CAA

⁴² *Toxic Substances Control Act*, 15 USC § 2601 (1976). Authorizes EPA to regulate chemical substances and mixtures that may present an unreasonable risk to human health or the environment. Updated in 2016 with the Frank Lautenberg Chemical Safety Act, the TSCA was heavily amended to require evaluation of existing chemicals using a risk-based standard. The TSCA has been criticized for rarely testing, banning, or restricting substances. See US, Centers for Disease Control and Prevention, *Toxic Substances Control Act and Workers' Health* (10 February 2017), online: <www.cdc.gov/niosh/chemicals/tsca.html> [perma.cc/NJS4-FLTM]; David Markell, "An Overview of TSCA: Its History, Key Underlying Assumptions, and Its Place in Environmental Regulation" (2010) 32 Wash UJL & Pol'y at 338-45. The *Federal Insecticide, Fungicide, and Rodenticide Act*, 7 USC § 136 (1976) gives EPA authority to regulate the registration, distribution, sale, and use of pesticides in the United States. See US, EPA, *Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and Federal Facilities* (16 February 2021), online: <www.epa.gov/enforcement/federal-insecticide-fungicide-and-rodenticide-act> [perma.cc/K349-SCMG]; "The Failure of US Law to Address the Ecological Considerations of Pesticide Use" (22 October 2015), online: *Law Explorer* <lawexplores.com/the-failure-of-us-law-to-address-the-ecological-considerations-of-pesticide-use/> [perma.cc/E6S2-SRGQ].

prosecutions occurred in Washington, five in Idaho, and three in Oregon. Only six TSCA and five FIFRA cases were prosecuted since 1983 across these three states. Second to only the CWA, a total of 57 prosecutions, or about 25%, ultimately resulted in at least one defendant charged with state-level environmental crimes. Twenty-eight such prosecutions occurred in Oregon, 25 in Washington, and four in Idaho.

Table 1: Charging Patterns in Environmental Crime Prosecutions in the Pacific Northwest by U.S. State

State	CWA	CAA	RCRA	TSCA	FIFRA	State-Level Crime
ID	17	5	8	0	2	4
OR	24	3	12	2	0	28
WA	36	8	18	4	3	25

Source: EPA Summary of Criminal Prosecutions Database

In Table 2 we explore prevalent criminal charges since 1983 occurring in conjunction with environmental crime prosecutions in Washington, Oregon, and Idaho. The most common offence is false statements. Whether this meant lying to investigators, submitting fraudulent reports, or fabricating outcomes and data in official documents, in 17% of cases, at least one defendant was charged in this manner. In one out of ten cases, at least one defendant was charged with conspiracy. We find ten cases involving fraud in the form of wire, mail, and conspiracy to defraud the government. In three cases, the defendants were charged with theft.

Table 2: Prevalent Criminal Charges in Environmental Crime Prosecutions in the Pacific Northwest

Charge	Number	Percentage
False Statements	38	17
Conspiracy	23	10
Fraud	10	4
Theft	3	1

Source: EPA Summary of Criminal Prosecutions Database

We now examine cumulative penalties assessed to all individual and company defendants in these states, from 1983-2019. We find that all individual defendants were cumulatively sentenced to pay over \$53 million in fines, monetary assessments, restitution, special fees, and community service payments. Companies were cumulatively assessed over \$72 million in such penalties at sentencing. All individual defendants were cumulatively sentenced to serve 6,520 months of probation and 1,669 months of incarceration. Companies were sentenced to 2,514 months of probation. Defendants were sentenced to a total of 10,304 community service hours since 1983.

Figure 3: Total Penalties Assessed in Environmental Crime Prosecutions in the Pacific Northwest

<i>Monetary Penalties</i>	<i>Probation</i>
\$53,012,965 (Individuals)	6,520 Months (Individuals)
\$72,511,327 (Companies)	2,514 Months (Companies)
<i>Incarceration</i>	<i>Community Service</i>
1,669 Months	10,304 Hours

Source: EPA Summary of Criminal Prosecutions Database

In Table 3, we examine the most punitive monetary penalties assessed to corporations in Oregon, Washington, and Idaho since 1983. On January 2, 1985, a tank ruptured at the Pennwalt Corporations Tacoma Plant containing sodium chlorate used as a bleaching agent in the pulp and paper industry.⁴³ The solution illegally discharged into the Hylebos Waterway, eventually leading to Puget Sound. The company, and four corporate officers were indicted for a variety of offences including making false statements to investigators from the U.S. Coast Guard, negligent discharge into the navigable waters of the United States without a permit in violation of the CWA, and failure to notify officials of the release under the *Comprehensive Environmental Response, Compensation, and Liability Act*

⁴³ *United States v Pennwalt Corporation*, 1989 W.D. Washington CR-88-55T.

(CERCLA).⁴⁴ On May 2, 1989, the corporation agreed to pay a \$500,000 fine and fund an environmental trust fund in the amount of \$600,000.⁴⁵

Table 3: Large Monetary Penalties Assessed to Corporate Defendants in Environmental Crime Prosecutions in the Pacific Northwest

<i>Year</i>	<i>Company</i>	<i>State</i>	<i>\$ Penalty</i>
1989	Pennwalt Corporation	Washington	1,100,000
2003	Equilon Pipeline	Washington	21,001,175
2004	MMS Company	Oregon	1,000,800
2005	Fujitrans Corporation	Oregon	2,000,000
2005	Evergreen International	Oregon	25,000,000
2017	Gallia Graeca Shipping	Washington	1,500,000

Source: EPA Summary of Criminal Prosecutions Database

The MMS Company was prosecuted for operating an oceangoing vessel, the MV Spring Drake, whose chief engineer admitted to U.S. Coast Guard Investigators to bypassing the oil water separator and discharging oily waste overboard.⁴⁶ The company and employee, Shashank Pendse, were indicted for state environmental violations, as well as violations of the *Act to Prevent*

⁴⁴ The *Comprehensive Environmental Response, Compensation, and Liability Act*, 42 USC § 9601 (1980) authorizes EPA to cleanup or remediate spills, accidents, or hazardous waste sites. EPA endeavors to find responsible parties to clean up or remediate spills or hazardous waste sites. The agency may decide to place a site on the National Priorities List (NPL) to guide EPA on which sites warrant further investigation for potential cleanup. If a responsible party cannot be located, EPA may decide to pay for remediation. Also known as the Superfund, the Act was paid for with a tax on industry, which Congress allowed to expire, meaning EPA often lacks funds for remediating known sites. See US, EPA, *Summary of the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)* (27 July 2020), online: <www.epa.gov/laws-regulations/summary-comprehensive-environmental-response-compensation-and-liability-act> [perma.cc/5AKR-5SQG]; US, EPA, *Superfund: National Priorities List (NPL)* (8 February 2021), online: <www.epa.gov/superfund/superfund-national-priorities-list-npl> [perma.cc/GL78-WQ25]; Norman W. Bernstein, “Superfund Reform Needs Dramatic Simplification” (1995) 25:1 *Envtl L Reporter* at 10008.

⁴⁵ Timothy Eagan, “THE LAW; Putting a Face on Corporate Crime”, *New York Times* (14 July 1989), online: <www.nytimes.com/1989/07/14/us/the-law-putting-a-face-on-corporate-crime.html> [perma.cc/6EVE-UDYJ].

⁴⁶ *United States v MMS Company*, 2004 D. Oregon CR 04-173.

Pollution from Ships (APPS).⁴⁷ MMS pled guilty on February 14, 2004, and was sentenced to 48 months probation in addition to being ordered to pay an \$800 special assessment, a \$500,000 federal fine, and \$500,000 in community service payments.⁴⁸ The Fujitrans Corporation operated the oceangoing vessel *Cyngus* to transport vehicles to the United States.⁴⁹ Investigators received a tip that employees were using a bypass valve to discharge oily wastes into the ocean and the crew had falsified the ship's Oil Record Book. On February 3, 2005, the corporation was charged with violations of the *APPS* and was sentenced to 36 months of probation and ordered to implement an environmental compliance program, pay a \$1,050,000 fine to the State of Oregon, pay \$335,000 to the State of California, make a \$495,000 community service payment to the National Fish and Wildlife Foundation, and make a \$165,000 payment to the Channel Islands National Park.⁵⁰

Evergreen International SA was prosecuted in Oregon for failing to keep an accurate Oil Record Book for oceangoing vessel the M/V *Ever Gleeful*. The company was also charged for making a materially false statement to U.S. Coast Guard Investigators by presenting them with the inaccurate Book. The company's other oceangoing vessel the M/V *Ever Group* illegally discharged oil into the Columbia River in March 2001. On April 20, 2003, Evergreen was sentenced to 36 months of probation and ordered to pay a \$15 million criminal fine and \$10 million in community service payments.⁵¹ Gallia Graeca Shipping LTD and the ship's operator,

⁴⁷ *Act to Prevent Pollution from Ships*, 33 USC § 1901 (1973). The Act is often used in conjunction with CWA violations to prosecute pollution from ships dumped in the navigable waters of the United States, and it implements the International Convention for the Prevention of Pollution from Ships (MARPOL). See US, EPA, *MARPOL Annex VI and the Act to Prevent Pollution from Ships (APPS)* (1 June 2021), online: <www.epa.gov/enforcement/marpol-annex-vi-and-act-prevent-pollution-ships-apps> [perma.cc/VVB9-P265].

⁴⁸ "Companies Indicted for Ocean Dumping" (20 February 2004), online: *MarineLink* <www.marinelink.com/news/companies-indicted323554> [perma.cc/2N2Q-58SW].

⁴⁹ *United States v Fujitrans Corporation*, 2005 D. Oregon CR04469-KI.

⁵⁰ "Japanese Company Plead Guilty to Illegal Dumping" (9 February 2005), online: *MarineLink* <www.marinelink.com/news/japanese-company-illegal316897> [perma.cc/YYT7-NQ7L].

⁵¹ In the case summary, the language appears to read that the company was sentenced to pay a total of \$25 million in fines and payments and another \$3 million to the District of Oregon and \$2 million to the Oregon Governor's Fund, totaling \$30 million in penalties. We coded it as such and include it in penalty totals, but the total was actually \$25 million as listed in official reports. See US, Department of Justice, Environment

Angelakos (Hellas) S.A., were sentenced on October 21, 2016, to 180 months of probation and ordered to pay \$1.3 million in fines and a \$200,000 community service payment.⁵² The ship’s operator rendered its oil water separator device inoperable, falsified their Oil Record Book, and made false statements to U.S. Coast Guard Inspectors.⁵³

Table 4: Significant Incarceration Assessed to Defendants in Environmental Crime Prosecutions in the Pacific Northwest

Year	Primary Defendant	State	Months Incarceration
2003	Alan Elias	ID	204
2017	Richard Estes	WA	105
2017	Nancy-Bush Estes	WA	73
2017	Scott Johnson	WA	97
2018	Donald Paul Holmes	WA	78

Source: EPA Summary of Criminal Prosecutions Database

Allen Elias knowingly instructed his employees to scrub a 25,000-gallon tank containing cyanide sludge. One worker was overcome by the fumes and when first responders and investigators arrived, Elias lied to them to cover up his crime. The man was left with permanent brain damage as a result. Elias also instructed workers to illegally dump 8,000 gallons of toxic sludge.⁵⁴ Elias was charged with knowing endangerment under RCRA and was sentenced to 204 months incarceration and 36 months of probation, as well as being ordered to pay \$364,750 in restitution to the EPA and \$6 million in restitution to the victim.⁵⁵

and Natural Resources Division, *Summary of Litigation Accomplishments Fiscal Year 2005* (2005), online: <www.justice.gov/sites/default/files/enrd/legacy/2015/04/13/ENRD_2005_Accomplishments_Report_508.pdf> [perma.cc/F8CF-HJEY].

⁵² *United States v Gallia Graeca Shipping LTD*, 2017 W.D. Washington CR16-62]CC.

⁵³ Peter Buxbaum, “Ship Owner, Operator, Engineers Convicted in Federal Court” (29 June 2016), online: *Global Trade* <www.globaltrademag.com/ship-owner-operator-engineers-convicted-in-federal-court/> [perma.cc/NP4X-TC77].

⁵⁴ *United States v Alan Elias*, 2003 D. Idaho CR 98-070-BLW. Elias later appealed and the victim restitution was overturned. See *Elias v. United States*, 2002 01-1502.

⁵⁵ “Supreme Court Rejects Appeal Over Cyanide Poisoning” (7 October 2002), online: *Water & Wastes Digest* <www.wwdmag.com/supreme-court-rejects-appeal-over-cyanide-poisoning/> [perma.cc/L6FQ-3WMD].

Richard and Nancy-Bush Estes were both prosecuted for defrauding the U.S. biodiesel product credit system. The 2007 *Energy Independence and Security Act (EISA)* encouraged the production of domestic biofuels.⁵⁶ When they generated new, renewable product, they could claim Renewable Identification Numbers (RINs) that could be used to sell renewable fuel credits to third parties, as well as claim federal tax credits for production. The defendants falsely claimed to produce biofuel from feedstock and claimed 60 million RINs from March 2013 to March 2014, received \$42 million from the sale of the RINs, and claimed over \$4.3 million in fraudulent tax credits.⁵⁷ On January 17, 2017, Richard Estes was sentenced to serve 105 months incarceration and three years of supervised release and had to pay over \$4.3 million in shared restitution to the IRS.⁵⁸ On February 17, 2007, Nancy Bush-Estes was sentenced to 73 months incarceration and three years' supervised release and ordered to pay her share of the restitution to the IRS.⁵⁹ Scott Johnson was also prosecuted for biodiesel fuel credit fraud in the broader prosecution of Gen-X Energy Group that ensnared Richard Estes and Nancy bush-Estes. Johnson was the founder and CEO of the company. Johnson was sentenced to 97 months incarceration.⁶⁰ The vice president and COO of the company, Donald Paul Holmes, was convicted and sentenced to 97 months incarceration.⁶¹

If we take these punishments into the context of overall sentencing patterns, excluding these six large-penalty corporate cases, total monetary penalties assessed to all other companies is reduced to \$21 million. Excluding these large incarceration sentences in Table 4, total incarceration to all other individual defendants drops to 1,112 months. Only the cases against Olympic and Evergreen were significant monetary penalties and

⁵⁶ *Energy Independence and Security Act*, 42 USC § 17001 (2007). P.L. 110-140. The most impactful part of the Act was to encourage alternative fuel development which, in the United States, led to a boom in the production of ethanol. See US, EPA, *Summary of the Energy Independence and Security Act* (6 May 2019), online: <www.epa.gov/laws-regulations/summary-energy-independence-and-security-act> [perma.cc/9PHU-VR4B].

⁵⁷ Cameron Probert, "Biodiesel scam involving Pasco firm lands man in federal prison" (31 January 2017), online: *Tri-City Herald* <www.tri-cityherald.com/news/local/article129865869.html>.

⁵⁸ *United States v Richard Estes*, 2017 E.D. Washington 4:15-CR-6048-SMJ-1.

⁵⁹ *United States v Nancy Bush-Estes*, 2017 E.D. Washington 4:15-CR-6047-SMJ-1.

⁶⁰ *United States v Scott Johnson*, 2017 E.D. Washington 4:15-CR-6042-SMJ.

⁶¹ *United States v Donald Paul Holmes*, 2017 E.D. Washington 4:15-CR-6044-SMJ-1.

outliers in the data, and all but one of the large incarceration penalty cases stem from the same biodiesel production credit fraud prosecution.

We conclude the analysis by attempting to draw out the dominant themes we uncovered in our data. While many prosecutions involve using more than one charging statute, we attempt to organize all the cases by the strongest theme in each case or what we feel was the central crime that led EPA-CID to investigate the case and prosecutors to pursue charges. This analysis will help us to develop a broader, global view of the major kinds of federal environmental crimes historically chosen for prosecution. We cull together all 230 cases and bring forward the most salient themes across all environmental crime prosecutions in the Pacific Northwest, from 1983-2019. We examine every case and code it by the central crime we feel is at the heart of each prosecution and present the results in Figure 4.

By a large margin, prosecutors chose to pursue water pollution crimes more frequently than any other offence since 1983. We cataloged a total of 99 cases from of all the prosecutions as primarily centring on water pollution crimes. We find that 77 of these cases are primarily prosecuted under the CWA. Many of these cases involve ships and other oceangoing vessels illegally polluting waterways. We found 11 cases where APPS/MARPOL was used to prosecute offenders, five prosecutions using provisions of the RHAA, and two using the *Ocean Dumping Act*.⁶² The central theme in water pollution crimes was the presence of companies and individuals illegally discharging harmful, toxic, and hazardous substances into sewer systems, rivers, creeks, the ocean, or, in some cases, altering or obstructing the navigable waters of the United States. We estimate that 43% of all federal environmental crime prosecutions occurring in the Pacific Northwest since 1983 centre on water pollution crimes.

In one case, the *Safe Water Drinking Act* (SWDA) was used as the charging statute, and in two cases, the *Endangered Species Act* (ESA) was used alongside the CWA.⁶³ Cory King was prosecuted in Idaho for violations of

⁶² The *Marine Protection, Research, and Sanctuaries Act*, 16 USC § 1431 (1988), also known as the *Ocean Dumping Act*, prohibits the transportation of material into the United States for purposes of ocean dumping. See US, EPA, *Summary of the Marine Protection, Research, and Sanctuaries Act* (27 December 2018), online: <www.epa.gov/laws-regulations/summary-marine-protection-research-and-sanctuaries-act> [perma.cc/R9F3-AD72].

⁶³ The *Safe Drinking Water Act*, 42 USC § 300f (1974) authorizes EPA to regulate drinking water in the United States. EPA sets minimum standards for tap water and municipal water systems. EPA is not allowed to regulate fracking wells and wastewater pits from

the SDWA and making false statements.⁶⁴ King was the farm manager and partial owner of Double C Ranch near Burley, Idaho. He instructed workers to inject surface fluids into agricultural irrigation wells without a permit. Gary West Jr. was prosecuted in Oregon for using a bulldozer to create a berm to divert the flow of the South Fork Little Butte Creek in violation of the CWA. He engaged in the illegal taking of the Coho Salmon, an endangered species, in violation of the ESA.⁶⁵ West was sentenced to 36 months of probation. Barton Randall Wilkinson was prosecuted for illegally altering a waterway of the United States in violation of the CWA when he and his co-defendants created a channel in Clear Creek near Kooskia, Idaho, violating the ESA by damaging a Steelhead Trout habitat.⁶⁶

Figure 4: Dominant Themes in Environmental Crime Prosecutions in the Pacific Northwest

Water Pollution Crimes 43 Percent	State-Level Crimes 24 Percent
Hazardous Waste Crimes 18 Percent	Air Pollution Crimes 10 Percent

Source: EPA Summary of Criminal Prosecutions Database

Outside of water pollution crimes, the second strongest theme we uncovered in these prosecutions was that 56 prosecutions, or about 24% of all prosecutions, in our dataset resulted in state-level prosecutions. These

the U.S. hydraulic fracking industry, even though these activities may impact wells, aquifers, and other sources of drinking water. See US, EPA, *Summary of the Safe Water Drinking Act* (3 August 2020), online: <www.epa.gov/laws-regulations/summary-safe-drinking-water-act> [perma.cc/8Y5A-U2R2]; Mary Tiemann & Adam Vann, “Hydraulic Fracturing and Safe Water Drinking Act Regulatory Issues” (13 June 2015), online (pdf): *Congressional Research Service* <fas.org/sgp/crs/misc/R41760.pdf> [perma.cc/54W6-KRPJ]; *Endangered Species Act*, 16 U.S.C., 1973, §1531. Provides a regulatory framework to conserve endangered species and their habitat. See US, Fish & Wildlife Service, *Endangered Species Act Overview* (30 January 2020), online: <www.fws.gov/endangered/laws-policies/> [perma.cc/B5F8-E6MY].

⁶⁴ *United States v Cory King*, 2010 D. Idaho CR08-0002-E BLW.

⁶⁵ *United States v Gary West Jr.*, 2010 D. Oregon CR10-78-01-HA.

⁶⁶ *United States v Barton Randall Wilkinson*, 2011 D. Idaho CR 09-CR-00203-EJL.

prosecutions tended to result from EPA-CID investigations often occurring in unison with state enforcement agents and the case ultimately led to state-level charges.⁶⁷ It is best to view these through the lens of state-federal cooperation on investigating and prosecuting environmental crimes. The finding that almost a quarter of all prosecutions result primarily in state-level charges indirectly suggest such cooperation is very common over time. A good example of such a case is John Charles Nelson who was prosecuted for dumping hazardous waste along the highway in the State of Washington. A taskforce including EPA and state officials investigated Nelson for hazardous waste disposal violations. He was charged on May 17, 1990, with first degree theft and attempted first degree theft. On April 19, 1991, Johnson was sentenced to four months incarceration and ordered to pay \$9,000 in restitution to a landowner impacted by his illegal dumping.⁶⁸

Sixty-seven percent of historical environmental crime prosecutions occurring in the Pacific Northwest since 1983 in our dataset stem from water pollution crimes or state-level environmental crimes. In 42 cases, or about 18% of all prosecutions occurring since 1983, we labelled as hazardous waste crimes. These cases primarily are charged via the RCRA for illegal storage, transport, or disposal of hazardous wastes. Cases were also prosecuted under the CERCLA, TSCA, and FIFRA. Quin Million was prosecuted in Washington for failing to report a spill containing polychlorinated biphenyls (PCBs). He was charged with failure to notify of the release of a hazardous substance under the CERCLA, and was sentenced on February 3, 1997, to 12 months incarceration and 12 months of probation.⁶⁹ Drum Recovery was prosecuted in Oregon for transporting and dumping sodium hydroxide and improper labeling, storage, and disposal of PCBs. The company and its co-defendants were charged under the CERCLA for failure to notify and under the TSCA for the illegal disposal of PCBs. The charges against the company were dismissed.⁷⁰ Centex Limited emptied the contents of a containment pond containing pesticides and disposed of it on a 100 acre parcel they were renting. The company was charged under

⁶⁷ Our phrasing here might be termed taskforce crimes or cooperative prosecutions to denote the likelihood state and federal agents cooperated, but that cannot be discerned sufficiently from the case studies, so we will use the term “state-level crimes.”

⁶⁸ US, Environmental Protection Agency, *Enforcement and Compliance Assurance Summary of Criminal Prosecutions Resulting from Environmental Investigations* (1992) at 144, online: <nepis.epa.gov/> [perma.cc/5QXS-LRMD].

⁶⁹ *United States v Quin Million*, 1997 E.D. Washington CR96-066WFN.

⁷⁰ *United States v Drum Recovery, Inc.*, 1985 D. Oregon 84-00005.

the FIFRA for illegal disposal of the hazardous pesticides and was sentenced on June 27, 1995, to 12 months of probation and was ordered to pay a \$10,000 fine and supply \$3,000 in chemicals to the City of Quincy, Washington.⁷¹ The PureGro Company was prosecuted for the illegal storage, transport, and disposal of hazardous pesticides under the RCRA and illegal application of registered pesticides under the FIFRA. On September 17, 1991, the company was sentenced to 24 months of probation and received a \$15,000 fine.⁷²

The fourth major theme we uncovered was that 10% of prosecutions involve air pollution crimes. These prosecutions involved a range of crimes from illegal release of toxic air emissions, to illegal importation of vehicles to violate CAA emissions standards, to illegal demolition and disposal of asbestos prosecution under the National Emissions Standards for Hazardous Air Pollutants (NESHAP).⁷³ We found that 18 cases, or 78% of all cases in this category, are related to asbestos crimes. These include illegal removal, demolition, and disposal of asbestos, failure to obtain training and accreditation for workers engaging in asbestos removal, failure to inspect a building for asbestos, selling fraudulent asbestos training certificates, and not reporting releases of asbestos.

The five cases in our dataset that fall into this category and do not involve asbestos crimes include Fields Products Incorporated, a maker of roofing products in Tacoma, Washington. The company was prosecuted for releasing approximately 3,300 gallons of xylene and was prosecuted under the CERCLA for failure to notify officials of the release. On September 24, 1993, the company was sentenced to 60 months of probation and received a \$200,000 fine.⁷⁴ Euro-Auto Ltd was prosecuted in Washington for an illegal automobile importation scheme to import gray market vehicles not complying with new emissions requirements in the 1980s under a five-year exemption. The company was sentenced on July 31, 1987, and ordered to pay a \$10,000 fine and \$4,300 to the Crime Victim's Fund.⁷⁵ The company and its owner, James Strecker, agreed to pay the U.S. Government \$15,000

⁷¹ *United States v Centex Limited*, 1995 E.D. Washington CR-95-025-JQL.

⁷² *United States v PureGro Company*, 1991 Incorporated: E.D. Washington CR-90-228-AAM.

⁷³ US, EPA, *National Emissions Standards for Hazardous Air Pollutants Compliance Monitoring* (17 January 2020), online: <www.epa.gov/compliance/national-emission-standards-hazardous-air-pollutants-compliance-monitoring> [perma.cc/V6WW-5YHZ].

⁷⁴ *United States v Fields Product, Incorporated*, 1993 W.D. Washington CR 93-2244T.

⁷⁵ *United States v Euro-Auto Ltd, Inc.*, 1987 W.D. Washington 86-95TB.

in storage charges for the illegally imported vehicles plus \$125,000 to surrender ownership rights.

Dyno Nobel was prosecuted for releasing six tons of anhydrous ammonia near Columbia City, Oregon, over a three-day period beginning July 20, 2015. The releases caused by restarting the company's urea plant triggered numerous complaints from residents in the nearby city and the company was charged under the CERCLA for failure to notify. On June 14, 2018, the company was sentenced to pay a \$250,000 fine and serve two years of probation.⁷⁶ John Myre was prosecuted in Idaho for supervising the cutting of steel beams on an old railroad trestle that were painted with lead paint. One of the workers became ill and was hospitalized due to lead poisoning because the blow torches they used caused the lead to vaporize and be released into the ambient air. Despite the worker being hospitalized, Myre continued the work resulting in diagnosed cases of lead poisoning. Myre was prosecuted for negligent endangerment under the the CAA and was sentenced on August 20, 2014, to three years of supervised release, 90 hours of community service, and ordered to pay a \$3,000 fine.⁷⁷ William Nowak was prosecuted under the the CAA for performing fraudulent testing and certifying wood-burning stoves. The owner of Energy and Environmental System Performance Corp, Nowak's company, falsely certified ten of 21 models that would not meet Washington State air emissions standards. On September 26, 1996, Nowak was sentenced to 36 months of probation and 240 hours of community service.⁷⁸

All the cases in our dataset, absent ten prosecutions, fall within one of the above four categories. Of the remaining cases, five of the ten involved generating fraudulent RINs and claiming tax credits under the U.S. biofuel production program under the EISA. Three cases involve the use or illegal sale of registered pesticides. Of the remaining two cases, Martin Glaves Kuna was prosecuted in Oregon for fraudulently representing himself as a certified lead-based paint inspector.⁷⁹ He was charged with wire fraud and sentenced on July 23, 2013, to 14 months incarceration and ordered to pay \$2,372 in restitution to his victims.⁸⁰ Clifford Tracy was prosecuted in

⁷⁶ *United States v Dyno Nobel, Inc.*, 2018 D. Oregon 3:18-CR-63-SI.

⁷⁷ *United States v John Myre*, 2014 D. Idaho 3:14-CR-27-EJL.

⁷⁸ *United States v William Nowak*, 1996 W.D. Washington CR-96-218C.

⁷⁹ *United States v Martin Glaves Kuna*, 2013 D. Oregon 313-CR-0050 SI.

⁸⁰ The defendant received a fairly severe sentenced for an environmental crime because his actions lead to children ingesting lead-based paint and experienced increased levels of lead in their blood. See US, Department of Justice, *Vancouver Man Sentenced to 14*

Oregon for operating an illegal gold mining operation that damaged U.S. Forest Service Property. He was warned to cease operations but continued and was jailed for 12 days. He was charged with unlawful use Forest Service land and was sentenced to 12 months of probation.⁸¹

IV. CONCLUSION

Our analysis of environmental crime prosecutions over 37 years in Washington, Oregon, and Idaho tells us much of how government enforces environmental laws that protect humans, animals, and the natural environment in the Pacific Northwest through a criminal process. Our results identify a few clear themes and outcomes for what the government chooses to prosecute and enforce. Our findings also tell us something about the potential deterrent value of these criminal enforcement remedies. All of these findings respond to the broader issues of the efficacy and substance of criminal enforcement in the literatures on environmental enforcement and green criminology.⁸²

We find that water pollution crimes dominate criminal enforcement efforts. Some 43% of all EPA-CID investigations that led to prosecution involve prosecuting individuals and companies for mostly illegal discharges into public sewer systems, creeks, rivers, and other waterways of the United States, including the ocean. The use of criminal provisions in the CWA to punish environmental criminals and enforce water pollution control laws proves to be an extremely important tool used over time in the region.⁸³

We also find that cooperation between state and federal environmental investigators and prosecutors is likely a common occurrence in the Pacific

Months in Prison for Lying About His Ability to Conduct Lead Testing (23 July 2013), online: <www.justice.gov/usao-or/pr/vancouver-man-sentenced-14-months-prison-lying-about-his-ability-conduct-lead-testing> [perma.cc/KM54-FRUP].

⁸¹ *United States v Clifford Tracy*, 2009 D. Oregon CR09-30041-01PA. Tracy persisted in his operations after being frustrated by the permitting process and was later incarcerated. See US, Department of Justice, *Southern Oregon Miner Sentenced to One Year in Prison for Unlawful Mining* (6 February 2012), online: <www.justice.gov/archive/usao/or/news/2012/20120206_Tracy.html> [perma.cc/JMS2-PEVP].

⁸² For a discussion of the deterrent value of criminal enforcement to environmental criminals see Billet & Rousseau, *supra* note 34 at 183– 86.

⁸³ For a comparison of these findings with CWA prosecutions occurring across the United States in a similar time frame, see Joshua Ozymy & Melissa L. Jarrell, “Illegal Discharge: Exploring the History of Charging and Sentencing Patterns in U.S. Clean Water Act Criminal Prosecutions” (25 March 2021) 32:2 *Fordham Envtl LJ*.

Northwest. Almost a quarter of all prosecutions end up hinging on prosecuting environmental criminals using state-level charging statutes. While it is difficult to know if all of these involve cooperation, it tends to imply communication and collaboration between state and federal investigators to prosecute offenders in such a manner.⁸⁴

About 28% of all other prosecutions involve hazardous waste crimes and air pollution crimes.⁸⁵ Particularly of note is the value of the CAA criminal provisions for punishing asbestos violations, which made up the bulk of all air pollution prosecutions. Undergirding most of these prosecutions is the need for physical evidence to police crimes with limited investigative staff. With illegal discharges into the air, water, and waste, investigators were able to gather evidence and prosecutors were successfully able to punish a range of environmental criminals using criminal provisions from these major federal environmental statutes.

With only 230 prosecutions occurring as the result of EPA-CID investigations across these three states over 37 years, the larger picture here is not one of overzealous prosecution, but possibly sub-optimal deterrence achieved with limited resources.⁸⁶ With less than 150 special agents to police the entire country, EPA-CID must cooperate with state agents to investigate environmental crimes, but even then, resources are limited. The number of criminal investigators has been declining over time, well below the statutory

⁸⁴ This finding has relevance, as there are very few studies in the United States that examine state or local environmental criminal enforcement. For qualitative work examining the organizational characteristics of environmental enforcement supports the coordinated nature of the enterprise, see Joshua C. Cochran et al, "Court Sentencing Patterns for Environmental Crimes: Is there a 'Green' Gap in Punishment?" (2018) 34 J Quantitative Criminology 37 at 38-40; Michael J. Lynch, "County-Level Environmental Crime Enforcement: A Case Study of Environmental/Green Crimes in Fulton County, Georgia, 1998-2014" (2019) 40:9 Deviant Behavior 1090 at 1090-104; Mintz, *supra* note 26 at 10495-497.

⁸⁵ See Brickey, *supra* note 36 at 1077-80.

⁸⁶ This finding speaks to the broader issue of whether limited enforcement staff in EPA-CID and DOJ-ECS can sufficiently investigate and prosecute enough cases to provide a specific and general deterrent value to individuals and companies within the regulated universe. The answer is complex, probably sometimes in particular cases where large penalties result that can deter similar actions by companies and individuals or change corporate practices for fear of liability. Criminal enforcement has always dealt with limited staff and had to be strategic in its decision to police and prosecute certain offences and offenders. See Lynch et al, *supra* note 33 at 1096-97; Devaney, *supra* note 6 at 1-4.

minimum.⁸⁷ For criminal enforcement to have sufficient scope and ability, EPA-CID must be able to hire at least the statutory minimum of 200 investigators, if not exceed that total set over three decades ago.⁸⁸ If criminal enforcement is to remain successful at policing and prosecuting serious, chronic, and willful violations of federal and state environmental crimes in the Pacific Northwest in the foreseeable future, additional resources are warranted.⁸⁹

Extensive punishments for serious crimes have occurred, but these are far and few between. Very few defendants received significant prison sentences outside of the *EISA* fraud cases previously noted, and only a handful of large corporations received multi-million-dollar penalties.⁹⁰ There have always been disputes over prosecutorial discretion at DOJ-ECS and the use of criminal provisions to punish environmental crime.⁹¹ Our

⁸⁷ “EPA CID Agent Count” (2019), online (pdf): *Public Employees for Environmental Responsibility (PEER)* <www.peer.org/wp-content/uploads/2019/11/11_21_19-Federal_Pollution_EPA_CID_Agent_Count.pdf> [perma.cc/S4GP-GKFU] [PEER, “Agent Count”].

⁸⁸ As per *The Pollution Prosecution Act*, 42 USC § 13101 (1990). P.L. 101-593, which mandated EPA hire a minimum of 200 criminal enforcement agents by fiscal year 1995 and increase civil enforcement investigators. See “Pollution Prosecution Act of 1990” (last visited 2021), online: *Govtrack* <www.govtrack.us/congress/bills/101/s2176/summary> [perma.cc/DJ7G-MEWR].

⁸⁹ EPA can persist with limited resources, but historically has managed to plug along across hostile and sympathetic presidential regimes. This is also true for the Trump Administration that did significant damage to agency morale and limited previous presidential actions and worked to change a variety of statutory guidelines and interpretations to reduce the reach of the agency but will not likely destroy its enforcement apparatus. See Joshua Ozymy & Melissa Jarrell, “Administrative Persistence in the Face of a Hostile Regime: How the EPA Can Survive the Trump Administration” (1 December 2017) 10:6 *Environmental Justice* 1 at 1-8; Mintz, *supra* note 25 at 10912.

⁹⁰ These results may suggest the lack of large penalty sentences and limited cases reduce the deterrent value of federal criminal enforcement. See Lynch, *supra* note 33 at 99-93.

⁹¹ DOJ-ECS was criticized by Congress in the late 1980s and early 1990s for being too lenient on environmental offenders. As time progressed, and by the end of the 1990s, the discussion had changed to impugn the agency for being overzealous and EPA received the same treatment. Increased penalties – particularly for knowing violations such as knowing endangerment – resulted from this desire by political principals at the time to give criminal enforcement agencies more teeth. For a discussion of the early politics behind funding and supporting federal criminal enforcement, see Judson W. Starr, “Turbulent Times at Justice and EPA: The Origins of Environmental Criminal Prosecutions and the Work that Remain” (1991), 59:4 *Geo Wash L* at 900-02.

results in these three states over almost four decades suggest overzealous prosecution is probably not the case.⁹²

For criminal enforcement to be more effective, it arguably requires greater salience attached to its activities. Very few environmental crimes get reported by the media.⁹³ Without enhanced salience, the public and policymakers can easily overlook this important tool that enhances the robustness and application of environmental law in practice.

A final act would be to encourage greater community policing of environmental crimes. Understaffed investigators and enforcement staff are ill-equipped to monitor and police so many industrial sources of pollution in the region, let alone mobile sources and unpermitted facilities and individuals that violate the law. The EPA's Report a Violation website, for example, resulted in EPA-CID opening 35 cases, and six of those cases were successfully prosecuted in the decade since its inception; this could be expanded.⁹⁴ Additional work to encourage people living near industrial sources of pollution, such as environmental justice communities, would also potentially aid investigations. The EPA's Office of Environmental Justice (OEJ) spends millions of dollars including environmental justice communities in the stakeholder participation process and providing small grants to researchers and communities to study health effects and other issues.⁹⁵ Perhaps more work could be done to both train and react to data collected from affected communities that suffer disproportionate health burdens from these facilities and have the most to gain from deterring polluters from violating environmental laws.

The Biden Administration has made significant commitments on paper to enhancing environmental enforcement, particularly as it pertains to

⁹² Limited empirical work shows that the decision to prosecute a federal environmental offence almost always involves a defendant or defendants that committed a crime with one or more aggregating factors, suggesting prosecutors choose cases involving serious, chronic, and/or willful violations. See Uhlmann, *supra* note 35 at 159.

⁹³ Melissa L. Jarrell, "Environmental Crime and Injustice: Media Coverage of a Landmark Environmental Crime Case" (2009), 6:1 *Southwest J Crim Justice* 25 at 27-28.

⁹⁴ US, EPA, *Criminal Enforcement Program Overview* (October 2011) at 6-7, online: <19january2017snapshot.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf> [perma.cc/WM9S-WRLW].

⁹⁵ US, EPA, *Factsheet on the EPA's Office of Environmental Justice* (2017), online: <www.epa.gov/sites/production/files/201709/documents/epa_office_of_environmental_justice_factsheet.pdf> [perma.cc/T6U2-WTVP].

prioritizing environmental justice issues within the DOJ.⁹⁶ Such work will have to respond to systematic damage done to the EPA by the Trump Administration.⁹⁷ In addition to the damage to the agency's morale and organizational culture, other studies show that the Trump EPA significantly reduced civil enforcement actions and the number of criminal investigative staff.⁹⁸ Through the end of 2019, criminal prosecutions were down from the previous few years.⁹⁹ Overall funding budgetary and staffing support for EPA, however, were consistent with the post-2009 Financial Crisis funding from the Obama Administration.¹⁰⁰

EPA has a lot of experience managing chronic instability in political and budgetary support. The Reagan Administration was terribly hostile to the agency. Anne Gorsuch was appointed to run the agency and quickly acted to slash budgets and enforcement, but EPA weathered the storm and maintained its enforcement prerogatives and did the same in the Clinton Administration that proved to be less of a supporter than expected.¹⁰¹ In this vein, EPA often “treads water”, but finds ways to maintain enforcement efforts, even though decades of chronic opposition and inconsistent support have severely reduced its morale and ability to properly function as a regulatory enforcement agency.¹⁰² If the Biden Administration wishes to

⁹⁶ “The Biden Plan to Secure Environmental Justice and Equitable Economic Opportunity” (2021), online: *Biden-Harris Campaign* <joebiden.com/environmental-justice-plan/> [perma.cc/8AND-T7QS].

⁹⁷ Jay Michaelson, “The Ten Worst Things Scott Pruitt’s EPA Has Already Done” (29 December 2017), online: *Daily Beast* <www.thedailybeast.com/the-ten-worst-things-scott-pruitts-epa-has-already-done> [perma.cc/N77Y-YUVF].

⁹⁸ “Total Civil Enforcement Case Initiations and Conclusions” (2017), online (pdf): *PEER* <www.peer.org/wp-content/uploads/attachments/3_29_18_Civil_Enforcement_Case_Initiations_Conclusions.pdf> [perma.cc/9XE2-WAUF]; “Federal Criminal Enforcement: Environmental Protection Agency” (2018), online (pdf): *PEER* <www.peer.org/wpcontent/uploads/attachments/3_29_18_EPA_Crim_cases_Referred_Prosecuted_1986-2018.pdf> [perma.cc/T5AU-THX8]; *PEER*, “Agent Count”, *supra* note 87.

⁹⁹ Ozmy et al, *supra* note 33. See also David M. Uhlmann, “New Environmental Crimes Project Data Shows that Pollution Prosecutions Plummeted During the First Two Years of the Trump Administration” (October 2020) Environmental Crimes Project 1.

¹⁰⁰ US, EPA, *EPA’s Budget and Spending* (24 June 2020), online: <www.epa.gov/planandbudget/budget/> [perma.cc/X3WV-LZQR].

¹⁰¹ Mintz, *supra* note 26.

¹⁰² Mintz, *supra* note 25 at 10912; Joel A. Mintz, “Running on Fumes: The Development of New EPA Regulations in an Era of Scarcity” (1 June 2016) 46:6 *Envtl L Reporter* 10510 at 10510-519.

achieve its loftier environmental goals – such as combatting climate change, reducing environmental injustices, and greening the economy while fixing the country’s badly aging infrastructure – all the funding in the world or new laws passed by the U.S. Congress will mean little without proper enforcement.